Appendix K Traffic Study

Appendices

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AGUA MANSA COMMERCE PARK TRAFFIC IMPACT ANALYSIS

City of Jurupa Valley

October 9, 2018

gandini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

AGUA MANSA COMMERCE PARK
TRAFFIC IMPACT ANALYSIS

City of Jurupa Valley

October 9, 2018

prepared by

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

1. INTRODUCTION 1
Purpose and Objectives 1
Project Description 1
Study Area 1
Analysis Scenarios 4

2. METHODOLOGY 7
Roadway Segment Analysis Methodology 7
Intersection Delay Methodology 7
Performance Standards 8
Thresholds of Significance 9

3. EXISTING CONDITIONS 10
Existing Roadway System 10
Existing Traffic Volumes 10
Existing Intersection Delay and Level of Service 11
Existing Traffic Signal Warrants 12
General Plan Circulation Element 13
Bicycle And Pedestrian Facilities 13
Transit Service 13
Planned Improvements 13

4. PROJECT TRIP FORECASTS 34
Project Description 34
Project Trip Generation 34
Other Factors Affecting Trip Generation 34
Project Trip Distribution and Assignment 34
Project Design Features 35
Construction Traffic 36

5. FUTURE VOLUME FORECASTS 72
Riverside Traffic Analysis Model (RivTAM) 72
Other Development 73
Analysis Scenario Volume Forecasts 73
Existing Plus Project Traffic Volumes 73
Opening Year (2020) Without Project Traffic Volumes 74
Opening Year (2020) With Project Traffic Volumes 74
Year 2035 Without Project Traffic Volumes 74
Year 2035 With Project Traffic Volumes 74

6. TRAFFIC OPERATIONS 106
Existing Plus Project – Alternative 1 106
Existing Plus Project – Alternative 2 108
Opening Year (2020) Without Project 110
Opening Year (2020) With Project – Alternative 1 111
Opening Year (2020) With Project – Alternative 2 114
Year 2035 Without Project 117
Year 2035 With Project– Alternative 1 119
Year 2035 With Project – Alternative 2 123

Future Traffic Signal Warrant Analysis 126
Freeway Mainline Evaluation 128
Freeway Merge / Diverge Analysis 128
Methodology 129
Level of Service 129
Results 130
Synchro Signal Timing and Delay Analysis 130

7. RECOMMENDATIONS 160

Mitigation Measures 160
Year 2035 With Project – Alternative 1 160
Year 2035 With Project – Alternative 2 163
Fair Share 166

8. INDUSTRIAL PARK ALTERNATIVE ACCESS ANALYSIS 172

Project Trip Distribution and Assignment 172
Project Design Features 172
Analysis Scenario Volume Forecasts 173
Existing Plus Project Traffic Volumes 173
Opening Year (2020) With Project Traffic Volumes 174
Year 2035 With Project Traffic Volumes 174
Traffic Operations 174
Existing Plus Project – Alternative 1A 174
Existing Plus Project – Alternative 2A 175
Opening Year (2020) With Project – Alternative 1A 177
Opening Year (2020) With Project – Alternative 2 179
Year 2035 With Project– Alternative 1A 181
Year 2035 With Project – Alternative 2A 184
Future Traffic Signal Warrant Analysis 186
Symchro Signal Timing and Delay Analysis 186
Fair Share 187

9. CONCLUSIONS 242

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D RivTAM Plots
Appendix E Future Growth Increment Worksheets
Appendix F Level of Service Worksheets
Appendix G Traffic Signal Warrant Worksheets
Appendix H Project Study Report for SR-60 / Rubidoux Boulevard Interchange Project
Appendix I Other Development Trip Distributions
Appendix J Merge / Diverge Worksheets
Appendix K Synchro Worksheets
Appendix L Level of Service Worksheets – Alternative Analysis
Appendix M Synchro Worksheets – Alternative Analysis

LIST OF TABLES

Table 1. County of Riverside Roadway Segment Daily Capacities 14
Table 2. Existing Roadway Segment Daily Capacity Analysis 15
Table 3. Existing Intersection Delay and Levels of Service 16
Table 4. Project Trip Generation Building 1 37
Table 5. Project Trip Generation Building 2 38
Table 6. Project Trip Generation Building 3 39
Table 7. Project Trip Generation Building 4 40
Table 8. Project Trip Generation Building 5 41
Table 9. Project Trip Generation Building 6 42
Table 10. Total Project Trip Generation 43
Table 11. Other Development Trip Generation 75
Table 12. Existing Plus Project Roadway Segment Daily Capacity Analysis – Alternative 1 132
Table 13. Existing Plus Project Intersection Delay and Level of Service – Alternative 1 133
Table 14. Existing Plus Project Roadway Segment Daily Capacity Analysis – Alternative 2 135
Table 15. Existing Plus Project Intersection Delay and Level of Service – Alternative 2 136
Table 16. Opening Year (2020) Without Project Roadway Segment Daily Capacity Analysis 138
Table 17. Opening Year (2020) Without Project Intersection Delay and Level of Service 139
Table 18. Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis – Alternative 1 141
Table 19. Opening Year (2020) With Project Intersection Delay and Level of Service – Alternative 1 142
Table 20. Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis – Alternative 2 144
Table 21. Opening Year (2020) With Project Intersection Delay and Level of Service – Alternative 2 145
Table 22. Year 2035 Without Project Roadway Segment Daily Capacity Analysis 147
Table 23. Year 2035 Without Project Intersection Delay and Level of Service 148
Table 24. Year 2035 With Project Roadway Segment Daily Capacity Analysis – Alternative 1 150
Table 25. Year 2035 With Project Intersection Delay and Level of Service – Alternative 1 151
Table 26. Year 2035 With Project Roadway Segment Daily Capacity Analysis – Alternative 2 153
Table 27. Year 2035 With Project Intersection Delay and Level of Service – Alternative 2 154
Table 28. Buildout Year (2035) Freeway Mainline Morning Peak Hour Operations Analysis 156
Table 29. Buildout Year (2035) Freeway Mainline Evening Peak Hour Operations Analysis 157
Table 30. Merge/Diverge Analysis 158
Table 31. Synchro Intersection Delay and Analysis 159

Table 32. Project Fair Share Contribution – Alternative 1 168
Table 33. Project Fair Share Contribution – Alternative 2 169
Table 34. Summary of Intersection Improvements 170
Table 35. Existing Plus Project Roadway Segment Daily Capacity Analysis – Alternative 1A 188
Table 36. Existing Plus Project Intersection Delay and Level of Service – Alternative 1A 189
Table 37. Existing Plus Project Roadway Segment Daily Capacity Analysis – Alternative 2A 190
Table 38. Existing Plus Project Intersection Delay and Level of Service – Alternative 2A 191
Table 39. Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis – Alternative 1A 192
Table 40. Opening Year (2020) With Project Intersection Delay and Level of Service – Alternative 1A 193
Table 41. Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis – Alternative 2A 194
Table 42. Opening Year (2020) With Project Intersection Delay and Level of Service – Alternative 2A 195
Table 43. Year 2035 With Project Roadway Segment Daily Capacity Analysis – Alternative 1A 196
Table 44. Year 2035 With Project Intersection Delay and Level of Service – Alternative 1A 197
Table 45. Year 2035 With Project Roadway Segment Daily Capacity Analysis – Alternative 2A 198
Table 46. Year 2035 With Project Intersection Delay and Level of Service – Alternative 2A 199
Table 47. Synchro Intersection Delay and Level of Service 200
Table 48. Project Fair Share Contribution – Alternative 1A 201
Table 49. Project Fair Share Contribution – Alternative 2A 202
Table 50. Summary of Intersection Improvements for Industrial Park Access Alternatives (1A and 2A) 203

LIST OF FIGURES

Figure 1. Project Location Map 5
Figure 2. Site Plan 6
Figure 3. Existing Lane Geometry and Intersection Traffic Controls 17
Figure 4. Existing Average Daily Traffic Volumes 18
Figure 5. Existing AM Peak Hour Intersection Turning Movement Volumes 19
Figure 6. Existing PM Peak Hour Intersection Turning Movement Volumes 20
Figure 7. City of Jurupa Valley General Plan Circulation Element 21
Figure 8. City of Jurupa Valley General Plan Roadway Cross-Sections 22
Figure 9. City of Rialto General Plan Circulation Element 23
Figure 10. City of Rialto General Plan Roadway Cross-Sections 24
Figure 11. City of Colton General Plan Circulation Element 25
Figure 12. City of Colton General Plan Roadway Cross-Sections 26
Figure 13. City of Riverside General Plan Circulation Element 27
Figure 14. City of Riverside General Plan Roadway Cross-Sections 28
Figure 15. County of San Bernardino General Plan Circulation Element 29
Figure 16. County of San Bernardino Plan Roadway Cross-Sections 30
Figure 17. City of Jurupa Valley Trails and Bikeway System Map 31
Figure 18. Existing Pedestrian Facilities 32
Figure 19. Riverside Transit Agency System Map 33
Figure 20. Project Outbound Trip Distribution – Building 1 (Cars) 44
Figure 21. Project Inbound Trip Distribution – Building 1 (Cars) 45
Figure 22. Project Outbound Trip Distribution – Building 1 (Trucks) 46
Figure 23. Project Inbound Trip Distribution – Building 1 (Trucks) 47
Figure 24. Project Outbound Trip Distribution – Building 2 (Cars) 48
Figure 25. Project Inbound Trip Distribution – Building 2 (Cars) 49
Figure 26. Project Outbound Trip Distribution – Building 2 (Trucks) 50
Figure 27. Project Inbound Trip Distribution – Building 2 (Trucks) 51
Figure 28. Project Outbound Trip Distribution – Buildings 3, 4, and 5 (Cars) 52
Figure 29. Project Inbound Trip Distribution – Buildings 3, 4, and 5 (Cars) 53
Figure 30. Project Outbound Trip Distribution – Buildings 3, 4, and 5 (Trucks) 54
Figure 31. Project Inbound Trip Distribution – Buildings 3, 4, and 5 (Trucks) 55
Figure 32. Project Outbound Trip Distribution – Building 6 (Cars) – Alternative 1 56
Figure 33. Project Inbound Trip Distribution – Building 6 (Cars) – Alternative 1 57
Figure 34. Project Outbound Trip Distribution – Building 6 (Trucks) – Alternative 1 58

Figure 35. Project Inbound Trip Distribution – Building 6 (Trucks) – Alternative 1 59
Figure 36. Project Outbound Trip Distribution – Business Park – Alternative 2 60
Figure 37. Project Inbound Trip Distribution – Business Park – Alternative 2 61
Figure 38. Project Outbound Trip Distribution – Commercial Retail – Alternative 2 62
Figure 39. Project Inbound Trip Distribution – Commercial Retail – Alternative 2 63
Figure 40. Project Trip Distribution – Regional Park 64
Figure 41. Project Trip Distribution – Research & Development 65
Figure 42. Project Average Daily Traffic Volumes – Alternative 1 66
Figure 43. Project Average Daily Traffic Volumes – Alternative 2 67
Figure 44. Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1 68
Figure 45. Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1 69
Figure 46. Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2 70
Figure 47. Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2 71
Figure 48. Other Development Location Map 78
Figure 49. Other Development Average Daily Traffic Volumes 79
Figure 50. Other Development AM Peak Hour Intersection Turning Movement Volumes 80
Figure 51. Other Development PM Peak Hour Intersection Turning Movement Volumes 81
Figure 52. Existing Plus Project Average Daily Traffic Volumes – Alternative 1 82
Figure 53. Existing Plus Project Average Daily Traffic Volumes – Alternative 2 83
Figure 54. Existing Plus Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1 84
Figure 55. Existing Plus Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1 85
Figure 56. Existing Plus Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2 86
Figure 57. Existing Plus Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2 87
Figure 58. Opening Year (2020) Without Project Average Daily Traffic Volumes 88
Figure 59. Opening Year (2020) Without Project AM Peak Hour Intersection Turning Movement Volumes 89
Figure 60. Opening Year (2020) Without Project PM Peak Hour Intersection Turning Movement Volumes 90
Figure 61. Opening Year (2020) With Project Average Daily Traffic Volumes – Alternative 1 91
Figure 62. Opening Year (2020) With Project Average Daily Traffic Volumes – Alternative 2 92
Figure 63. Opening Year (2020) With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1 93
Figure 64. Opening Year (2020) With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1 94

Figure 65. Opening Year (2020) With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2 95
Figure 66. Opening Year (2020) With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2 96
Figure 67. Year 2035 Without Project Average Daily Traffic Volumes 97
Figure 68. Year 2035 Without Project AM Peak Hour Intersection Turning Movement Volumes 98
Figure 69. Year 2035 Without Project PM Peak Hour Intersection Turning Movement Volumes 99
Figure 70. Year 2035 With Project Average Daily Traffic Volumes – Alternative 1 100
Figure 71. Year 2035 With Project Average Daily Traffic Volumes – Alternative 2 101
Figure 72. Year 2035 With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1 102
Figure 73. Year 2035 With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1 103
Figure 74. Year 2035 With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2 104
Figure 75. Year 2035 With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2 105
Figure 76. Site Plan – Alternatives 1A and 2A 205
Figure 77. Project Outbound Trip Distribution – Building 1 (Cars) – Alternatives 1A and 2A 206
Figure 78. Project Inbound Trip Distribution – Building 1 (Cars) – Alternatives 1A and 2A 207
Figure 79. Project Outbound Trip Distribution – Building 1 (Trucks) – Alternatives 1A and 2A 208
Figure 80. Project Inbound Trip Distribution – Building 1 (Trucks) – Alternatives 1A and 2A 209
Figure 81. Project Outbound Trip Distribution – Building 2 (Cars) – Alternatives 1A and 2A 210
Figure 82. Project Inbound Trip Distribution – Building 2 (Cars) – Alternatives 1A and 2A 211
Figure 83. Project Outbound Trip Distribution – Building 2 (Trucks) – Alternatives 1A and 2A 212
Figure 84. Project Inbound Trip Distribution – Building 2 (Trucks) – Alternatives 1A and 2A 213
Figure 85. Project Outbound Trip Distribution – Buildings 3, 4, and 5 (Cars) – Alternatives 1A and 2A 214
Figure 86. Project Inbound Trip Distribution – Buildings 3, 4, and 5 (Cars) – Alternatives 1A and 2A 215
Figure 87. Project Outbound Trip Distribution – Buildings 3, 4, and 5 (Trucks) – Alternatives 1A and 2A 216
Figure 88. Project Inbound Trip Distribution – Buildings 3, 4, and 5 (Trucks) – Alternatives 1A and 2A 217
Figure 89. Project Average Daily Traffic Volumes – Alternative 1A 218
Figure 90. Project Average Daily Traffic Volumes – Alternative 2A 219
Figure 91. Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 220
Figure 92. Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 221
Figure 93. Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 222

Figure 94. Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 223
Figure 95. Existing Plus Project Average Daily Traffic Volumes – Alternative 1A 224
Figure 96. Existing Plus Project Average Daily Traffic Volumes – Alternative 2A 225
Figure 97. Existing Plus Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 226
Figure 98. Existing Plus Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 227
Figure 99. Existing Plus Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 228
Figure 100. Existing Plus Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 229
Figure 101. Opening Year (2020) With Project Average Daily Traffic Volumes – Alternative 1A 230
Figure 102. Opening Year (2020) With Project Average Daily Traffic Volumes – Alternative 2A 231
Figure 103. Opening Year (2020) With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 232
Figure 104. Opening Year (2020) With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 233
Figure 105. Opening Year (2020) With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 234
Figure 106. Opening Year (2020) With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 235
Figure 107. Year 2035 With Project Average Daily Traffic Volumes – Alternative 1A 236
Figure 108. Year 2035 With Project Average Daily Traffic Volumes – Alternative 2A 237
Figure 109. Year 2035 With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 238
Figure 110. Year 2035 With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 1A 239
Figure 111. Year 2035 With Project AM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 240
Figure 112. Year 2035 With Project PM Peak Hour Intersection Turning Movement Volumes – Alternative 2A 241
Figure 113. Circulation Recommendations – Alternative 1 & 2 243
Figure 114. Circulation Recommendations – Alternatives 1A & 2A 244

EXECUTIVE SUMMARY

PROJECT DESCRIPTION

The proposed Agua Mansa Commerce Park Specific Plan project is located east of Rubidoux Boulevard between El Rivino Road, the West Riverside Canal, and Hall Avenue in the City of Jurupa Valley. The project site is proposed to consist of five high-cube warehouse distribution center buildings totaling 4,216,000 square feet (comprised of 3,452,000 square foot building footprint with 764,000 square feet of mezzanine), an approximately 71.3 acre regional park, 200,000 square feet of light industrial (Alternative 1) or 170,000 square feet of light industrial and 25,000 square feet of commercial retail (Alternative 2), and 64,000 square feet of research and development (Cal Portland).

Project access for the industrial park is proposed to be provided to Rubidoux Boulevard, Hall Avenue, Brown Avenue, and El Rivino Road. Access for the regional park is proposed to be provided to El Rivino Road via an internal roadway located east of and adjacent to the railroad spur line. The project opening year is planned for 2020.

OPERATIONS & FORECASTS

Existing Conditions

For Existing traffic conditions, the study roadway segments currently operate at acceptable Levels of Service, except for the following roadway segment which currently operates at an unacceptable Level of Service (see Table 2):

- Market Street, Hall Avenue to Rivera Street

The study intersections currently operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing traffic conditions, except for the following study intersections that currently operate at unacceptable Levels of Service during the peak hours (see Table 3):

- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30

Project Trip Forecasts

The proposed project (Alternative 1) is forecast to generate a total of approximately 11,376 daily trips in passenger car equivalents, 746 passenger car equivalent trips of which will occur during the morning peak hour and 868 passenger car equivalent trips of which will occur during the evening peak hour.

The proposed project (Alternative 2) is forecast to generate a total of approximately 13,176 daily trips in passenger car equivalents, 657 passenger car equivalent trips of which will occur during the morning peak hour and 874 passenger car equivalent trips of which will occur during the evening peak hour.

Existing Plus Project – Alternative 1

For Existing Plus Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 12):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street

The following study roadway segment improvements are recommended for Existing Plus Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

For Existing Plus Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements.

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 13):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30

The following study intersection improvements are recommended for Existing Plus Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct a second westbound right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Existing Plus Project – Alternative 1 traffic conditions, with improvements.

Existing Plus Project – Alternative 2

For Existing Plus Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 14):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street

The following study roadway segment improvements are recommended for Existing Plus Project – Alternative 2 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

For Existing Plus Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements.

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 15):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30

The following study intersection improvements are recommended for Existing Plus Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct a second westbound right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Existing Plus Project – Alternative 2 traffic conditions, with improvements.

Opening Year (2020) Without Project

For Opening Year (2020) Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 16):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) Without Project traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segment that is projected to operate at an unacceptable Level of Service:

- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) Without Project traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 17):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 30th Street/SR-60 Freeway WB Off-Ramp - #14
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33

The following study intersection improvements are recommended for Opening Year (2020) Without Project traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 30th Street/SR-60 Freeway WB Off-Ramp (EW) - #14
  - Construct westbound left turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) Without Project traffic conditions, with improvements.

Opening Year (2020) With Project – Alternative 1

For Opening Year (2020) With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 18):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) With Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) With Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 19):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 30th Street/SR-60 Freeway WB Off-Ramp - #14
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Rubidoux Boulevard at SR-60 Freeway EB Ramps - #16
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33

The following study intersection improvements are recommended for Opening Year (2020) With Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane

- Construct westbound left turn lane
- Construct westbound right turn lane
- Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 30th Street/SR-60 Freeway WB Off-Ramp (EW) - #14
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at SR-60 Freeway EB Ramps (EW) - #16
  - Construct northbound right turn lane
  - Construct eastbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane

  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) With Project – Alternative 1 traffic conditions, with improvements.

Opening Year (2020) With Project – Alternative 2

For Opening Year (2020) With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 20):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) With Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) With Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 21):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 30th Street/SR-60 Freeway WB Off-Ramp - #14
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Rubidoux Boulevard at SR-60 Freeway EB Ramps - #16
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33

The following study intersection improvements are recommended for Opening Year (2020) With Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 30th Street/SR-60 Freeway WB Off-Ramp (EW) - #14
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at SR-60 Freeway EB Ramps (EW) - #16
  - Construct northbound right turn lane
  - Construct eastbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane

  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane

- Construct westbound left turn lane
- Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) With Project – Alternative 2 traffic conditions, with improvements.

Year 2035 Without Project

For Year 2035 Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 22):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 Without Project traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segment that is projected to operate at an unacceptable Level of Service:

- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 Without Project traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 23):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 Without Project traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue(EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 Without Project traffic conditions, with improvements.

Year 2035 With Project – Alternative 1

For Year 2035 With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 24):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 25):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway WB Ramps - #32
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct eastbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway WB Ramps (EW) - #32
  - Restripe southbound right turn lane to shared through/right turn lane

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue (EW) - #36
  - Construct southbound right turn lane
  -

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 1 traffic conditions, with improvements.

Year 2035 With Project – Alternative 2

For Year 2035 With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 26):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 2 traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 27):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12

- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway WB Ramps - #32
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane

- Construct westbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct eastbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

- Construct southbound through lane
- Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway WB Ramps (EW) - #32
  - Restripe southbound right turn lane to shared through/right turn lane

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue (EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 2 traffic conditions, with improvements.

SUMMARY OF IMPROVEMENTS

Table 34 exhibits the summary of intersection improvements. This includes the study intersections projected to operate at unacceptable Levels of Service during the peak hours for various analysis scenarios, jurisdiction each intersection is located within, recommended mitigation measures, the scenarios each mitigation measure is required for from Existing Plus Project to Year 2035 With Project traffic conditions, whether not the improvement has a funding source, and the intersection fair share percentage.

ON-SITE/ACCESS RECOMMENDATIONS

Site-specific circulation and access recommendations are depicted on Figure 113.

All on-site and site-adjacent improvements, including traffic signing/striping and project driveways, should be constructed as approved by the City of Jurupa Valley Public Works Department.

Rubidoux Boulevard along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

Hall Avenue along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

El Rivino Road along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

Sufficient on-site parking shall be provided to meet City of Jurupa Valley parking code requirements.

The proposed project driveways shall be constructed in conformance with City of Jurupa Valley standards, including provisions for sight distance requirements.

Prior to the issuance of any building permits, the project applicant shall make required per unit fee payments associated with Western Riverside County Transportation Uniform Mitigation Fees (TUMF) and the City of Jurupa Valley Development Impact Fee (DIF).

1. INTRODUCTION

This section describes the purpose of this traffic impact analysis, project location, proposed development, and study area. Figure 1 shows the project location map and Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

The purpose of this report is to provide an assessment of the traffic impacts resulting from the development of the proposed Agua Mansa Commerce Park Specific Plan and to identify the traffic mitigation measures necessary to maintain the established Level of Service standard for the elements of the impacted roadway system. The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act (CEQA).

The City of Jurupa Valley is the lead agency responsible for preparation of the traffic impact analysis, in accordance with California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with occupancy of the development in Opening Year (2020), at which time it will be generating trips at its full potential, as well as Year 2035.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

PROJECT DESCRIPTION

The proposed Agua Mansa Commerce Park Specific Plan project is located east of Rubidoux Boulevard between El Rivino Road, the West Riverside Canal, and Hall Avenue in the City of Jurupa Valley. The project site is proposed to consist of five high-cube warehouse distribution center buildings totaling 4,216,000 square feet (comprised of 3,452,000 square foot building footprint with 764,000 square feet of mezzanine), an approximately 71.3 acre regional park, 200,000 square feet of light industrial (Alternative 1) or 170,000 square feet of light industrial and 25,000 square feet of commercial retail (Alternative 2), and 64,000 square feet of research and development (Cal Portland).

Project access for the industrial park is proposed to be provided to Rubidoux Boulevard, Hall Avenue, Brown Avenue, and El Rivino Road. Access for the regional park is proposed to be provided to El Rivino Road via an internal roadway located east of and adjacent to the railroad spur line. An alternative analysis has been conducted later in this report that analyzes the project without internal connectivity across this railroad spur line. The project opening year is planned for 2020.

STUDY AREA

Based on the City approved scoping agreement (see Appendix B), the study area consists of the following intersections, roadway segments, freeway ramp merge/diverge, and freeway mainline locations:

Intersections			
No.	North-South	East-West	Jurisdiction*
1	Cedar Avenue	I-10 Freeway WB Ramps	CAL
2		I-10 Freeway EB Ramps	CAL
3		Slover Avenue	SB
4		Santa Ana Avenue	SB
5		Jurupa Avenue	SB
6	Cedar Avenue/ Rubidoux Boulevard	Tarragona Drive/El Rivino Road	JV

Intersections			
No.	North-South	East-West	Jurisdiction*
7	Rubidoux Boulevard	Building 6 Access	JV
8		Project Access	JV
9		Production Circle	JV
10		20th Street/Market Street	JV
11		24th Street	JV
12		26th Street	JV
13		28th Street	JV
14		30th Street/SR-60 Freeway WB Off-Ramp	CAL
15		SR-60 Freeway WB On-Ramp	CAL
16		SR-60 Freeway EB Ramps	CAL
17		34th Street	JV
18	Building 6 Access	El Rivino Road	JV/SB
19	Project Access	El Rivino Road	JV/RIA
20	Cactus Avenue /Project Access	El Rivino Road	JV/RIA /SB
21	Building 1 Auto Access	El Rivino Road	JV/SB
22	Hall Avenue	El Rivino Road	JV/SB
23		Building 1 Access	JV
24	Agua Mansa Road	El Rivino Road	RIA/SB
25		Holly Place	SB
26		Hall Avenue	JV/SB
27		Brown Avenue	JV/SB
28		R.A. Nelson	JV
29		Market Street	JV
30	Market Street	Hall Avenue	JV
31		Rivera Street	RIV
32		SR-60 Freeway WB Ramps	CAL
33		SR-60 Freeway EB Ramps	CAL
34	Riverside Avenue	I-10 Freeway WB Ramps	CAL
35		I-10 Freeway EB Ramps	CAL
36		Slover Avenue	RIA
37		Santa Ana Avenue	RIA
38		Jurupa Avenue	RIA
39		Agua Mansa Road	RIA/COL
40	Rancho Avenue	Agua Mansa Road	COL

Notes:

* CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = Rialto; RIV = City of Riverside; COL = City of Colton

Roadway Segments			
No.	Roadway	Segment	Jurisdiction*
1	Rubidoux Boulevard	El Rivino Road to Production Circle	JV
2		Production Circle to 20th Street	JV
3		20th Street to 24th Street	JV
4		24th Street to 26th Street	JV
5		26th Street to 28th Street	JV
6		28th Street to 30th Street	JV

Roadway Segments			
No.	Roadway	Segment	Jurisdiction*
7	El Rivino Road	Cedar Avenue to Cactus Avenue	JV/RIA/SB
8		Cactus Avenue to Hall Avenue	JV/SB
9		Hall Avenue to Agua Mansa Road	JV/SB
10	Hall Avenue	El Rivino Road to Agua Mansa Road	JV
11	Market Street	Rubidoux Boulevard to Agua Mansa Road	JV
12		Agua Mansa Road to Hall Avenue	JV
13		Hall Avenue to Rivera Street	JV/RIV
14	Agua Mansa Road	Market Street to Brown Avenue	JV
15		Brown Avenue to Hall Avenue	JV/SB
16		Hall Avenue to El Rivino Road	JV/SB

Notes:

* CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = Rialto; RIV = City of Riverside; COL = City of Colton

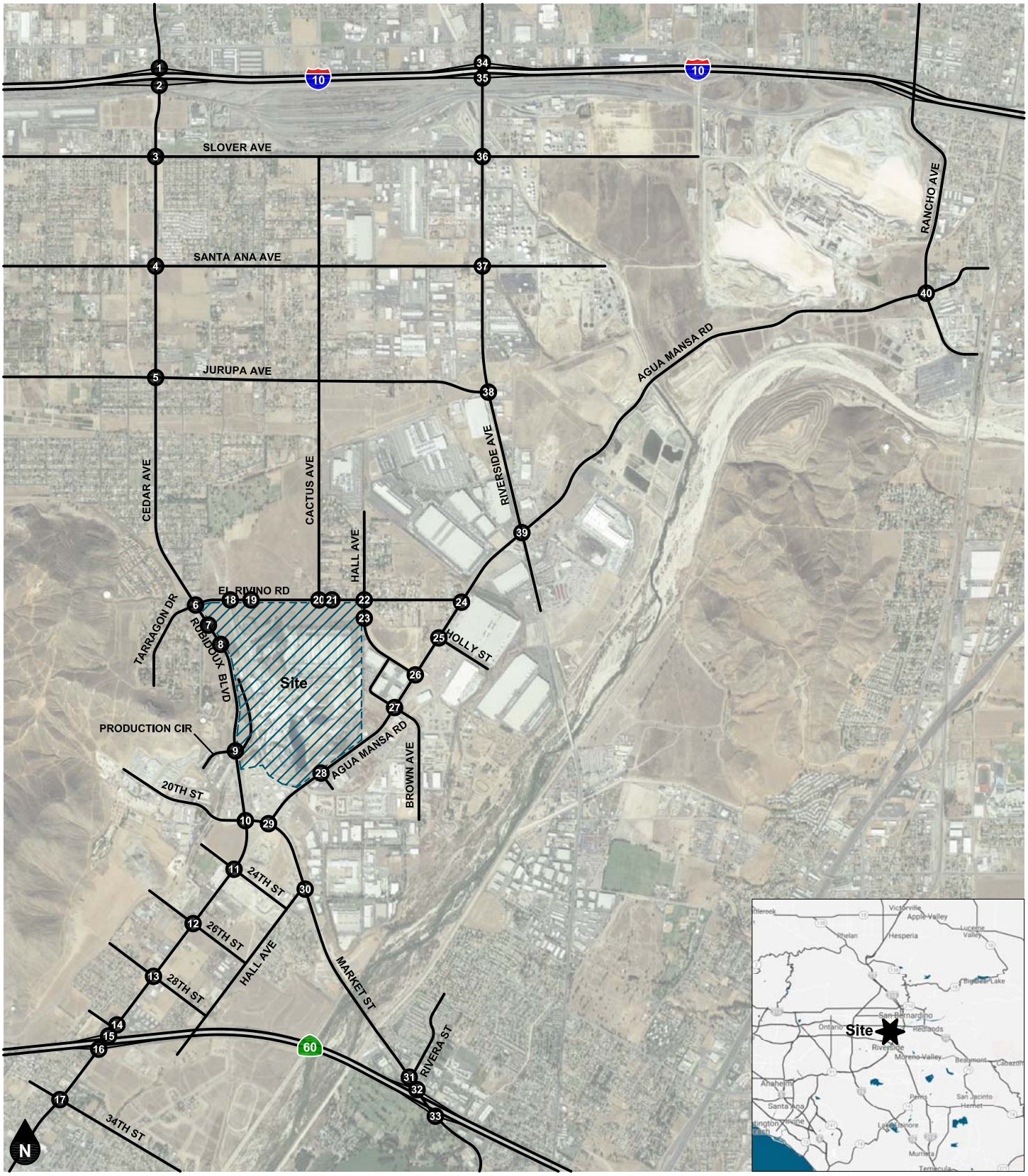
Freeway Ramp Merge/Diverge Locations			
No.	Freeway	Roadway	Ramp
1	SR-60 Freeway	Market Street	Westbound Off-Ramp
2			Westbound On-Ramp
3			Eastbound Off-Ramp
4			Eastbound On-Ramp
5		Rubidoux Boulevard	Westbound Off-Ramp
6			Westbound On-Ramp
7			Eastbound Off-Ramp
8			Eastbound On-Ramp
9	I-10 Freeway	Cedar Avenue	Westbound Off-Ramp
10			Westbound On-Ramp
11			Eastbound Off-Ramp
12			Eastbound On-Ramp
13	I-10 Freeway	Riverside Avenue	Westbound Off-Ramp
14			Westbound On-Ramp
15			EB Off-Ramp
16			EB On-Ramp

Freeway Mainline Locations			
No.	Freeway	Direction	Segment
1	SR-60 Freeway	Westbound	Main Street to Market Street
2			Market Street to Rubidoux Boulevard
3			Rubidoux Boulevard to Valley Way
4		Eastbound	Valley Way to Rubidoux Boulevard
5			Rubidoux Boulevard to Market Street
6			Market Street to Main Street

ANALYSIS SCENARIOS

The following scenarios are analyzed during typical weekday morning and evening peak hour conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Opening Year (2020) Without Project Conditions
- Opening Year (2020) With Project Conditions
- Year 2035 Without Project Conditions
- Year 2035 With Project Conditions



Legend

(#) Study Intersection

Figure 1
Project Location Map

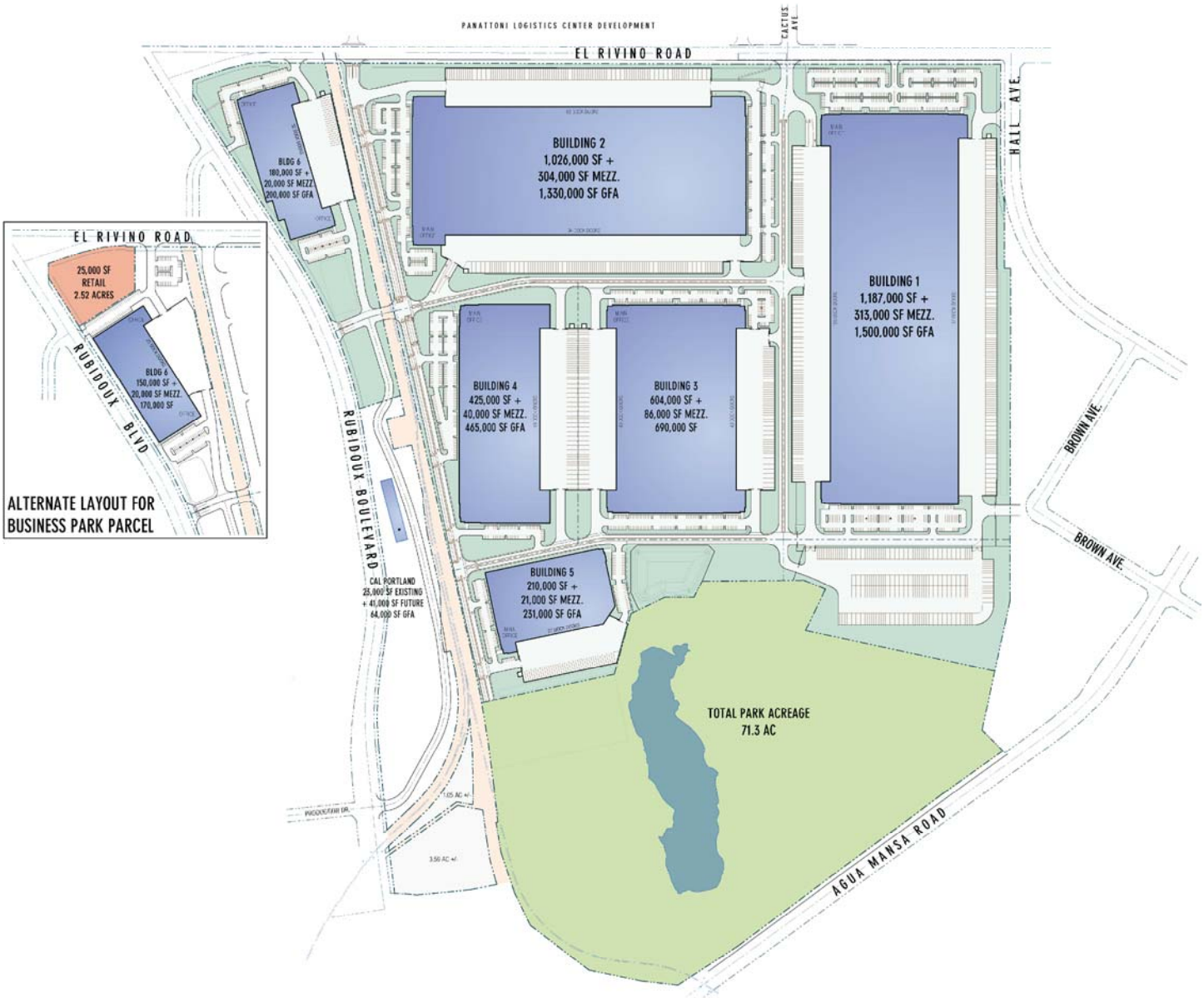


Figure 2
Site Plan

2. METHODOLOGY

This traffic impact analysis has been prepared in accordance with the standards adopted by the City of Jurupa Valley and listed in the Traffic Impact Analysis Preparation Guide (Riverside County Transportation Department, April 2008). The study area and project assumptions were developed through scoping discussions with City of Jurupa Valley staff with input from surrounding jurisdictional staff. The City approved scoping agreement is included in Appendix B.

ROADWAY SEGMENT ANALYSIS METHODOLOGY

Roadway segments are considered to operate at an acceptable level when the average daily traffic volumes do not exceed the roadway capacities as specified by the roadway classification. The City of Jurupa Valley General Plan (2017) (adopted September 2017) roadway capacities as specified by the roadway classifications are shown in Table 1[1]. The City of Jurupa Valley along with the City of Riverside utilize the County of Riverside roadway capacities. For roadway segments located in multiple jurisdictions, City of Jurupa Valley roadway capacities and classifications have been given preference since the City of Jurupa Valley is the lead agency.

When a roadway segment is identified as potentially exceeding capacity, and if the intersections along a roadway segment operate efficiently, then it is assumed that the roadway segment would operate efficiently. The peak hour intersection capacity is a key indicator of the overall transportation network performance and more accurately reflects operations along a roadway. In the cases where the roadway segment potentially exceeds capacity, but the intersections along this roadway segment are characterized by acceptable Levels of Service, then the roadway segment operations are generally considered satisfactory.

INTERSECTION DELAY METHODOLOGY

The technique used to assess the performance of an intersection is known as the intersection delay methodology based on the procedures contained in the Highway Capacity Manual (Transportation Research Board, 2010). The methodology compares the volume of traffic using the intersection to the capacity of the intersection to calculate the delay associated with associated with the traffic control at the intersection. The intersection delay is then correlated to a performance measure known as Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (Transportation Research Board, 2010).

[1] The roadway segment capacity thresholds represent the theoretical maximum two-way average daily traffic volumes that any given roadway is able to accommodate within one day, given typical peak hour characteristics. Generally, roadway segment analysis is performed for planning purposes only and is affected by such factors as the number of intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignments), sight distance, vehicle mix (truck and bus traffic), and bicycle/pedestrian traffic. Roadway segments benefit from on-going traffic signal progression timing adjustments that maximize green time during peak traffic demands.

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). Intersection delay analysis was performed using the Vistro (Version 6.00-00) software.

Signalized intersection input parameters, such as saturation flow rates and default values for Highway Capacity Manual calculations, were used in accordance with the recommended values shown on Exhibit C of the Riverside County Guidelines as well as Appendix C of the San Bernardino County Congestion Management Program, 2016 Update.

For study intersections located in multiple jurisdictions, City of Jurupa Valley input parameters have been given preference since the City of Jurupa Valley is the lead agency.

PERFORMANCE STANDARDS

The following are the General Plan performance standards for each jurisdiction:

City of Jurupa Valley

The City of Jurupa Valley General Plan Mobility Element has adopted the County of Riverside performance standards which require, as a Citywide target, a Level of Service C on all City maintained roads and conventional State Highways, except that a Level of Service D could be allowed in urban areas only at intersections of any combination of Major Streets, Arterials, Expressways, or conventional State Highways within one mile of a freeway interchange and also at freeway ramp intersections. Level of Service D would only be allowed, subject to City Council approval, in those instances where mitigation of Level of Service C is deemed to be impractical.

Accordingly, the target Level of Service for the study intersections is Level of Service D. Study intersections and roadway segments forecast to operate at worse than the target Level of Service are considered deficient.

California Department of Transportation

The Freeway interchanges are State Highway facilities under the jurisdiction of the California Department of Transportation. As stated in the Guide for the Preparation of Traffic Impact Studies (State of California, 2002), "Caltrans endeavors to maintain a target LOS [Level of Service] at the transition between LOS "C" and LOS "D" on State highway facilities". Consistent with the City and County requirements, this analysis defines Level of Service E or F as deficient for State Highway facilities.

City of Colton

The definition of an intersection deficiency has been obtained from the City of Colton General Plan Mobility Element. The General Plan states that peak hour intersection operations of Level of Service D or better are generally acceptable. Therefore, any intersection operating at Level of Service E to F will be considered deficient.

City of Rialto

The City of Rialto 2010 General Plan Update (Circulation Element) contains the following policies applicable to Level of Service standards within the City:

- Policy 4-1.20: Design City streets so that signalized intersections operate at Level of Service (LOS) D or better during the morning and evening peak hours, and require new development to mitigate traffic impacts that degrade LOS below that level. The one exception will be Riverside Avenue south of the Metrolink tracks all the way to the City's southern border, which can operate at LOS E.

- Policy 4-1.21: Design City streets so that unsignalized intersections operate with no vehicular movement having an average delay greater than 120 seconds during the morning and evening peak hours, and require new development to mitigate traffic impacts that increase delay above that level.

Based on the above thresholds, signalized study intersections and roadway segments operating at Level of Service E or F are considered deficient. Unsignalized study intersections operating at Level of Service F with greater than 120 seconds of delay are considered deficient.

City of Riverside

The definition of an intersection deficiency has been obtained from the City of Riverside General Plan Circulation and Community Mobility Element, which states that Level of Service D is the maximum acceptable threshold for study intersections including a roadway of Collector or higher classification. Level of Service C is the maximum threshold in other cases.

County of San Bernardino

The definition of an intersection deficiency has been obtained from the County of San Bernardino General Plan Circulation Element. The General Plan states that peak hour intersection operations of Level of Service D or better are generally acceptable. Therefore, any intersection operating at Level of Service E or F will be considered deficient.

It should be noted that for any roadway segment or intersection located in multiple jurisdictions, the roadway segment or intersection has been analyzed in accordance to City of Jurupa Valley standards since the City of Jurupa Valley is the lead agency.

THRESHOLDS OF SIGNIFICANCE

Based on the performance standards identified above, a traffic impact is considered significant if the Level of Service is forecast to fall below the target Level of Service. The target Level of Service for the study intersections is Level of Service D.

To reduce a potential impact to a less than significant level, feasible mitigation measures should be identified that will maintain the acceptable Level of Service. If a project is forecast to worsen a facility already operating at a deficient Level of Service under pre-project conditions, proposed mitigation measures should maintain operation of the impacted facility at pre-project conditions. Mitigation measures can be in many forms, including addition of lanes, traffic control modification, or demand management measures. If no feasible mitigation measures can be identified for a significantly impacted facility, the impact will remain significant and unavoidable.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the Existing roadway conditions based on a field survey of the study area; the number of through lanes for roadways and the intersection geometry and controls are identified.

Regional access to the project site is provided by the I-10 Freeway to the north and the SR-60 Freeway to the south of the project site. Local north-south circulation is provided by Cedar Avenue, Rubidoux Boulevard, Cactus Avenue, Hall Avenue, Market Street, and Riverside Avenue. Local east-west circulation is provided by Slover Avenue, Santa Ana Avenue, Jurupa Avenue, El Rivino Road, and Agua Mansa Road.

EXISTING TRAFFIC VOLUMES

Existing peak hour intersection turning movement volumes are based upon morning peak period and evening peak period intersection turning movement counts conducted in January/February/May/August 2017 during typical weekday conditions. Typically, there are two peak periods in a weekday; the morning peak period was counted between 7:00 AM and 9:00 AM and the evening peak period was counted between 4:00 PM and 6:00 PM.

At the request of City of Jurupa Valley staff, the peak periods were extended from a two hour peak period to a three hour peak period for study intersections within the City of Jurupa Valley. These study intersections were counted between 6:30 AM and 9:30 AM for the morning peak period and from 3:30 PM and 6:30 PM for the evening peak period.

At the request of City of Jurupa Valley staff, the turning movement volumes were increased by an annual ambient growth rate of one percent over a one year period. This was conducted so that the 2017 traffic counts would be reflective of existing year 2018.

The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume.

Intersection turning movement count worksheets are provided in Appendix C. Mid-day peak period intersection turning movement counts were conducted between 12:00 PM and 2:00 PM for intersections within the City of Jurupa Valley at the request of City of Jurupa Valley staff and are included in Appendix C for informational purposes.

The peak hour intersection turning movement volumes were adjusted to peak 15 minute volumes for analysis purposes using the existing measured peak hour factors. The 24-hour roadway segment counts were conducted at the study roadway segments to establish Existing average daily traffic volumes.

Figure 4 depicts actual and estimated Existing average daily traffic volumes. Existing average daily traffic volumes have been based upon the 2016 Traffic Counts on California State Highway System by the California Department of Transportation and 24-hour roadway segment counts obtained by Ganddini Group, Inc. in May/August 2017 (see Appendix C) for the freeway segments and roadway segments that have been analyzed in this report as part of the roadway segment analysis.[1] For roadway segments that were not required for analysis, the estimated Existing average daily traffic volumes have been factored from peak hour volumes for informational purposes using the following formula for each intersection leg:

[1] The 24-hour roadway segment counts are classification counts for a two-day period within the City of Jurupa Valley and one-day outside of the City of Jurupa Valley limits.

PM Peak Hour (Approach Volume + Exit Volume) x 12 = Leg Volume.

At the request of City of Jurupa Valley staff, the roadway segment counts were increased by an annual ambient growth rate of one percent over a one year period. This was conducted so that the 2017 traffic counts would be reflective of existing year 2018.

The technique used to assess the capacity needs of the roadway is known as the Volume to Capacity Ratio. Roadway segment operations were evaluated using daily volume to daily capacity ratios, (V/C). The average daily traffic volumes of the study roadways were compared with the county standards by roadway classification. General volume to capacity ratio ranges used for the purposes of estimating overall daily performance along the study roadway segments are as follows in conformance with each jurisdictions General Plan:

0.00– 0.80 = Acceptable Capacity. This represents a range of free flow to stable flow, where the unrestricted speed and freedom to maneuver begins to become more limited by the increase in traffic. In general, the driver experiences only minor inconvenience, and traffic flow is quick but light during off-peak hours.

0.81 – 1.00 = Approaches Capacity. This represents high-density but stable flow, where speed and freedom to maneuver are restricted. In general, the driver experiences a degree of inconvenience during peak hours, and traffic flow is slow but steady during peak hours.

1.00 + = Potentially Exceeds Capacity. This is used to define forced or breakdown flow during peak hours. This condition exists wherever the amount of traffic exceeds the amount which can reasonably be handled by the roadway. In general, the driver experiences a high degree of inconvenience, and traffic flow is extremely slow with stop-and-go flow and traffic queues begin to form. This condition is typical of the breakdown in flow which occurs when an accident is present on the roadway.

The existing daily capacity analyses for roadway segments in the vicinity of the project are shown in Table 2. The 24-hour roadway segment count worksheets are provided in Appendix C.

For Existing traffic conditions, the study roadway segments currently operate at acceptable Levels of Service (D or better), except for the following roadway segment which currently operates at an unacceptable Level of Service:

Market Street, Hall Avenue to Rivera Street

EXISTING INTERSECTION DELAY AND LEVEL OF SERVICE

Figures 5 and 6 show the Existing morning and evening peak hour intersection turning movement volumes, respectively.[2] Existing peak hour intersection turning movement volumes are based upon morning and evening peak period intersection turning movement counts conducted in January/February/May/August 2017 during typical weekday conditions. The morning peak period was counted between 7:00 AM and 9:00 AM and the evening peak period was counted between 4:00 PM and 6:00 PM. At the request of City of Jurupa Valley staff, the peak periods were extended from a two hour peak period to a three hour peak period

[2] Standard practice for traffic studies throughout Southern California is to calculate Levels of Service based upon the peak hour intersection turning movement volumes for each study intersection based on the highest consecutive 15-minute intervals over one hour time during the two to three hour morning and evening peak period. This may produce a situation where two closely spaced intersections have different peak hours within the peak periods (e.g., Intersection A at 7:15 AM to 8:15 AM and Intersection B at 7:30 AM to 8:30 AM), resulting in minor volume differences between adjacent intersections. This occurs when some vehicles are counted within one 15-minute interval at an intersection but in a different-15 minute interval at the other intersection. To provide for a conservative analysis and to adhere to the California Department of Transportation Guide for the Preparation of Traffic Impact Studies (December 2002) requirements regarding peak hour volume formulation, the four highest consecutive 15-minute intervals (peak hour) during the peak period were utilized for the intersection turning movement volumes. A detailed review of the conservation of flow between these closely spaced intersections indicates that the volumes differences are nominal. The existing traffic volumes are considered conservative in that the highest morning/evening peak hour within the respective peak period were used for each study intersection.

for study intersections within the City of Jurupa Valley. These study intersections were counted between 6:30 AM and 9:30 AM for the morning peak period and from 3:30 PM and 6:30 PM for the evening peak period. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume. The peak hour factors used for intersection delay calculations are based the measured peak hour factors obtained from Existing intersection turning movement counts. Intersection turning movement count worksheets[3] are provided in Appendix C.

The morning and evening peak hour Levels of Service for Existing traffic conditions have been calculated and are shown in Table 3. The study intersections currently operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing traffic conditions, except for the following study intersections that currently operate at unacceptable Levels of Service during the peak hours (see Table 3):

Rubidoux Boulevard at Production Circle/Project Access - #9
Rubidoux Boulevard at 24th Street - #11
Rubidoux Boulevard at 26th Street - #12
Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
Agua Mansa Road at El Rivino Road - #24
Agua Mansa Road at Market Street - #29
Market Street at Hall Avenue - #30

Existing Level of Service worksheets are provided in Appendix F.

EXISTING TRAFFIC SIGNAL WARRANTS

The application of traffic control devices is governed by Federal standards adopted by the State of California and contained in the California Manual on Uniform Traffic Control Devices ("California MUTCD", November 2014). Part 4C – Traffic Control Signal Needs Studies of the California MUTCD contains a series of warrants, or criteria, which serve to determine whether installation of a traffic signal is justified at a particular location. The California MUTCD states that a traffic control signal should not be installed unless one or more warrants are satisfied. Application of the traffic signal warrants should be based on engineering judgement and satisfaction of one or more traffic signal warrants shall not in itself require the installation of a traffic signal.

The unsignalized study intersections have been evaluated for the potential need to install a traffic signal using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California MUTCD.

For Existing[4] traffic conditions, traffic signals appear to currently be warranted at the following study intersections (see Appendix G):

Rubidoux Boulevard (NS) at:
SR-60 WB On-Ramp (EW) - #15

Agua Mansa Road (NS) at:
El Rivino Road (EW) - #24
Holly Place (EW) - #25

[3] The intersection turning movement counts are 3-hour AM peak period, 2-hour mid-day, and 3-hour PM peak period classification counts within the City of Jurupa Valley; 2-hour AM peak period and 2-hour PM peak period classification counts outside of the City of Jurupa Valley limits.
[4] The City of Jurupa Valley Scoping Agreement For Traffic Study (see Appendix B) requires that if a traffic signal appears to be warranted for Existing traffic conditions, then 8-hour approach traffic volume information must be submitted. However, the unsignalized intersections listed above are not within the City of Jurupa Valley.

GENERAL PLAN CIRCULATION ELEMENT

Figure 7 shows the City of Jurupa Valley General Plan Circulation Plan. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Jurupa Valley General Plan roadway cross-sections are illustrated on Figure 8.

Figure 9 shows the City of Rialto General Plan Circulation Element, Figure 10 depicts the City of Rialto General Plan Roadway Cross-Sections, Figure 11 illustrates the City of Colton General Plan Circulation Element, Figure 12 includes the City of Colton General Plan Roadway Cross-Sections, Figure 13 illustrates the City of Riverside General Plan Circulation Element, Figure 14 includes the City of Riverside General Plan Roadway Cross-Sections, Figure 15 illustrates the County of San Bernardino General Plan Circulation Element, and Figure 16 includes the County of San Bernardino General Plan Roadway Cross-Sections.

BICYCLE AND PEDESTRIAN FACILITIES

The Jurupa Area Plan trails and bikeway system is shown on Figure 17 and includes both multi-purpose trails and bicycle routes. It should be noted that the City of Jurupa Valley is working on a Pedestrian and Bicycle Master Plan (PBMP). Completion of that plan is anticipated to be completed in 2018. As part of the PBMP there will be recommendations for bicycle and pedestrian access facilities to and from the proposed regional park to/from the surrounding area.

Existing pedestrian facilities adjacent to the project site are shown on Figure 18.

TRANSIT SERVICE

The study area is currently served by Riverside Transit Agency Route 29 along Rubidoux Boulevard, Market Street, Hall Avenue, and 24th Street. Also, Riverside Transit Agency Route 49 along Mission Boulevard (south of the SR-60 Freeway). Figure 19 shows the existing transit routes in the project vicinity.

PLANNED IMPROVEMENTS

The Rubidoux Boulevard/SR-60 Freeway interchange has two planned alternative improvements included in Appendix H. Alternative 2 proposes a tight diamond interchange and Alternative 3 proposes a single point urban interchange (SPUI) configuration. For the purposes of this traffic impact analysis, Alternative 2 (tight diamond configuration) has been utilized as part of the interchange improvements to mitigate deficient ramp intersections for General Plan Buildout (2035) conditions. This is consistent with the Emerald Ridge Traffic Impact Analysis prepared by Trames Solutions, Inc. (February 24, 2016) which also analyzed this interchange utilizing Alternative 2 for General Plan Buildout (2035) traffic conditions.

Table 1
County of Riverside Roadway Segment Daily Capacities[1]

Roadway Classification	Number of Lanes	Maximum Two-Way Traffic Volume (ADT)[2] Level of Service		
		C	D	E
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Arterial	2	14,400	16,200	18,000
Arterial	4	27,800	32,300	35,900
Mountain Arterial	2	12,900	14,500	16,100
Mountain Arterial	4	29,800	33,500	37,200
Major Arterial	4	27,300	30,700	34,100
Urban Arterial	4	28,700	32,300	35,900
Urban Arterial	6	43,100	48,500	53,900
Urban Arterial	8	57,400	64,600	71,800
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300
Expressway	8	65,400	73,500	81,700

Level of Service	Volume to Capacity Ratio
A	0.000 - 0.600
B	0.601 - 0.700
C	0.701 - 0.800
D	0.801 - 0.900
E	0.901 - 1.000
F	>1.000

Notes:

(1) Source: County of Riverside roadway daily service volume standards.

(2) Average Daily Traffic Volumes

(3) These roadway capacities are "rule of thumb" estimates for planning purposes. The Level of Service "E" volumes are estimated maximum daily capacity for respective classifications.

Table 2
Existing Roadway Segment Daily Capacity Analysis

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	22,300	0.65	Acceptable	B
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	22,000	0.65	Acceptable	B
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	18,800	0.55	Acceptable	A
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	19,600	0.57	Acceptable	A
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	20,200	0.59	Acceptable	A
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	21,800	0.64	Acceptable	B
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	4,300	0.33	Acceptable	A
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	4,000	0.31	Acceptable	A
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	3,100	0.24	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	1,100	0.08	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	22,200	0.65	Acceptable	B
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	17,000	0.94	Approaches Capacity	E
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	23,600	1.31	Potentially Exceeds Capacity	F
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	11,300	0.87	Approaches Capacity	D
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	12,300	0.47	Acceptable	A
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	12,800	0.71	Acceptable	C

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect the number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane widths west of Agua Mansa Road (see Table 1).

Table 3
Existing Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	54.5	D	35.6	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	43.4	D	36.1	D
3.	Cedar Ave at Slover Ave	SB	TS	17.5	B	17.4	B
4.	Cedar Ave at Santa Ana Ave	SB	TS	10.4	B	11.3	B
5.	Cedar Ave at Jurupa Ave	SB	TS	28.1	C	31.0	C
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	11.3	B	19.4	B
9.	Rubidoux Blvd at Production Circle	JV	CSS	69.3	F	99.9	F
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	27.7	C	37.8	D
11.	Rubidoux Blvd at 24th St	JV	CSS	43.5	E	99.9	F
12.	Rubidoux Blvd at 26th St	JV	CSS	33.6	D	55.5	F
13.	Rubidoux Blvd at 28th St	JV	TS	47.5	D	40.3	D
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	TS	20.1	C	24.8	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	UN	44.5	E	20.1	C
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	TS	30.5	C	33.7	C
17.	Rubidoux Blvd at 34th St	JV	TS	10.5	B	10.5	B
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	9.5	A	9.4	A
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	11.1	B	17.4	C
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	28.9	D	56.3	F
25.	Agua Mansa Rd at Holly Place	SB	CSS	13.5	B	20.4	C
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	12.2	B	13.2	B
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	10.1	B	14.2	B
28.	Agua Mansa Rd at R.A. Nelson	JV	TS	7.8	A	3.6	A
29.	Agua Mansa Rd at Market St	JV	TS	49.8	D	99.9	F
30.	Market St at Hall Ave	JV	CSS	28.2	D	54.2	F
31.	Market St at Rivera St	RIV	TS	19.6	B	22.6	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	10.8	B	16.5	B
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	19.3	B	31.2	C
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	21.3	C	12.2	B
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	18.5	B	19.8	B
36.	Riverside Ave at Slover Ave	RIA	TS	20.9	C	19.7	B
37.	Riverside Ave at Santa Ana Ave	RIA	TS	10.0	B	9.2	A
38.	Riverside Ave at Jurupa Ave	RIA	TS	7.5	A	7.0	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	8.7	A	8.4	A
40.	Rancho Ave at Agua Mansa Rd	COL	TS	9.7	A	16.4	B

Notes:

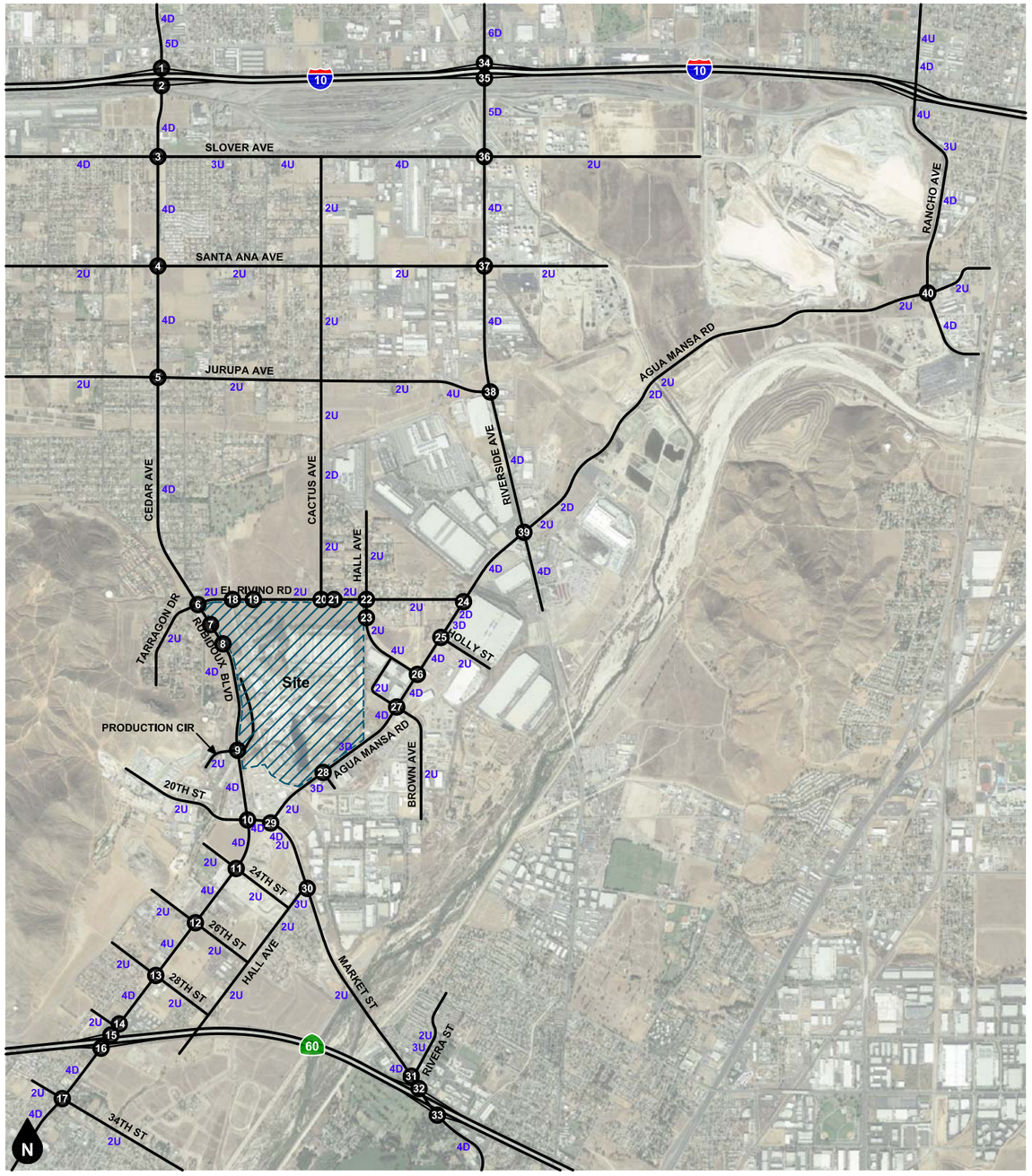
(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

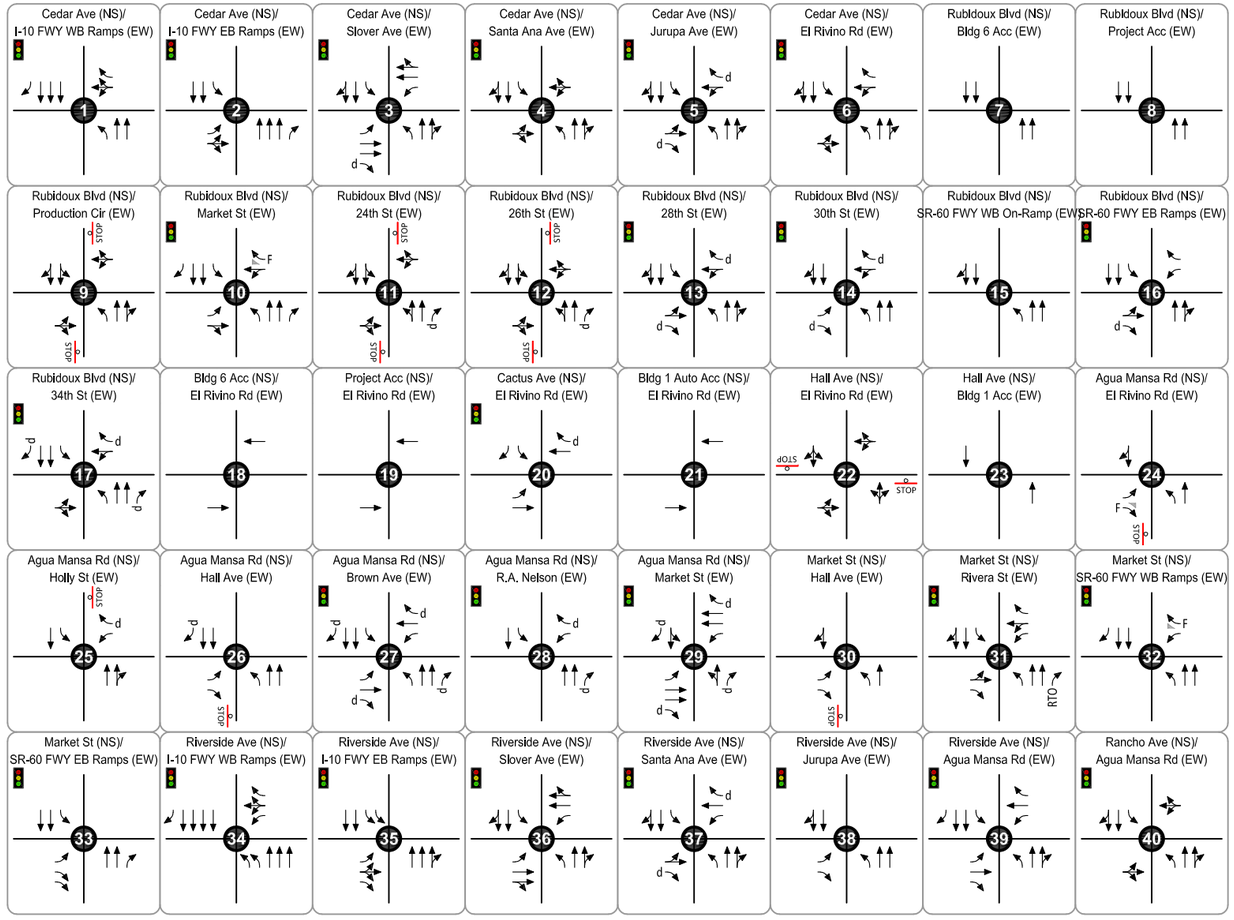
(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

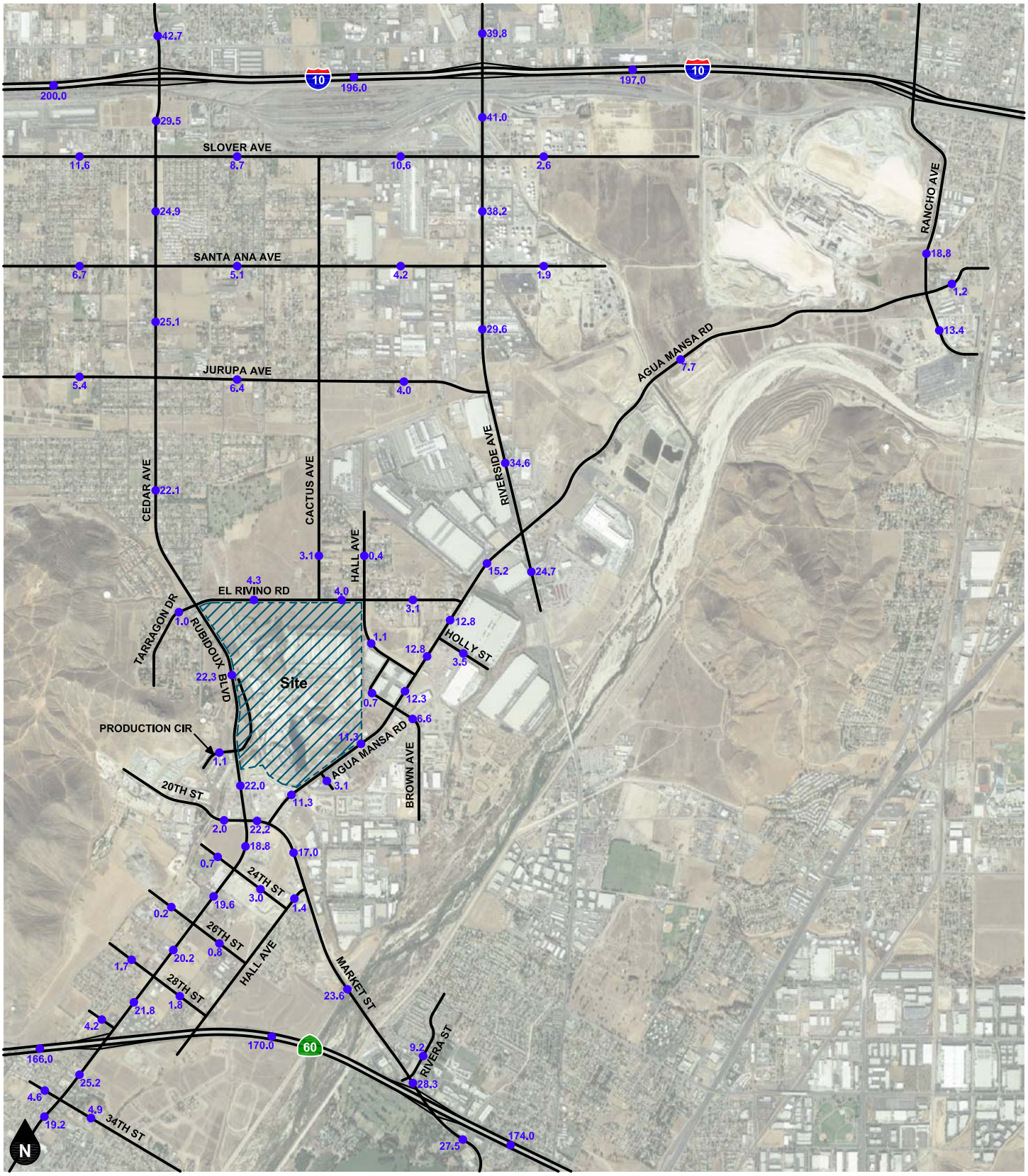




Legend

- Traffic Signal
- Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- RTO Right Turn Overlap
- F Free Right Turn Lane
- d De Facto Right Turn Lane

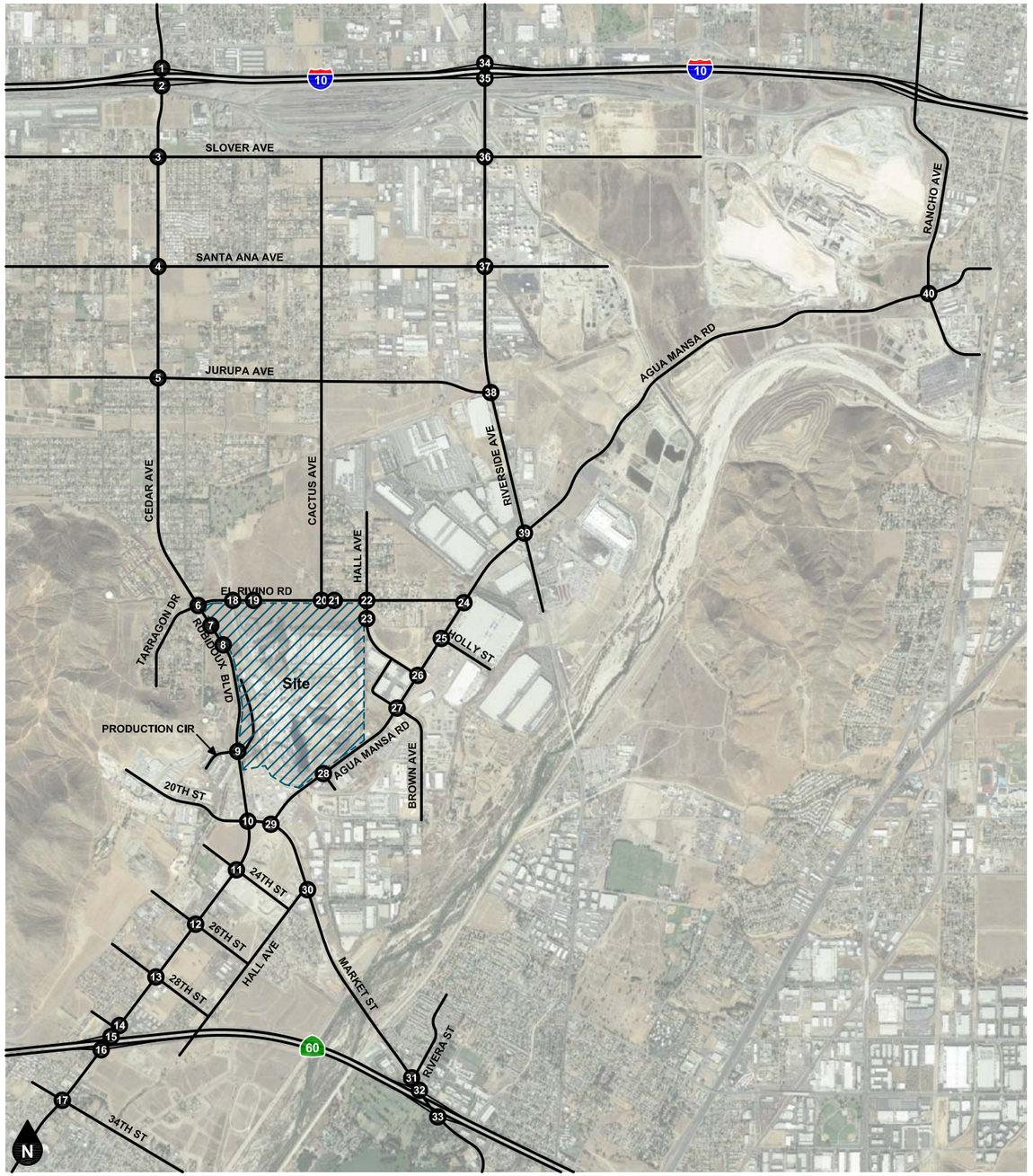
Figure 3
Existing Lane Geometry and Intersection Controls



Legend

●## Vehicles Per Day (1,000's)

Figure 4
Existing Average Daily Traffic Volumes



Legend
(#) Study Intersection

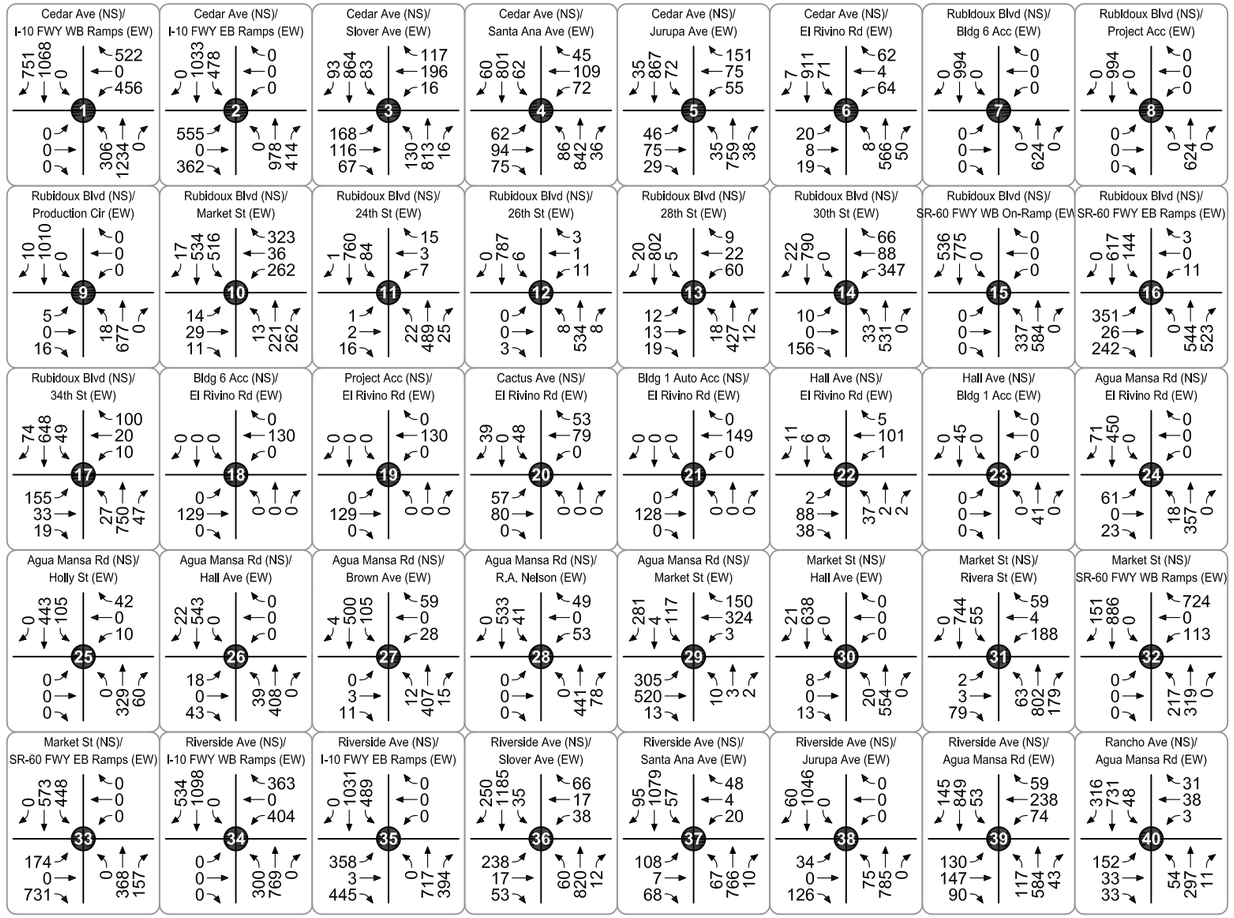
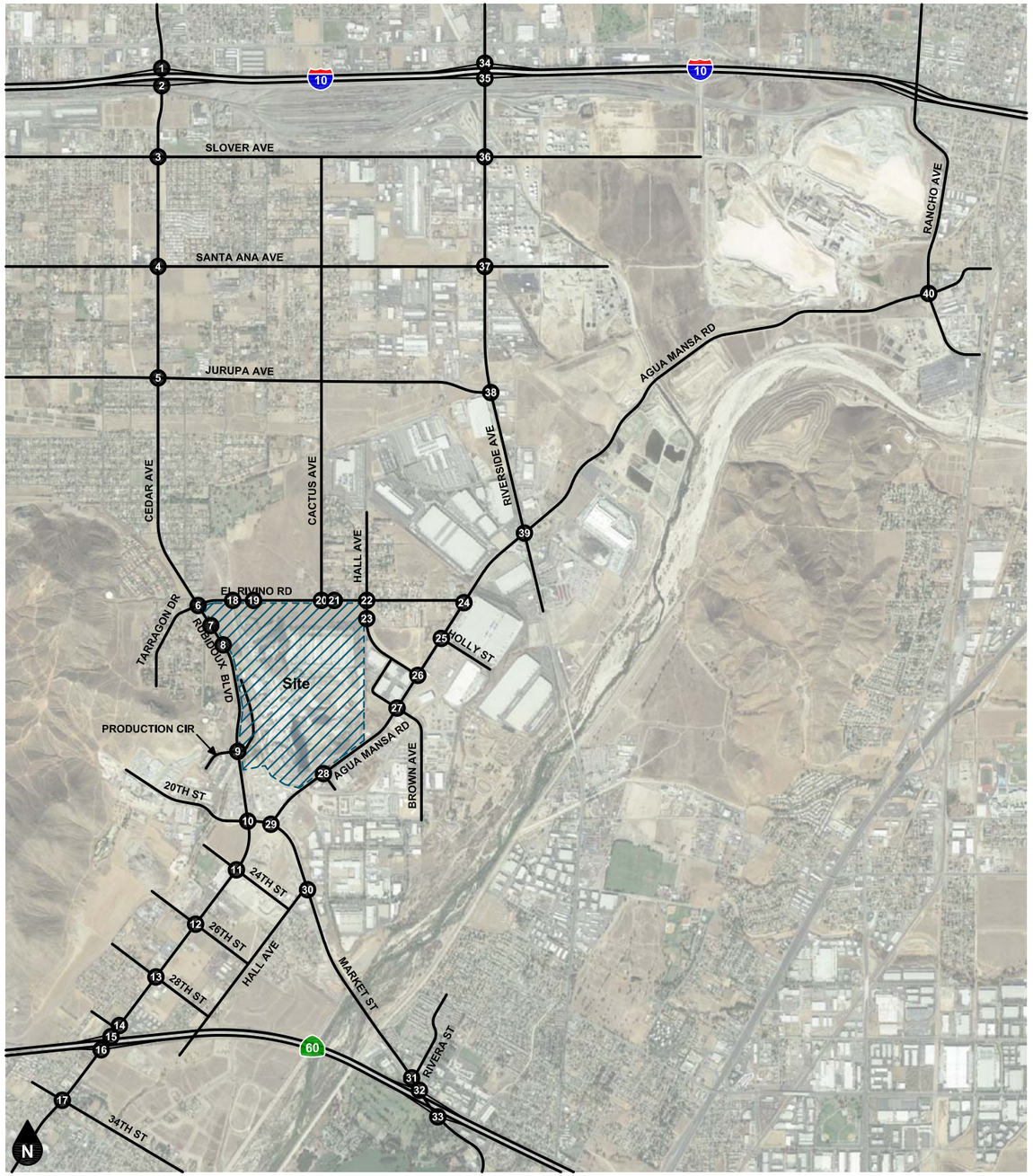


Figure 5
Existing AM Peak Hour Intersection Turning Movement Volumes



Legend
(#) Study Intersection

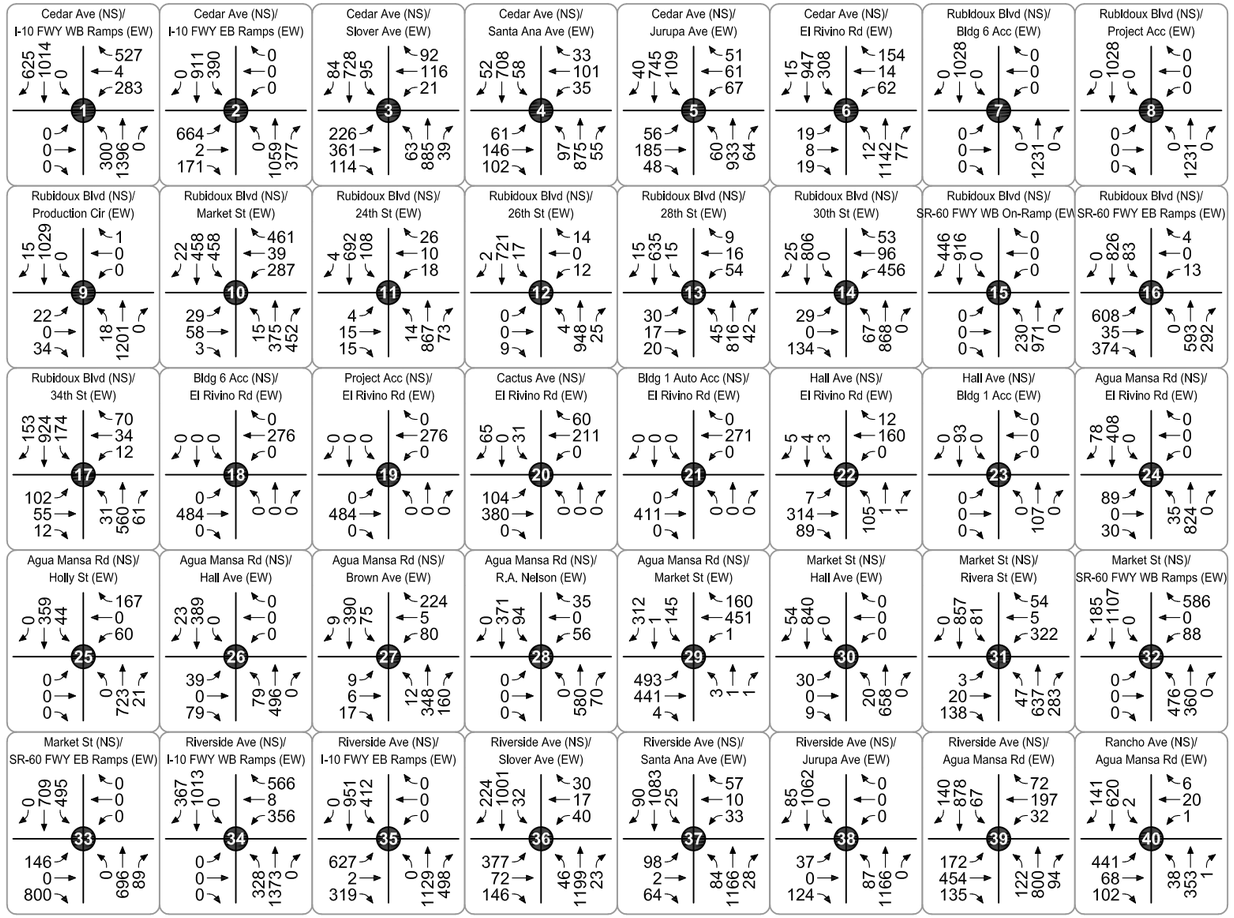


Figure 6
Existing PM Peak Hour Intersection Turning Movement Volumes

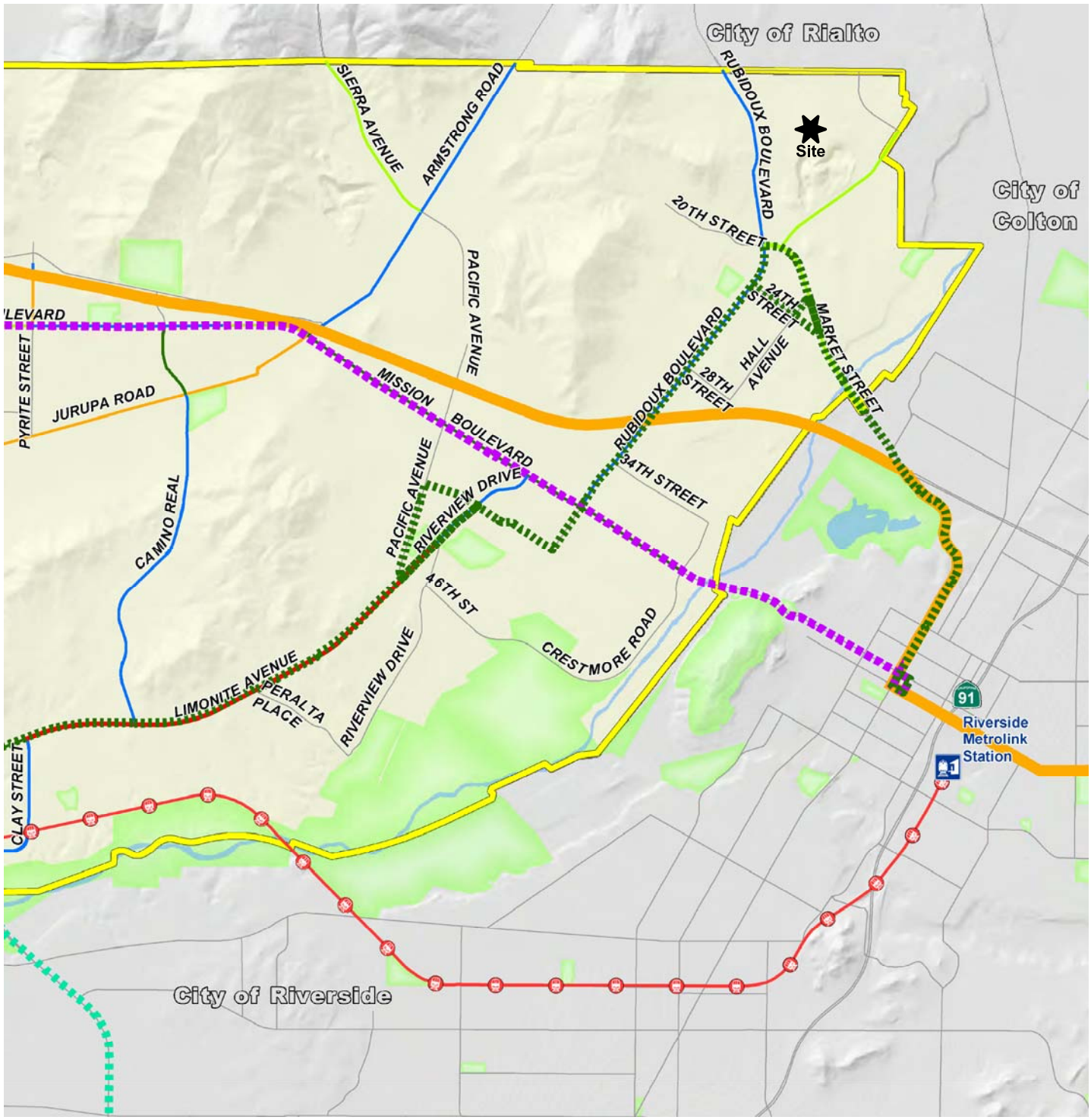


Figure 7
City of Jurupa Valley General Plan Circulation Element

Source: City of Jurupa Valley

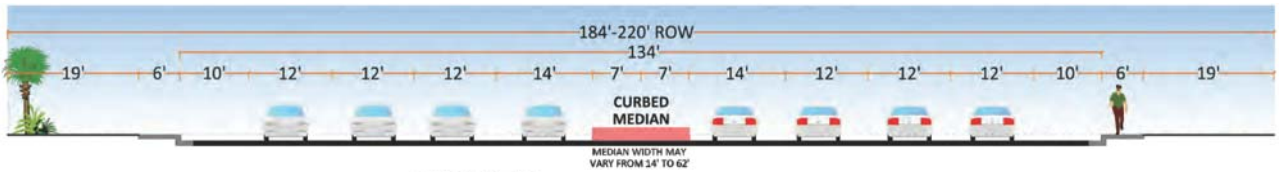


EXHIBIT 1: EXPRESSWAY- 6 TO 8 LANES

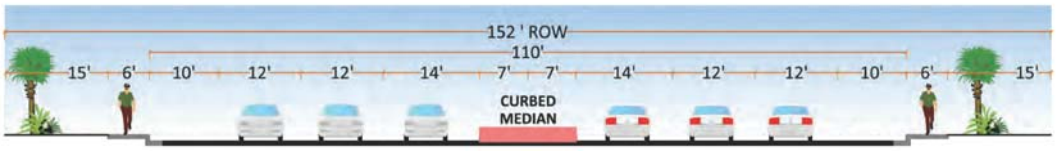


EXHIBIT 2: URBAN ARTERIAL

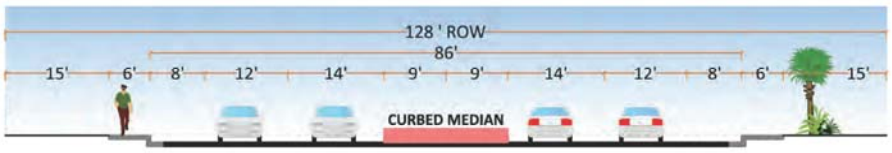


EXHIBIT 3: ARTERIAL

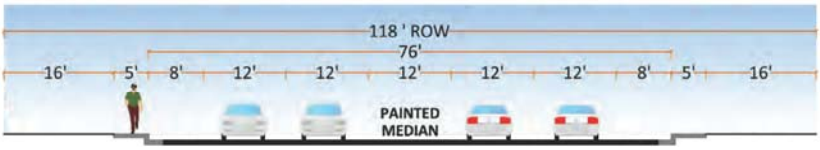


EXHIBIT 4: MAJOR - 4 LANES

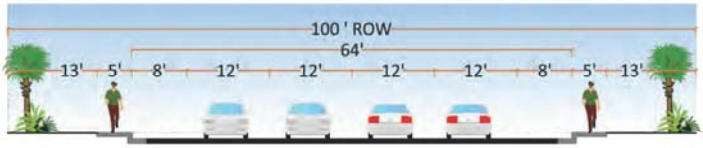


EXHIBIT 5: SECONDARY

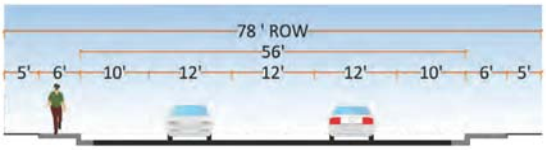


EXHIBIT 6: INDUSTRIAL COLLECTOR

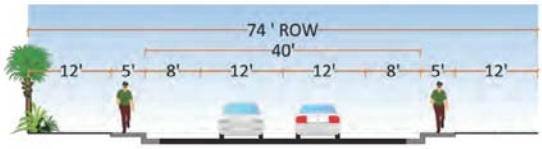
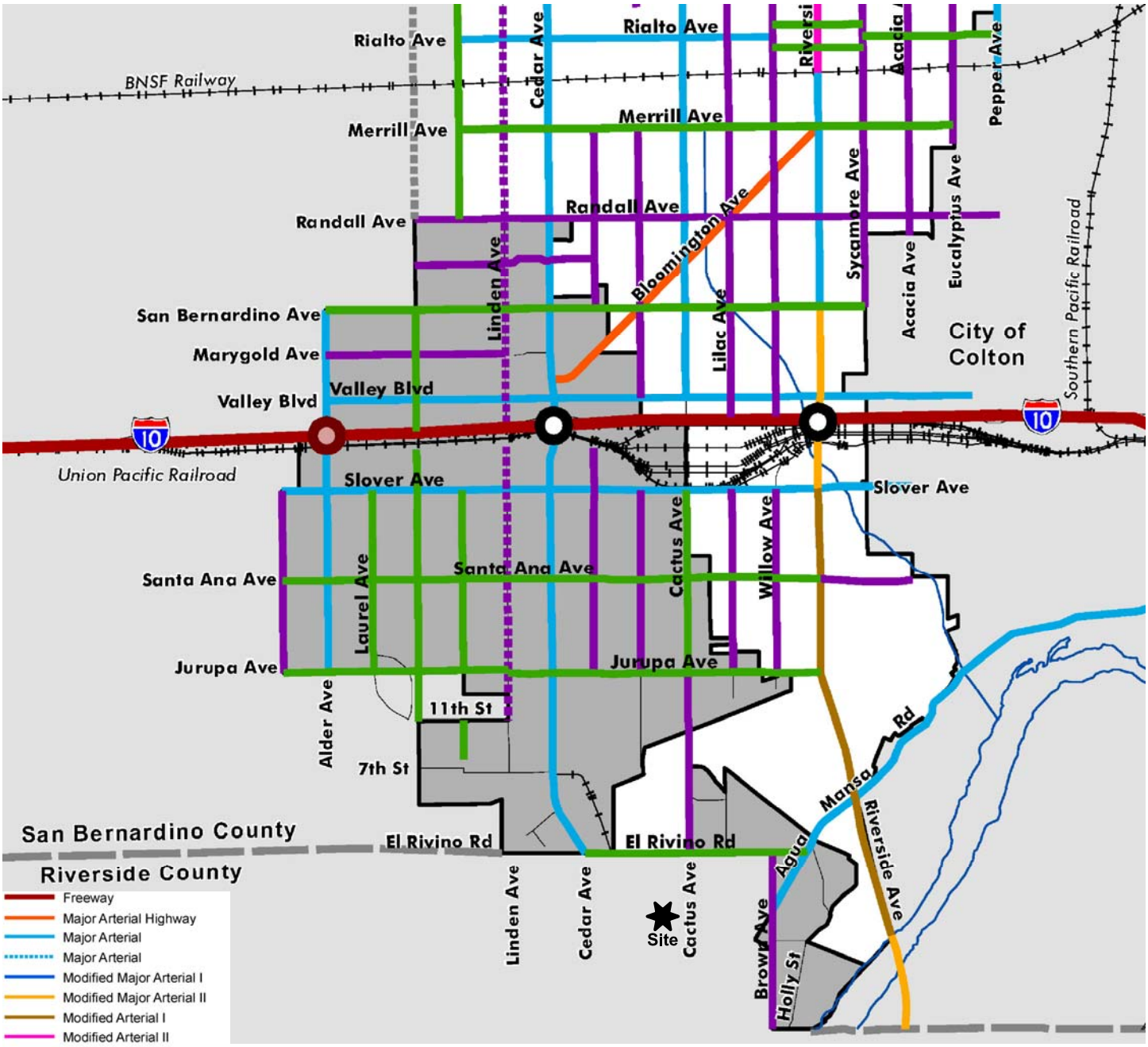


EXHIBIT 7: COLLECTOR

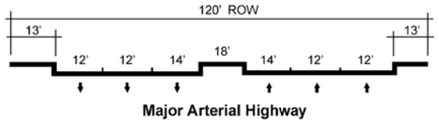
Figure 8
City of Jurupa Valley General Plan Roadway Cross-Sections

Source: City of Jurupa Valley



Source: City of Rialto

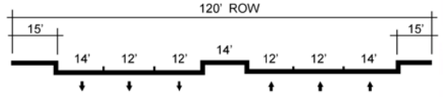
Figure 9
City of Rialto General Plan Circulation Element



Major Arterial Highway



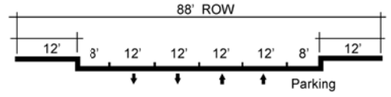
Major Arterial Highway



Modified Major Arterial II



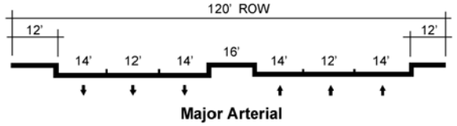
Modified Major Arterial II



Secondary Arterial



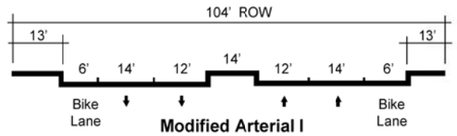
Secondary Arterial



Major Arterial



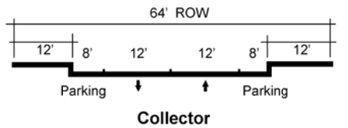
Major Arterial



Modified Arterial I



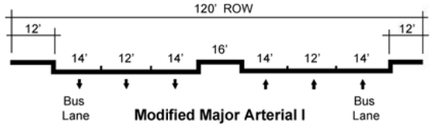
Modified Arterial I



Collector



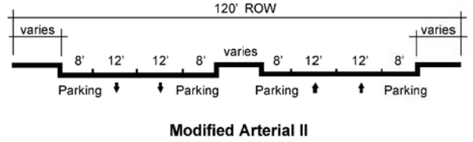
Collector Street



Modified Major Arterial I



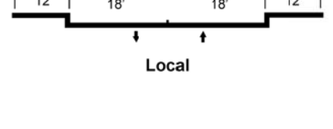
Modified Major Arterial I



Modified Arterial II



Modified Arterial II



Local



Local Street

Figure 10
City of Rialto General Plan Roadway Cross-Sections

Source: City of Rialto

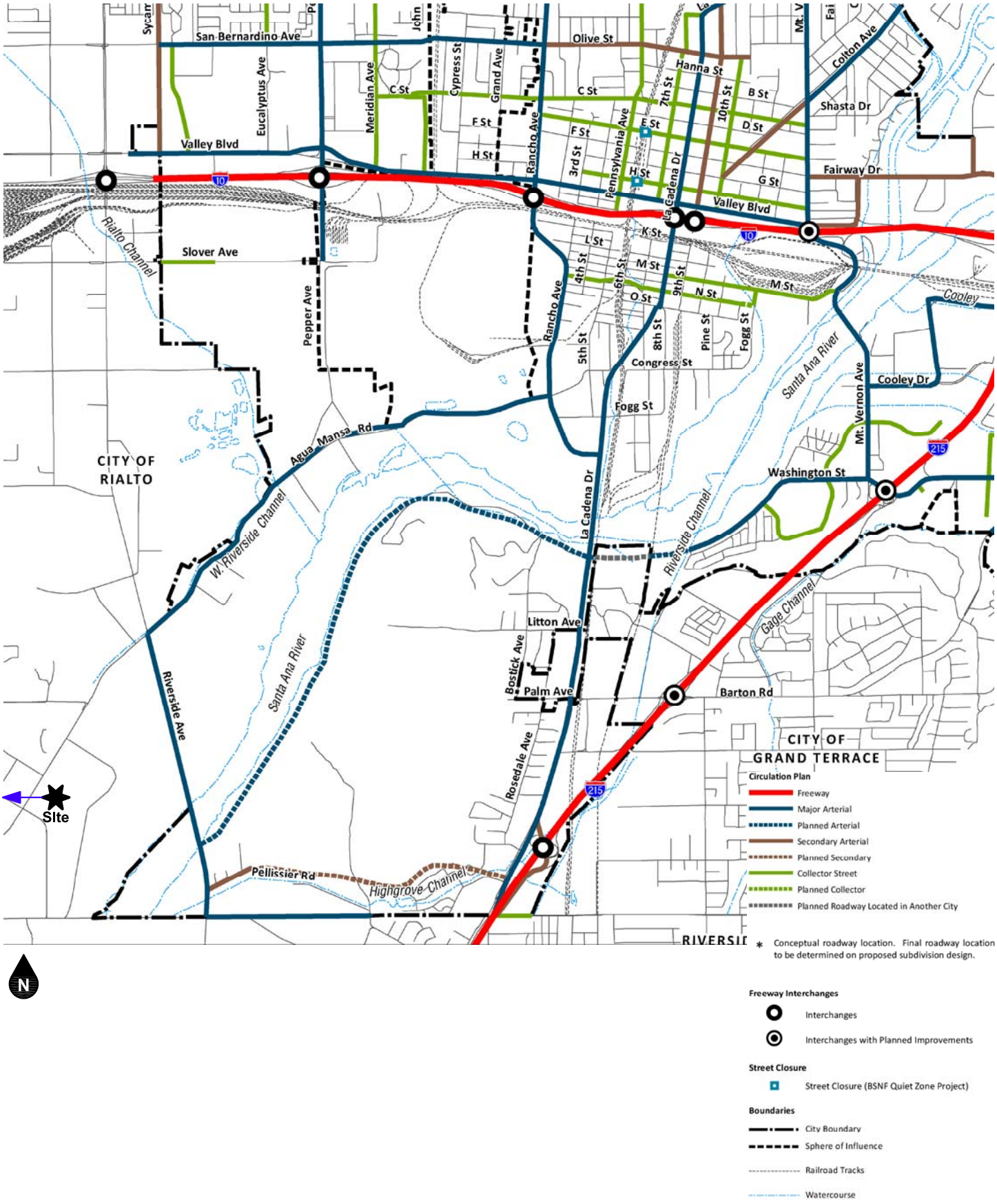
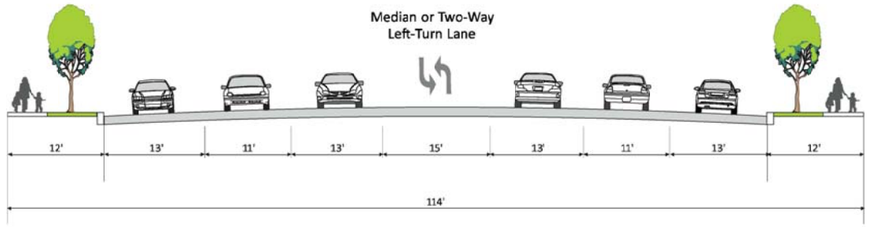


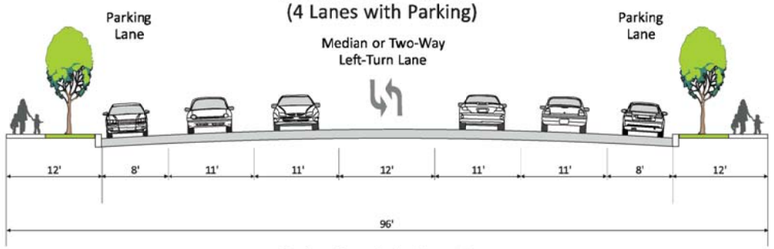
Figure 11
City of Colton General Plan Circulation Element

Source: City of Colton

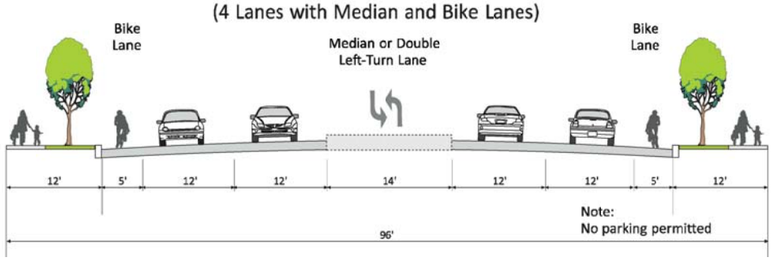
Major Arterial - Six-Lane



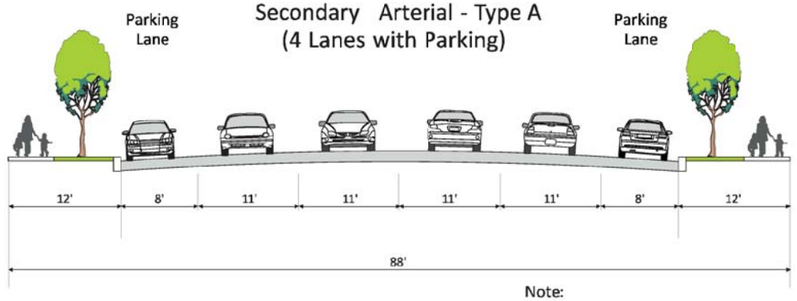
MajorArterial - Type A
(4 Lanes with Parking)



Major Arterial - Type B
(4 Lanes with Median and Bike Lanes)

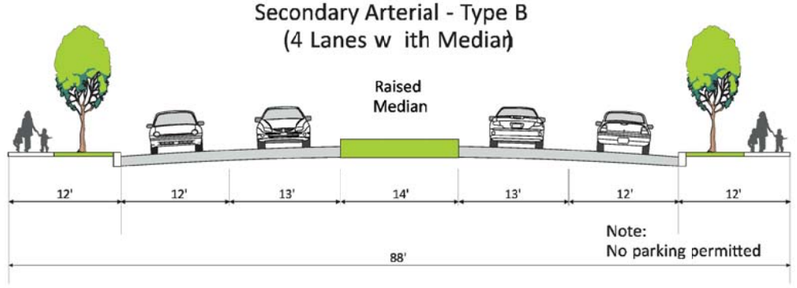


Secondary Arterial - Type A
(4 Lanes with Parking)

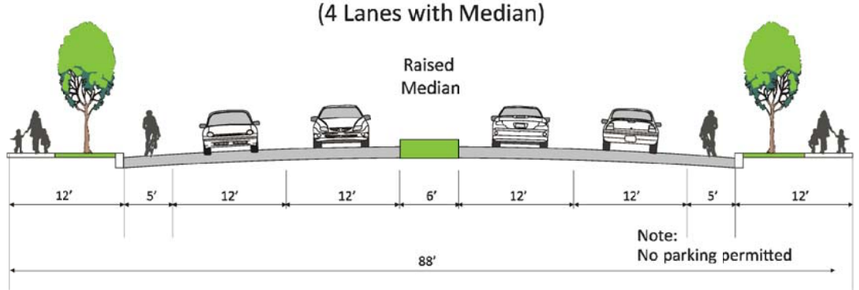


Note:
Parkways may be removed to allow
for leftturn lanes

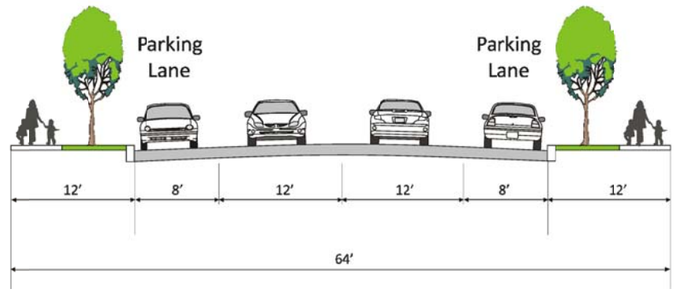
Secondary Arterial - Type B
(4 Lanes w ith Median)



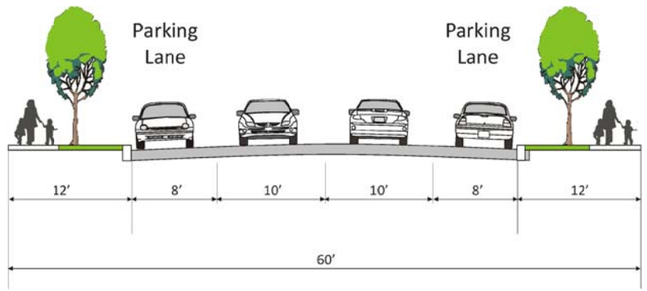
Secondary Arterial with Bike Lane - Type C
(4 Lanes with Median)



Collector Street
(2 Lanes with Parking)



Local Street
(2 Lanes with Parking)



Hillside Local Street
(2 Lanes)

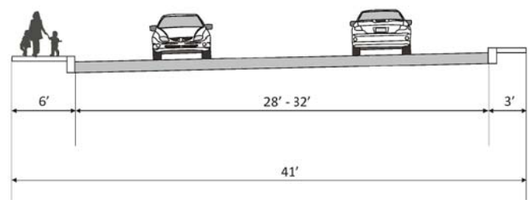


Figure 12
City of Colton General Plan Roadway Cross-Sections

Source: City of Colton

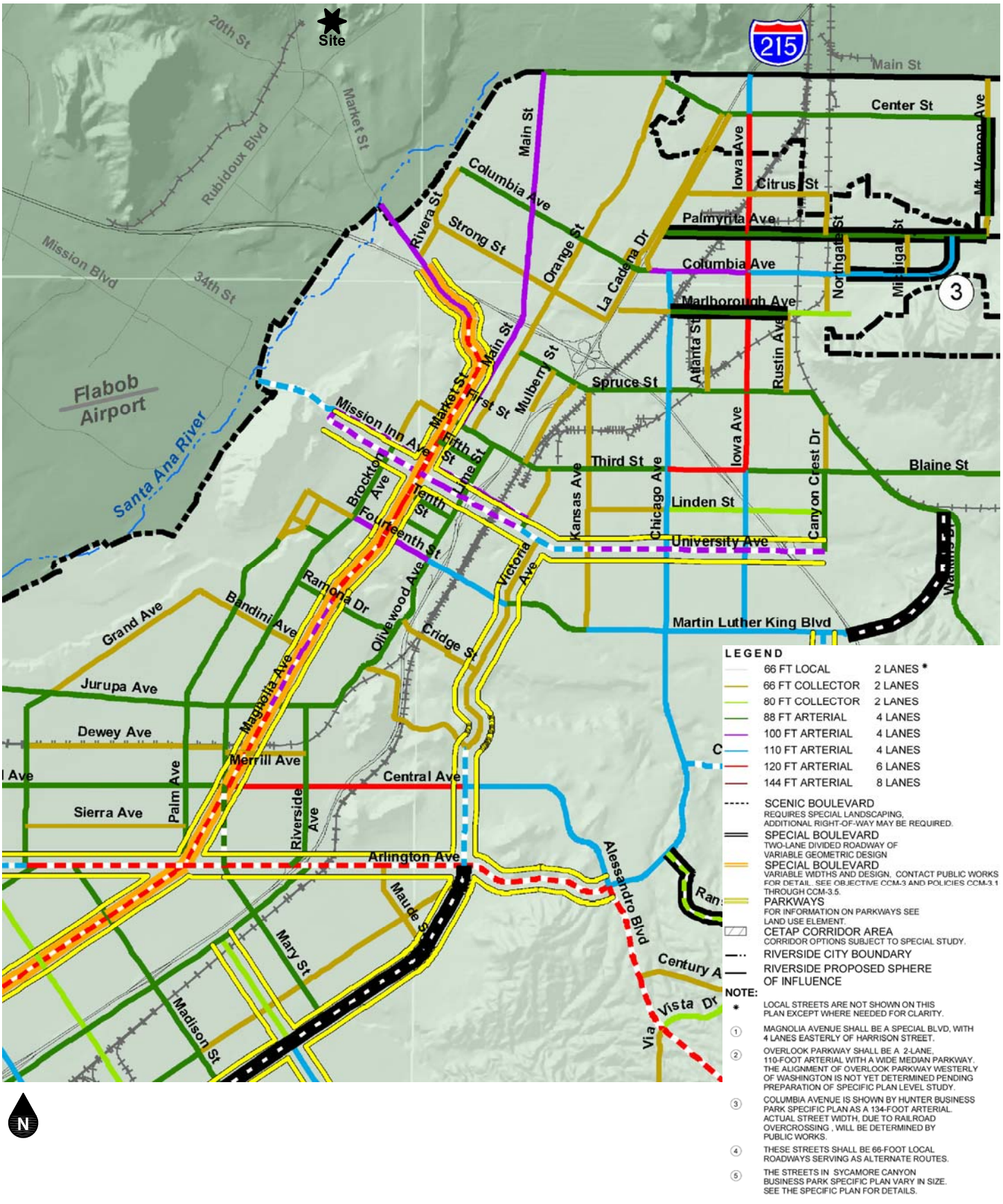
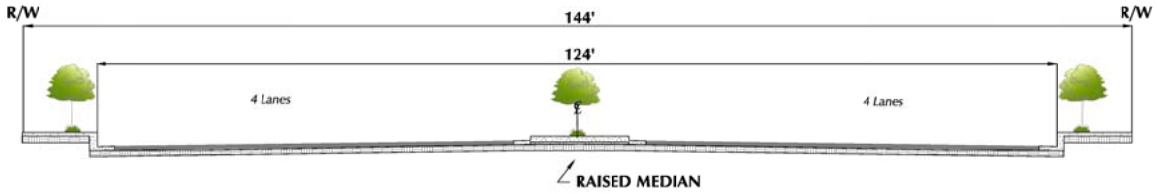
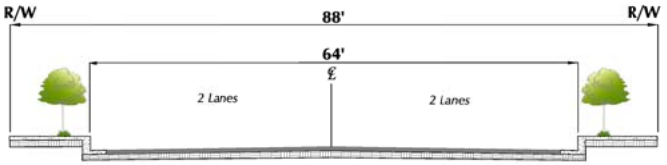


Figure 13
City of Riverside General Plan Circulation Element

Source: City of Riverside



144-FOOT ARTERIAL



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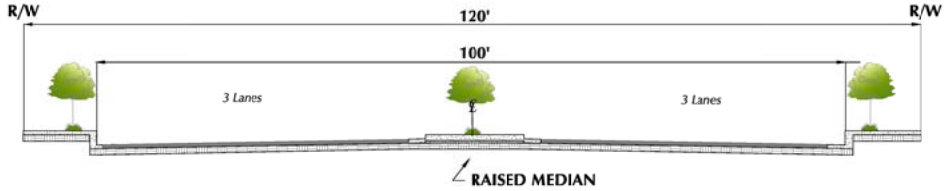
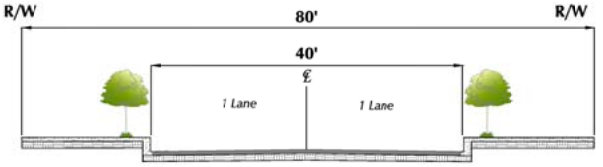
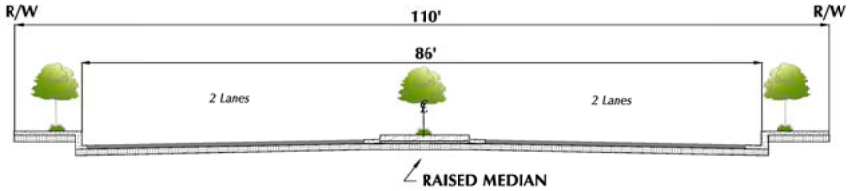


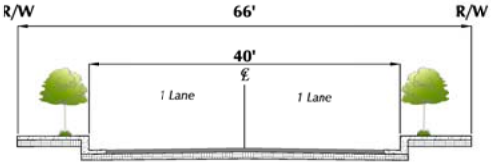
120-FOOT ARTERIAL



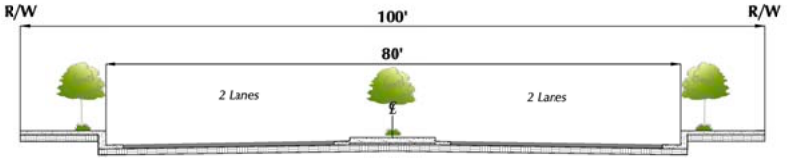
80-FOOT COLLECTOR



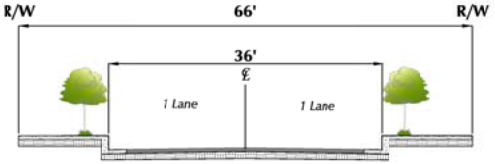
110-FOOT ARTERIAL



66-FOOT COLLECTOR



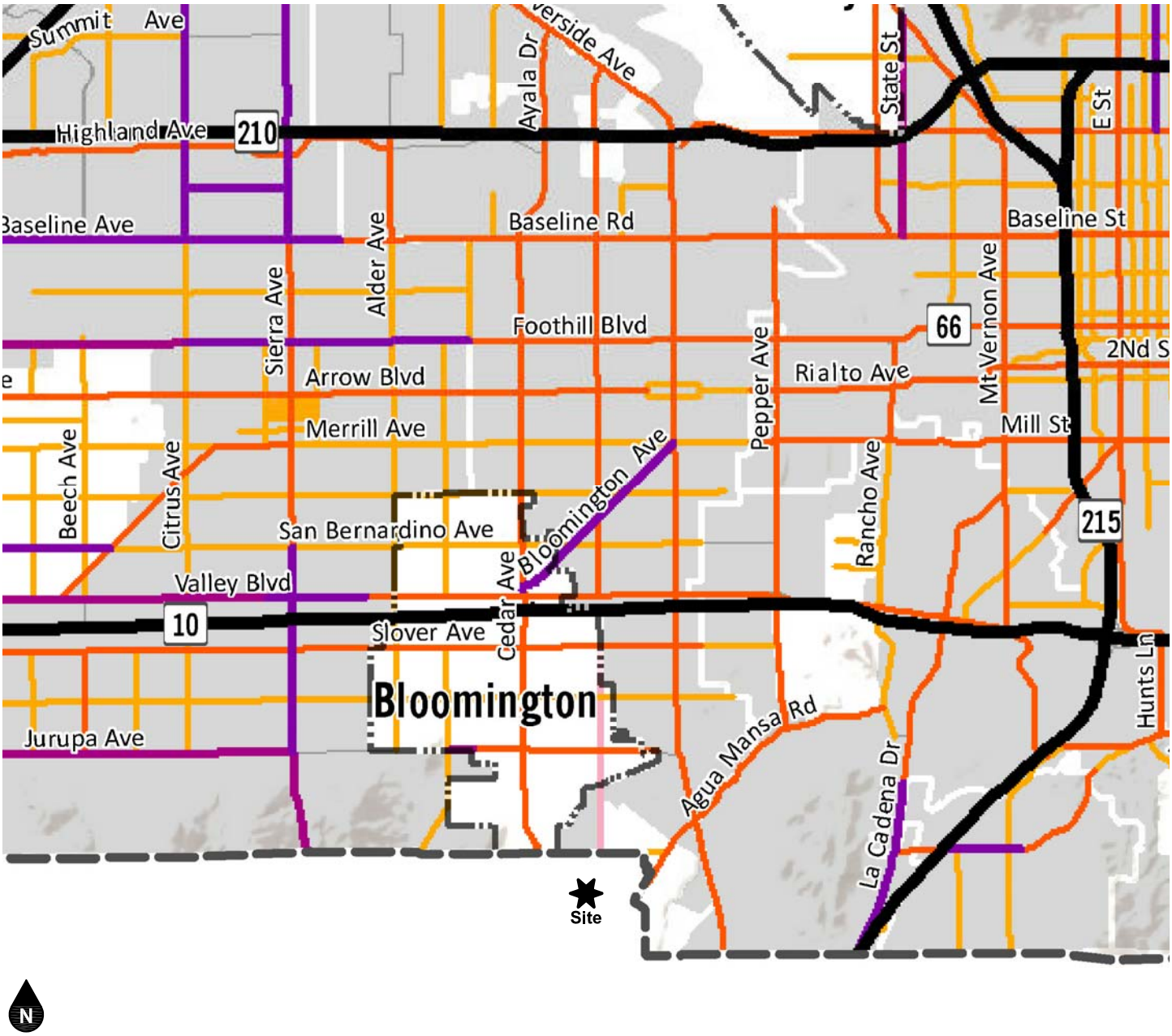
100-FOOT ARTERIAL



LOCAL STREET

Figure 14
City of Riverside General Plan Roadway Cross-Sections

Source: City of Riverside



County Region
Incorporated City/Town Limits
Community Plan Area
Major Roadway w/o Designation

Roadway Designation
Freeway
Major Divided Highway
Major Arterial Highway
Major Highway

Secondary Highway
Controlled/Limited Access Collector
Mountain Major Highway
Mountain Secondary Highway
State Highway (Special Standards or Conditions)

Figure 15
County of San Bernardino General Plan Circulation Element

Source: County of San Bernardino

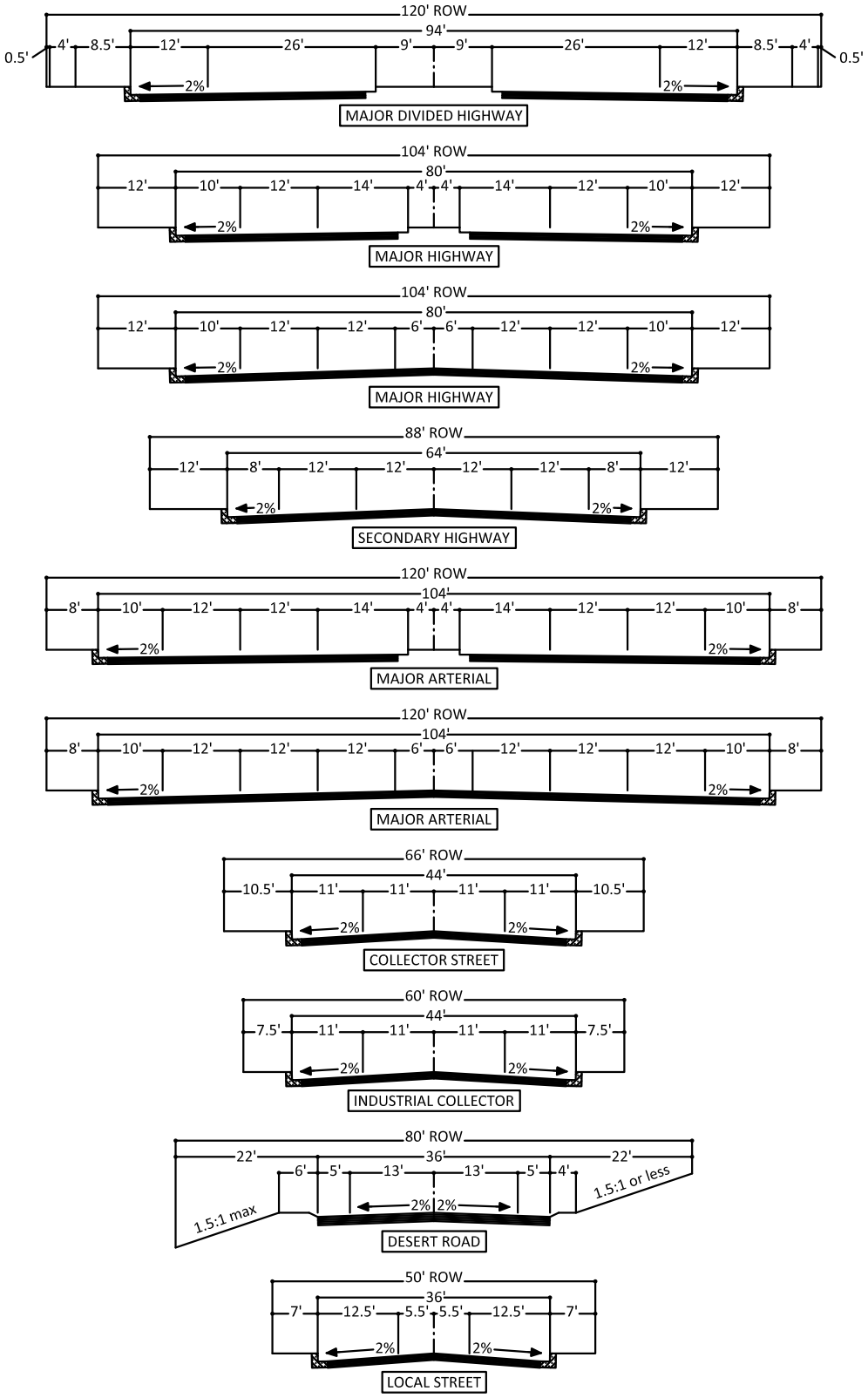


Figure 16
County of San Bernardino General Plan Roadway Cross-Sections

Source: County of San Bernardino

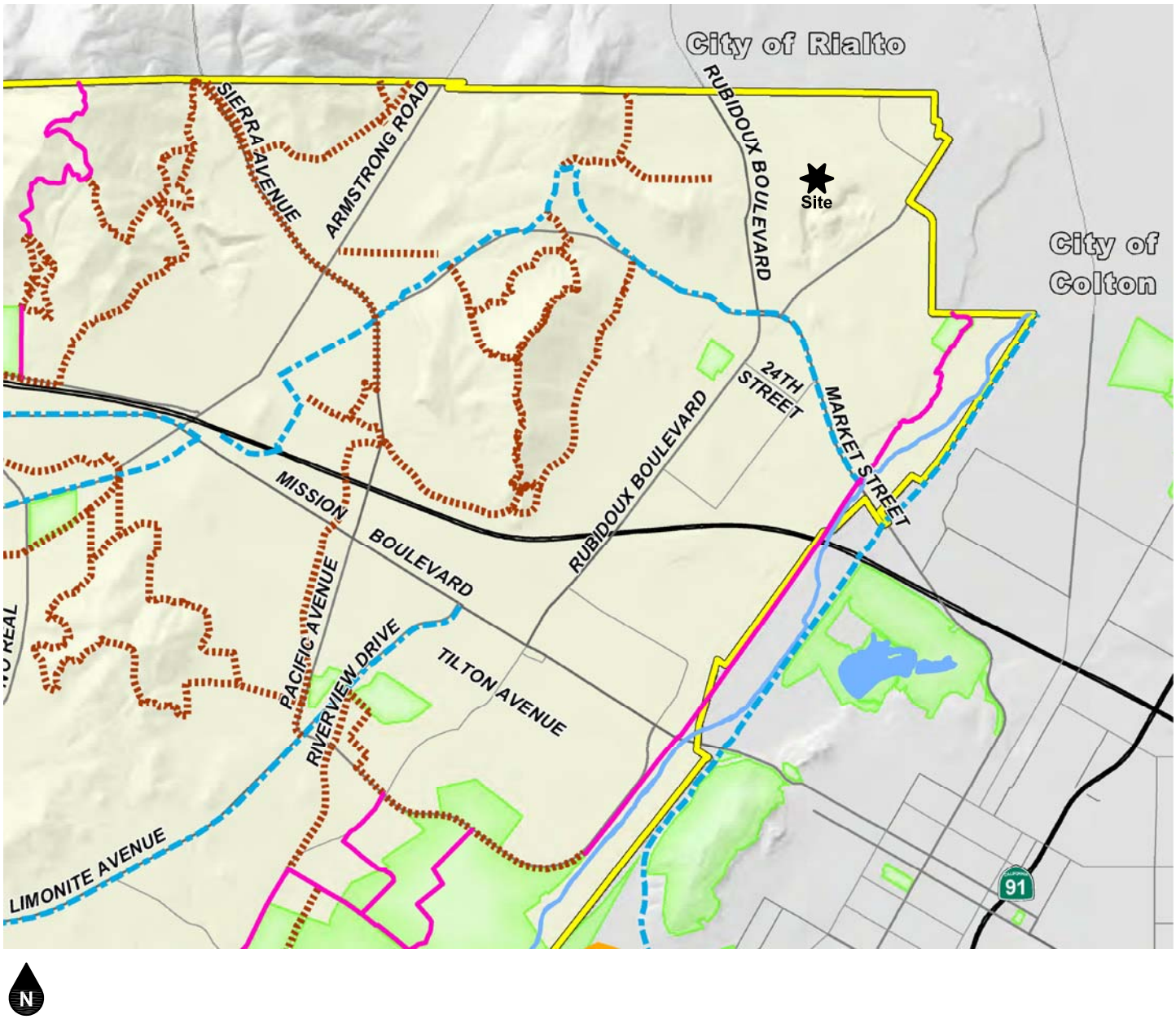
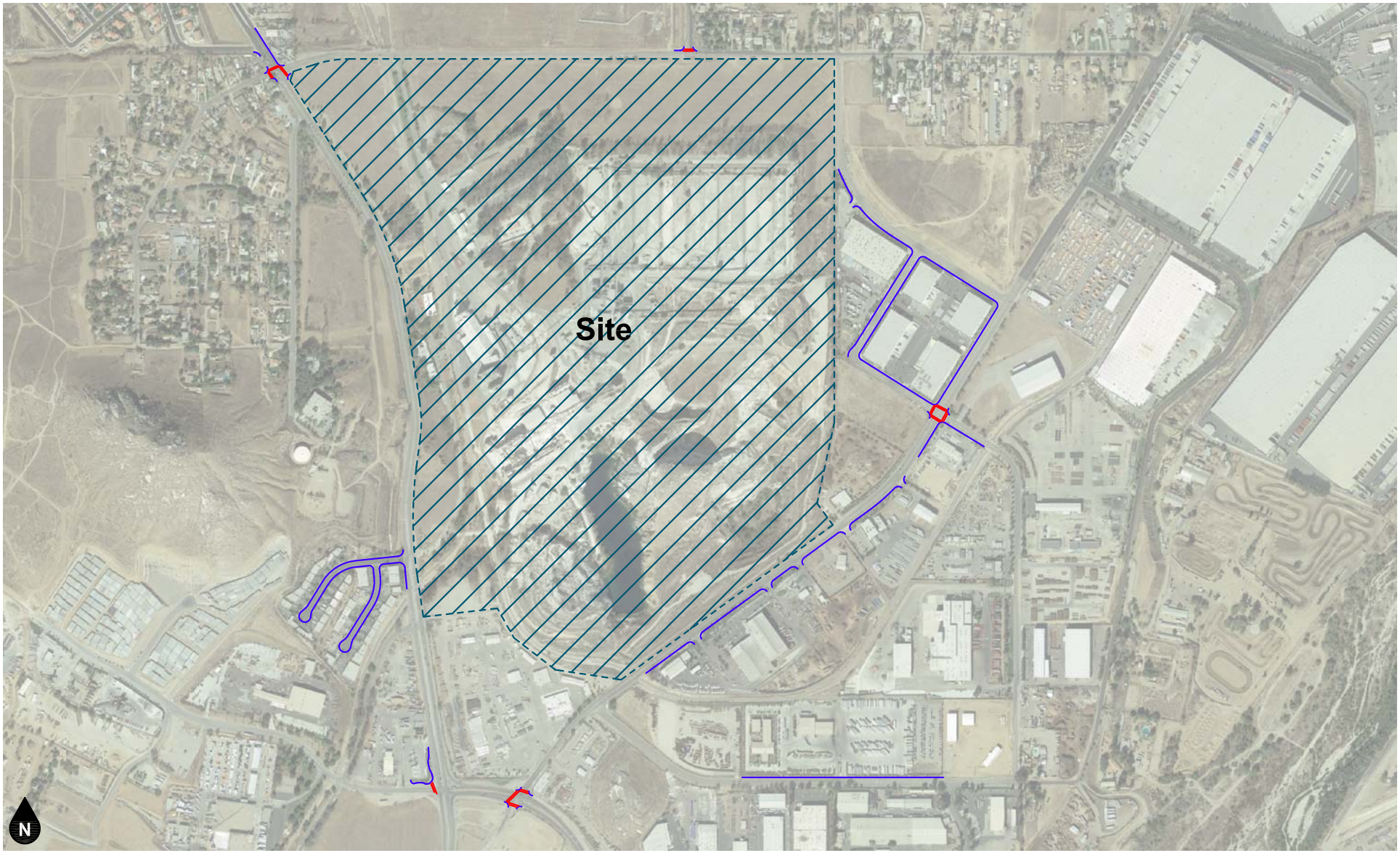


Figure 17
City of Jurupa Valley Trails and Bikeway System Map

Source: City of Jurupa Valley



Legend
Sidewalk
Cross Walk

Figure 18
Existing Pedestrian Facilities

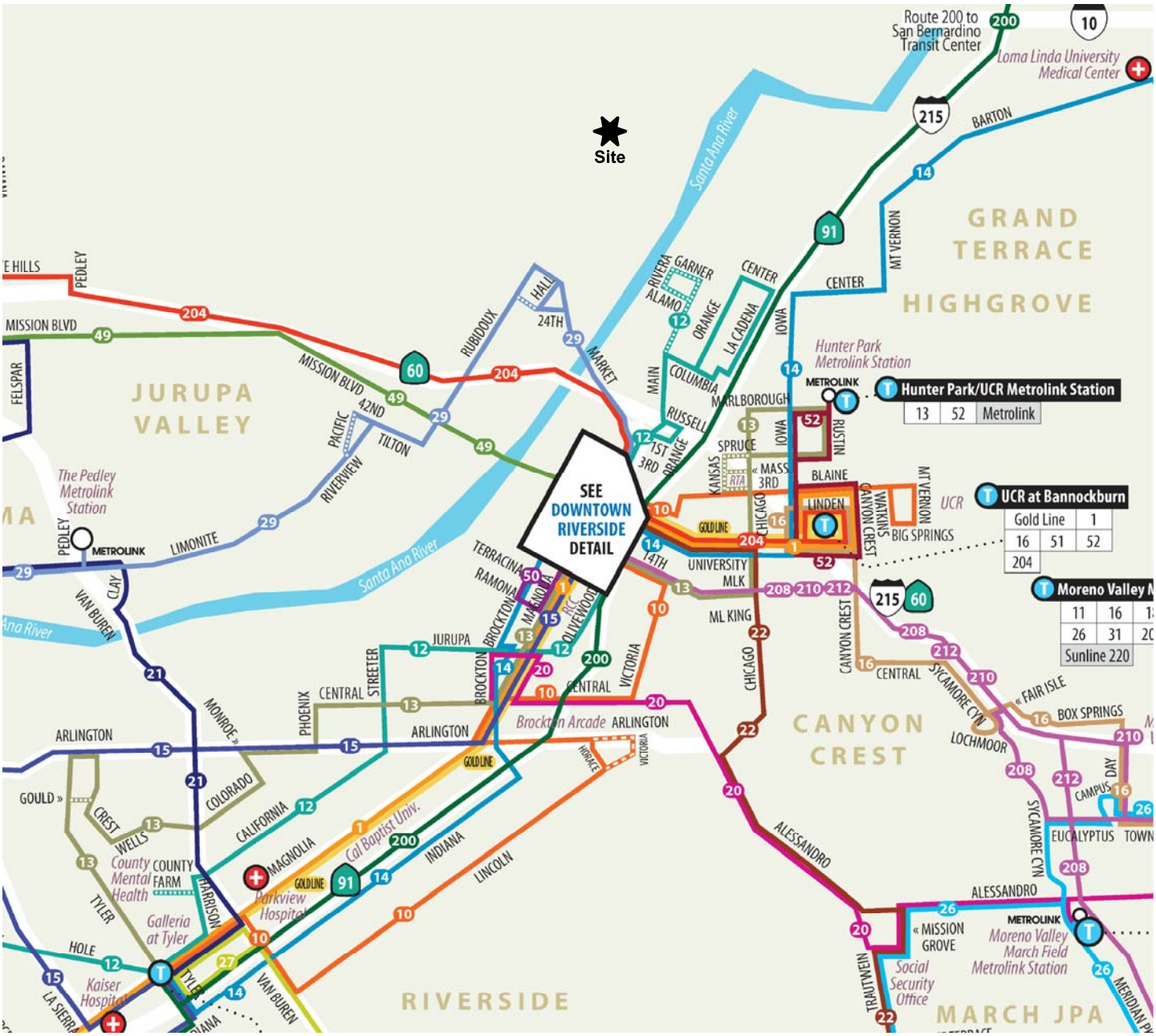


Figure 19
Riverside Transit Agency System Map

Source: Riverside Transit Agency

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT DESCRIPTION

The proposed Agua Mansa Commerce Park Specific Plan project is located east of Rubidoux Boulevard between El Rivino Road, the West Riverside Canal, and Hall Avenue in the City of Jurupa Valley. The project site is proposed to consist of five high-cube warehouse distribution center buildings totaling 4,216,000 square feet (comprised of 3,452,000 square foot building footprint with 764,000 square feet of mezzanine), an approximately 71.3 acre regional park, 200,000 square feet of light industrial (Alternative 1) or 170,000 square feet of light industrial and 25,000 square feet of commercial retail (Alternative 2), and 64,000 square feet of research and development (Cal Portland).

Project access for the industrial park is proposed to be provided to Rubidoux Boulevard, Hall Avenue, Brown Avenue, and El Rivino Road. Access for the regional park is proposed to be provided to El Rivino Road via an internal roadway located east of and adjacent to the railroad spur line. The project opening year is planned for 2020.

PROJECT TRIP GENERATION

Tables 4 to 10 show the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017 and the City of Fontana, Truck Trip Generation Study, August 2003. Trip generation rates were determined for daily trips, morning peak hour inbound and outbound trips, and evening peak hour inbound and outbound trips for the proposed land uses. The number of trips forecast to be generated by the proposed project are determined by multiplying the trip generation rates by the land use quantities. The passenger car equivalent factors have been obtained from the San Bernardino Associated Governments.

As shown in Table 10, the proposed project (Alternative 1) is forecast to generate a total of approximately 11,376 daily trips in passenger car equivalents, 746 passenger car equivalent trips of which will occur during the morning peak hour and 868 passenger car equivalent trips of which will occur during the evening peak hour.

As shown in Table 10, the proposed project (Alternative 2) is forecast to generate a total of approximately 13.176 daily trips in passenger car equivalents, 657 passenger car equivalent trips of which will occur during the morning peak hour and 874 passenger car equivalent trips of which will occur during the evening peak hour.

OTHER FACTORS AFFECTING TRIP GENERATION

It should be noted that for commercial retail land use, a portion of the trips would come from pass-by trips, trips that are currently on the roadway system. In order to analyze a "conservative" scenario in terms of the assignment of trips, the traffic volumes from the commercial retail portion of the project site have not been reduced as a result of pass-by trips.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figures 20 to 41 show the forecast directional distributions of the project generated trips. The project trip distributions are based upon RivTAM select zone traffic model runs and refined by City of Jurupa Valley Engineering Department staff. The trip distributions have been separated for cars and trucks for industrial land uses as these trips have different distributional patterns. For instance, car trips to/from industrial land

uses generally have more localized residential or commercial destination points. Whereas, truck trips are usually going to/from industrial land uses via the freeway network to more regional destination points which include other industrial land uses and ports.

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 42 for Alternative 1 and Figure 43 for Alternative 2. Morning and evening peak hour intersection turning movement volumes expected from the project for Alternative 1 are shown on Figures 44 and 45, respectively. Morning and evening peak hour intersection turning movement volumes expected from the project for Alternative 2 are shown on Figures 46 and 47, respectively.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project to provide project site access:

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane

- Construct southbound right turn lane
- Construct eastbound left turn lane
- Construct eastbound right turn lane

CONSTRUCTION TRAFFIC

Compared to the project trip generation, construction of the proposed project is expected to generate significantly less trips. The traffic impacts of construction activity will be minor and temporary. To further lessen the impact of construction traffic, the project will be required to comply with all standard conditions pertaining to construction including work hours, traffic control plan, haul route, access, oversized-vehicle transportation permit, site security, noise, vehicle emissions, and dust control. All construction related trips should be restricted to off-peak hours, whenever possible.

A construction work site traffic control plan shall be submitted to the City for review and approval prior to the start of any construction work. The plans shall show the location of any roadway, sidewalk, bike route, bus stop or driveway closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. Temporary traffic controls used around the construction area should adhere to the standards set forth in the California Manual of Uniform Traffic Control Devices (2014) and construction activities should adhere to applicable local ordinances.

Site development would require the use of haul trucks during site clearing, demolition, remediation, and excavation and the use of a variety of other construction vehicles throughout the construction work at the site. Transportation of heavy construction equipment and or materials, which requires the use of oversized vehicles, will require the appropriate transportation permit.

It is anticipated that during construction approximately 12,660 tons of demolition materials will be exported. This is composed of 3,000 tons of concrete and masonry material, 6,660 tons of scrap metal, and 3,000 tons of mixed demolition debris (wood, drywall, roofing, insulation, and glass). Up to 20,000 cubic yards of contaminated soil is also expected to be exported.

Table 4
Project Trip Generation Building 1[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	1,500.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			1,302	128	184	487	799	2,101
Morning Peak Hour								
Inbound			56	6	8	21	35	91
Outbound			19	2	3	7	12	31
Total			75	8	11	28	47	122
Evening Peak Hour								
Inbound			28	3	4	10	17	45
Outbound			65	6	9	24	39	104
Total			93	9	13	34	56	149
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			1,302	192	368	1,461	2,021	3,323
Morning Peak Hour								
Inbound			56	9	16	63	88	144
Outbound			19	3	6	21	30	49
Total			75	12	22	84	118	193
Evening Peak Hour								
Inbound			28	5	8	30	43	71
Outbound			65	9	18	72	99	164
Total			93	14	26	102	142	235

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

(2) TSF = Thousand Square Feet

(3) Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 5
Project Trip Generation Building 2[1]

Descriptor	Quantity	Units[2]	Type of Vehicle					Total
			Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	
Land Use: High Cube	1,330.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			1,154	113	163	432	708	1,862
Morning Peak Hour								
Inbound			49	5	7	18	30	79
Outbound			16	2	2	6	10	26
Total			65	7	9	24	40	105
Evening Peak Hour								
Inbound			25	2	3	9	14	39
Outbound			58	6	8	22	36	94
Total			83	8	11	31	50	133
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			1,154	170	326	1,296	1,792	2,946
Morning Peak Hour								
Inbound			49	8	14	54	76	125
Outbound			16	3	4	18	25	41
Total			65	11	18	72	101	166
Evening Peak Hour								
Inbound			25	3	6	27	36	61
Outbound			58	9	16	66	91	149
Total			83	12	22	93	127	210

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

(2) TSF = Thousand Square Feet

(3) Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 6
Project Trip Generation Building 3[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	690.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			599	59	84	224	367	966
Morning Peak Hour								
Inbound			26	3	4	10	17	43
Outbound			9	1	1	3	5	14
Total			35	4	5	13	22	57
Evening Peak Hour								
Inbound			13	1	2	5	8	21
Outbound			30	3	4	11	18	48
Total			43	4	6	16	26	69
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			599	89	168	672	929	1,528
Morning Peak Hour								
Inbound			26	5	8	30	43	69
Outbound			9	2	2	9	13	22
Total			35	7	10	39	56	91
Evening Peak Hour								
Inbound			13	2	4	15	21	34
Outbound			30	5	8	33	46	76
Total			43	7	12	48	67	110

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

(2) TSF = Thousand Square Feet

(3) Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 7
Project Trip Generation Building 4[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	465.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			404	40	57	151	248	652
Morning Peak Hour								
Inbound			17	2	2	6	10	27
Outbound			6	1	1	2	4	10
Total			23	3	3	8	14	37
Evening Peak Hour								
Inbound			9	1	1	3	5	14
Outbound			20	2	3	8	13	33
Total			29	3	4	11	18	47
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			404	60	114	453	627	1,031
Morning Peak Hour								
Inbound			17	3	4	18	25	42
Outbound			6	2	2	6	10	16
Total			23	5	6	24	35	58
Evening Peak Hour								
Inbound			9	2	2	9	13	22
Outbound			20	3	6	24	33	53
Total			29	5	8	33	46	75

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

(2) TSF = Thousand Square Feet

(3) Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 8
Project Trip Generation Building 5[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	231.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			201	20	28	75	123	324
Morning Peak Hour								
Inbound			9	1	1	3	5	14
Outbound			3	-	-	1	1	4
Total			12	1	1	4	6	18
Evening Peak Hour								
Inbound			4	-	1	2	3	7
Outbound			10	1	1	4	6	16
Total			14	1	2	6	9	23
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			201	30	56	225	311	512
Morning Peak Hour								
Inbound			9	2	2	9	13	22
Outbound			3	-	-	3	3	6
Total			12	2	2	12	16	28
Evening Peak Hour								
Inbound			4	-	2	6	8	12
Outbound			10	2	2	12	16	26
Total			14	2	4	18	24	38

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

(2) TSF = Thousand Square Feet

(3) Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 9
Project Trip Generation Building 6[1]

Descriptor	Quantity	Units[2]	Type of Vehicle					Total
			Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	
Land Use: Light Industrial	200.000	TSF	78.6%	8.0%	3.9%	9.5%	21.4%	100%
Trip Generation Rates in trips per TSF								
Daily			3.899	0.397	0.193	0.471	1.061	4.96
Morning Peak Hour			0.550	0.056	0.027	0.067	0.150	0.70
Evening Peak Hour			0.495	0.050	0.025	0.060	0.135	0.63
Trip Generation in Vehicles								
Daily			780	79	39	94	212	992
Morning Peak Hour								
Inbound			97	10	5	12	27	124
Outbound			13	1	1	2	4	17
Total			110	11	6	14	31	141
Evening Peak Hour								
Inbound			13	1	1	2	4	17
Outbound			86	9	4	10	23	109
Total			99	10	5	12	27	126
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			780	119	78	282	479	1,259
Morning Peak Hour								
Inbound			97	15	10	36	61	158
Outbound			13	2	2	6	10	23
Total			110	17	12	42	71	181
Evening Peak Hour								
Inbound			13	2	2	6	10	23
Outbound			86	14	8	30	52	138
Total			99	16	10	36	62	161

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 110 and City of Fontana, Truck Trip Generation Study, August 2003.

(2) TSF = Thousand Square Feet

(3) Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 10
Total Project Trip Generation[1]

Alternative 1										
				Peak Hour						
				Morning			Evening			
Descriptor	Land Use	Quantity	Units[2]	Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
Trip Generation Rates	Research and Development[3]	64.000	TSF	0.31	0.11	0.42	0.07	0.42	0.49	11.26
	Regional Park[4]	71.3	AC	0.01	0.01	0.02	0.06	0.05	0.11	0.78
Trips Generated	Building 1 - Cars	1,500.000	TSF	56	19	75	28	65	93	1,302
	Building 1 - Trucks	1,500.000	TSF	88	30	118	43	99	142	2,021
	Building 2 - Cars	1,330.000	TSF	49	16	65	25	58	83	1,154
	Building 2 - Trucks	1,330.000	TSF	76	25	101	36	91	127	1,792
	Building 3 - Cars	690.000	TSF	26	9	35	13	30	43	599
	Building 3 - Trucks	690.000	TSF	43	13	56	21	46	67	929
	Building 4 - Cars	465.000	TSF	17	6	23	9	20	29	404
	Building 4 - Trucks	465.000	TSF	25	10	35	13	33	46	627
	Building 5 - Cars	231.000	TSF	9	3	12	4	10	14	201
	Building 5- Trucks	231.000	TSF	13	3	16	8	16	24	311
	Building 6 - Cars	200.000	TSF	97	13	110	13	86	99	780
	Building 6 - Trucks	200.000	TSF	61	10	71	10	52	62	479
	Research and Development	64.000	TSF	20	7	27	4	27	31	721
	Regional Park	71.3	AC	1	1	2	4	4	8	56
	Total			581	165	746	231	637	868	11,376

Alternative 2										
				Peak Hour						
				Morning			Evening			
Land Use	Land Use	Quantity	Units[2]	Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
Trip Generation Rates	Business Park[5]	170.000	TSF	0.24	0.16	0.40	0.19	0.23	0.42	12.44
	Commercial Retail[6]	25.000	TSF	0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Research and Development[3]	64.000	TSF	0.31	0.11	0.42	0.07	0.42	0.49	11.26
	Regional Park[4]	71.3	AC	0.01	0.01	0.02	0.06	0.05	0.11	0.78
Trips Generated	Building 1 - Cars	1,500.000	TSF	56	19	75	28	65	93	1,302
	Building 1 - Trucks	1,500.000	TSF	88	30	118	43	99	142	2,021
	Building 2 - Cars	1,330.000	TSF	49	16	65	25	58	83	1,154
	Building 2 - Trucks	1,330.000	TSF	76	25	101	36	91	127	1,792
	Building 3 - Cars	690.000	TSF	26	9	35	13	30	43	599
	Building 3 - Trucks	690.000	TSF	43	13	56	21	46	67	929
	Building 4 - Cars	465.000	TSF	17	6	23	9	20	29	404
	Building 4 - Trucks	465.000	TSF	25	10	35	13	33	46	627
	Building 5 - Cars	231.000	TSF	9	3	12	4	10	14	201
	Building 5- Trucks	231.000	TSF	13	3	16	8	16	24	311
	Business Park	170.000	TSF	41	27	68	32	39	71	2,115
	Commercial Retail	25.000	TSF	15	9	24	46	50	96	944
	Research and Development	64.000	TSF	20	7	27	4	27	31	721
	Regional Park	71.3	AC	1	1	2	4	4	8	56
	Total			479	178	657	286	588	874	13,176

Notes:

(1) See Tables 4-9.

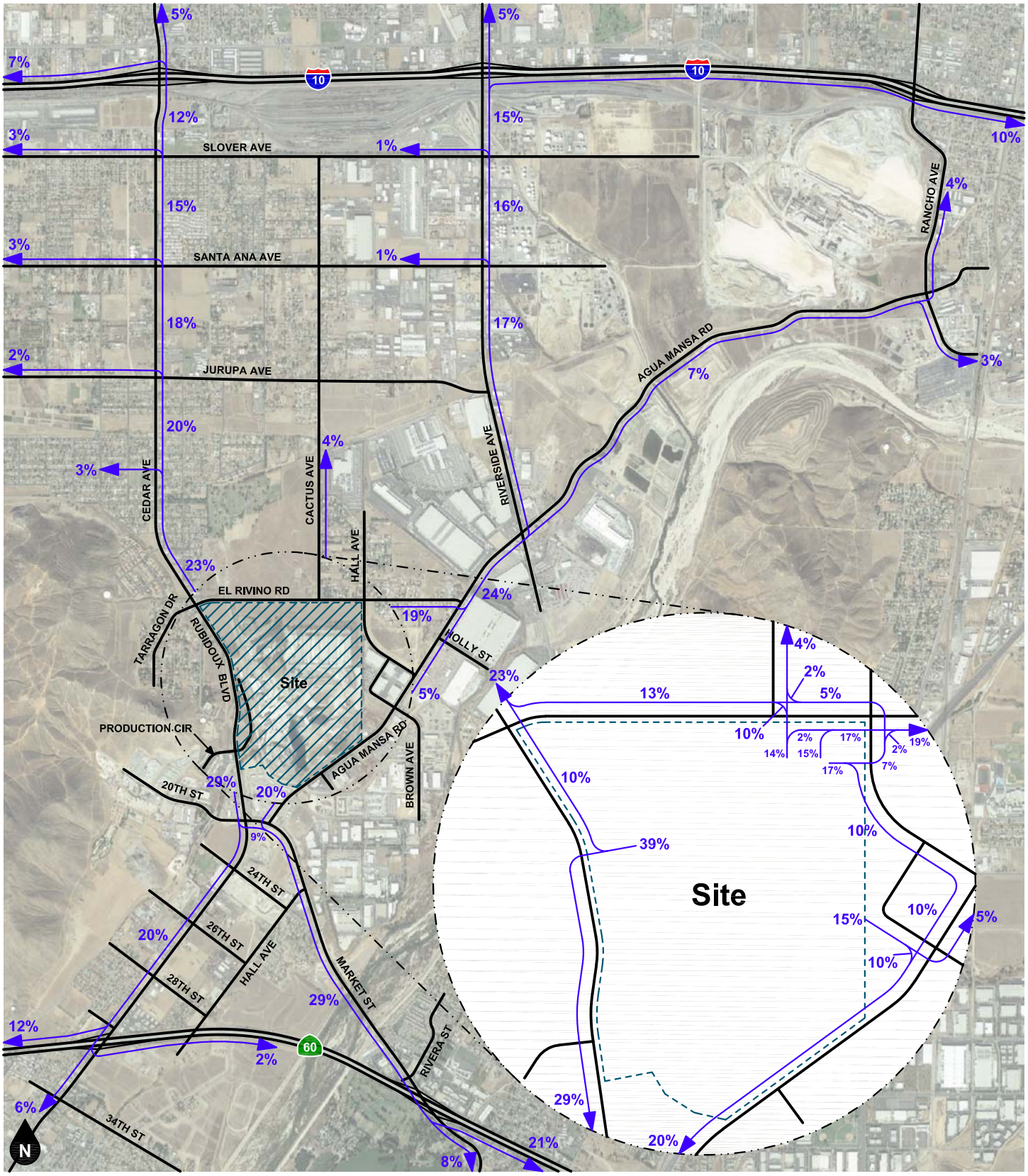
(2) TSF = Thousand Square Feet; AC = Acres

(3) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 760.

(4) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 417.

(5) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 770.

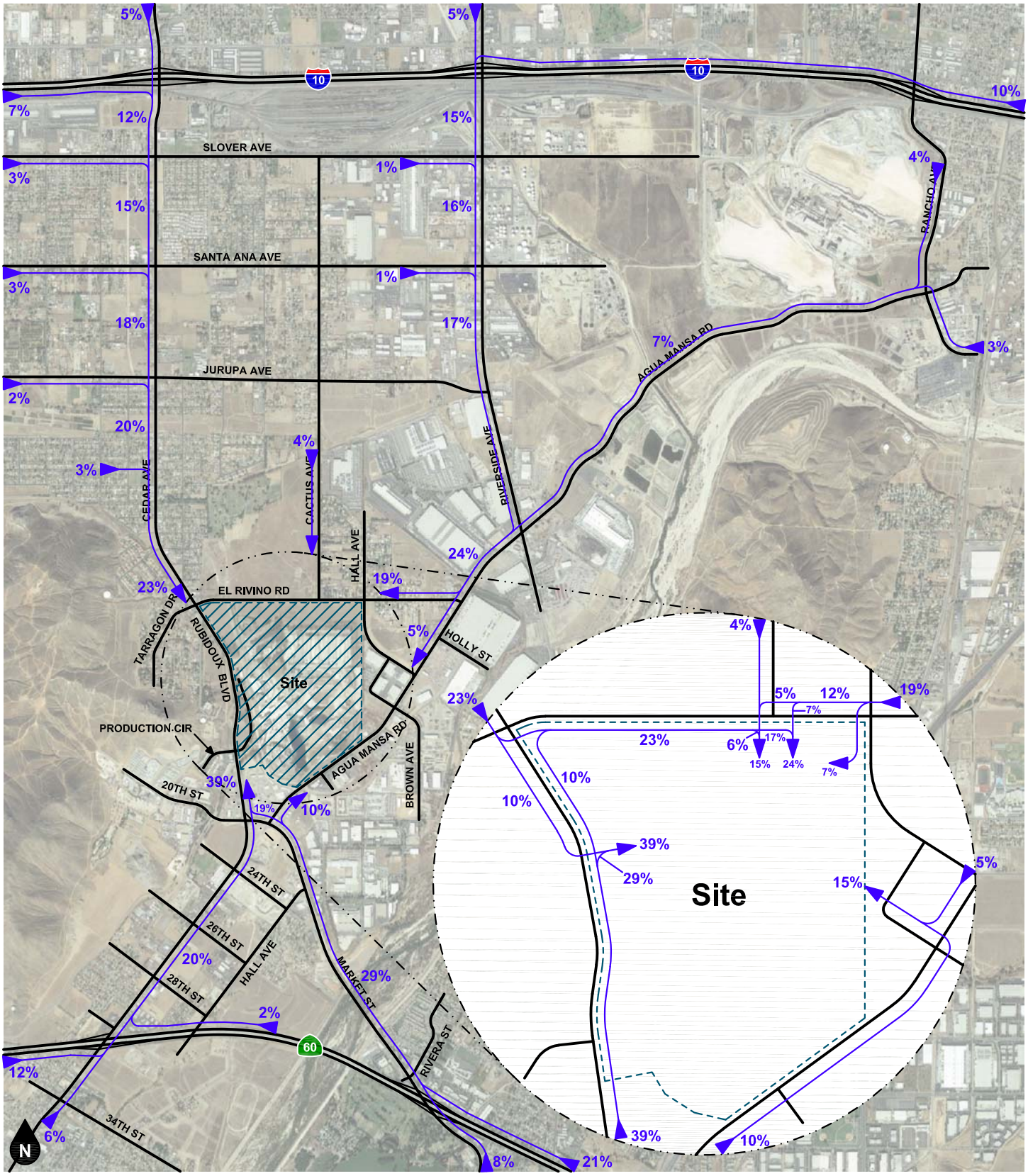
(6) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 820.



Legend

10% Percent From Project

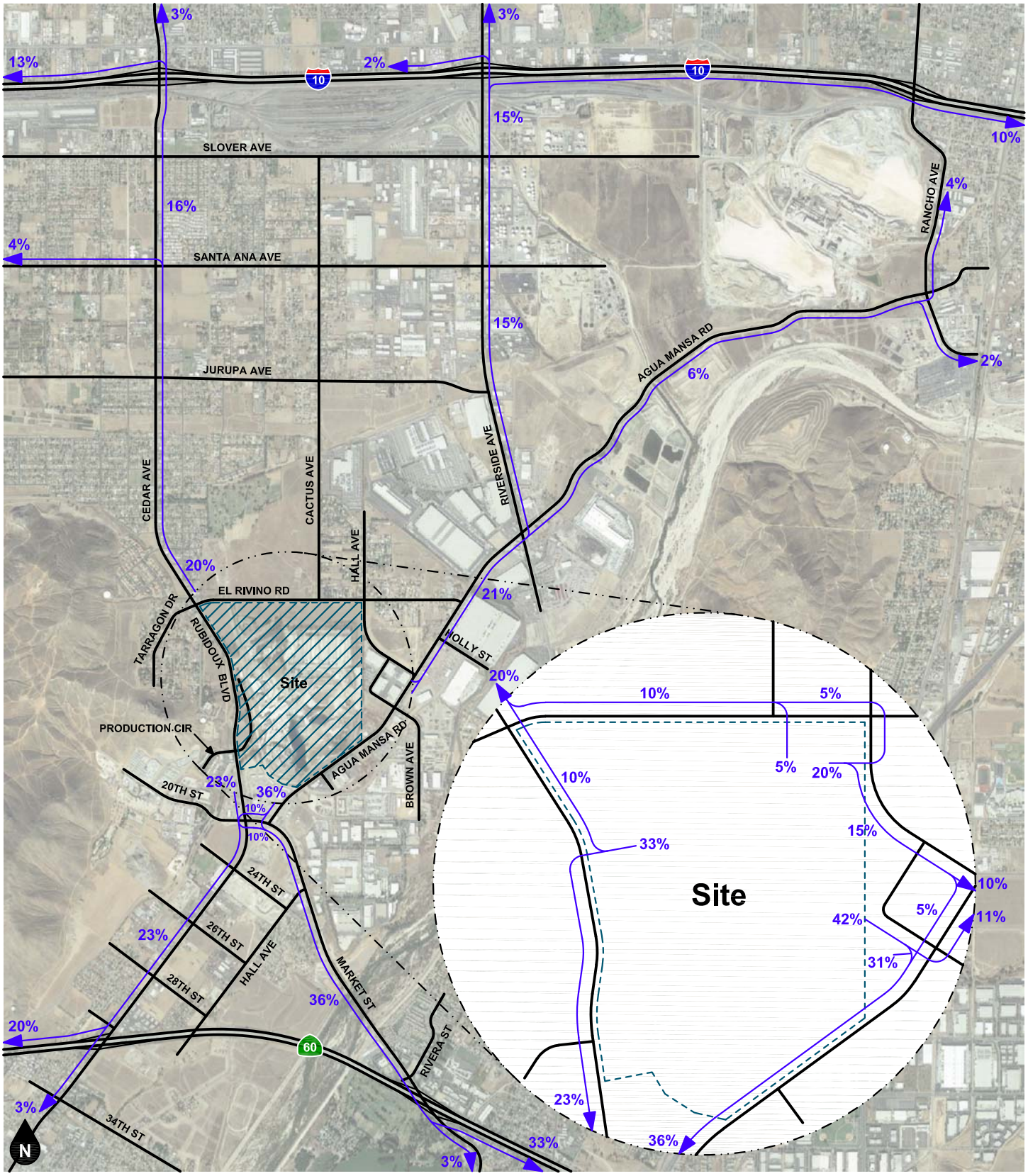
Figure 20
Project Outbound Trip Distribution - Building 1 (Cars)



Legend

10% Percent To Project

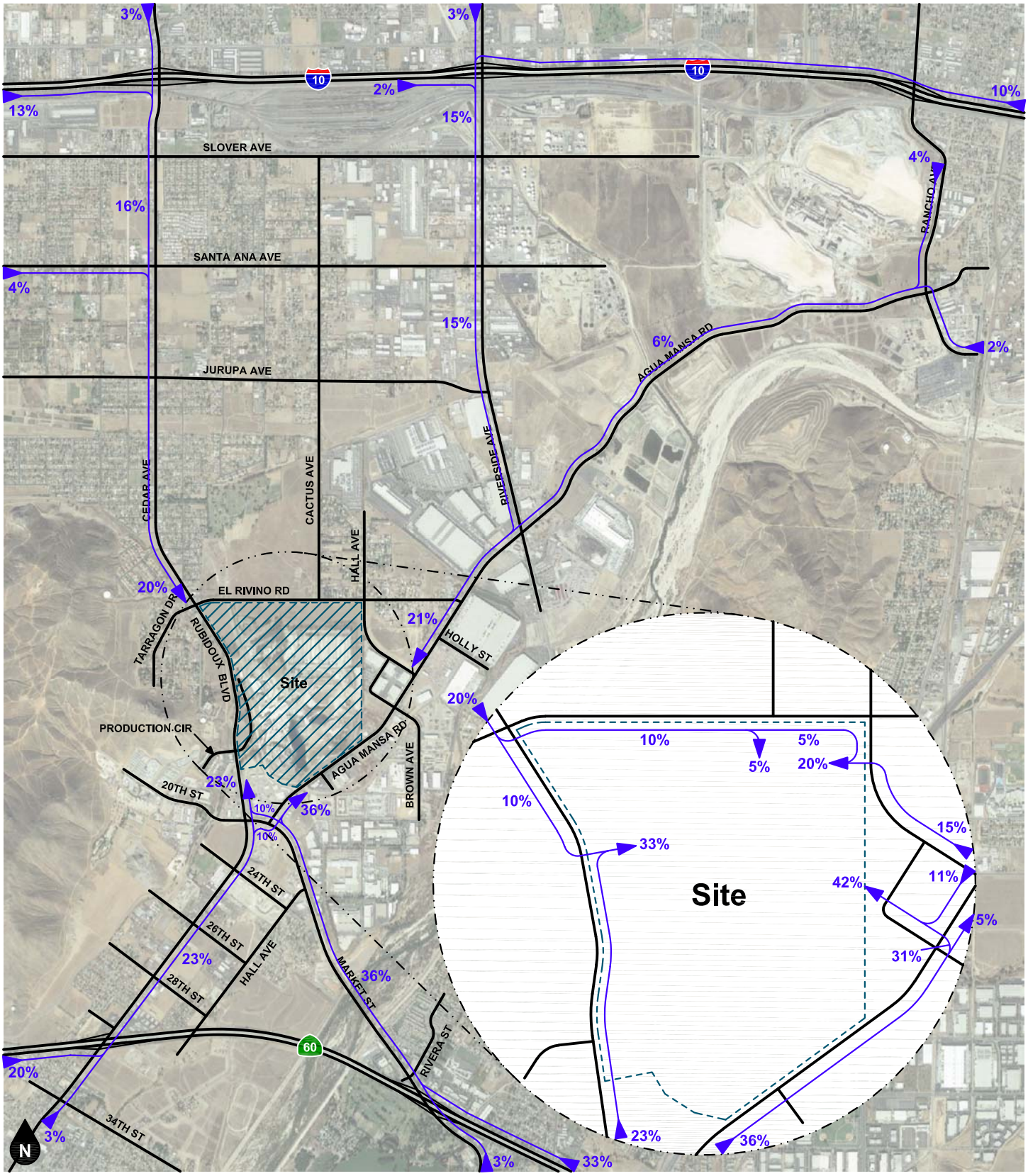
Figure 21
Project Inbound Trip Distribution - Building 1 (Cars)



Legend

10% Percent From Project

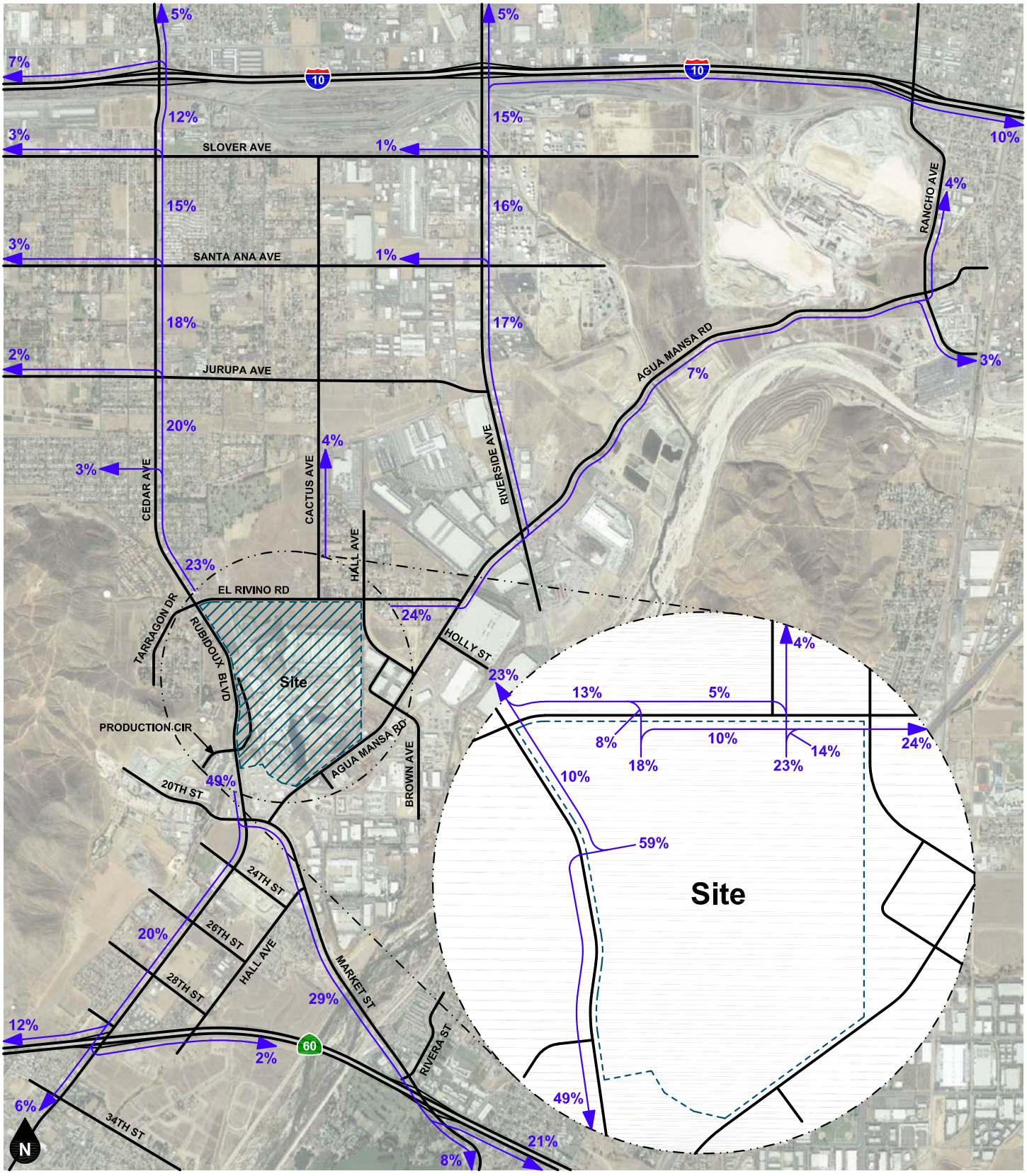
Figure 22
Project Outbound Trip Distribution - Building 1 (Trucks)



Legend

10% Percent To Project

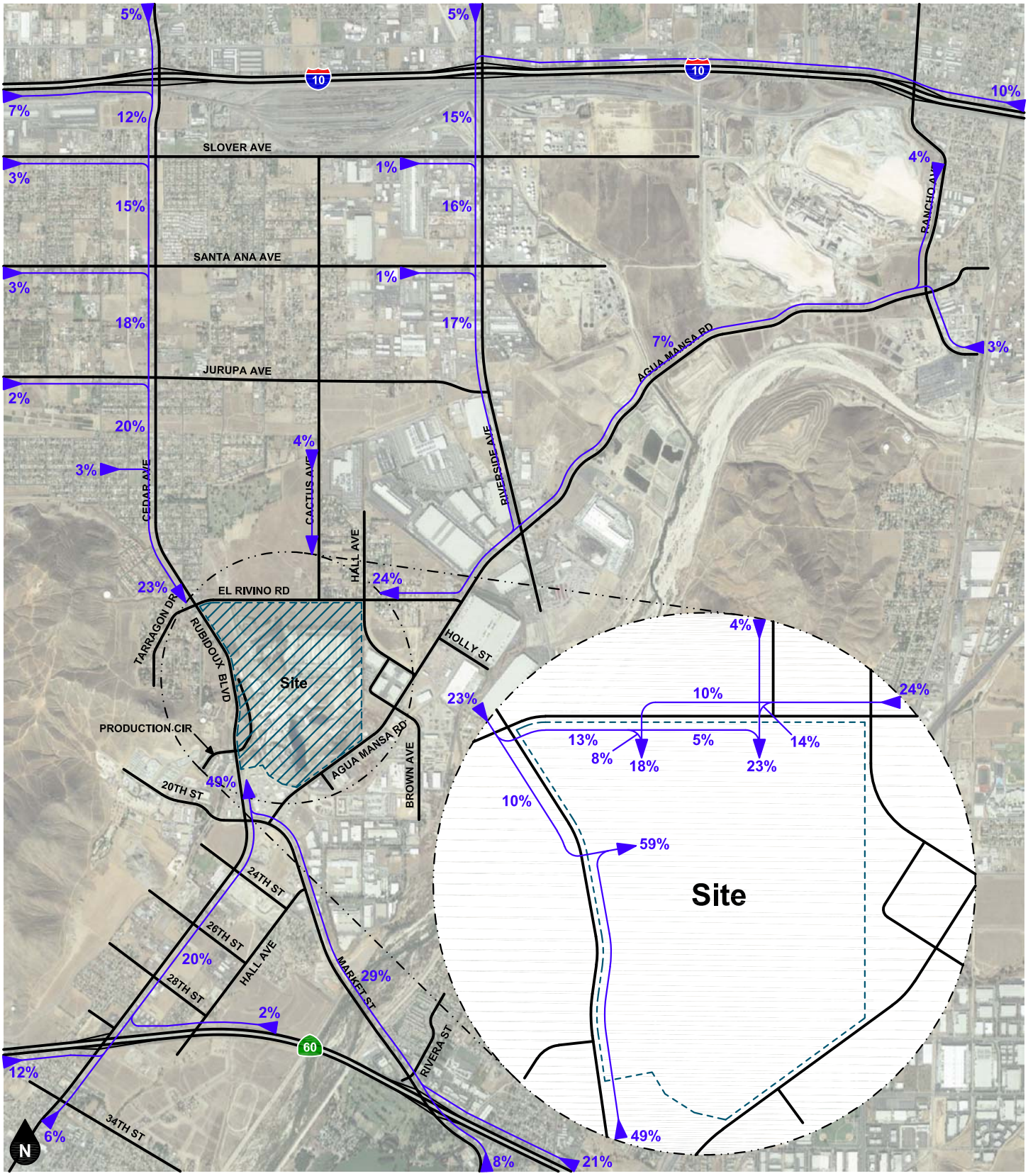
Figure 23
Project Inbound Trip Distribution - Building 1 (Trucks)



Legend

10% Percent From Project

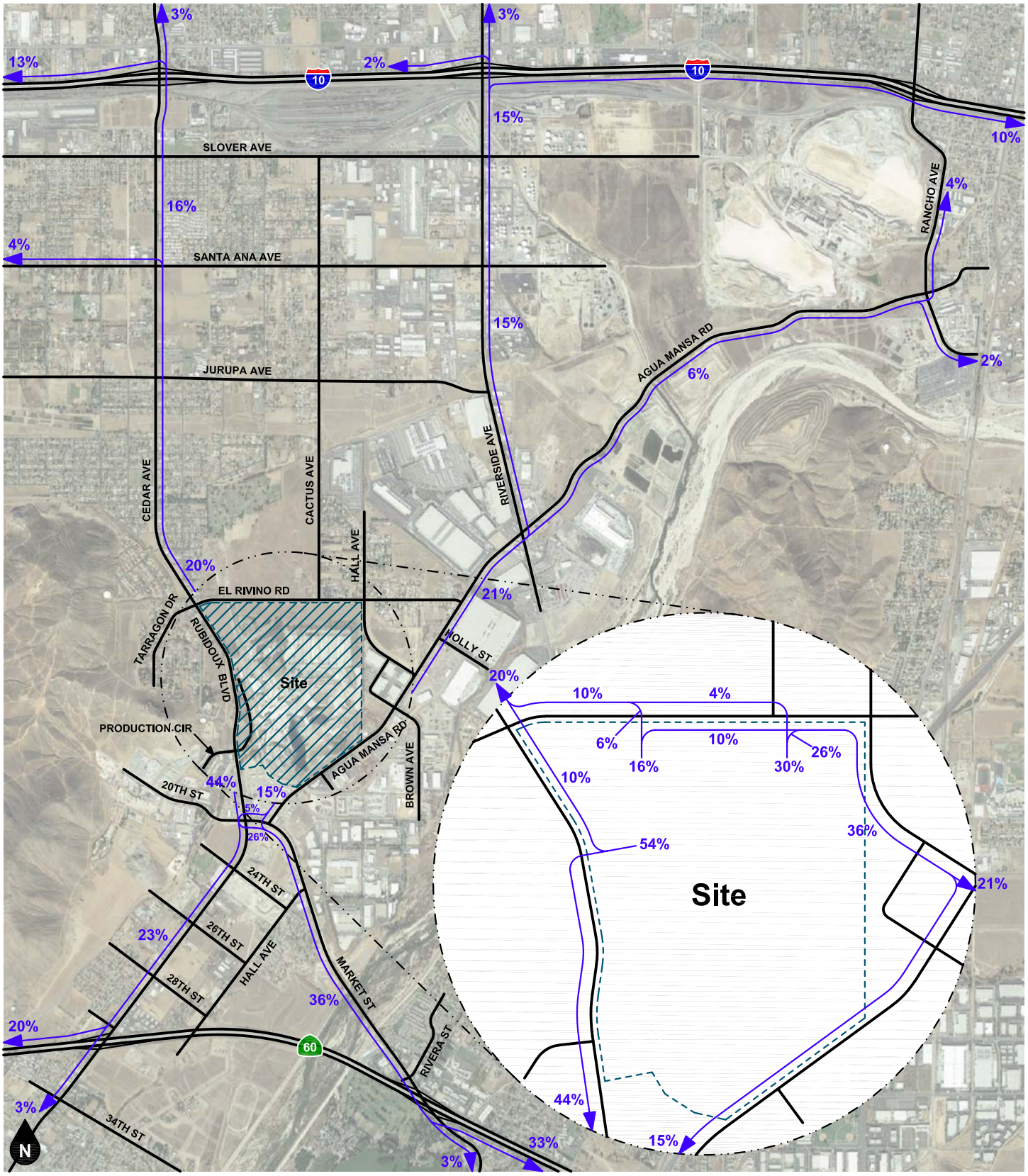
Figure 24
Project Outbound Trip Distribution - Building 2 (Cars)



Legend

10% Percent To Project

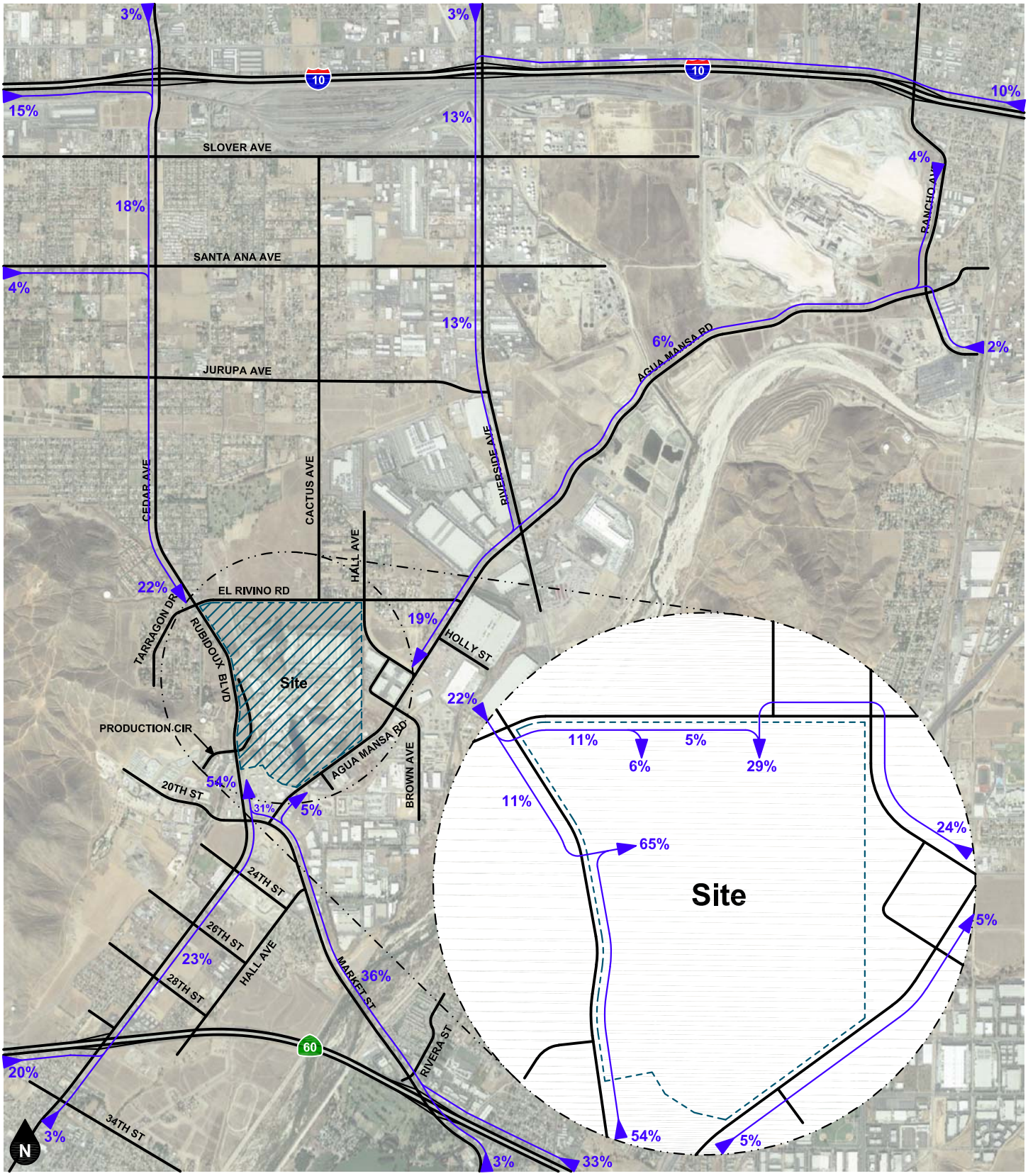
Figure 25
Project Inbound Trip Distribution - Building 2 (Cars)



Legend

10% Percent From Project

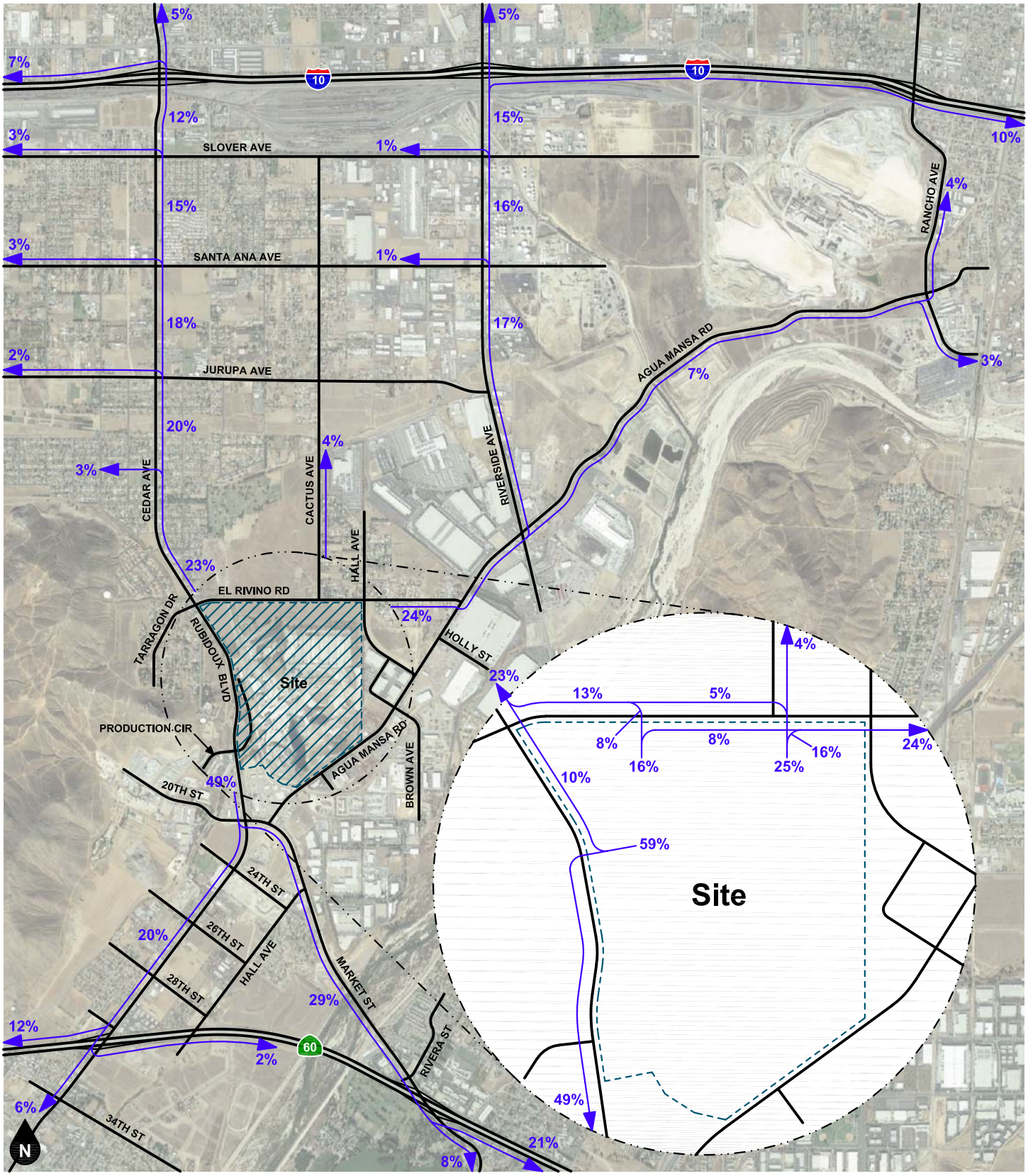
Figure 26
Project Outbound Trip Distribution - Building 2 (Trucks)



Legend

10% Percent To Project

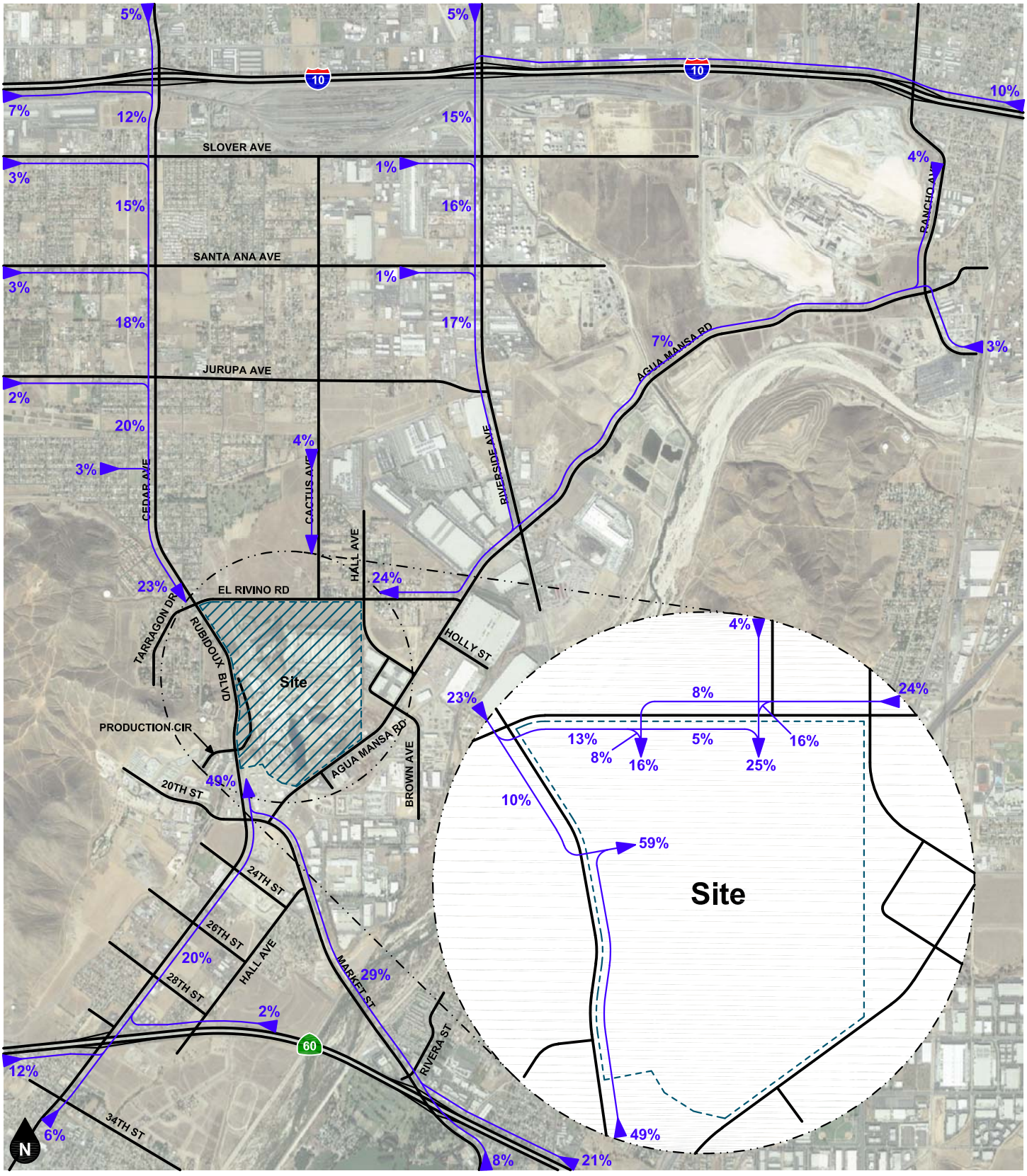
Figure 27
Project Inbound Trip Distribution - Building 2 (Trucks)



Legend

10% Percent From Project

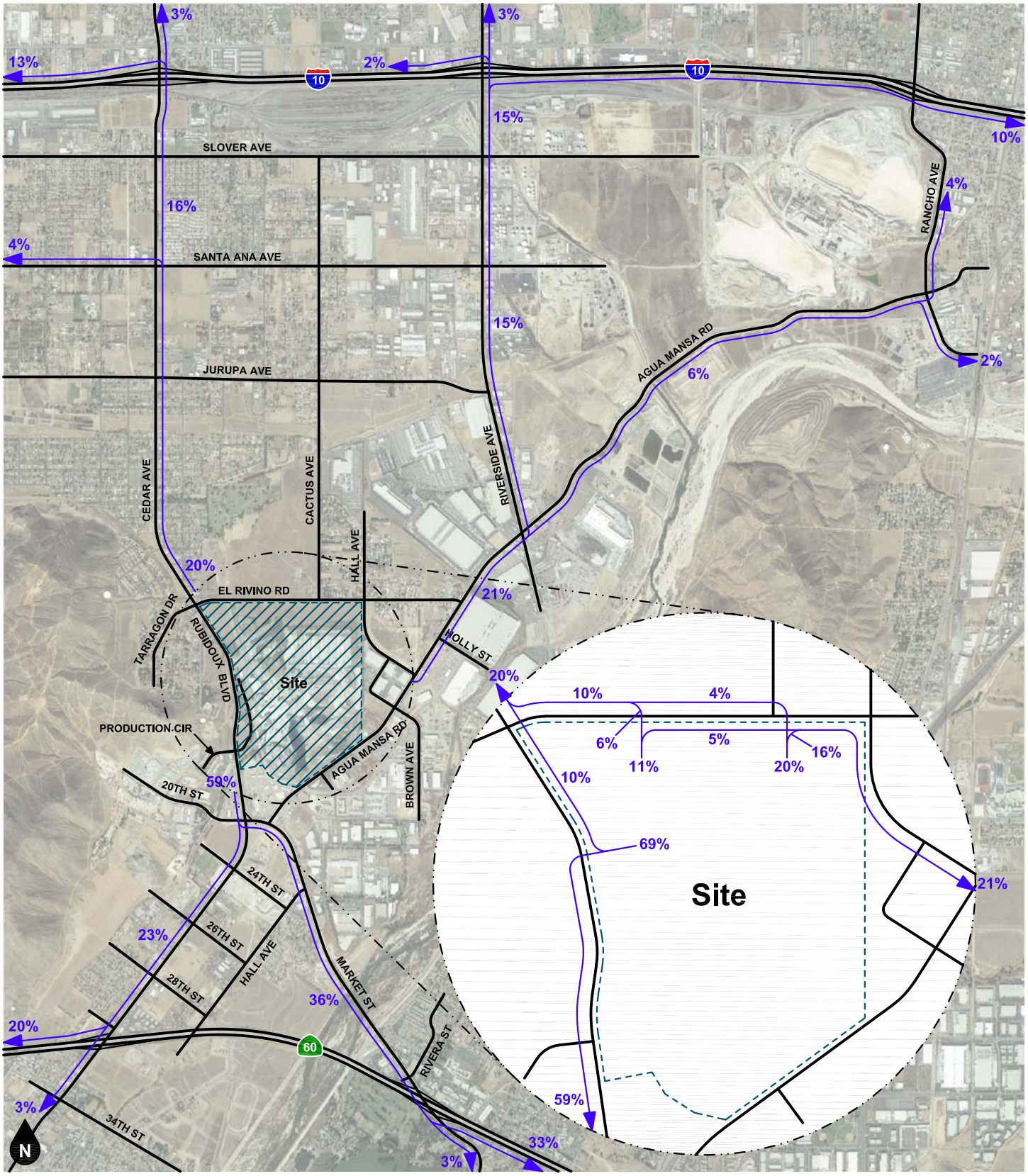
Figure 28
Project Outbound Trip Distribution - Buildings 3, 4, and 5 (Cars)



Legend

10% Percent To Project

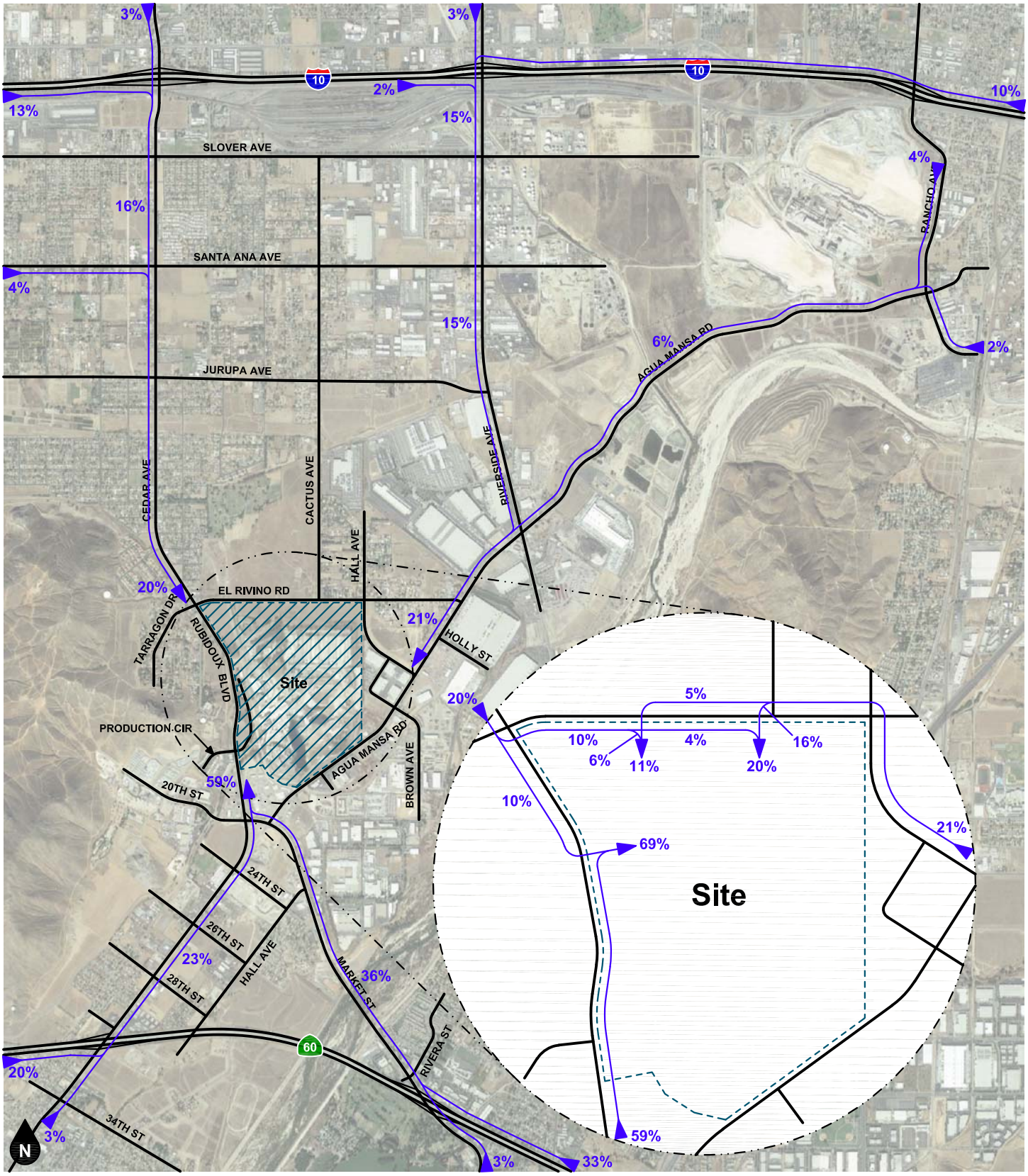
Figure 29
Project Inbound Trip Distribution - Buildings 3, 4, and 5 (Cars)



Legend

10% Percent From Project

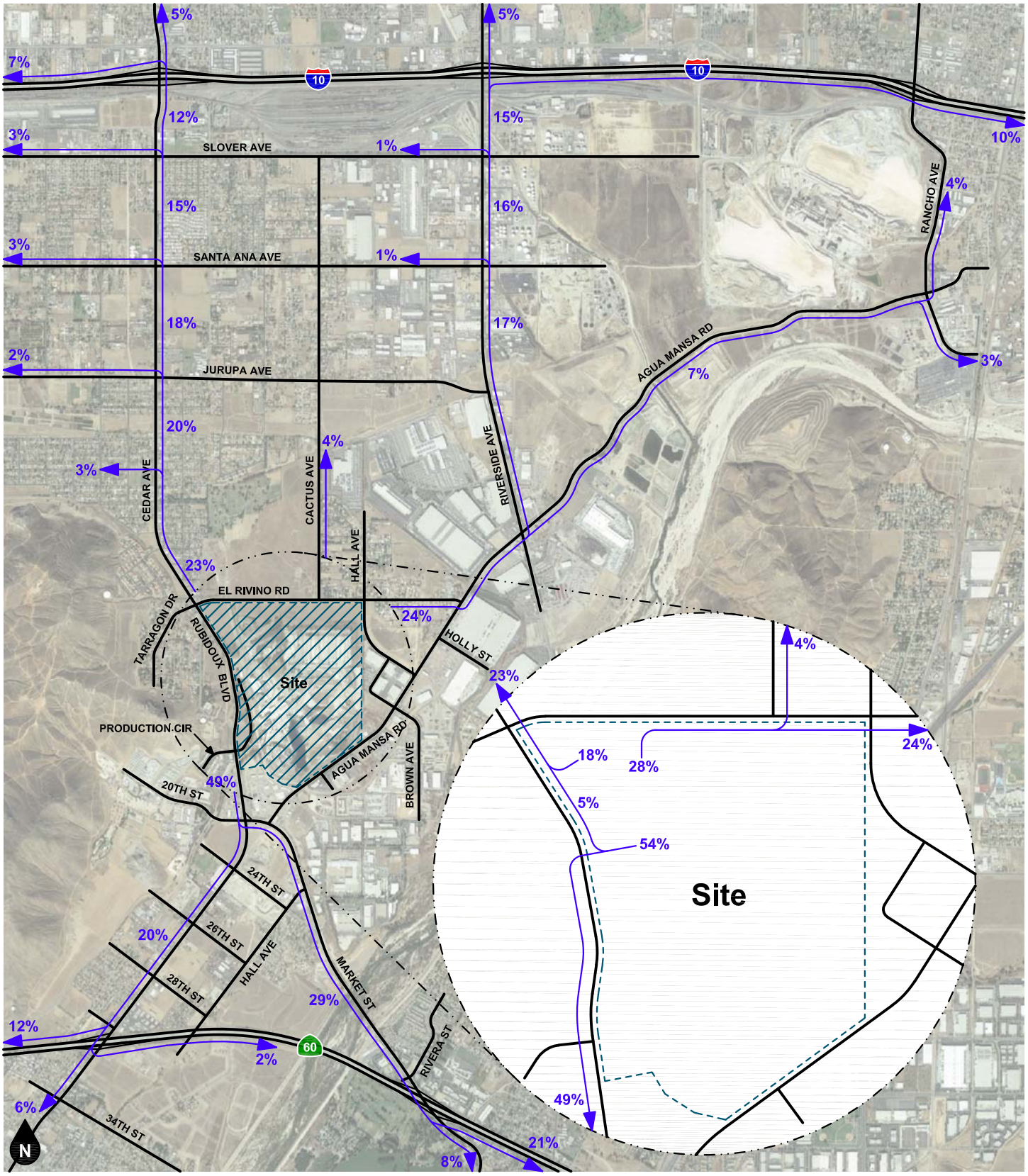
Figure 30
Project Outbound Trip Distribution - Buildings 3, 4, and 5 (Trucks)



Legend

10% Percent To Project

Figure 31
Project Inbound Trip Distribution - Buildings 3, 4, and 5 (Trucks)

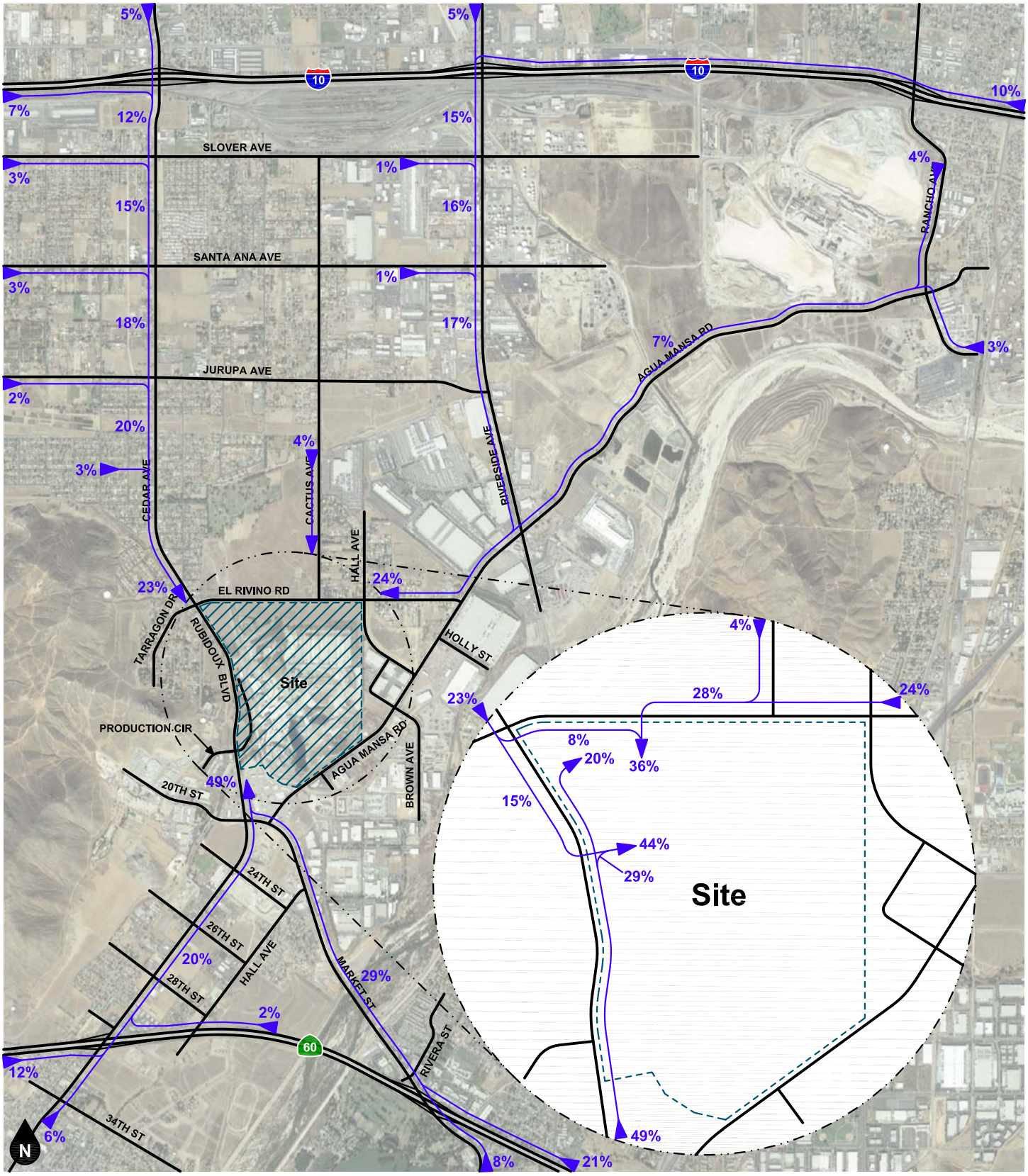


Legend

10% Percent From Project

Figure 32

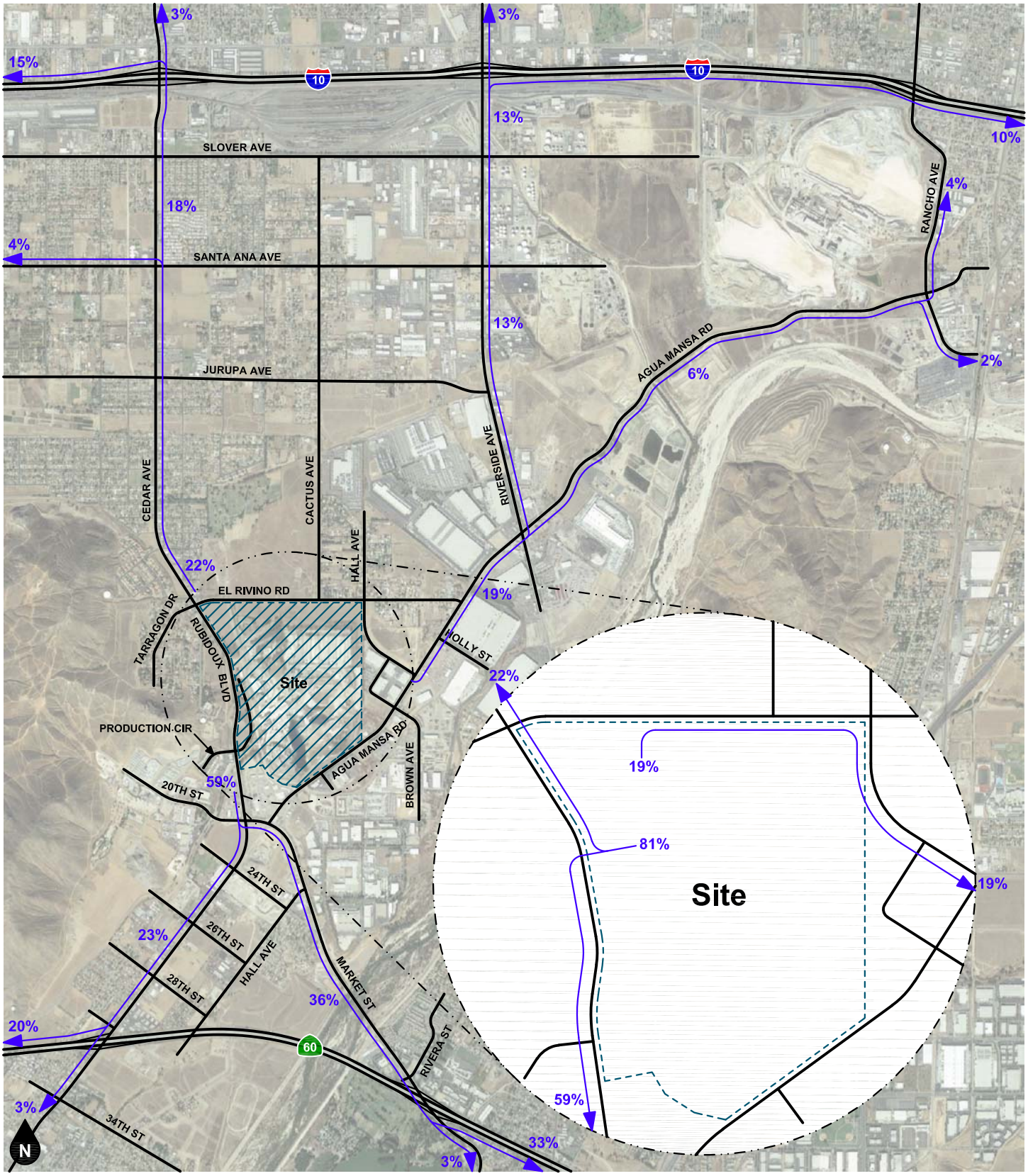
Project Outbound Trip Distribution - Building 6 (Cars) - Alternative 1



Legend

10% Percent To Project

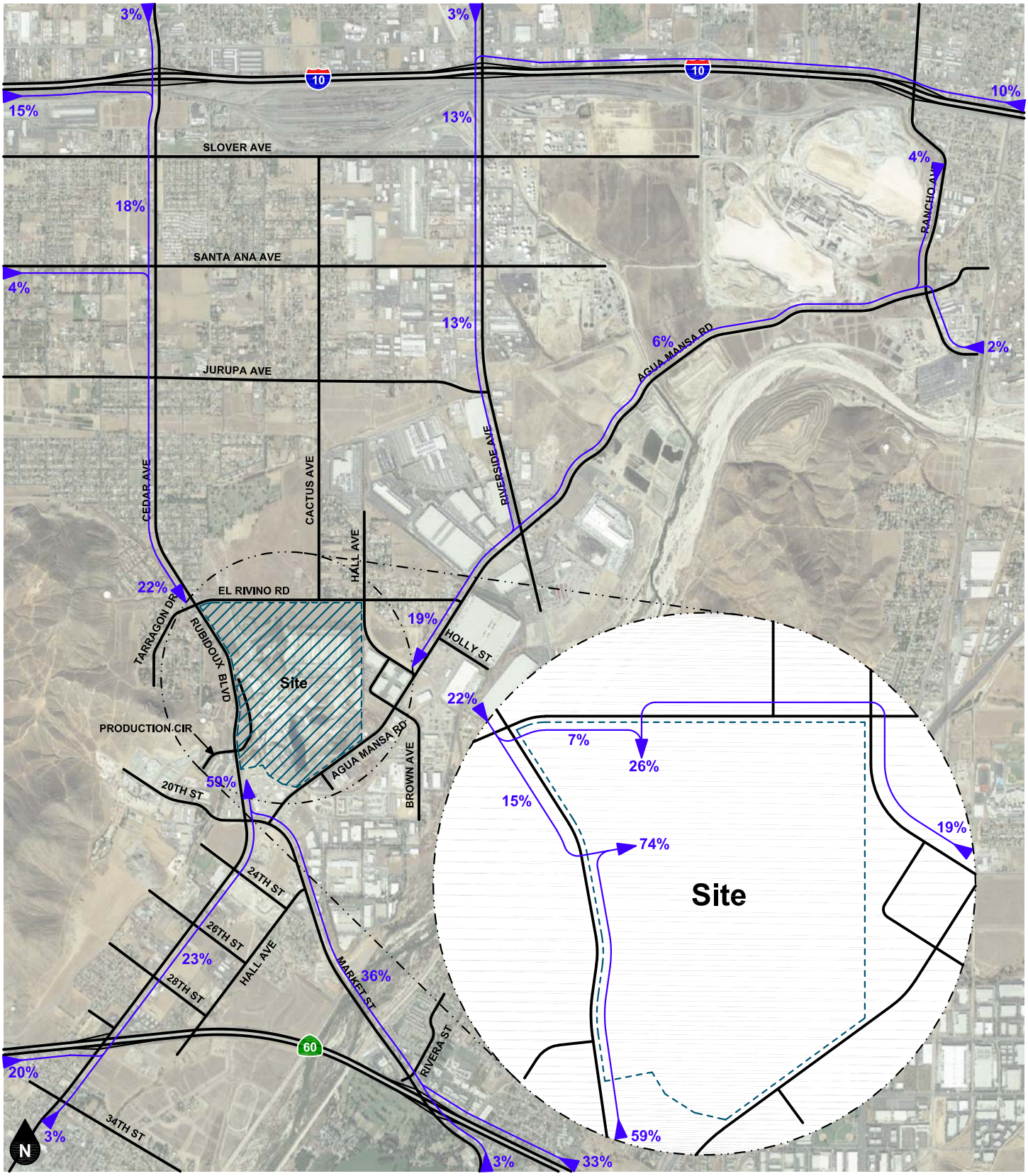
Figure 33
Project Inbound Trip Distribution - Building 6 (Cars) - Alternative 1



Legend

10% Percent From Project

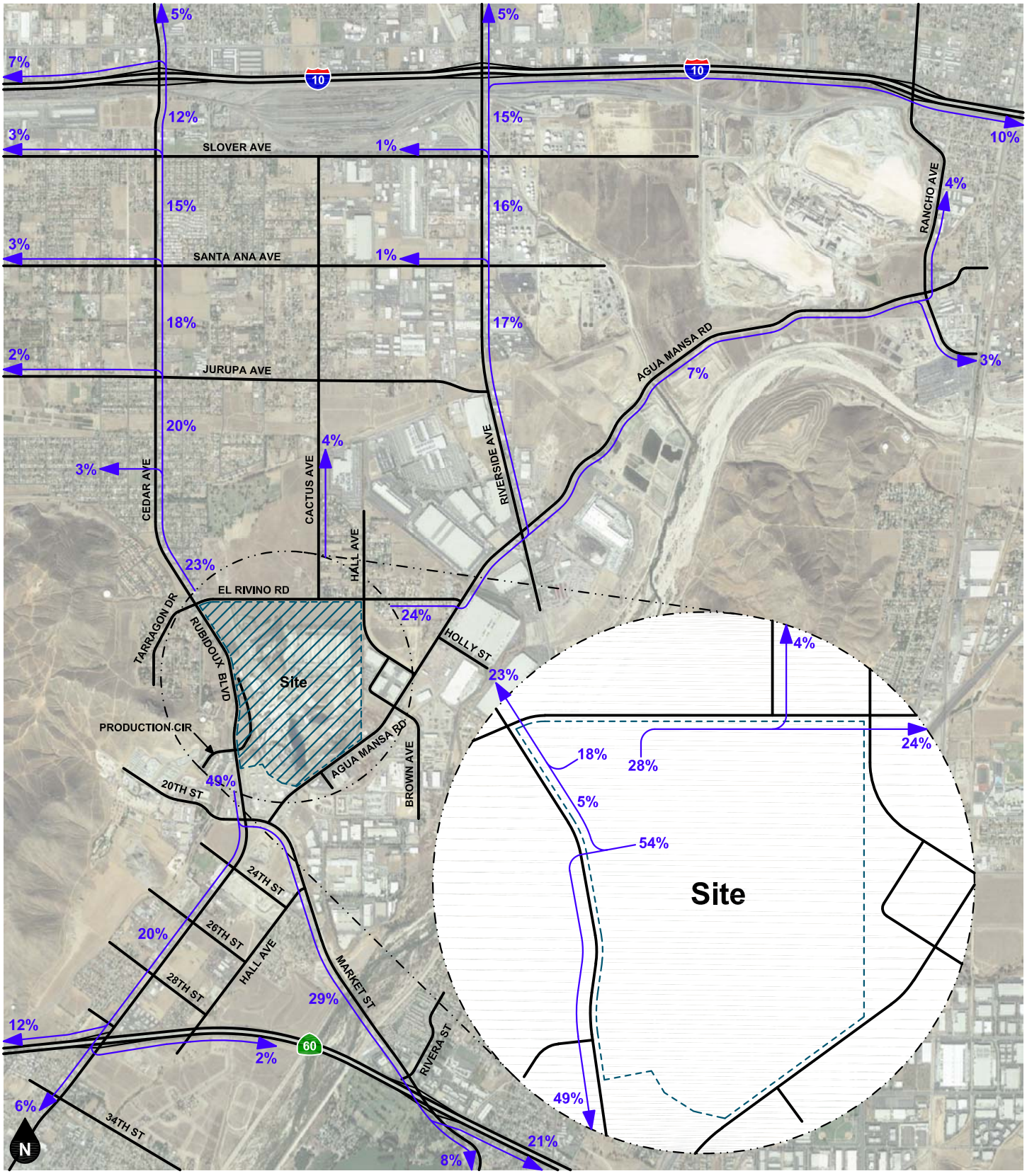
Figure 34
Project Outbound Trip Distribution - Building 6 (Trucks) - Alternative 1



Legend

10% Percent To Project

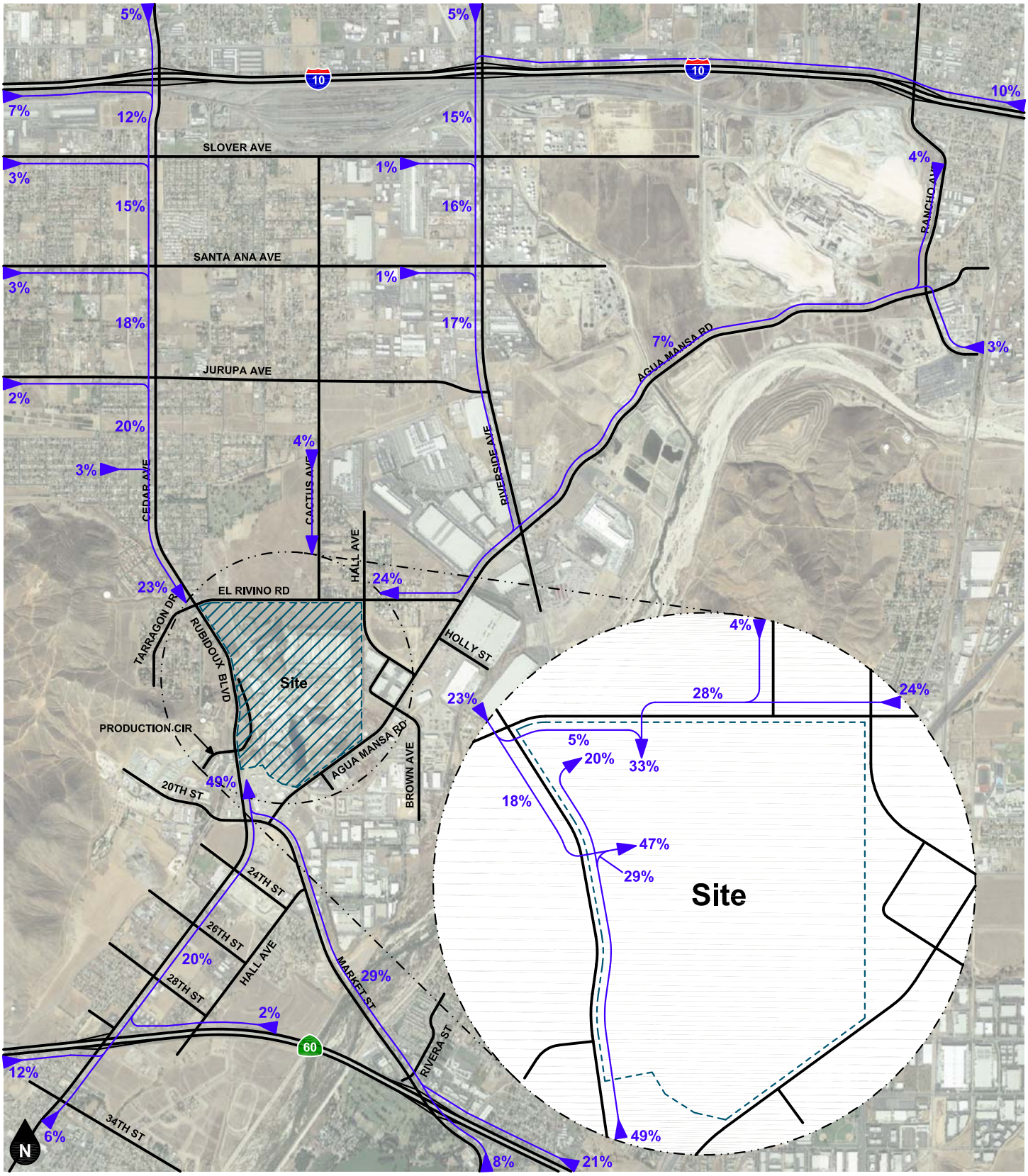
Figure 35
Project Inbound Trip Distribution - Building 6 (Trucks) - Alternative 1



Legend

10% Percent From Project

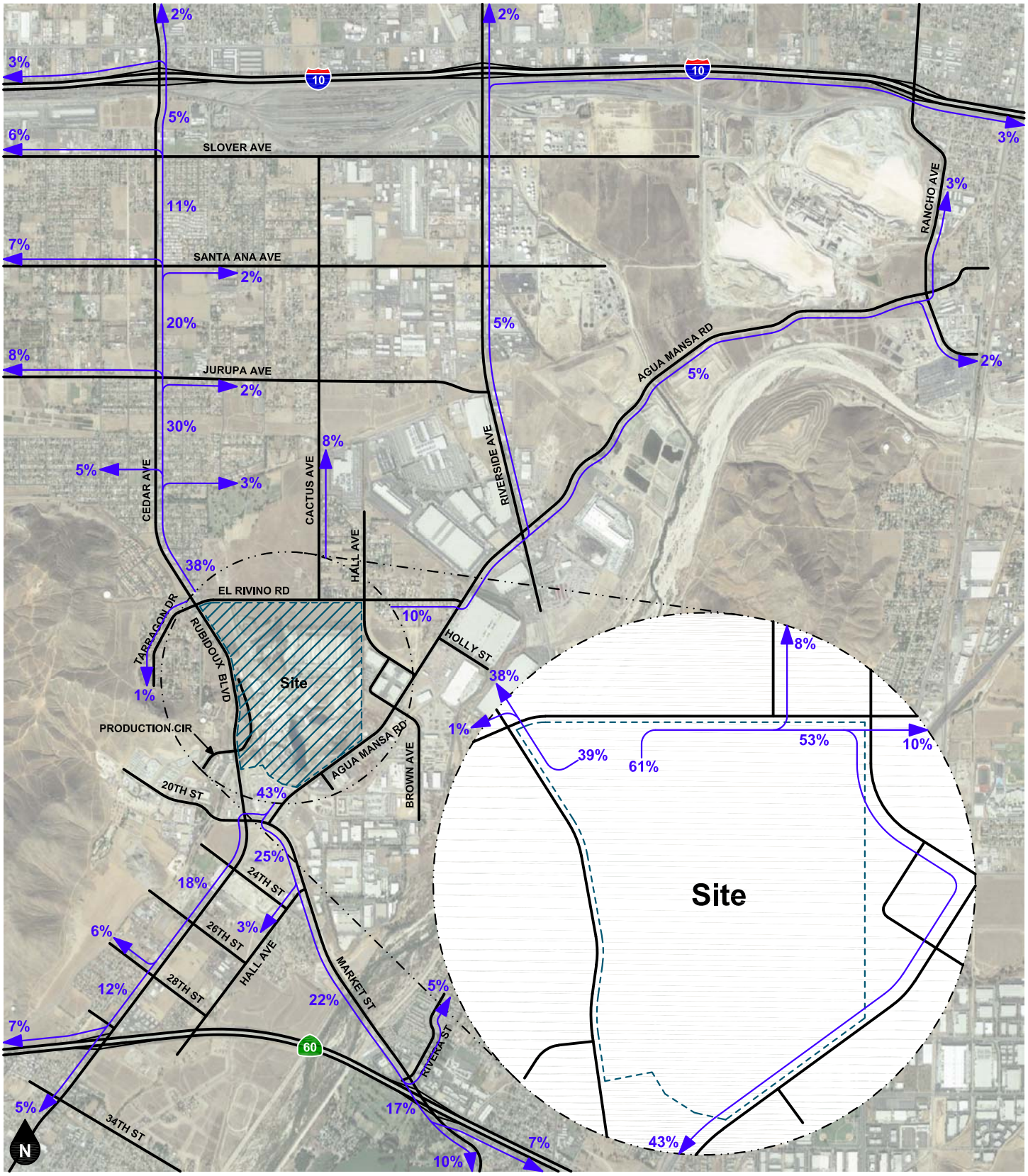
Figure 36
Project Outbound Trip Distribution - Business Park - Alternative 2



Legend

10% Percent To Project

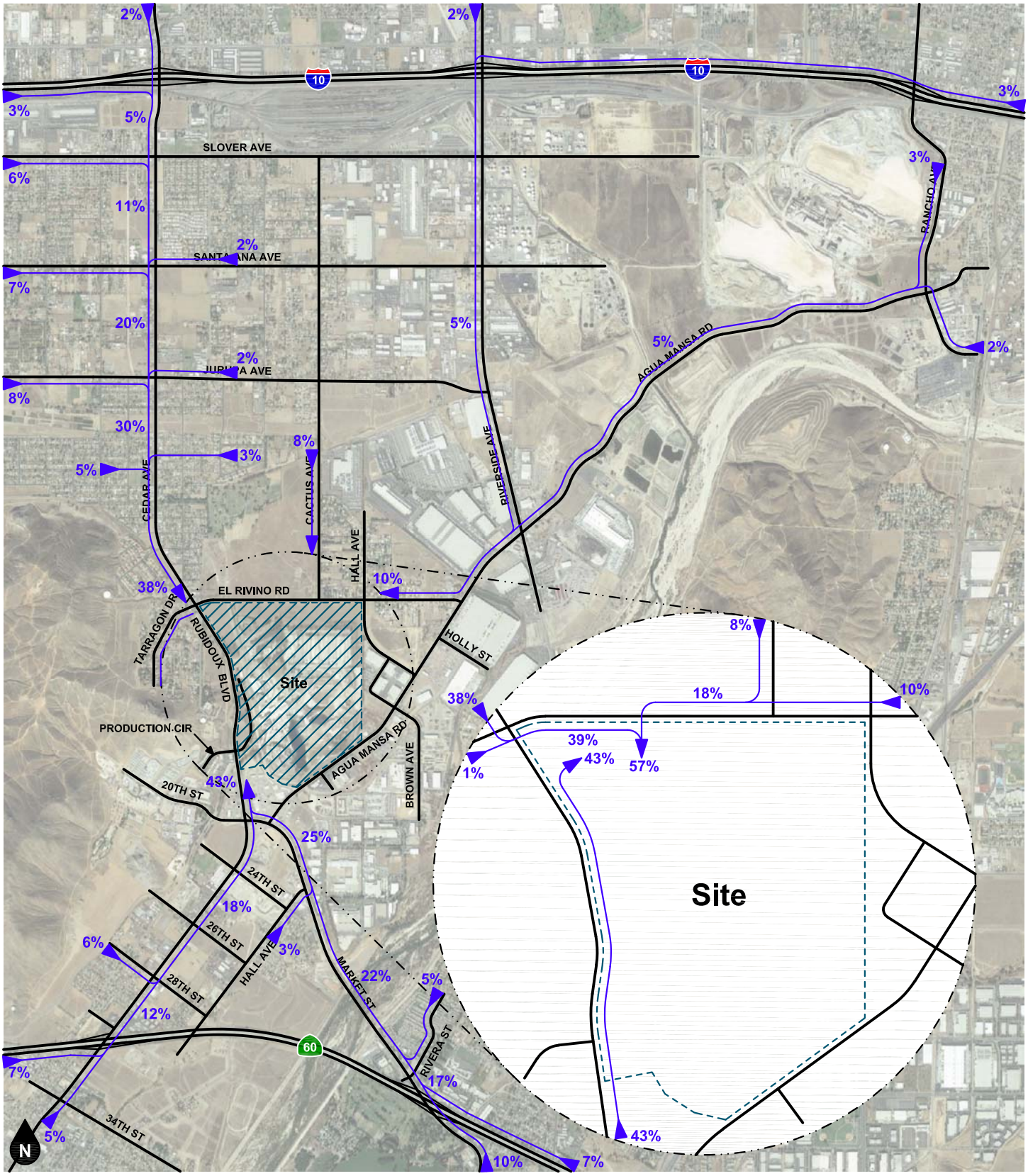
Figure 37
Project Inbound Trip Distribution - Business Park - Alternative 2



Legend

10% Percent From Project

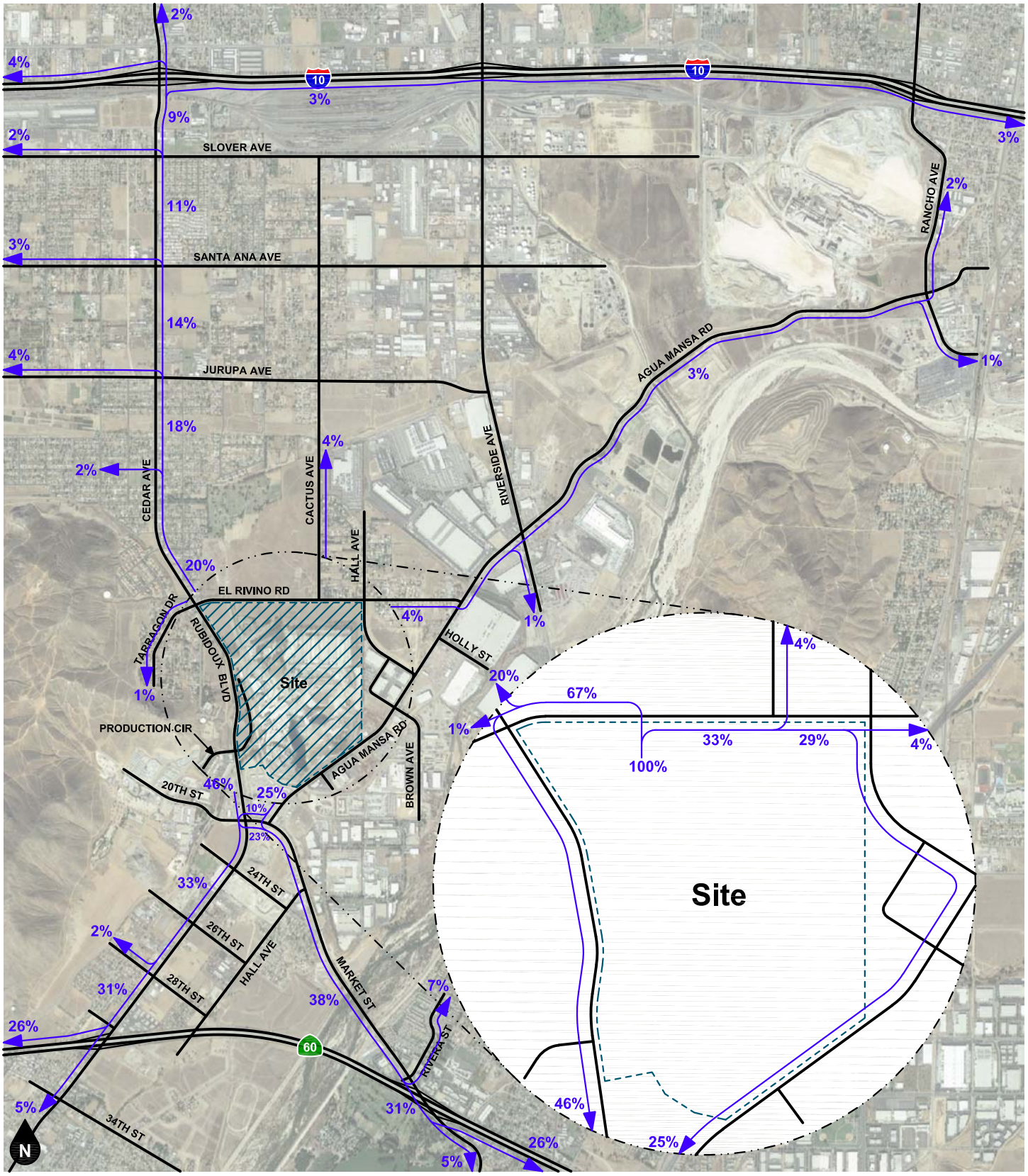
Figure 38
Project Outbound Trip Distribution - Commercial Retail - Alternative 2



Legend

10% Percent To Project

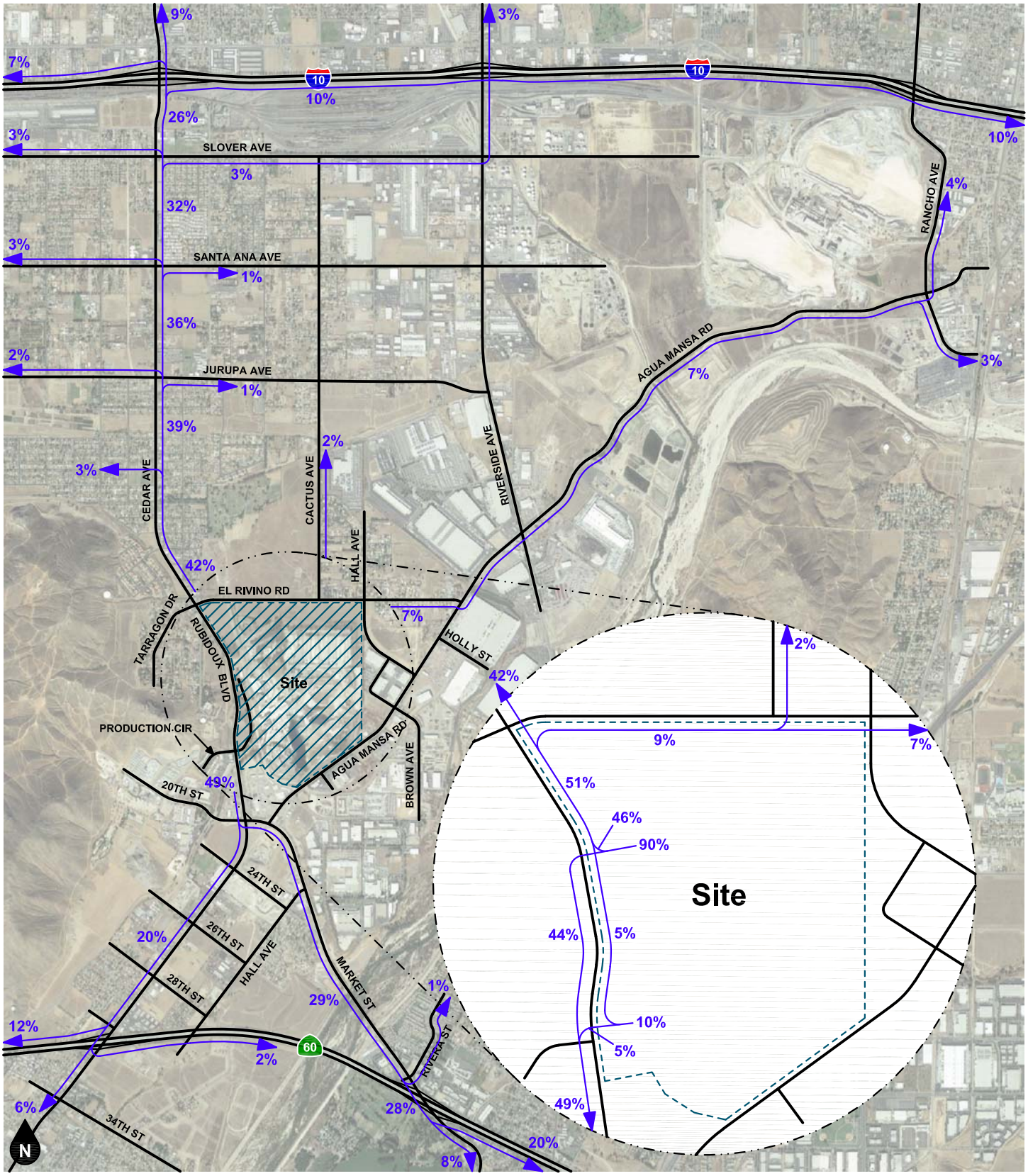
Figure 39
Project Inbound Trip Distribution - Commercial Retail - Alternative 2



Legend

10% Percent To/From Project

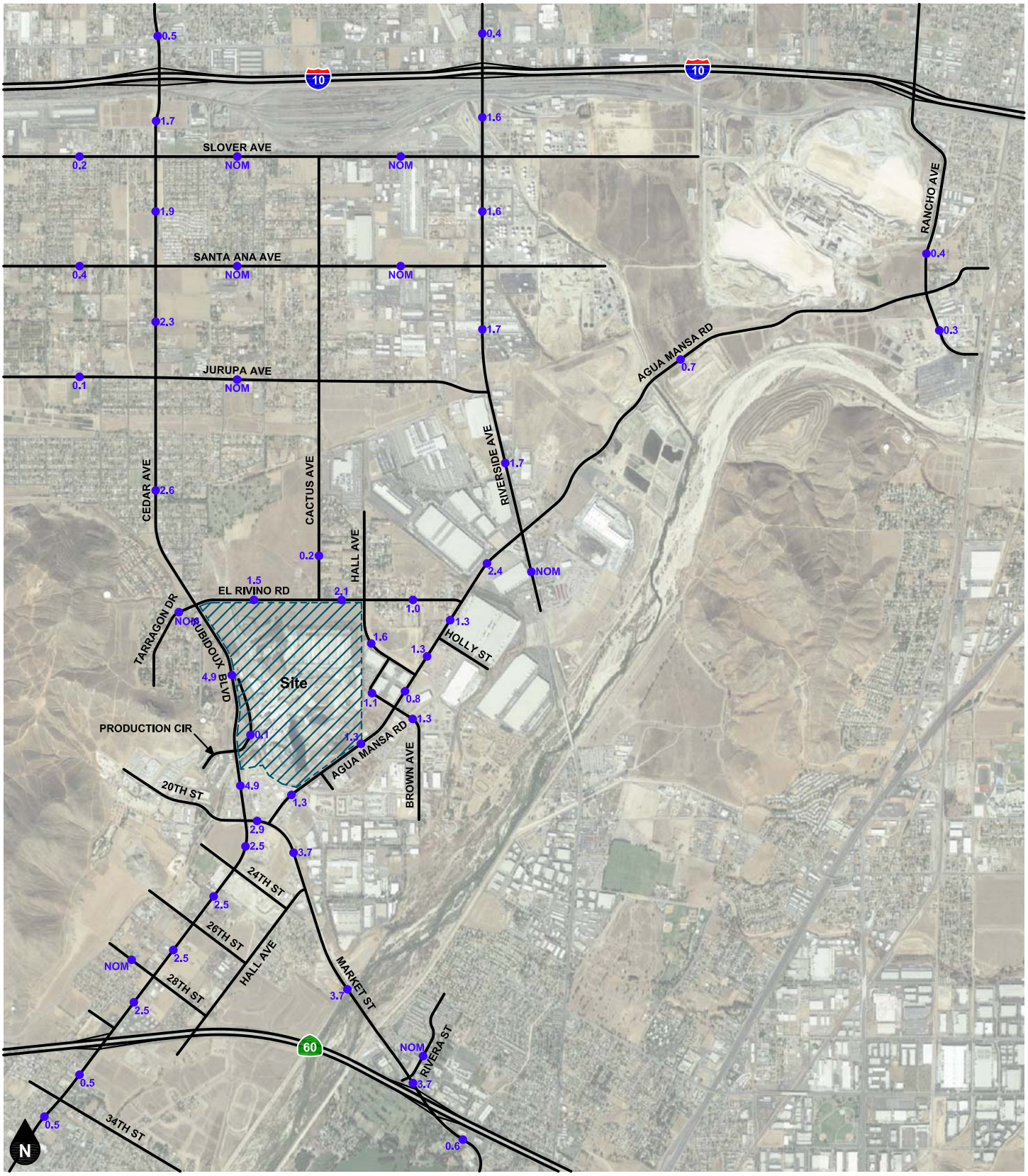
Figure 40
Project Trip Distribution - Regional Park



Legend

10% Percent To/From Project

Figure 41
Project Trip Distribution - Research & Development



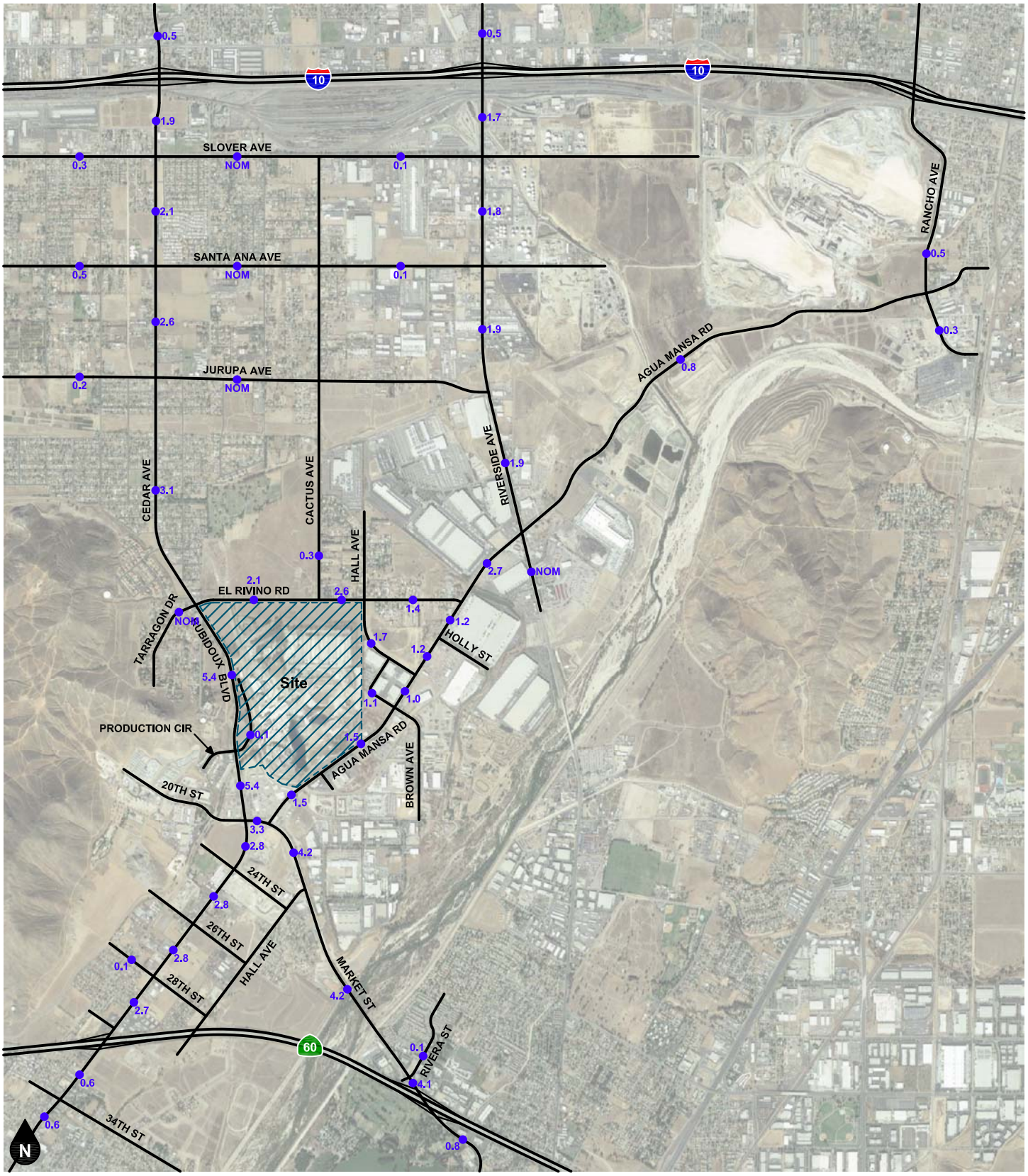
Legend

● ## Vehicles Per Day (1,000's)

NOM Nominal; Less Than 50 Vehicles Per Day

Figure 42

Project Average Daily Traffic Volumes - Alternative 1

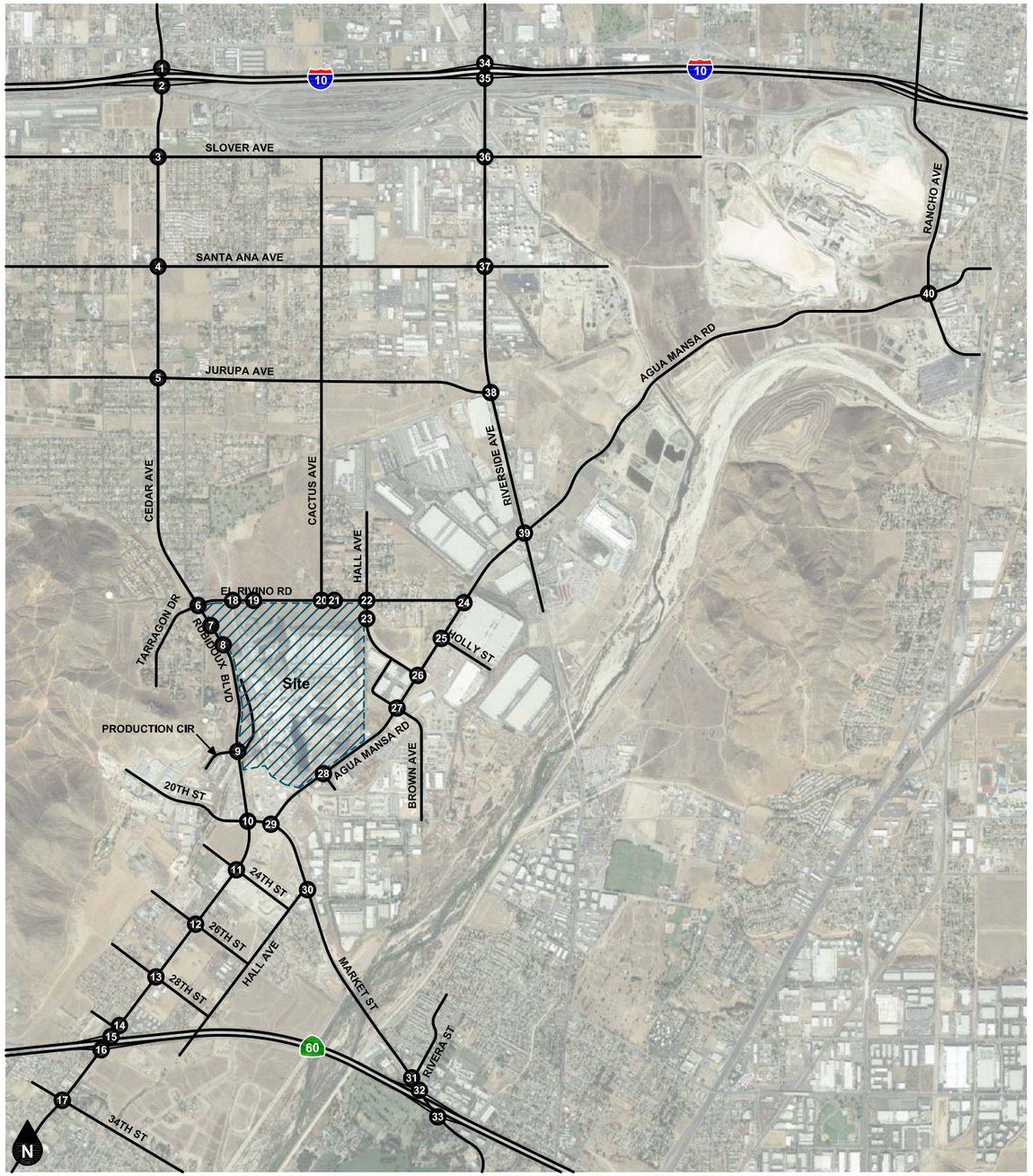


Legend

● ## Vehicles Per Day (1,000's)

NOM Nominal; Less Than 50 Vehicles Per Day

Figure 43
Project Average Daily Traffic Volumes - Alternative 2



Legend
(#) Study Intersection

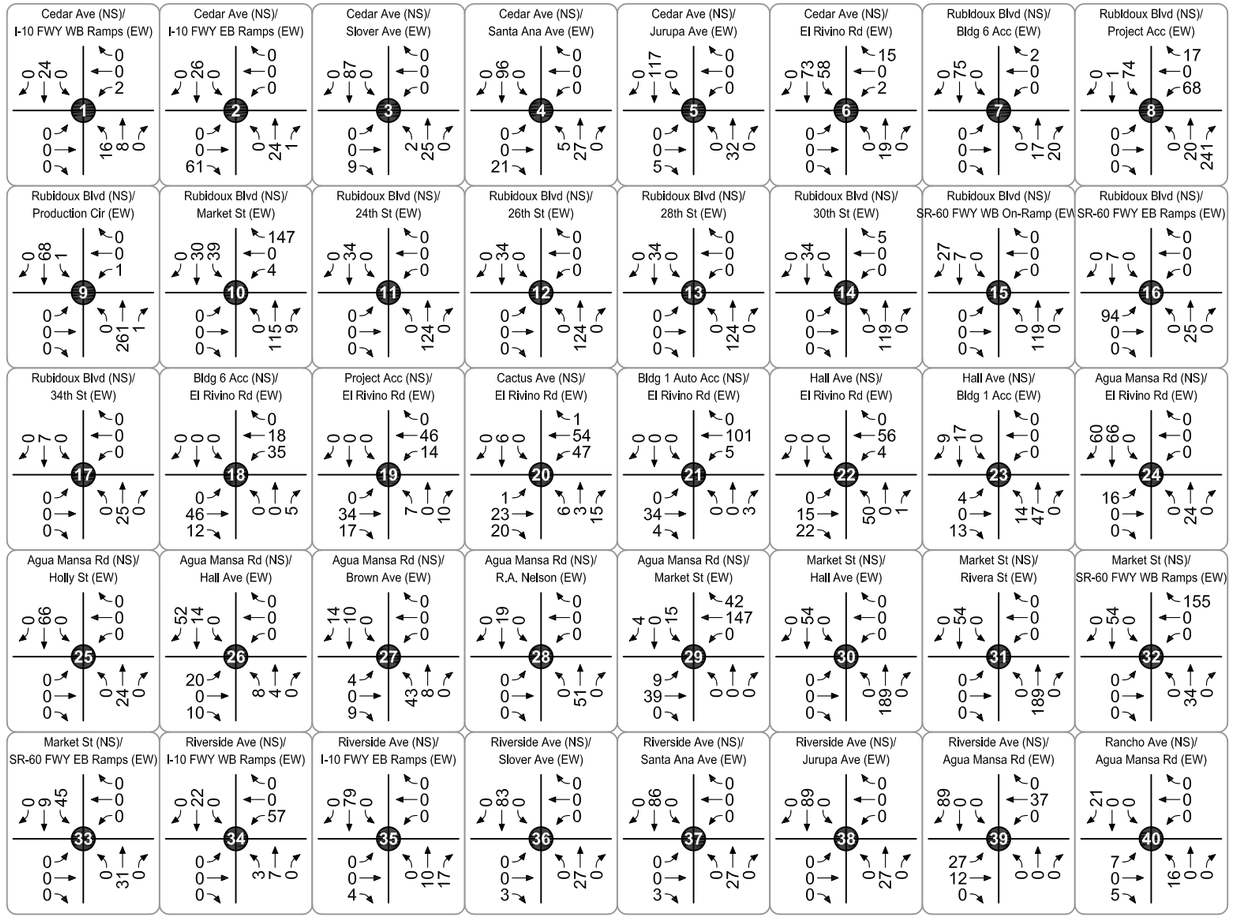
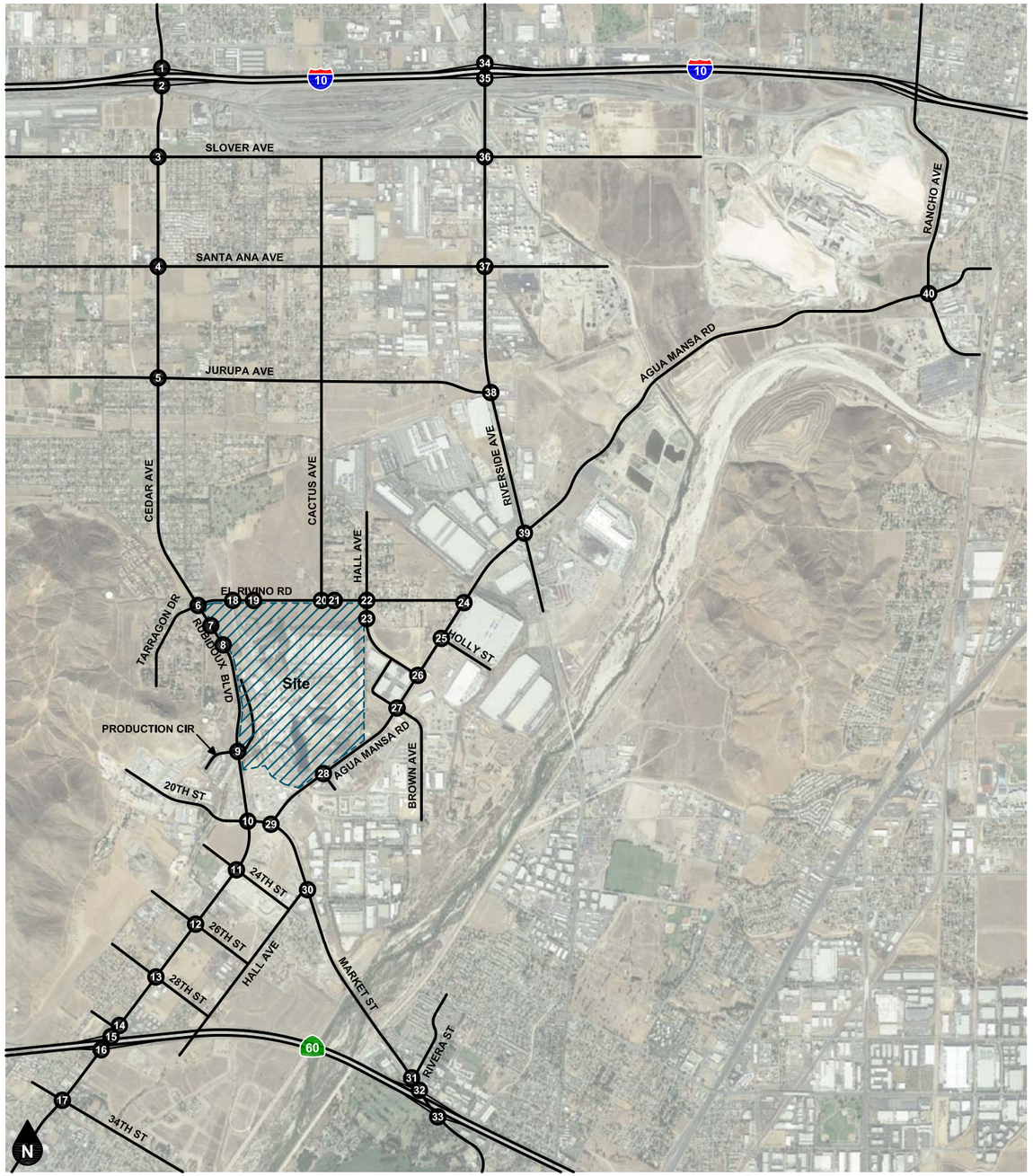


Figure 44
Project AM Peak Hour Intersection Turning Movement Volumes
- Alternative 1



Legend
(#) Study Intersection

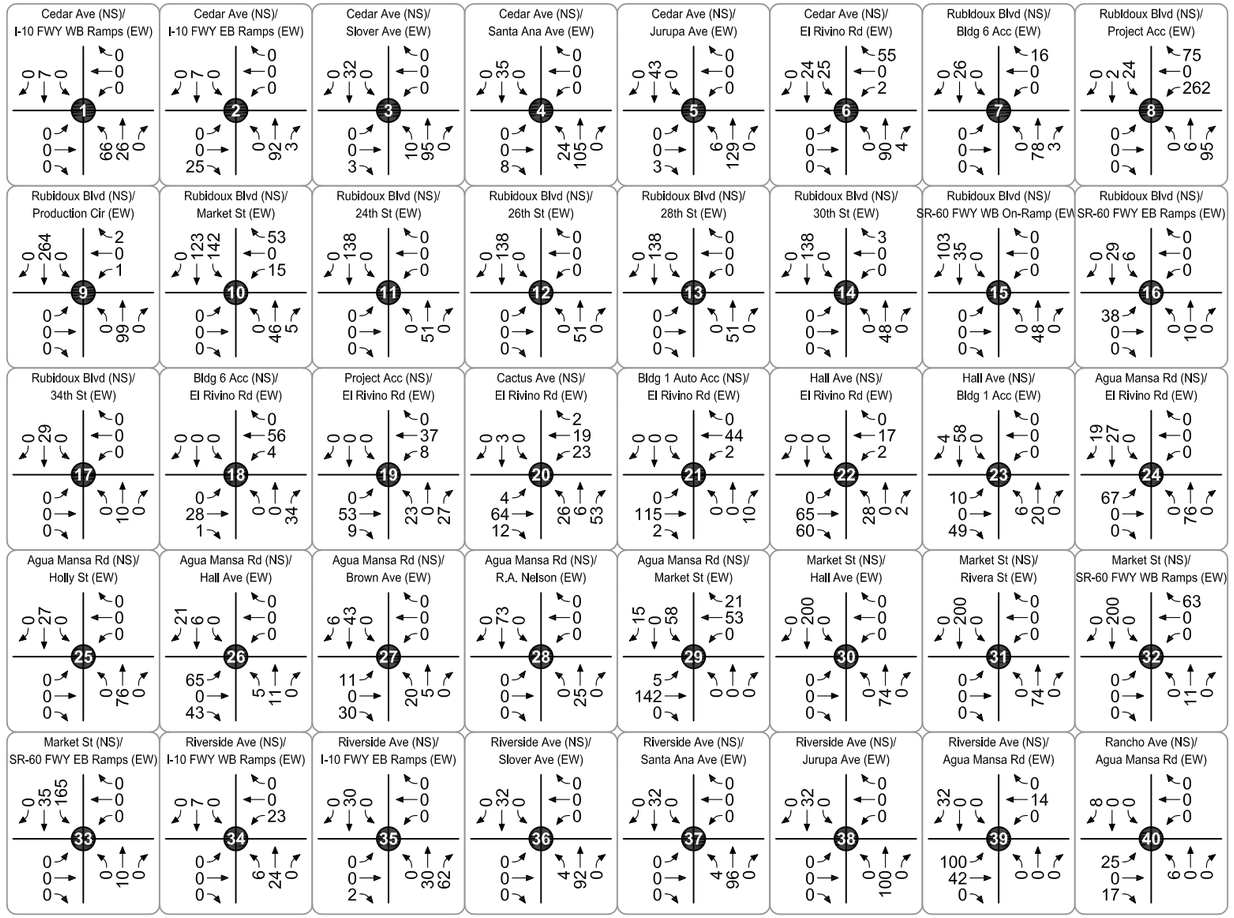
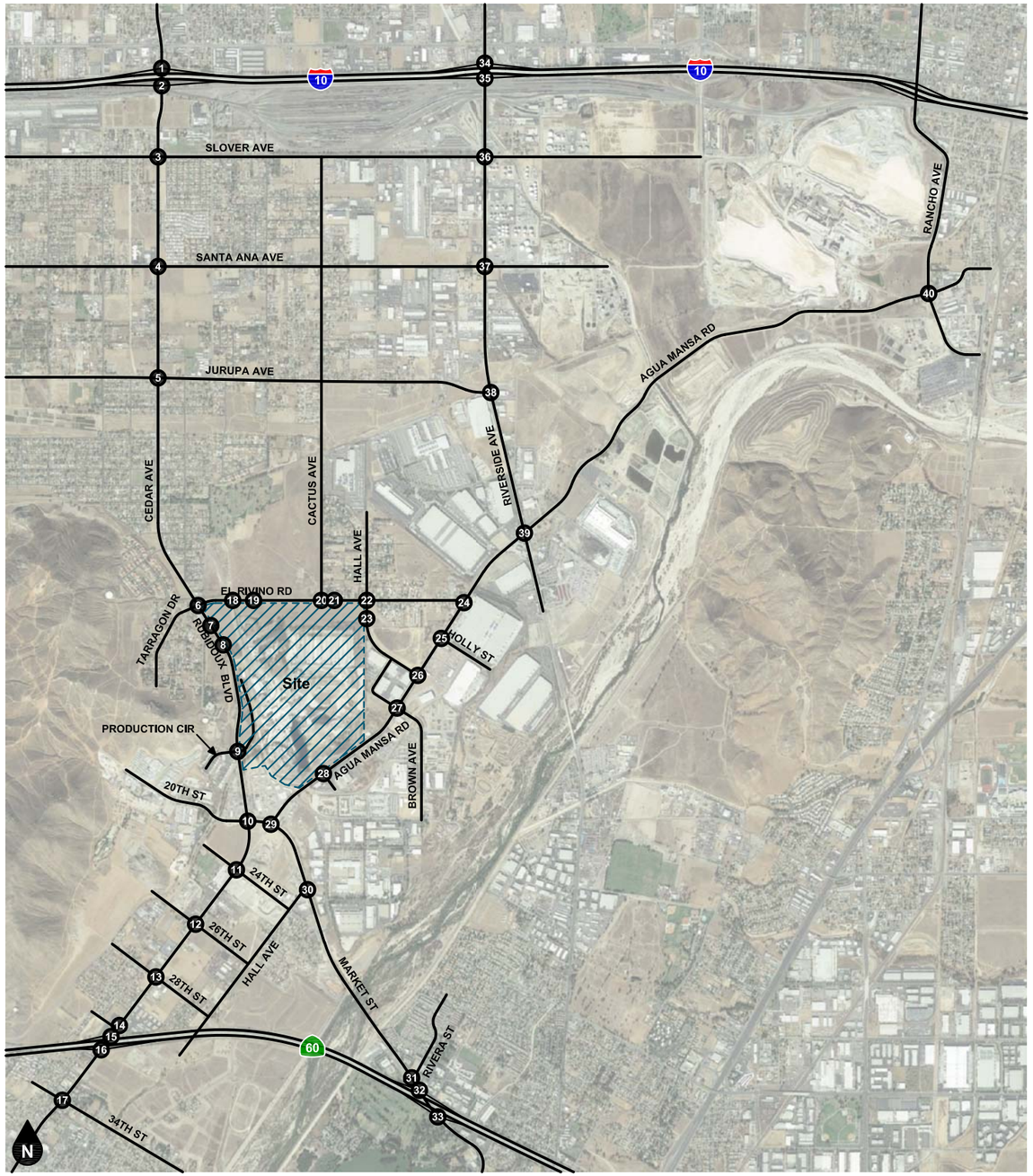


Figure 45
Project PM Peak Hour Intersection Turning Movement Volumes
- Alternative 1



Legend
(#) Study Intersection

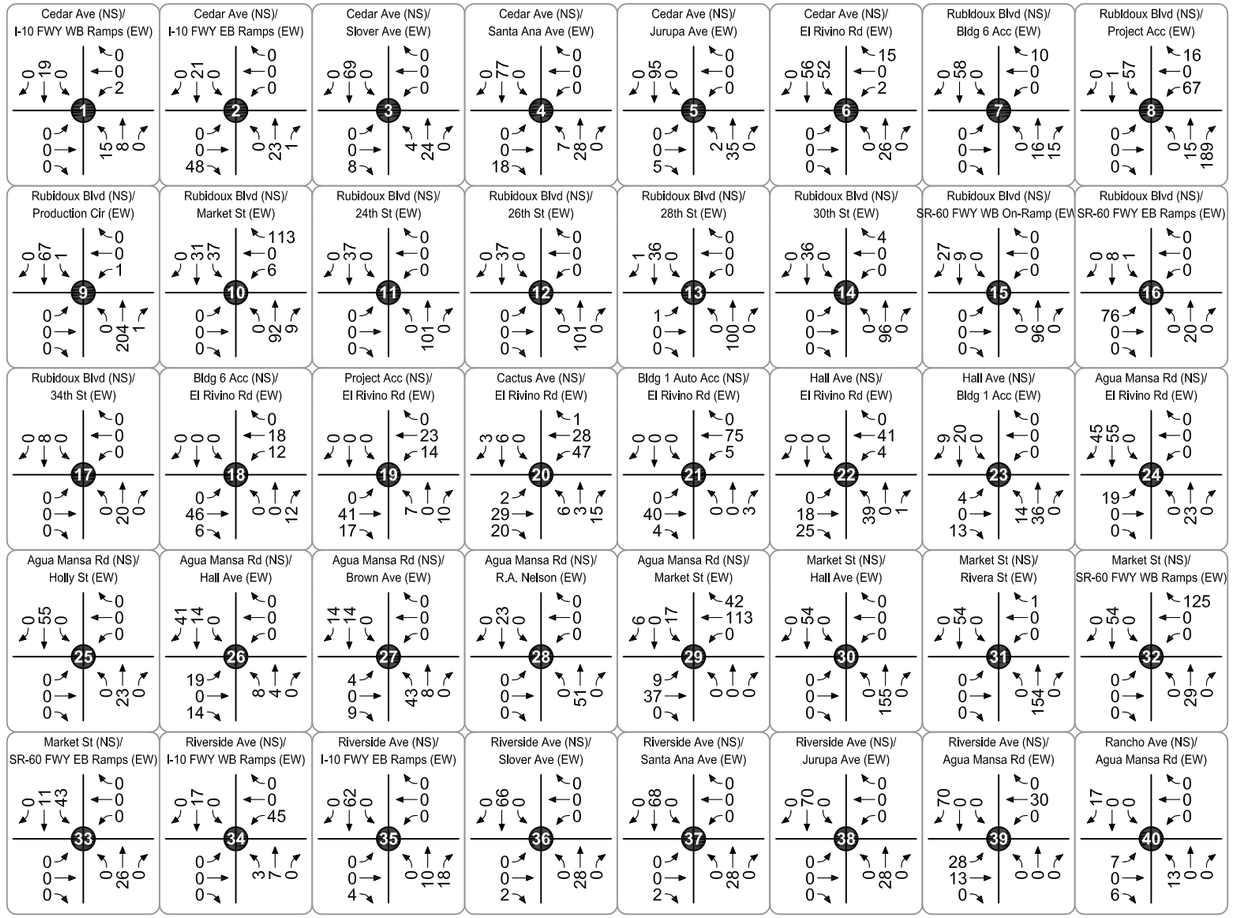
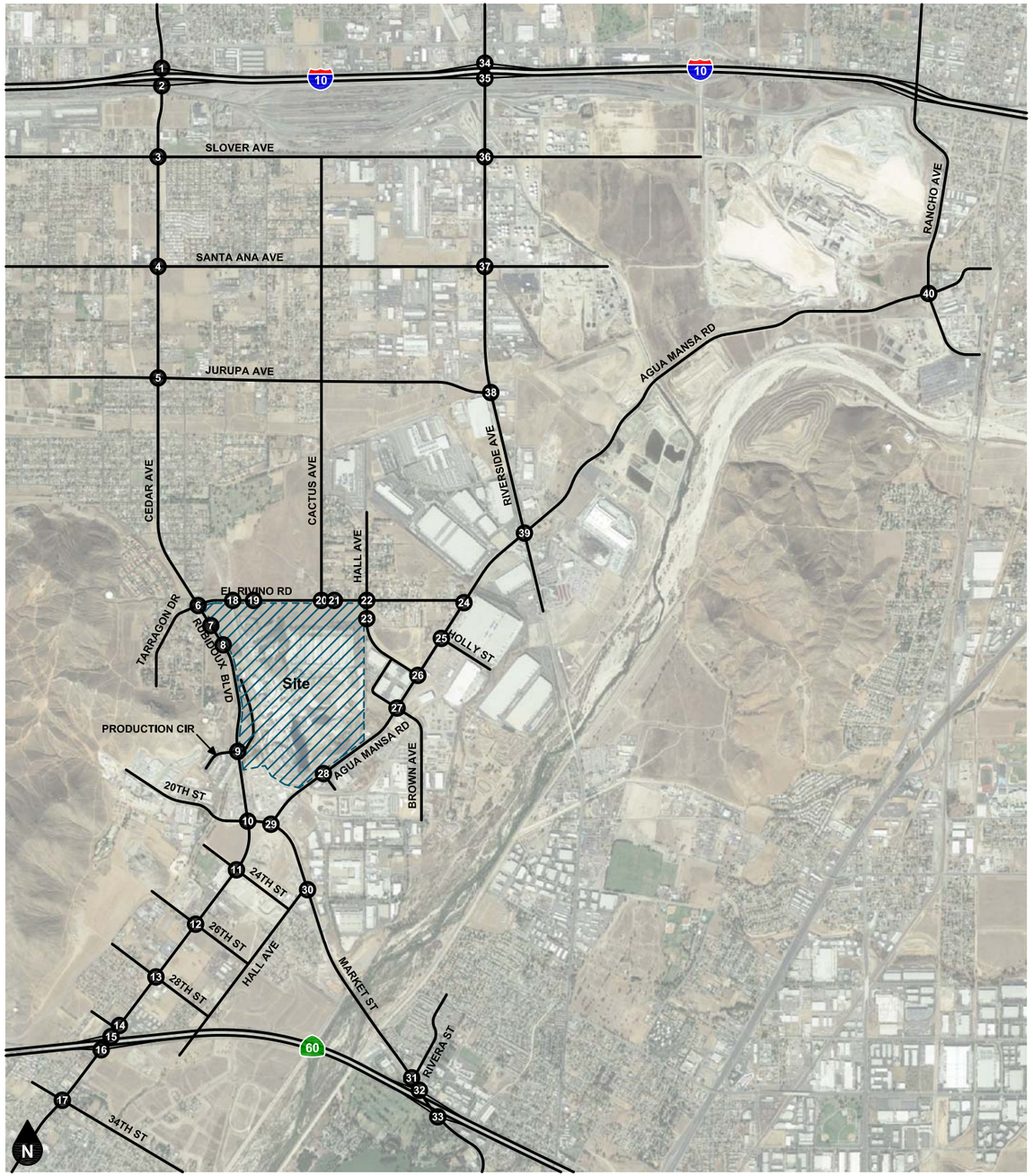


Figure 46
Project AM Peak Hour Intersection Turning Movement Volumes
- Alternative 2



Legend

(#) Study Intersection

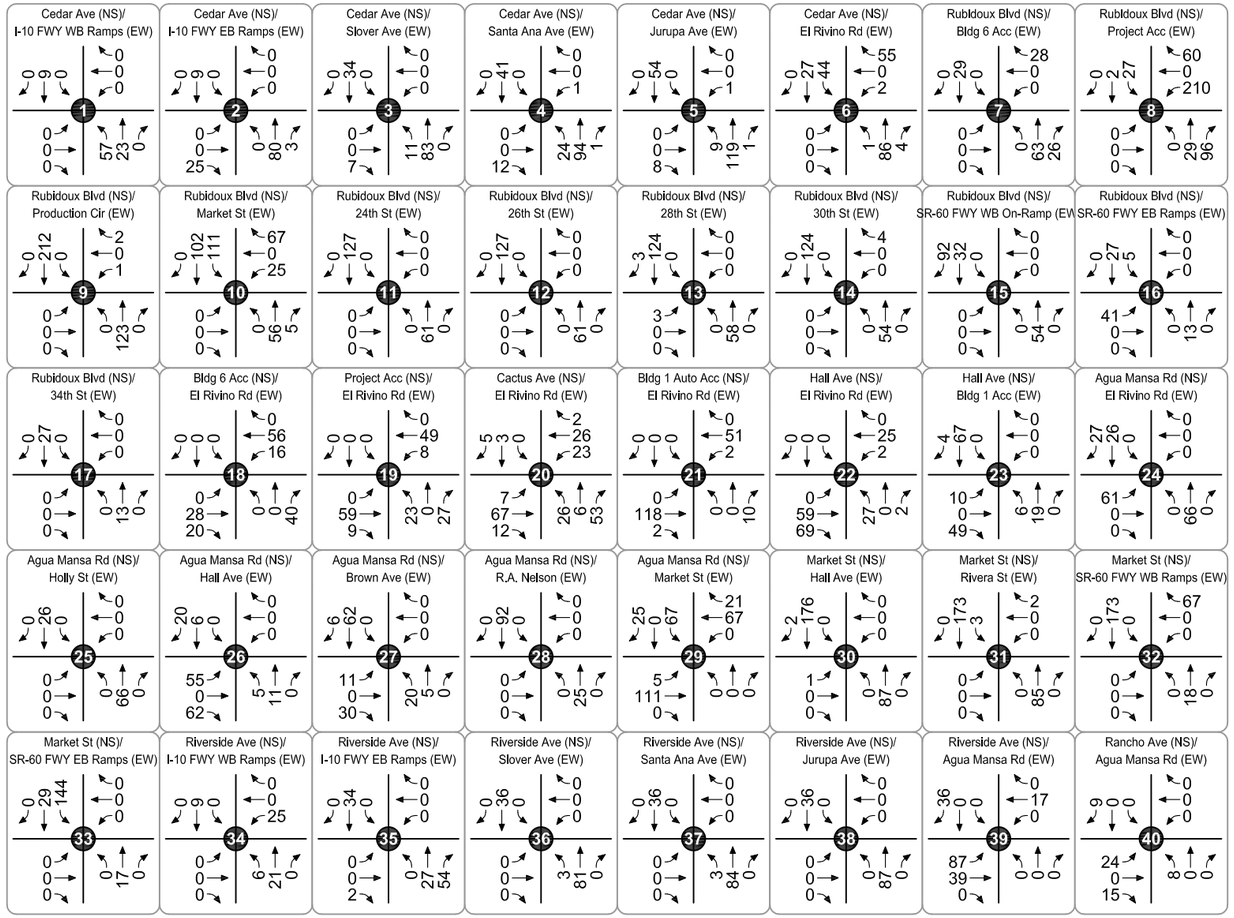


Figure 47
Project PM Peak Hour Intersection Turning Movement Volumes
- Alternative 2

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

To assess future traffic conditions, existing traffic volumes are combined with project trips, ambient growth, and other development trips. The project opening year for analysis purposes in this report is 2020.

RIVERSIDE TRAFFIC ANALYSIS MODEL (RIVTAM)

Based upon discussions with City of Jurupa Valley staff, the average daily traffic volume forecasts have been determined using the growth increment approach[1] on the Riverside Traffic Analysis Model Year 2008 and Year 2035 average daily traffic volume forecasts (see Appendix E). This difference defines the growth in traffic volumes over the 27 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between Year 2018 and Year 2035. For this purpose, linear growth between the Year 2008 base condition and the forecast Year 2035 condition was assumed. Since the increment between Year 2018 and Year 2035 is 17 years of the 27 year time frame, a factor of 0.63 (i.e., 17/27) was used.

The Year 2035 daily and peak hour directional roadway segment volume forecasts have been determined using the growth increment approach on the Riverside Traffic Analysis Model Year 2008 and Year 2035 peak hour volumes. The growth increment calculation worksheets are shown in Appendix E. Current peak hour intersection approach/departure data is a necessary input to this approach. The existing intersection turning movement volume data serves as the starting point for the refinement process. The initial intersection turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The Year 2035 Riverside Traffic Analysis Model (see Appendix D) was obtained for the study area. At the request of City of Jurupa Valley staff, the Riverside Traffic Analysis Model was obtained by LSA Associates, Inc. in conformance with the Jurupa Valley General Plan Update. The Riverside Traffic Analysis Model utilizes socio-economic data based on the proposed land uses and quantities for its analysis. Therefore, to analyze the Levels of Service for Year 2035 with full buildout of the project trips, it was necessary to manually add the entire project buildout trip generation project trips to the Year 2035 traffic volumes developed by the model.

Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10%[2] growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

[1] This methodology is an accepted procedure for traffic model forecast refinement and smoothing based upon the National Cooperative Highway Research Program (NCHRP Report 255). A linear programming algorithm was used to calculate individual turning movements and the traffic model output was checked for reasonableness and factored up to ensure at least 10% growth as part of the refinement process. The minimum growth includes any additional growth that is not accounted for in the future forecasts. These forecasts were also checked for flow conservation, reasonable growth, and reasonable diversion between parallel routes. This methodology is consistent with previous traffic studies conducted in the area by other traffic engineering firms.

[2] The minimum 10% growth rate accounts for areawide growth between Existing (2017) traffic conditions and Buildout Year (2035) traffic conditions, over 18 years. Conservatively, this 10% growth rate (spread over 18 years) is added to the Riverside Traffic Analysis Model projections. The Year 2020 growth rate is pro-rated (2 years). This overlapping growth rate refinement maintains that the traffic model projections are higher than existing traffic conditions.

The Year 2020 traffic projections have been interpolated between Year 2035 traffic volumes and existing traffic volumes utilizing a portion of the growth increment.

Year 2035 Without Project turning movement forecasts for each intersection were compared to Opening Year (2020) Without Project turning movement forecasts to ensure that Year 2035 Without Project turning movement forecasts were equal to or greater than the Opening Year (2020) Without Project forecasts.

Per City of Jurupa Valley and City of Riverside traffic study guidelines, all analysis factors and procedures have been obtained from the Riverside County Transportation Department Traffic Impact Analysis Preparation Guide.

Per City of Rialto, City of Colton, and County of San Bernardino traffic study guidelines, all analysis factors and procedures have been obtained from Appendix C of the San Bernardino County Congestion Management Program, 2016 Update.

The peak hour intersection turning movement volumes have been adjusted to peak 15 minute volumes for analysis purposes using the existing observed peak 15 minute to peak hour factors for all scenarios analyzed. In accordance with the Riverside County Transportation Department Traffic Impact Analysis Preparation Guide, the Year 2035 peak hour factor has been adjusted upwards to 1.00 for intersections within Jurupa Valley. This is to account for the effects of congestion on peak spreading. Peak spreading refers to the tendency of traffic to spread more evenly across time as congestion increases.

For study intersections within County of San Bernardino, the Year 2035 peak hour factor has been adjusted to 0.95 per County of San Bernardino traffic impact analysis guidelines. Saturation flow rate, coordination type, actuation type, arrival type, etc. were also adjusted based on County of San Bernardino traffic impact analysis guidelines.

OTHER DEVELOPMENT

A list of other developments in the project vicinity were provided by City of Jurupa Valley, City of Rialto, City of Fontana, City of Colton, City of Riverside, and County of San Bernardino staffs. The other development trips have been aggregated into 31 traffic analysis zones. Table 11 shows the forecast trip generation by traffic analysis zone for other developments forecast to add future traffic volumes to the study area. Figure 48 shows the other development location map. Appendix I includes the trip distributions for the other development. Average daily traffic volumes forecast to be generated by other developments are depicted on Figure 49. Figures 50 and 51 show the morning and evening peak hour intersection turning movement volumes for other developments, respectively.

ANALYSIS SCENARIO VOLUME FORECASTS

Existing Plus Project Traffic Volumes

The traffic volumes for existing plus project conditions have been derived by adding the project generated trips to existing traffic volumes.

Existing plus project average daily traffic volumes are depicted on Figure 52 for Alternative 1 and Figure 53 for Alternative 2. Existing plus project morning and evening peak hour intersection turning movement volumes are shown for Alternative 1 on Figures 54 and 55, respectively. Existing plus project morning and evening peak hour intersection turning movement volumes are shown for Alternative 2 on Figures 56 and 57, respectively.

Opening Year (2020) Without Project Traffic Volumes

To assess Opening Year (2020) Without Project traffic conditions, Year 2020 model projections are combined with trips generated by other developments.

Opening Year (2020) Without Project average daily traffic volumes are depicted on Figure 58. Opening Year (2020) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 59 and 60, respectively.

Opening Year (2020) With Project Traffic Volumes

To assess Opening Year (2020) With Project traffic conditions, the project generated trips are added to Opening Year (2020) Without Project traffic volumes.

Opening Year (2020) With Project average daily traffic volumes are depicted on Figure 61 for Alternative 1 and Figure 62 for Alternative 2. Opening Year (2020) With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 1 on Figures 63 and 64, respectively. Opening Year (2020) With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 2 on Figures 65 and 66, respectively.

Year 2035 Without Project Traffic Volumes

To assess Year 2035 Without Project traffic conditions, the Year 2035 model volume projections are utilized.

Year 2035 Without Project average daily traffic volumes are depicted on Figure 67. Year 2035 Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 68 and 69, respectively.

Year 2035 With Project Traffic Volumes

To assess Year 2035 With Project traffic conditions, the project generated trips are added to Year 2035 Without Project traffic volumes.

Year 2035 With Project average daily traffic volumes are depicted on Figure 70 for Alternative 1 and Figure 71 for Alternative 2. Year 2035 With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 1 on Figures 72 and 73, respectively. Year 2035 With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 2 on Figures 74 and 75, respectively.

Table 11 (1 of 3)
Other Development Trip Generation[1]

Traffic Analysis Zone	Project Name	Land Use	Quantity	Units[2]	Peak Hour						Daily
					Morning			Evening			
					Inbound	Outbound	Total	Inbound	Outbound	Total	
1	P201300294 (Bloomington)[3]	Apartments	131	DU	14	46	60	46	27	73	959
		Senior Housing	65	DU	5	8	13	9	8	17	241
		Library	6.000	TSF	4	2	6	24	25	49	432
		Subtotal			23	56	79	79	60	139	1,632
2	P201500317	Warehouse/Maintenance/Storage Canopy	11.900	TSF	2	0	2	1	2	3	21
	Bloomington Business Center	High-Cube Warehouse Distribution Center	344.000	TSF							
		- Cars			16	5	21	8	19	27	383
		- Trucks (in PCE's)	150	RM	13	3	16	3	13	16	247
		Subtotal			31	8	39	12	34	46	651
3	Slover High-Cube Warehouse[4]	High-Cube Warehouse Distribution Center	708.240	TSF							
		- Cars			22	9	31	3	22	25	347
		- Trucks (in PCE's)			17	-2	15	-8	8	0	20
		Subtotal			39	7	46	-5	30	25	367
4	Thrifty Oil[5]	High-Cube Warehouse Distribution Center	371.422	TSF							
		- Cars			18	6	24	9	21	30	416
		- Trucks (in PCE's)			12	3	15	6	15	21	312
		Subtotal			30	9	39	15	36	51	728
5	Cedar Avenue Technology Park	High-Cube Warehouse Distribution Center	184.770	TSF							
		- Cars			9	3	12	4	10	14	206
		- Trucks (in PCE's)			5	0	5	3	8	11	134
		Subtotal			14	3	17	7	18	25	340
6	Slover / Cactus Warehouse	High-Cube Warehouse Distribution Center	257.915	TSF							
		- Cars			12	4	16	6	14	20	287
		- Trucks (in PCE's)			10	3	13	3	10	13	187
		Subtotal			22	7	29	9	24	33	474
7	P201200375	Dollar Store	8.320	TSF	15	11	26	30	27	57	528
8	P201400517	Single-Family Detached Residential	22	DU	4	12	16	14	8	22	208
9	Western Realco[6]	High-Cube Warehouse Distribution Center	676.983	TSF							
		- Cars			32	11	43	16	38	54	754
		- Trucks (in PCE's)			21	8	29	10	25	35	489
		Subtotal			53	19	72	26	63	89	1,243
10	West Valley Logistics Center[7]	Warehousing	3,600.000	TSF	341	115	456	170	396	566	7,907
11	Rialto Commerce Center - San Bernardino County[8]	High-Cube Warehouse Distribution Center	3,475.000	TSF							
		- Cars			166	55	221	83	194	277	3,871
		- Trucks (in PCE's)			109	36	145	55	126	181	2,504
		Warehousing	184.000	TSF							
		- Cars			19	6	25	8	20	28	257
		- Trucks (in PCE's)			10	3	13	3	13	16	150
		Subtotal			304	100	404	149	353	502	6,782
12	Southwest Regional Operations Center[9]	Regional Operations Center	125	TR							
		- Cars			13	20	33	14	8	22	413
		- Trucks (in PCE's)			20	44	64	33	8	41	712
		Subtotal			33	64	97	47	16	63	1,125
13	Bloomington 167[10]	Single-Family Detached Residential	167	DU	31	93	124	104	61	165	1,576
14	I-10/60 Logistics Center[11]	High-Cube Warehouse Distribution Center	2,471.000	TSF							
		- Cars			118	39	157	59	138	197	2,753
		- Trucks (in PCE's)			76	25	101	38	88	126	1,780
		Subtotal			194	64	258	97	226	323	4,533

Table 11 (2 of 3)
Other Development Trip Generation[1]

Traffic Analysis Zone	Project Name	Land Use	Quantity	Units[2]	Peak Hour						Daily
					Morning			Evening			
					Inbound	Outbound	Total	Inbound	Outbound	Total	
15	Inland Empire Cold Storage[12]	Light Industrial	46.300	TSF							
		- Cars			23	3	26	3	20	23	181
		- Trucks (in PCE's)			14	0	14	0	11	11	111
		Subtotal			37	3	40	3	31	34	292
16	Agua Mansa Commerce Center[13]	High-Cube Warehouse Distribution Center	447.330	TSF							
		- Cars			21	7	28	11	25	36	498
		- Trucks (in PCE's)			13	3	16	8	16	24	322
		Subtotal			34	10	44	19	41	60	820
17	Agua Mansa Commerce Center[14]	High-Cube Warehouse Distribution Center	299.584	TSF							
		- Cars			14	5	19	7	17	24	334
		- Trucks (in PCE's)			10	3	13	3	13	16	215
		Subtotal			24	8	32	10	30	40	549
18	Agua Mansa Logistics Center[15]	High-Cube Warehouse Distribution Center	808.500	TSF							
		- Cars			39	13	52	19	45	64	901
		- Trucks (in PCE's)			25	10	35	13	30	43	585
		Subtotal			64	23	87	32	75	107	1,486
19	Roquet Ranch Specific Plan[16]	Residential	1,050	DU	161	474	635	535	315	850	8,644
		Commercial	12.000	TSF	63	73	136	39	32	71	1,077
		Parks	19.500	AC	12	12	24	23	23	46	568
		Subtotal			236	559	795	597	370	967	10,289
20	Center Street Warehouse[17]	Manufacturing	308.000	TSF							
		- Cars			110	32	142	48	105	153	901
		- Trucks (in PCE's)			89	25	114	38	86	124	724
		Subtotal			199	57	256	86	191	277	1,625
21	Emerald Ridge[18]	Single-Family Detached Residential	284	DU	53	158	211	177	104	281	2,681
		Residential Condominium/Townhome	121	DU	13	43	56	43	25	68	886
		Subtotal			66	201	267	220	129	349	3,567
22	Market Street Commercial[19]	High Turnover Sit-Down Restaurant	4.715	TSF	26	21	47	29	18	47	529
		- Pass-By Trip Reduction (43% PM)			--	--	--	-12	-8	-20	-20
		Fast-Food Restaurant With Drive-Thru	2.700	TSF	55	53	108	46	42	88	1,272
		- Pass-By Trip Reduction (49% AM, 50% PM)			-27	-26	-53	-23	-21	-44	-97
		Convenience Market With Gas Pumps	18	FP	365	365	730	444	444	888	11,236
		- Pass-By Trip Reduction (63% AM, 66% PM)			-230	-230	-460	-293	-293	-586	-1,046
		Automatic Car Wash	1	Site	18	18	36	41	41	82	900
		- Pass-By Trip Reduction (50%)			-9	-9	-18	-21	-21	-42	-450
		Subtotal			198	192	390	211	202	413	12,324
23	Avalon Court (TTM 33649)	Single-Family Detached Residential	24	DU	4	13	17	15	9	24	227
24	Palm Communities	Apartments	49	DU	5	17	22	17	10	27	359
	Legend Shopping Center	Commercial Retail	50.000	TSF	29	18	47	60	65	125	1,823
	Flabob - River Charter School	7th - 12th Grade School	200	ST	63	53	116	17	17	34	426
		Subtotal			97	88	185	94	92	186	2,608
25	4253 Fairgrounds	Warehousing	15.000	TSF	2	1	3	1	2	3	26
	3530 Fairmount	Hotel	239	RM	66	46	112	73	70	143	1,998
	3105 Market Street	Apartments	146	DU	15	52	67	52	30	82	1,069
		Subtotal			83	99	182	126	102	228	3,093
26	Mission Gateway Plaza & Villas[20]	Multi-Family Housing	68	DU	7	24	31	24	14	38	498
		Recreational Community Center	3.80	TSF	4	2	6	4	5	9	110
		Shopping Center	31.40	TSF	48	29	77	132	143	275	3,198
		Internal Capture (5%)			-3	-3	-6	-8	-8	-16	-190
		Subtotal			56	52	108	152	154	306	3,616

Table 11 (3 of 3)
Other Development Trip Generation[1]

Traffic Analysis Zone	Project Name	Land Use	Quantity	Units[2]	Peak Hour						Daily
					Morning			Evening			
					Inbound	Outbound	Total	Inbound	Outbound	Total	
27	Agua Mansa High Cube Warehouse[21]	High-Cube Warehouse Distribution Center	475.847	TSF							
		General Light Industrial	30.059	TSF							
		- Cars			46	11	57	14	47	61	713
		- Trucks (in PCE's)			32	3	35	8	31	39	461
		Subtotal			78	14	92	22	78	100	1,174
28	Highland Park[22]	Single-Family Detached Residential	408	DU	75	226	301	254	149	403	3,852
	Highland Park 2	Single-Family Detached Residential	34	DU	6	19	25	21	12	33	321
					81	245	326	275	161	436	4,173
29	Rio Vista Specific Plan[23]	Single-Family Detached Residential	414	DU	77	230	307	258	152	410	3,908
		Internal Capture			-24	-28	-52	-8	-9	-17	-156
		Elementary School	600	ST	217	185	402	49	53	102	1,134
		Alternative Modes			-17	0	-17	0	0	0	-17
		Internal Capture			-43	-37	-80	-10	-11	-21	-227
		Regional Park	12.2	AC	1	1	2	1	1	2	56
		Subtotal			211	351	562	290	186	476	4,698
30	Bailey Building	General Light Industrial	32.700	TSF							
		- Cars			16	2	18	2	14	16	129
		- Trucks (in PCE's)			10	0	10	0	10	10	85
		Subtotal			26	2	28	2	24	26	214
31	Carson Companies	High-Cube Warehouse Distribution Center	334.523	TSF							
		- Cars			16	5	21	8	19	27	373
		- Trucks (in PCE's)			10	3	13	3	13	16	242
		Subtotal			26	8	34	11	32	43	615
				TOTAL	**2,654**	**2,493**	**5,147**	**2,919**	**3,259**	**6,178**	**79,464**

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012, Land Use Codes 110, 150, 152, 210, 220, 252, 310, 520, 522, 590. 814, 820, 934, and 937.
City of Fontana, Truck Trip Generation Study, August 2003.
San Diego Association of Governments, Traffic Generators, May 2003.

(2) DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms; TR = Trucks; AC = Acres; FP = Fueling Positions; ST = Students

(3) Source: Bloomington Phase 1 Project Traffic Impact Analysis, RBF Consulting, June 21, 2013.

(4) Source: Slover High-Cube Warehouse Traffic Study, LSA Associates, Inc., January 3, 2014.

(5) Source: High-Cube Warehouse / Distribution Center Traffic Impact Study, David Evans and Associates Inc., July 19, 2016.

(6) Source: Bloomington Industrial Facility Traffic Impact Analysis, Kunzman Associates, Inc., August 31, 2016.

(7) Source: West Valley Logistics Center Specific Plan Recirculated Draft Environmental Impact Report, ICF International, December 2014.

(8) Source: Rialto Commerce Center - San Bernardino County Traffic Impact Analysis (Revised), Kunzman Associates, Inc., May 25, 2010.

(9) Source: Southwest Regional Operations Center Traffic Impact Analysis (Revised), Kunzman Associates, Inc., May 3, 2016.

(10) Source: Bloomington 167 Traffic Impact Analysis, Kunzman Associates, Inc., February 4, 2015.

(11) Source: Rialto Commerce Center Traffic Impact Analysis (Revised), Kunzman Associates, Inc., June 30, 2009.

(12) Source: Hall Avenue / El Rivino Road Project Traffic Impact Analysis, Kunzman Associates, Inc., March 17, 2015.

(13) Source: Agua Mansa Commerce Center Addendum Traffic Impact Analysis, Kunzman Associates, Inc., May 22, 2014.

(14) Source: Agua Mansa Commerce Center Traffic Impact Analysis (Revised), Kunzman Associates, Inc., February 8, 2008.

(15) Source: Agua Mansa Logistics Center Traffic Impact Analysis (Revised), Kunzman Associates, Inc., October 9, 2013.

(16) Source: Roquet Ranch Specific Plan Traffic Impact Analysis, Urban Crossroads, November 30, 2016.

(17) Source: Center Street Warehouse Project Traffic Impact Analysis, Urban Crossroads, January 19, 2016.

(18) Source: Emerald Ridge Traffic Impact Analysis, Trames Solutions, Inc., February 24, 2016.

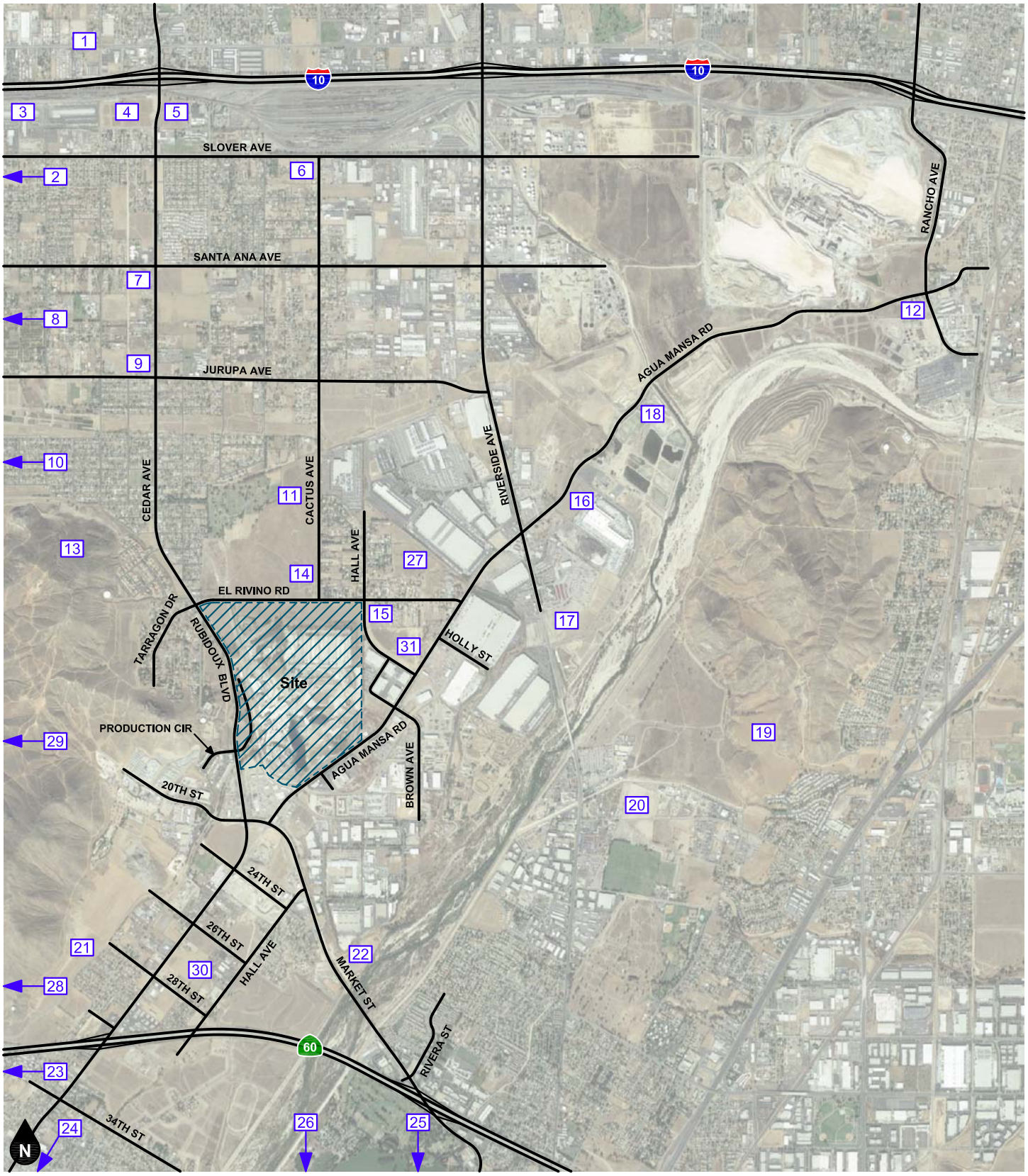
(19) Source: Market Street Commercial Center Project Traffic Impact Analysis, Kunzman Associates, Inc., June 12, 2015.

(20) Source: Information supplied by Urban Crossroads.

(21) Source: Agua Mansa High-Cube Warehouse Traffic Impact Analysis (Revised), RK Engineering Group, Inc., May 15, 2015.

(22) Source: Tentative Tract Map No. 31894 Traffic Impact Analysis, Albert A. Webb Associates.

(23) Source: Information from the traffic impact analysis for the Rio Vista Specific Plan supplied by Albert A. Webb Associates. Phase 1 anticipated for completion in 2020.



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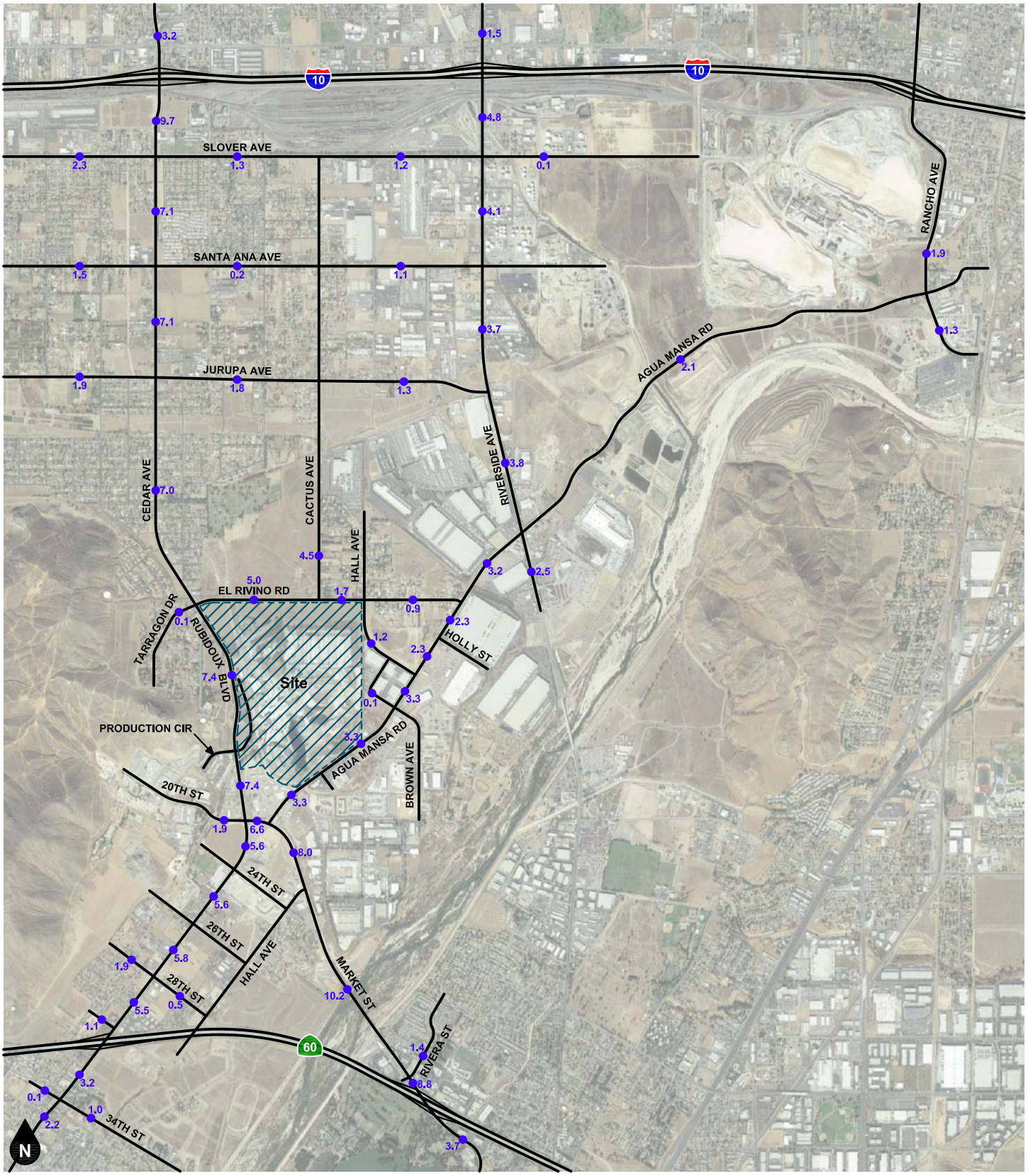
88 Traffic Analysis Zone

Figure 48
Other Development Location Map



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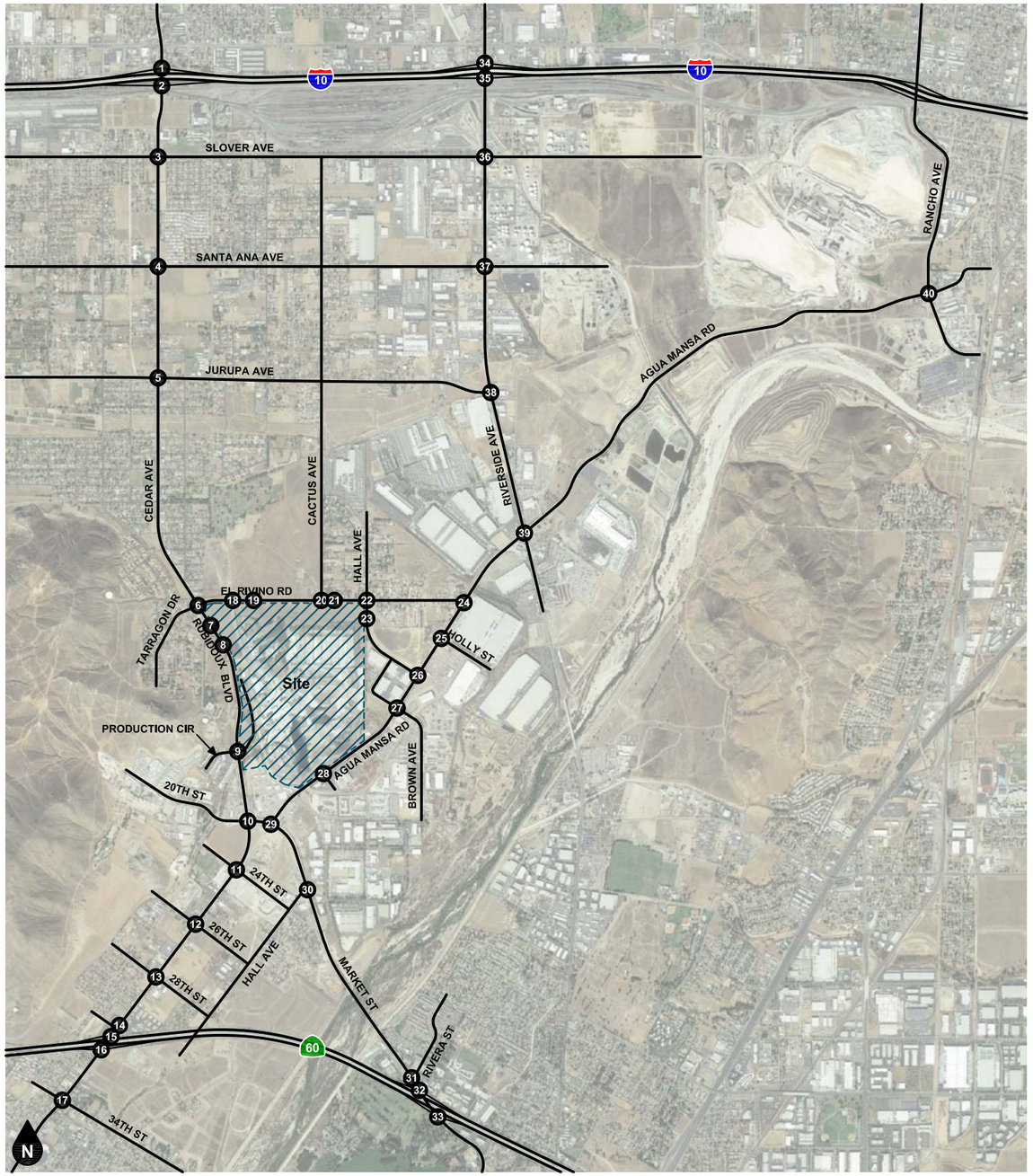
●## Vehicles Per Day (1,000's)

Figure 49
Other Development Average Daily Traffic Volumes



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(#) Study Intersection

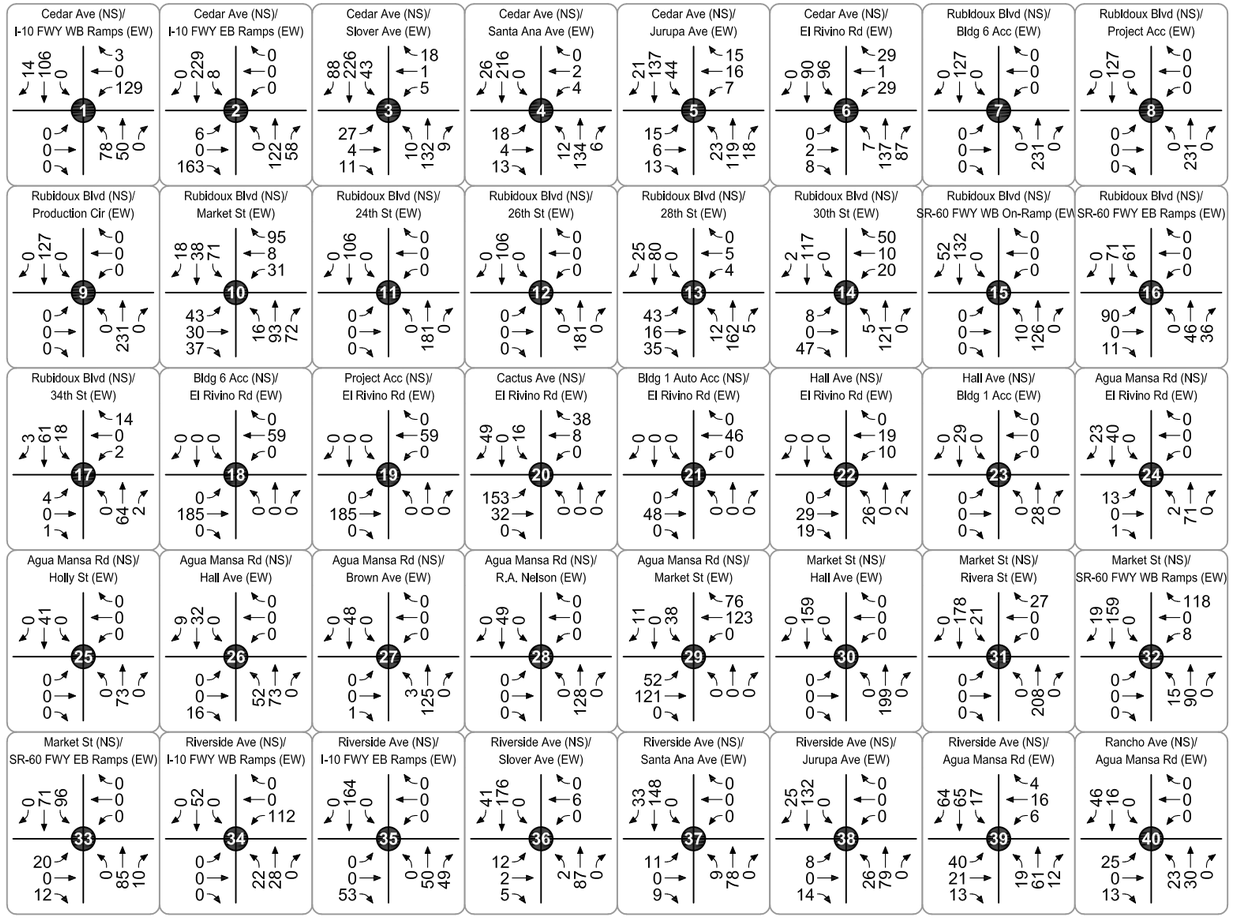
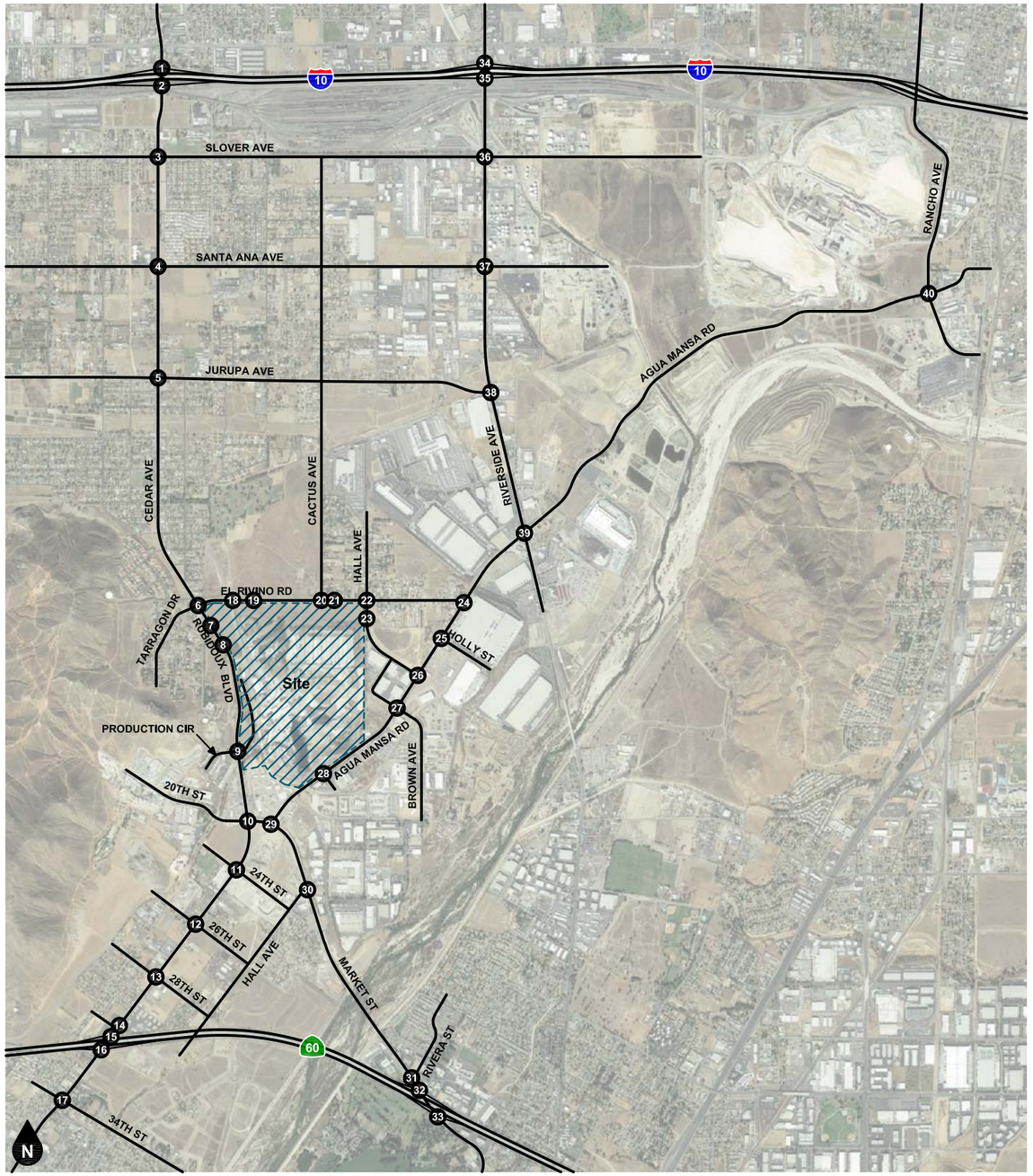


Figure 50
Other Development
AM Peak Hour Intersection Turning Movement Volumes



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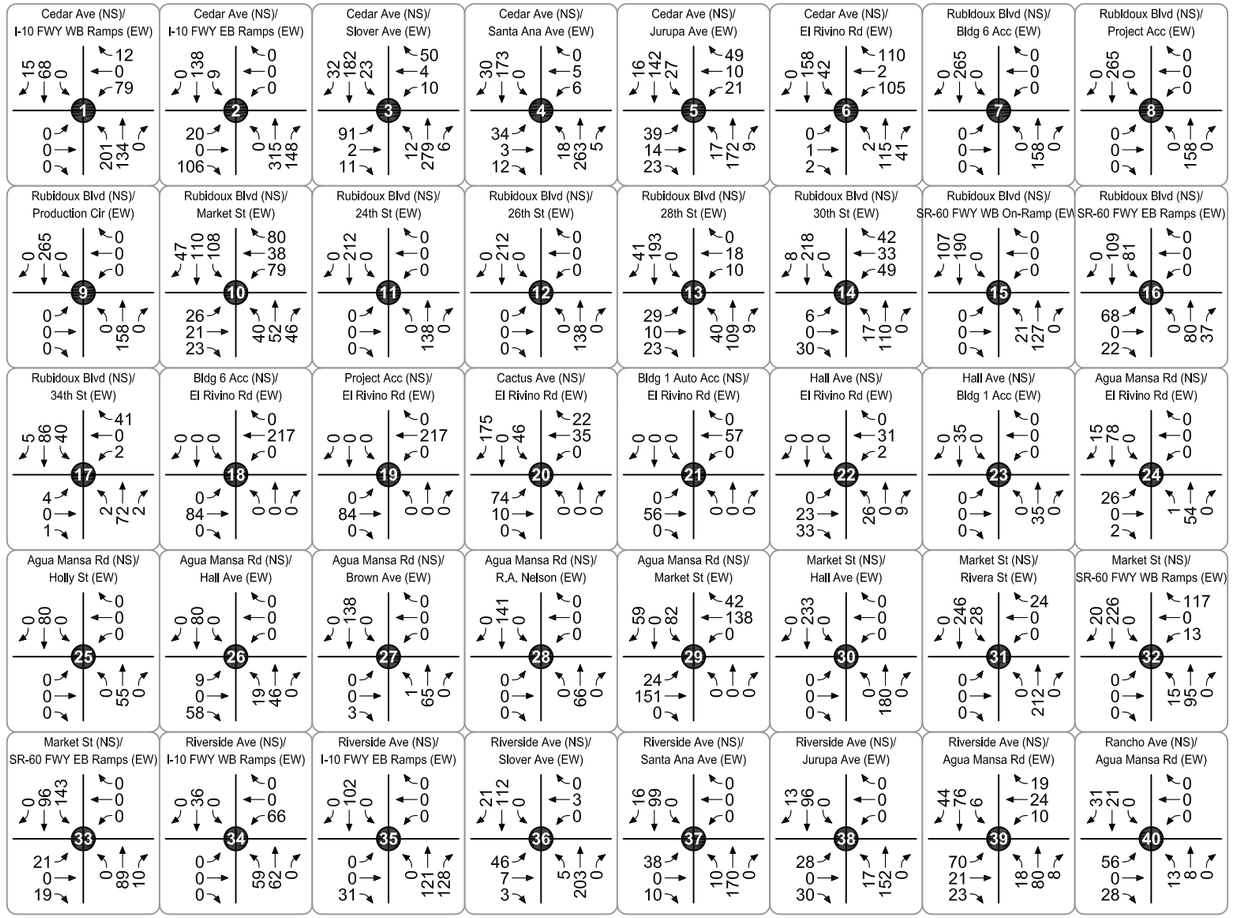
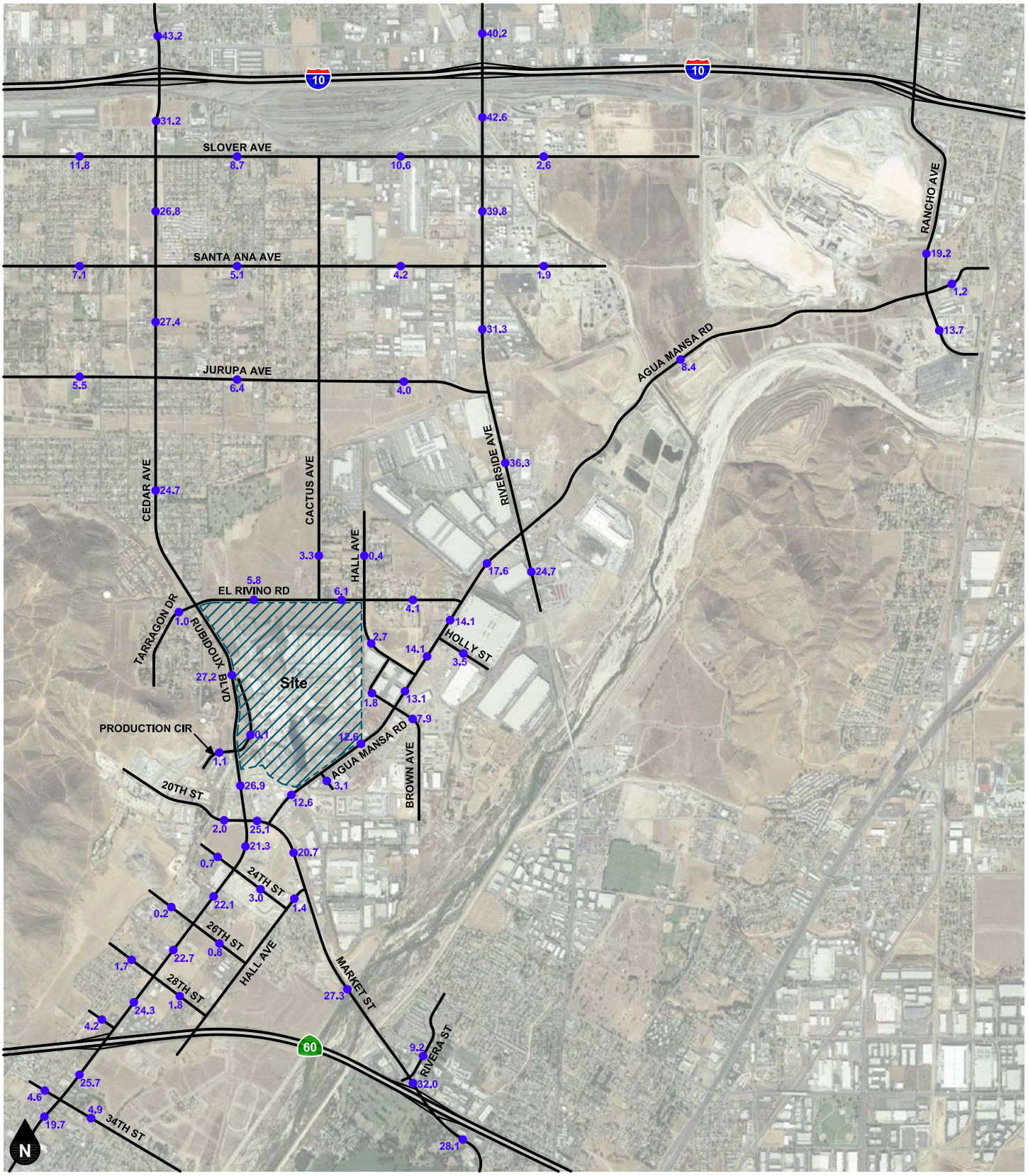


Figure 51
Other Development
PM Peak Hour Intersection Turning Movement Volumes



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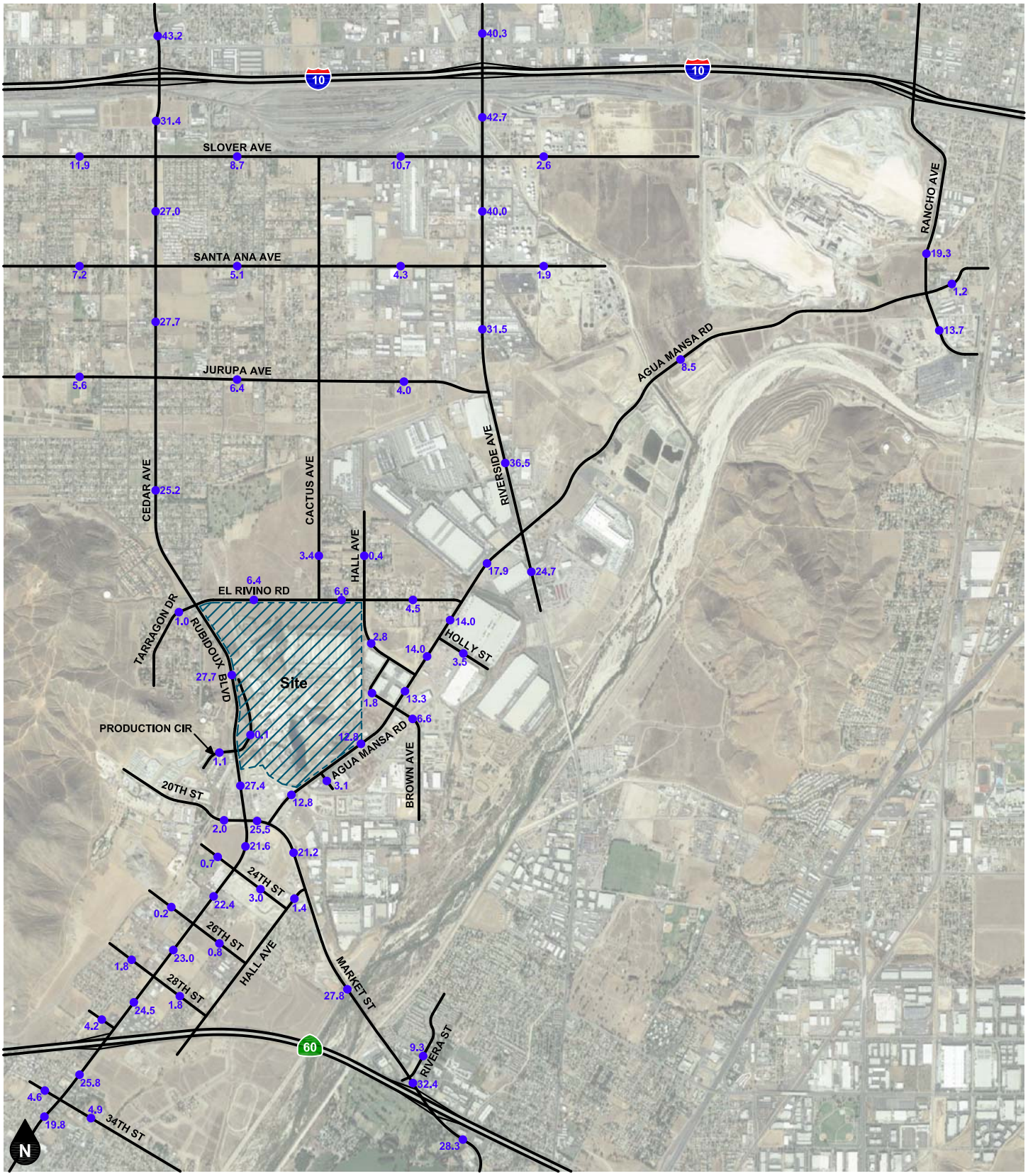
●## Vehicles Per Day (1,000's)

Figure 52
Existing Plus Project Average Daily Traffic Volumes - Alternative 1



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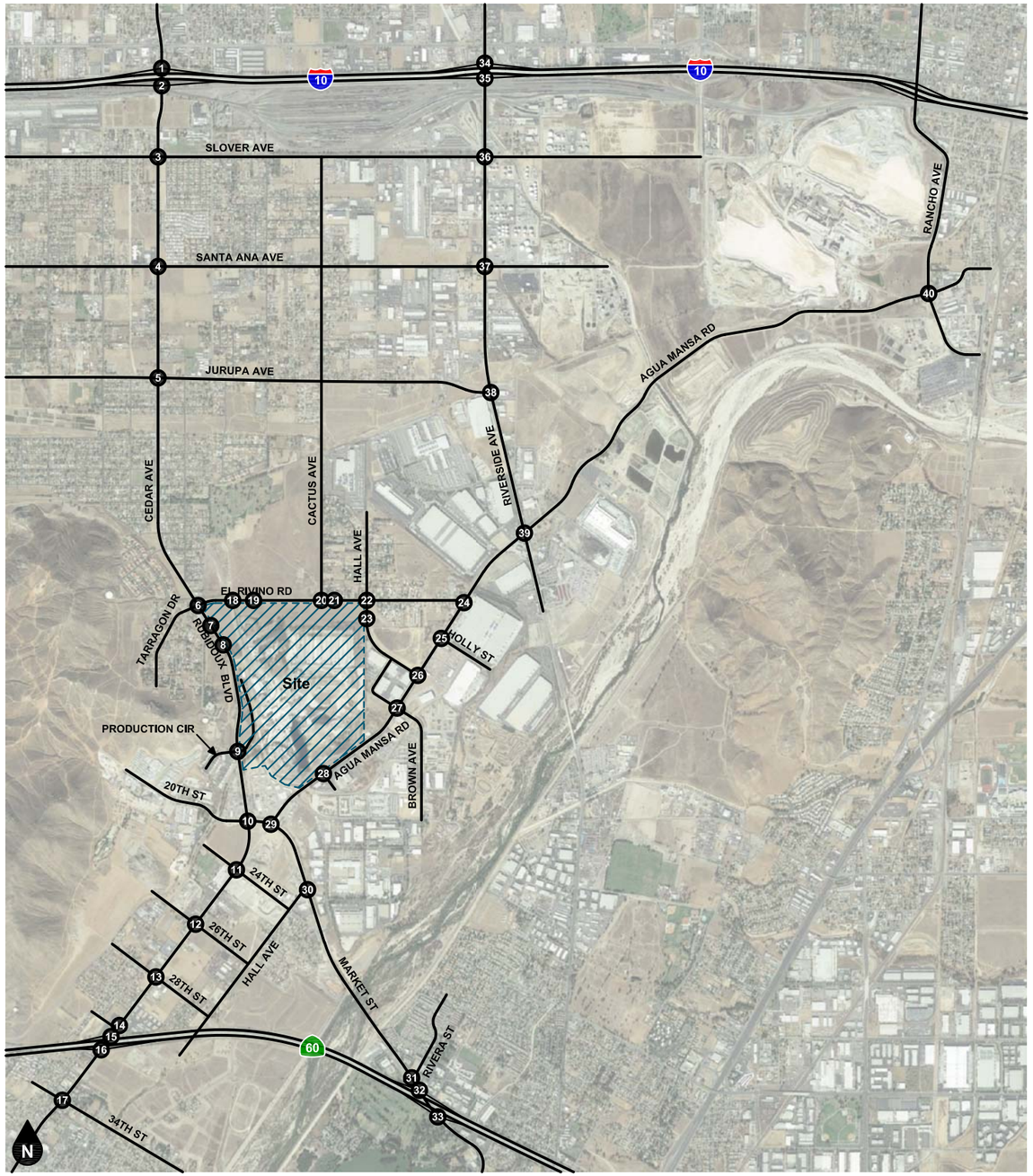
●## Vehicles Per Day (1,000's)

Figure 53
Existing Plus Project Average Daily Traffic Volumes - Alternative 2



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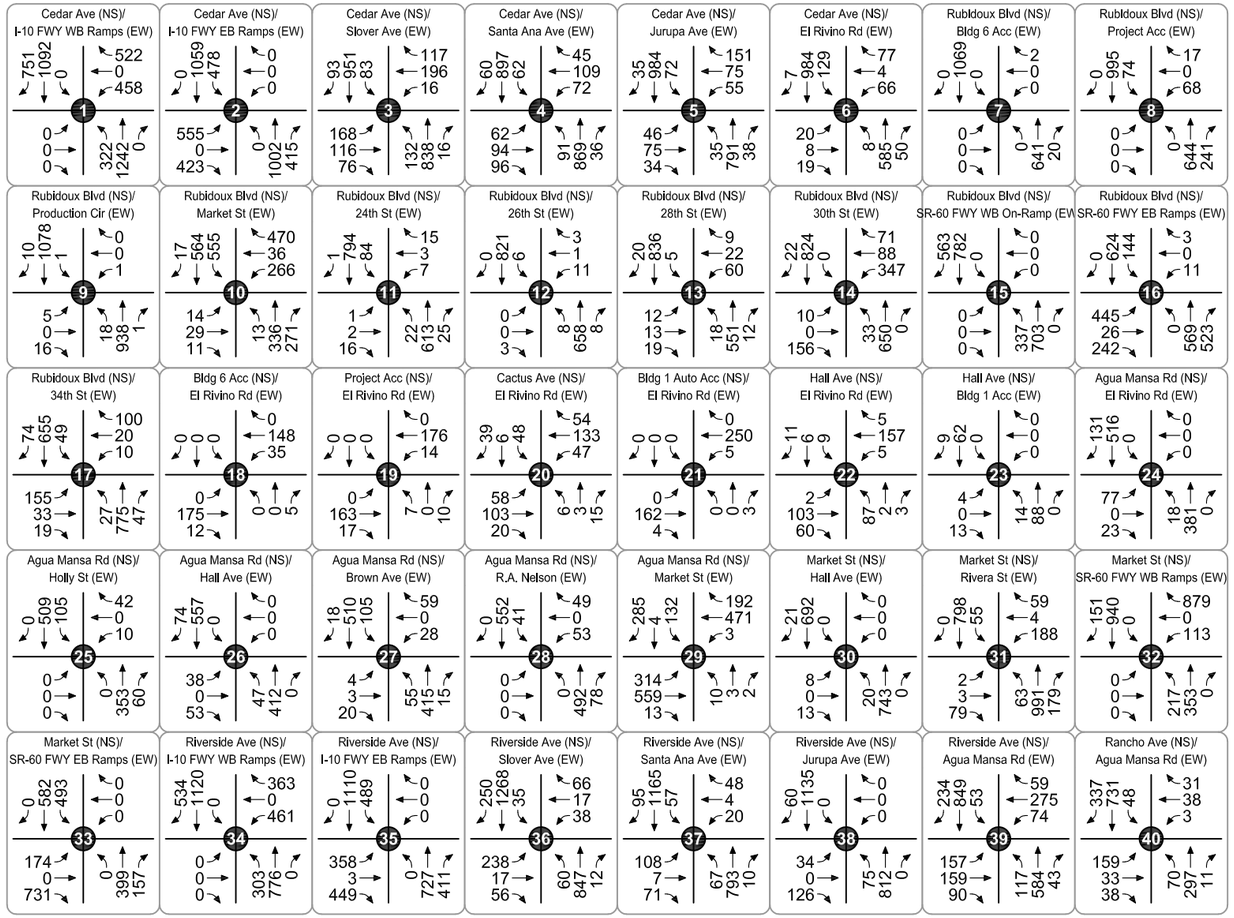
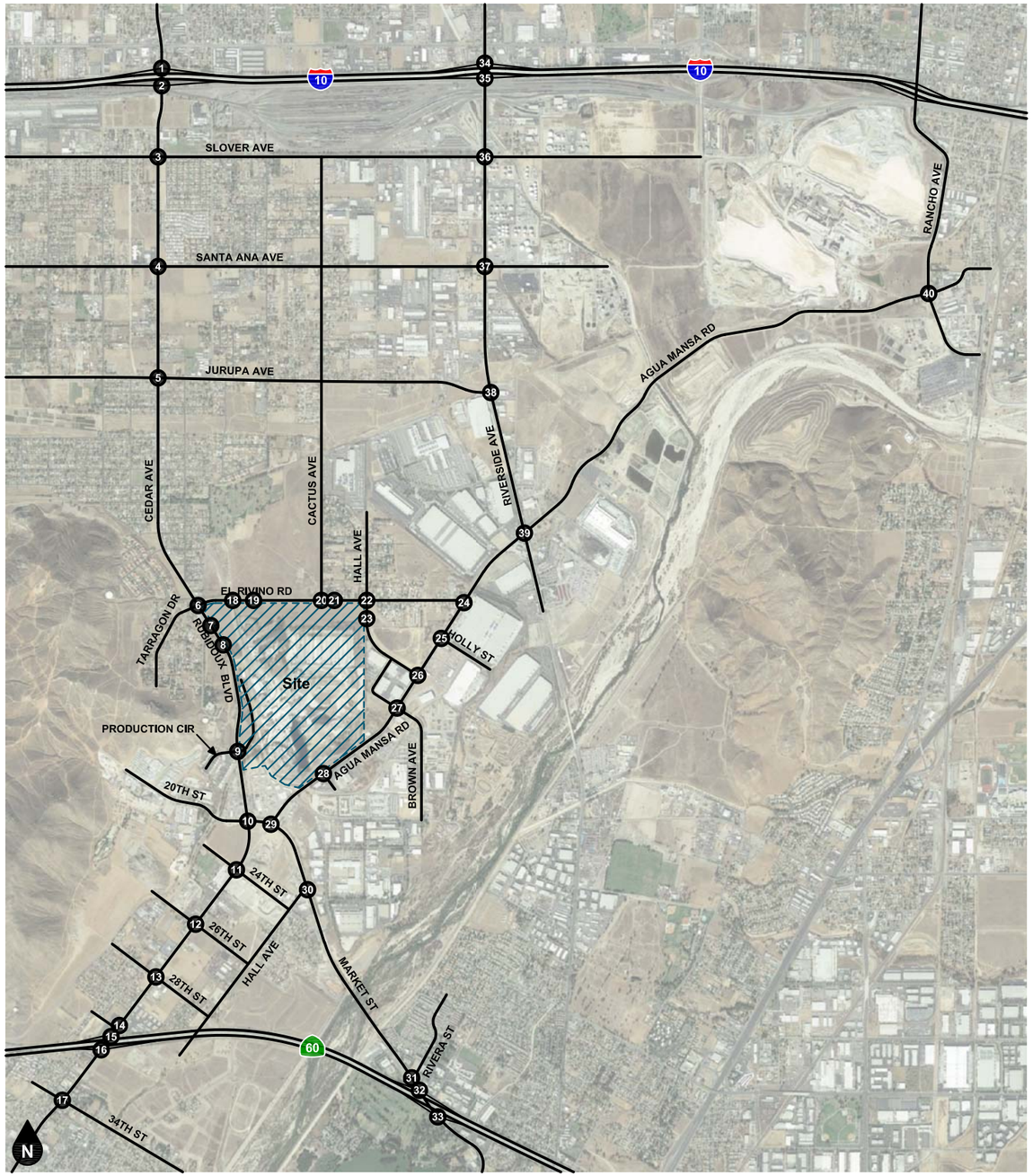


Figure 54
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 1



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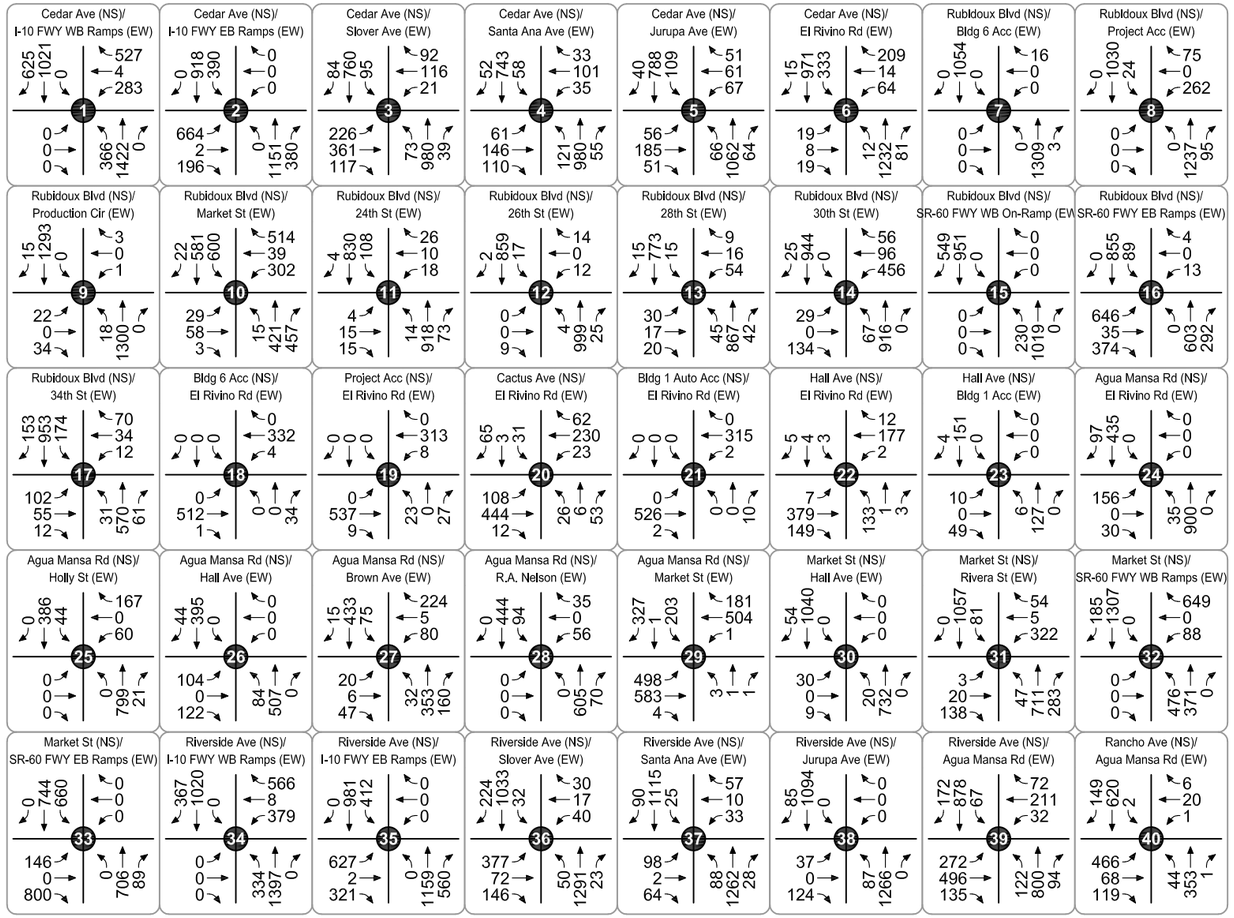
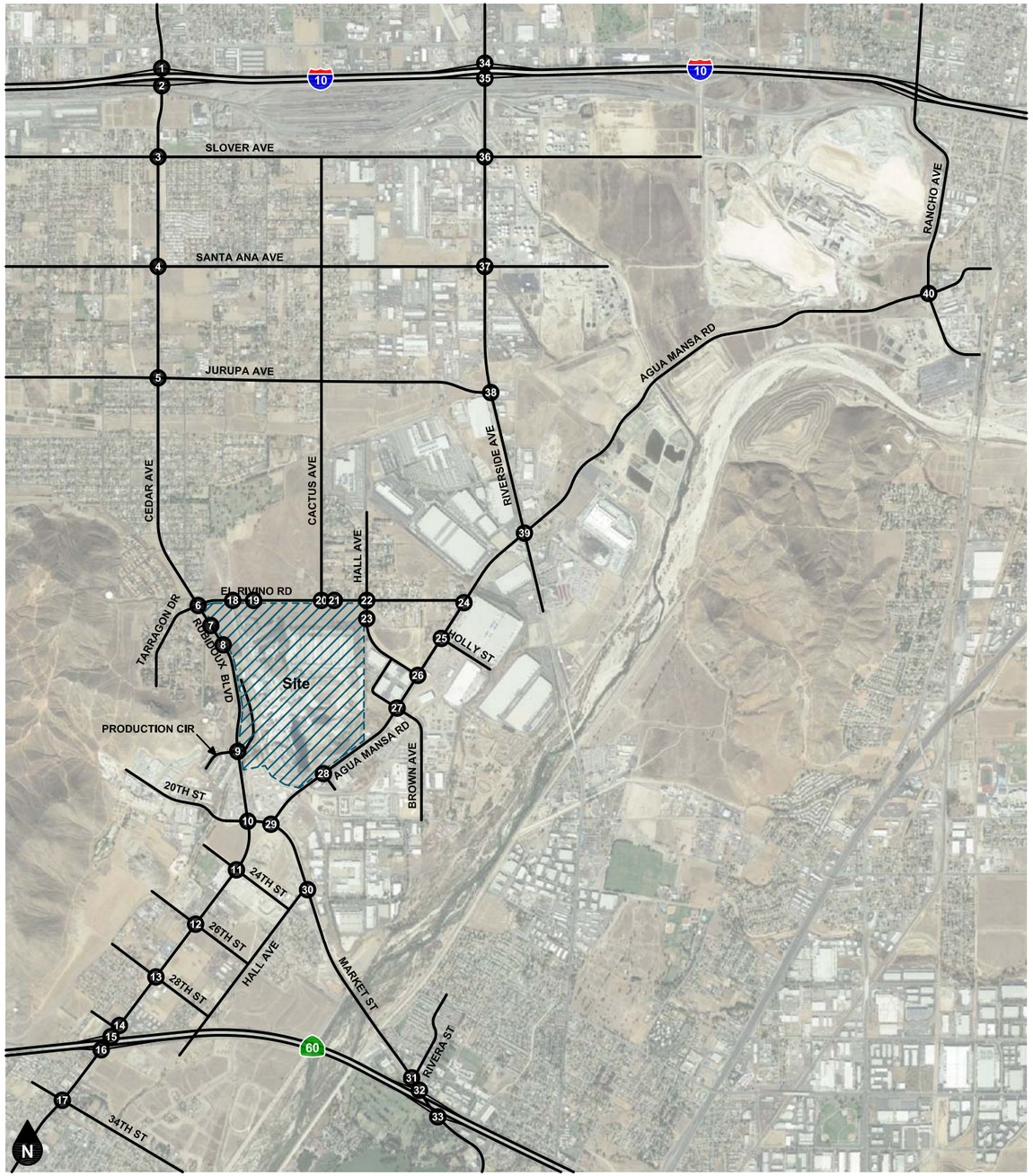


Figure 55
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 1



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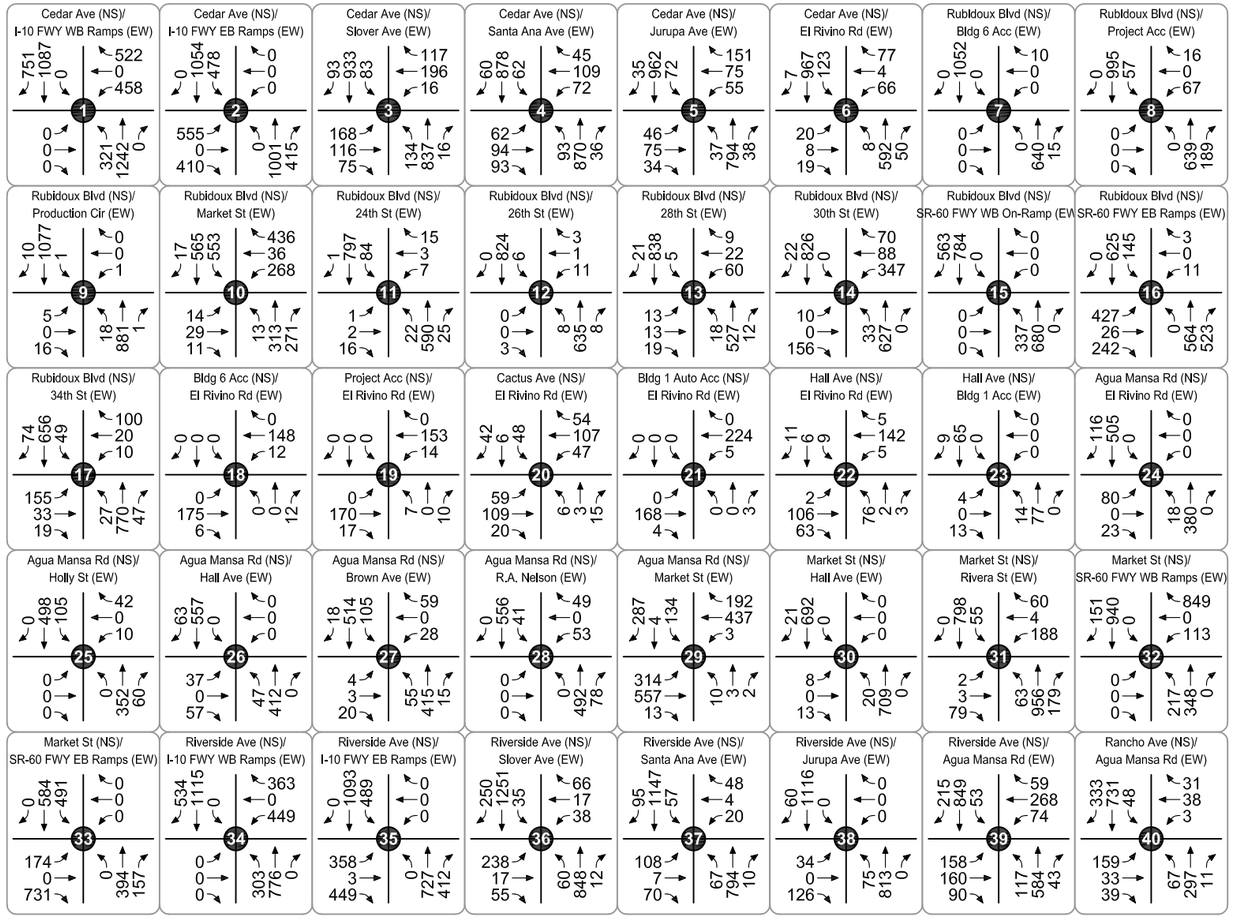
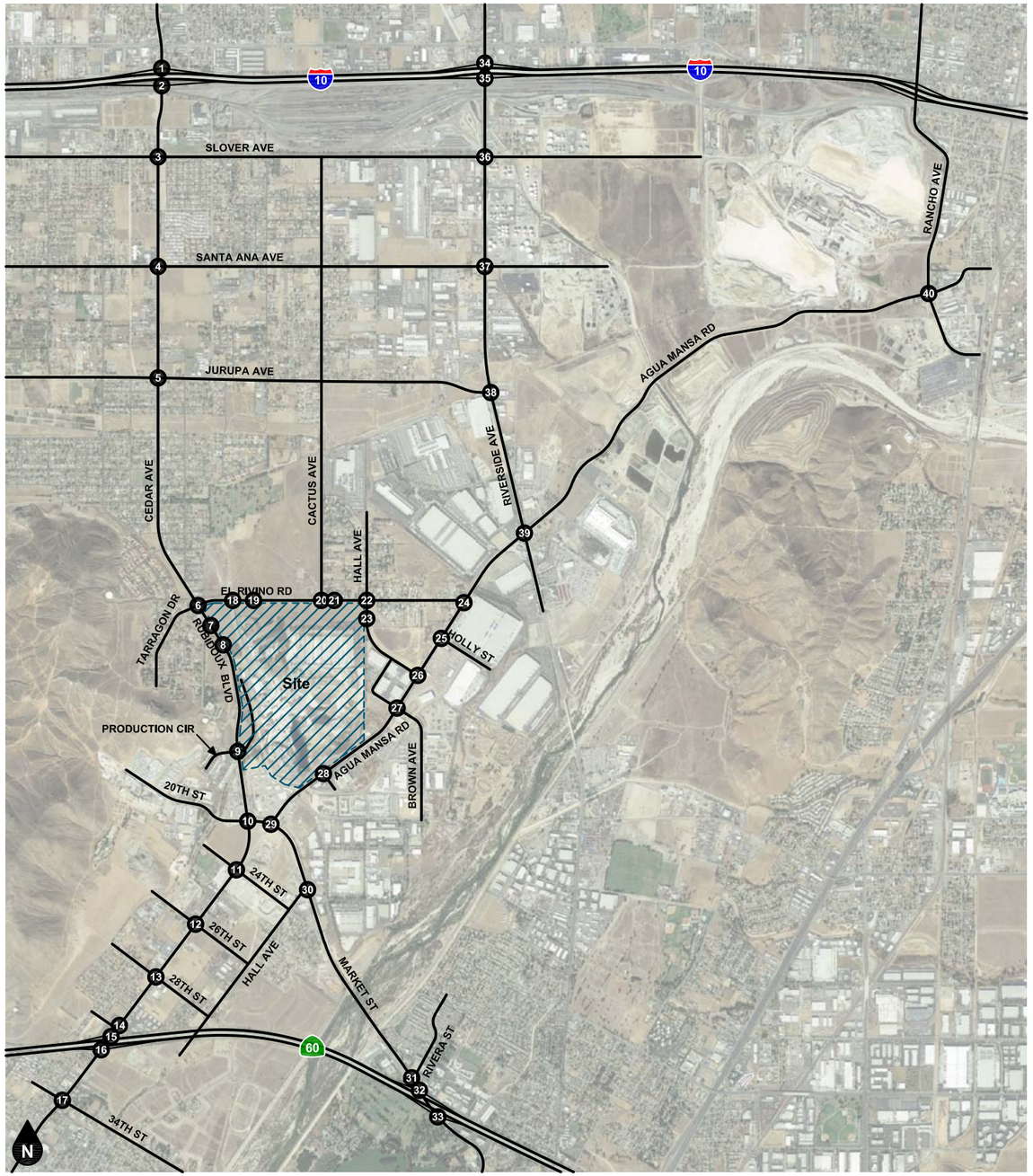


Figure 56
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 2



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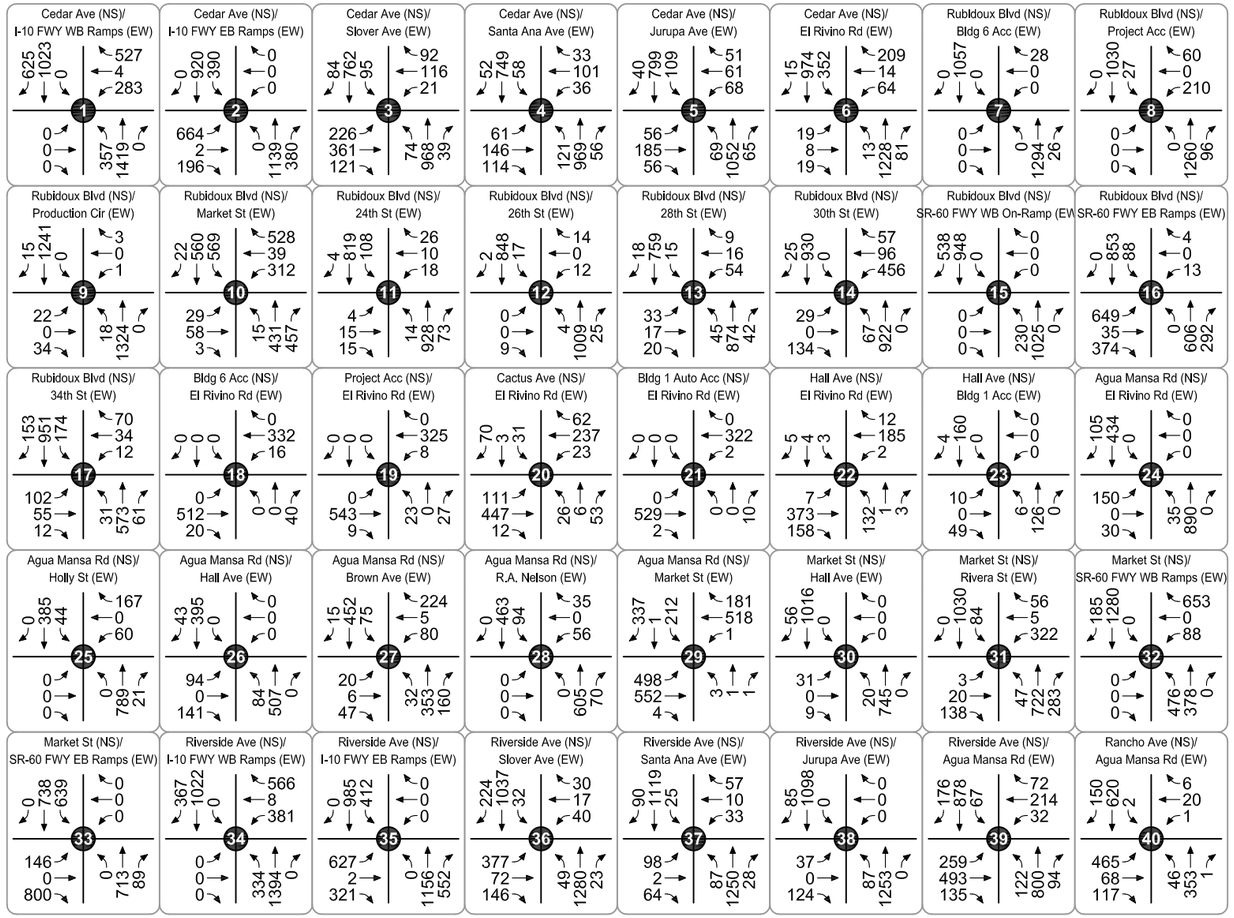
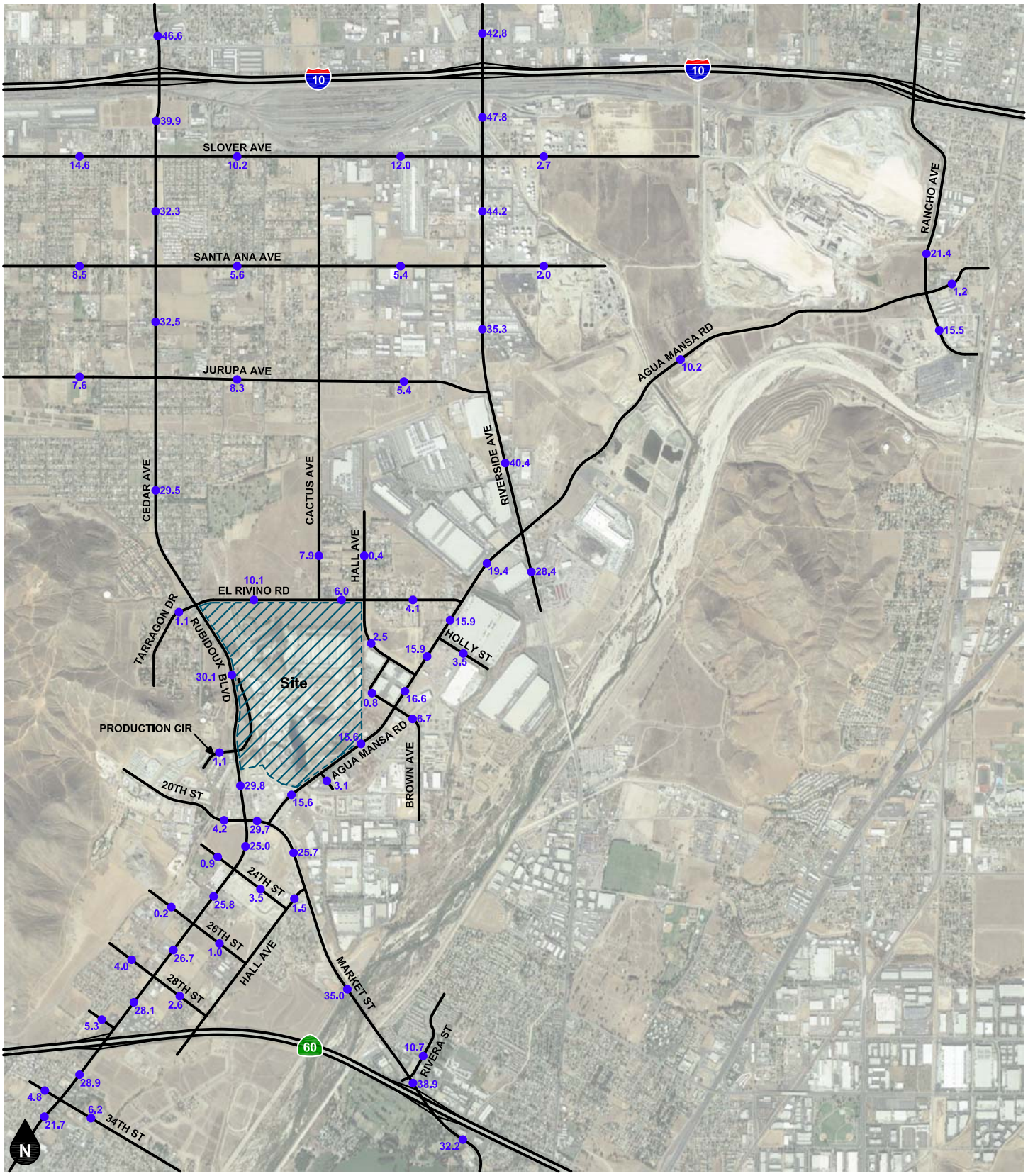


Figure 57
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 2



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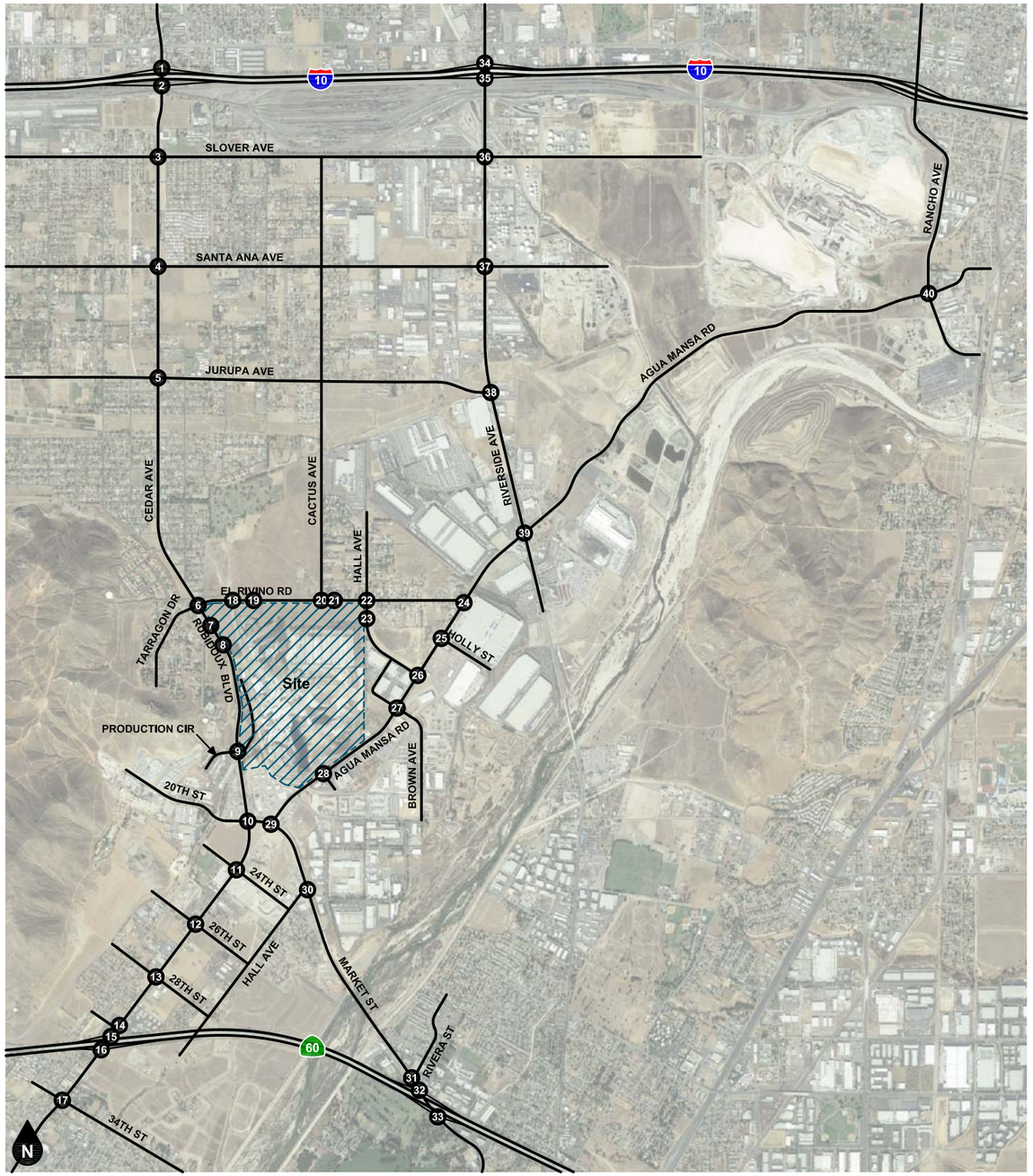
●## Vehicles Per Day (1,000's)

Figure 58
Opening Year (2020) Without Project
Average Daily Traffic Volumes



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(#) Study Intersection

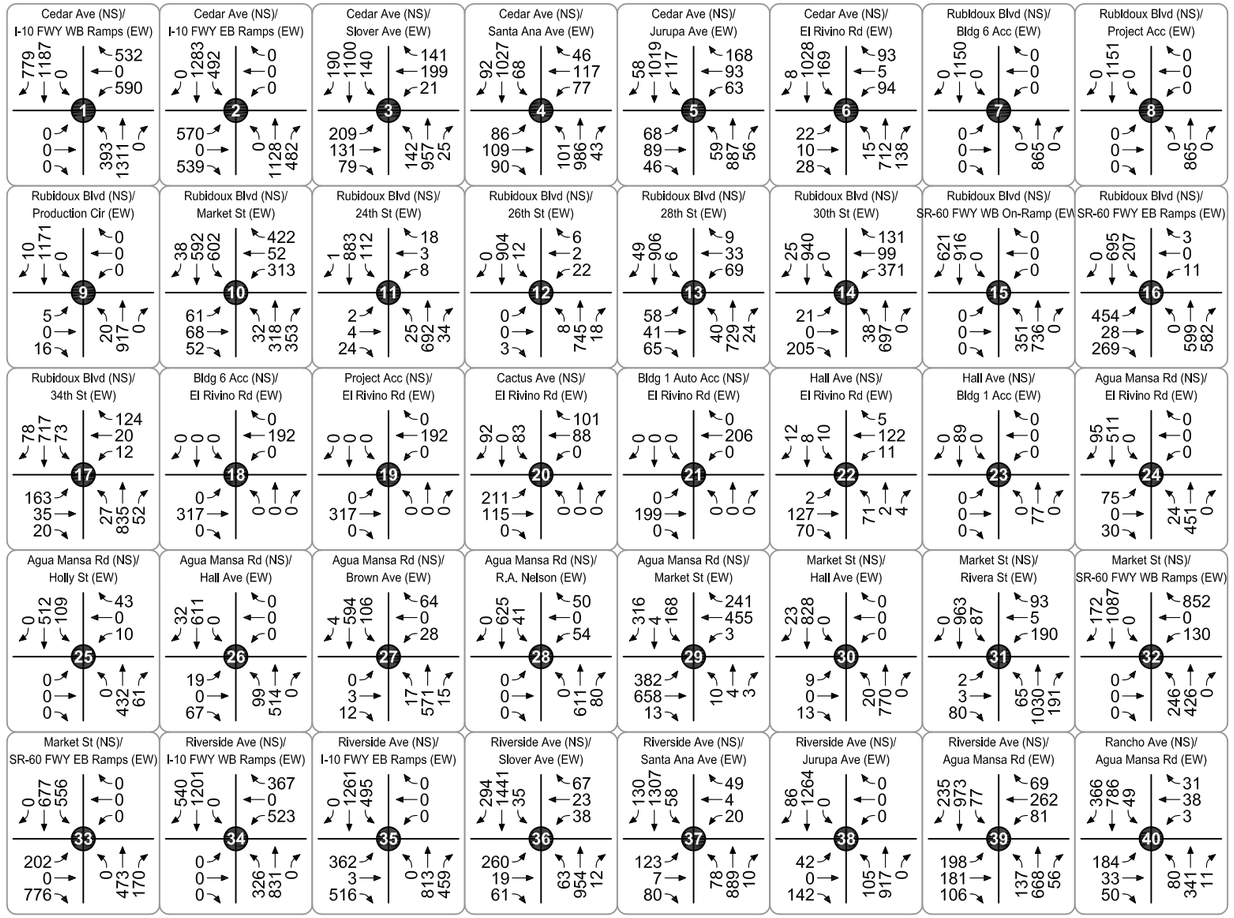
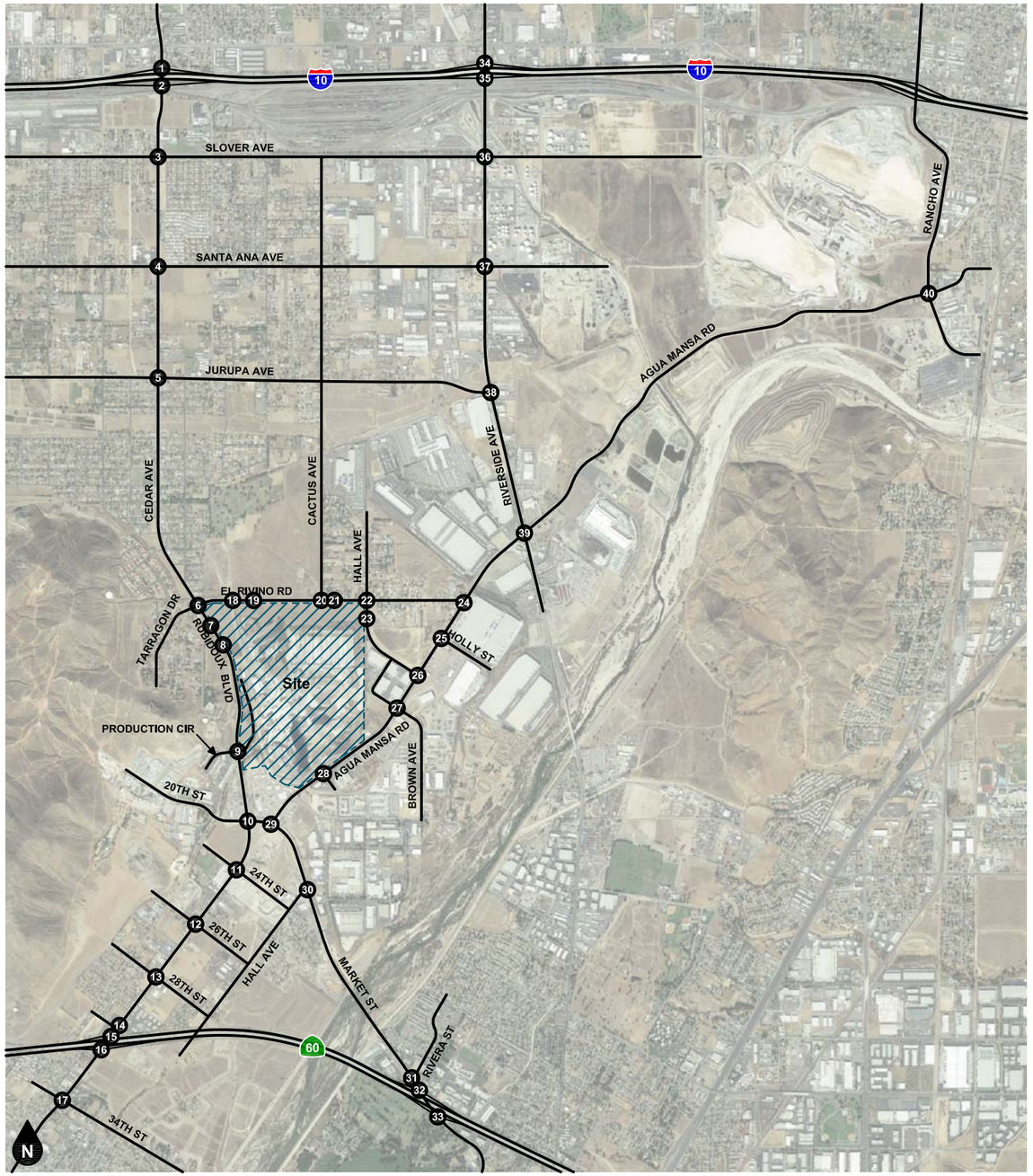


Figure 59
Opening Year (2020) Without Project
AM Peak Hour Intersection Turning Movement Volumes



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(#) Study Intersection

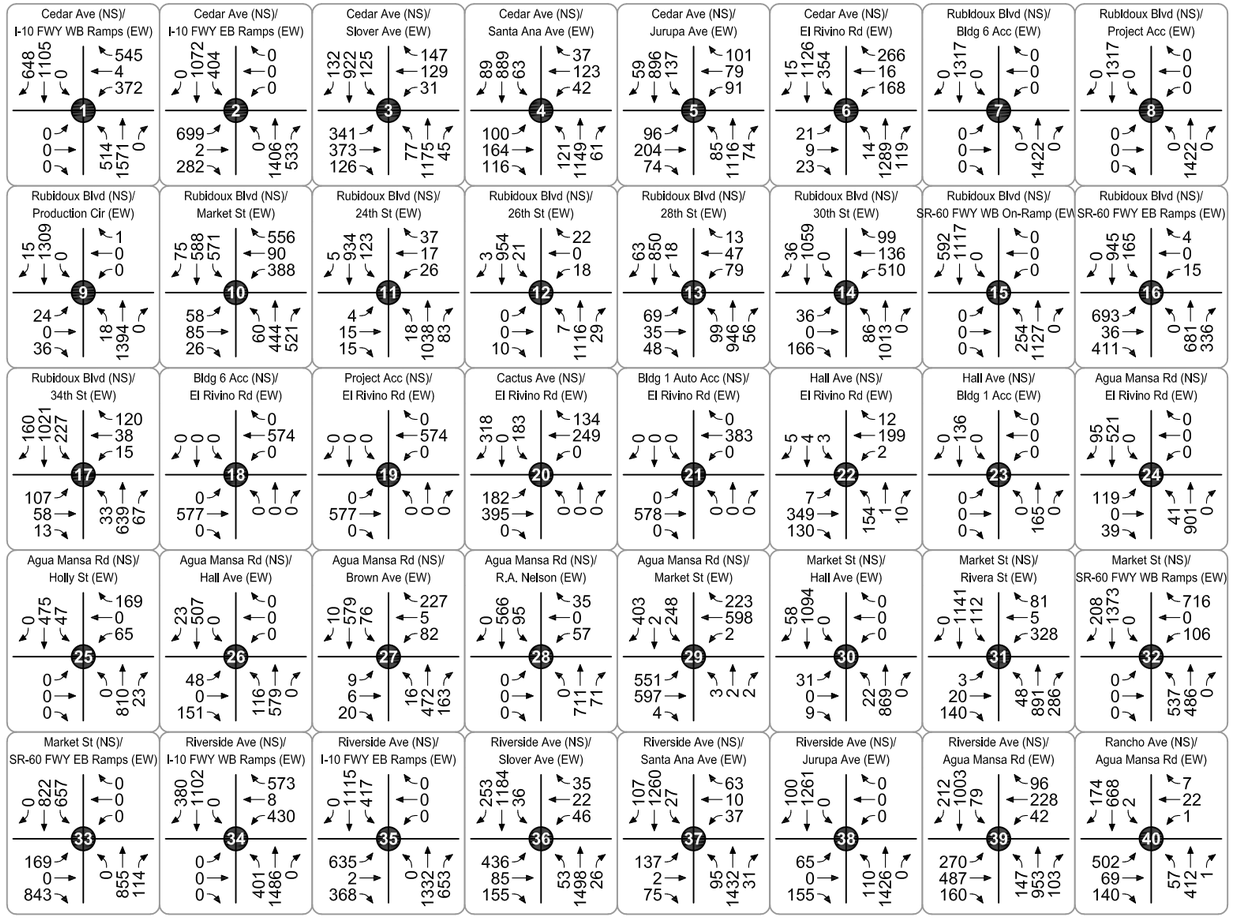
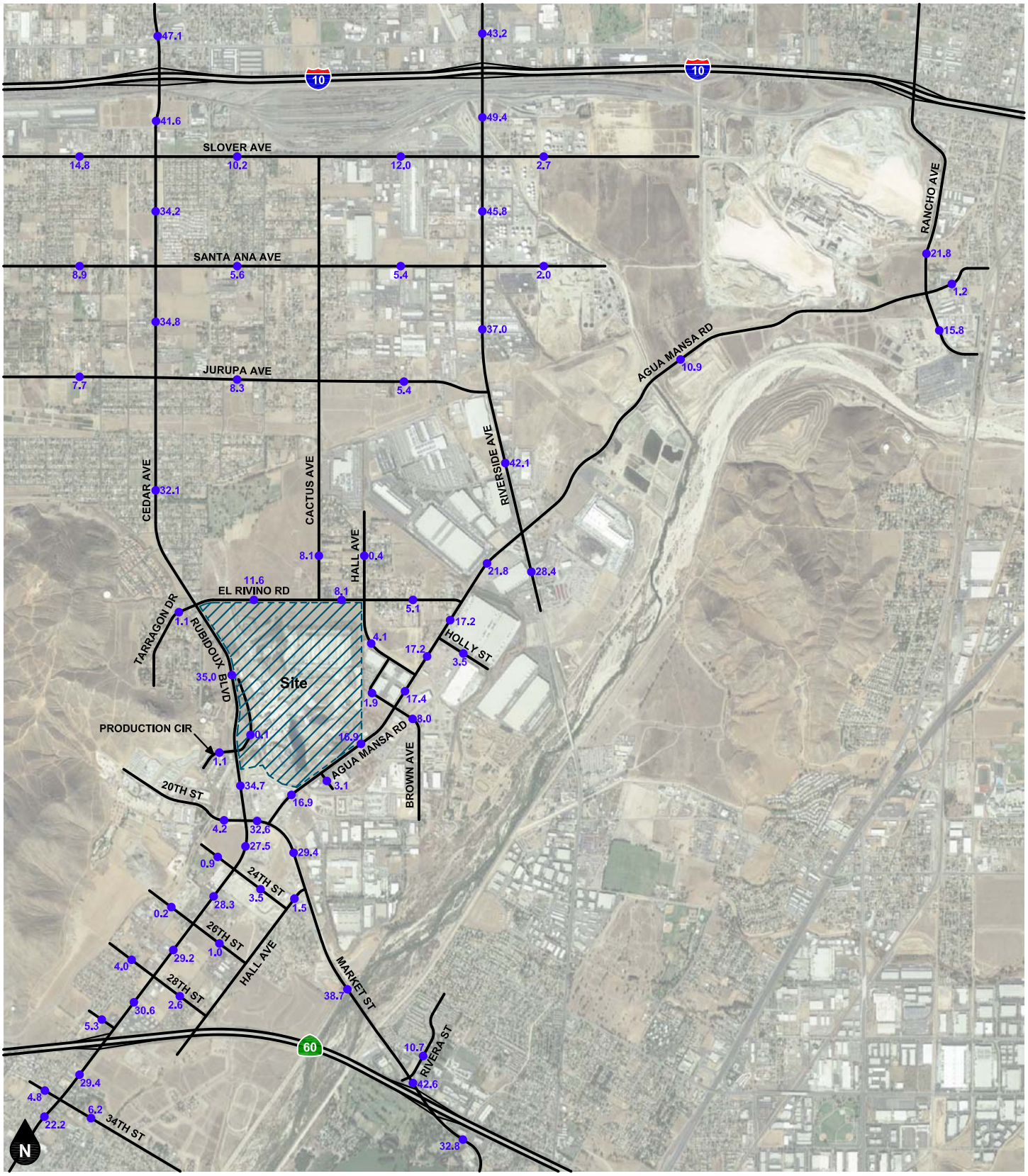


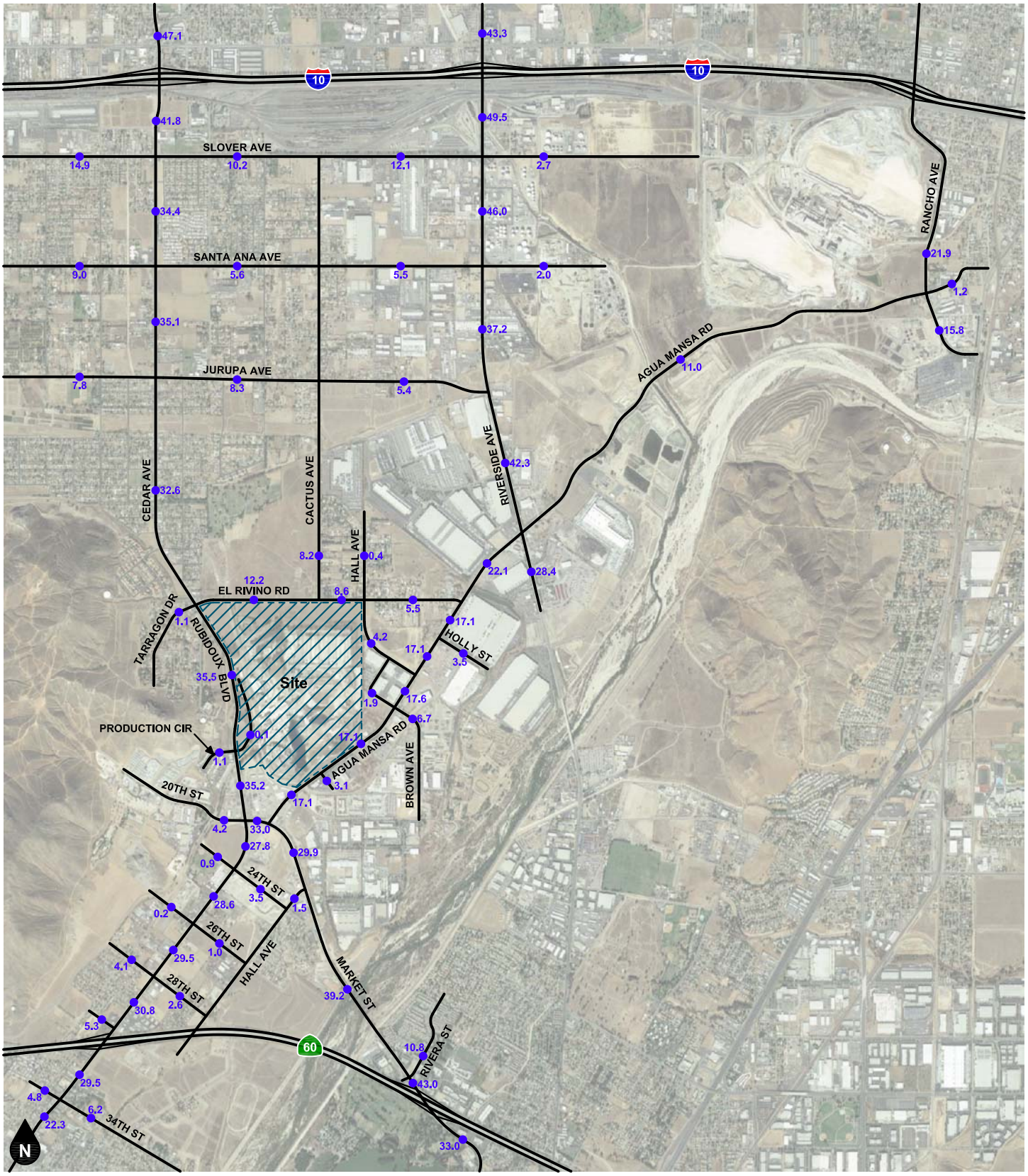
Figure 60
Opening Year (2020) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

Figure 61
Opening Year (2020) With Project
Average Daily Traffic Volumes - Alternative 1



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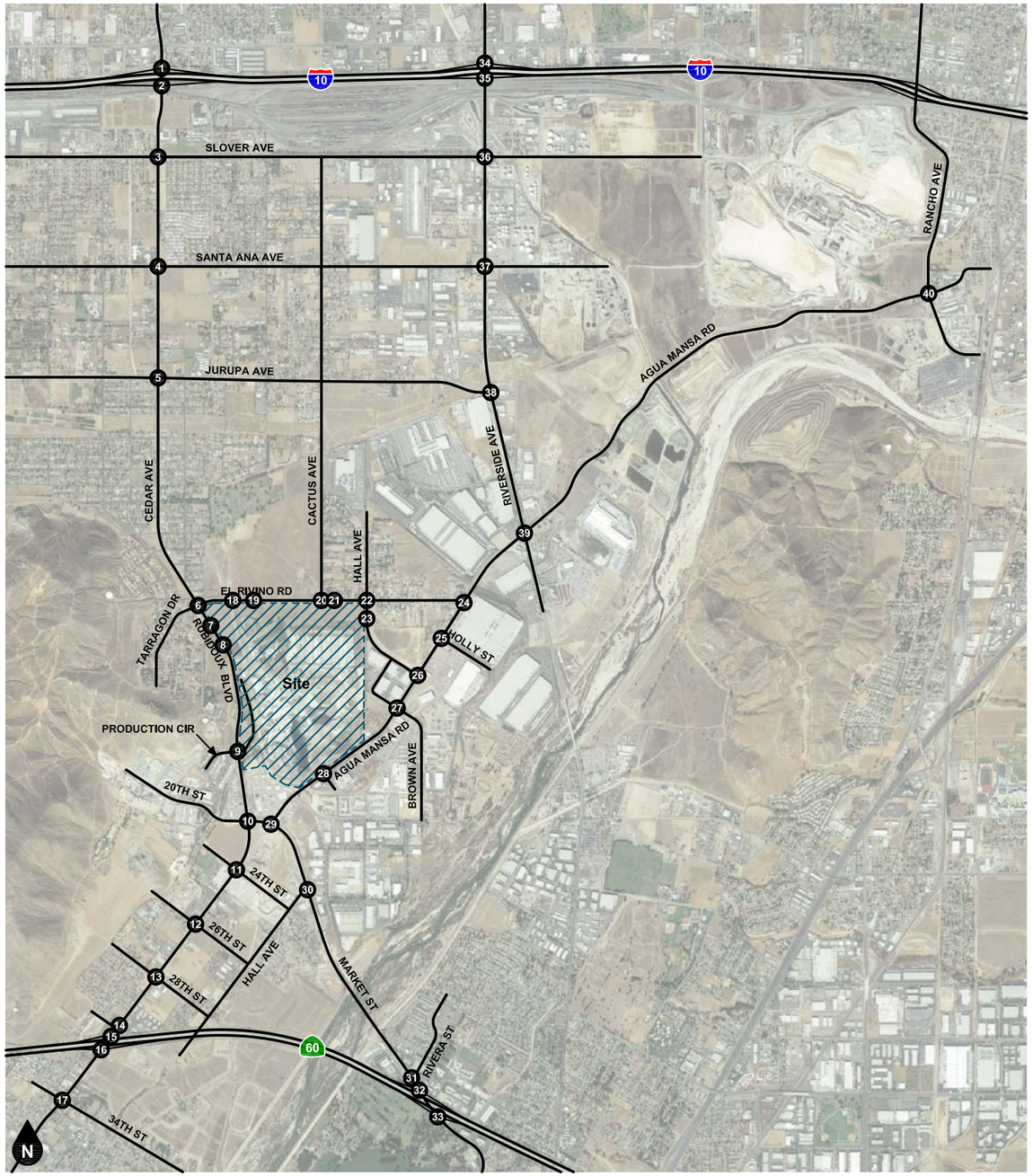
●## Vehicles Per Day (1,000's)

Figure 62
Opening Year (2020) With Project
Average Daily Traffic Volumes - Alternative 2



Legend
(#) Study Intersection

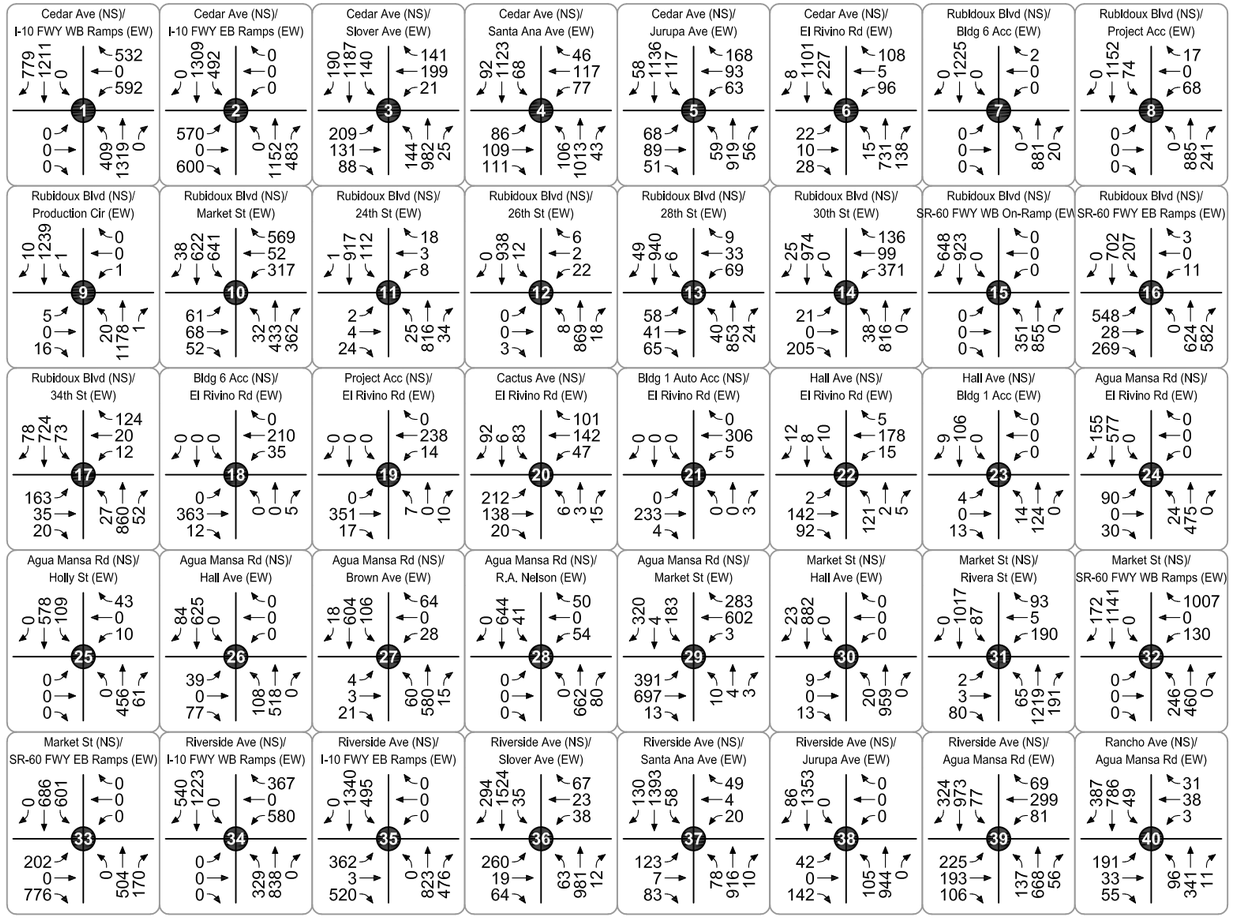
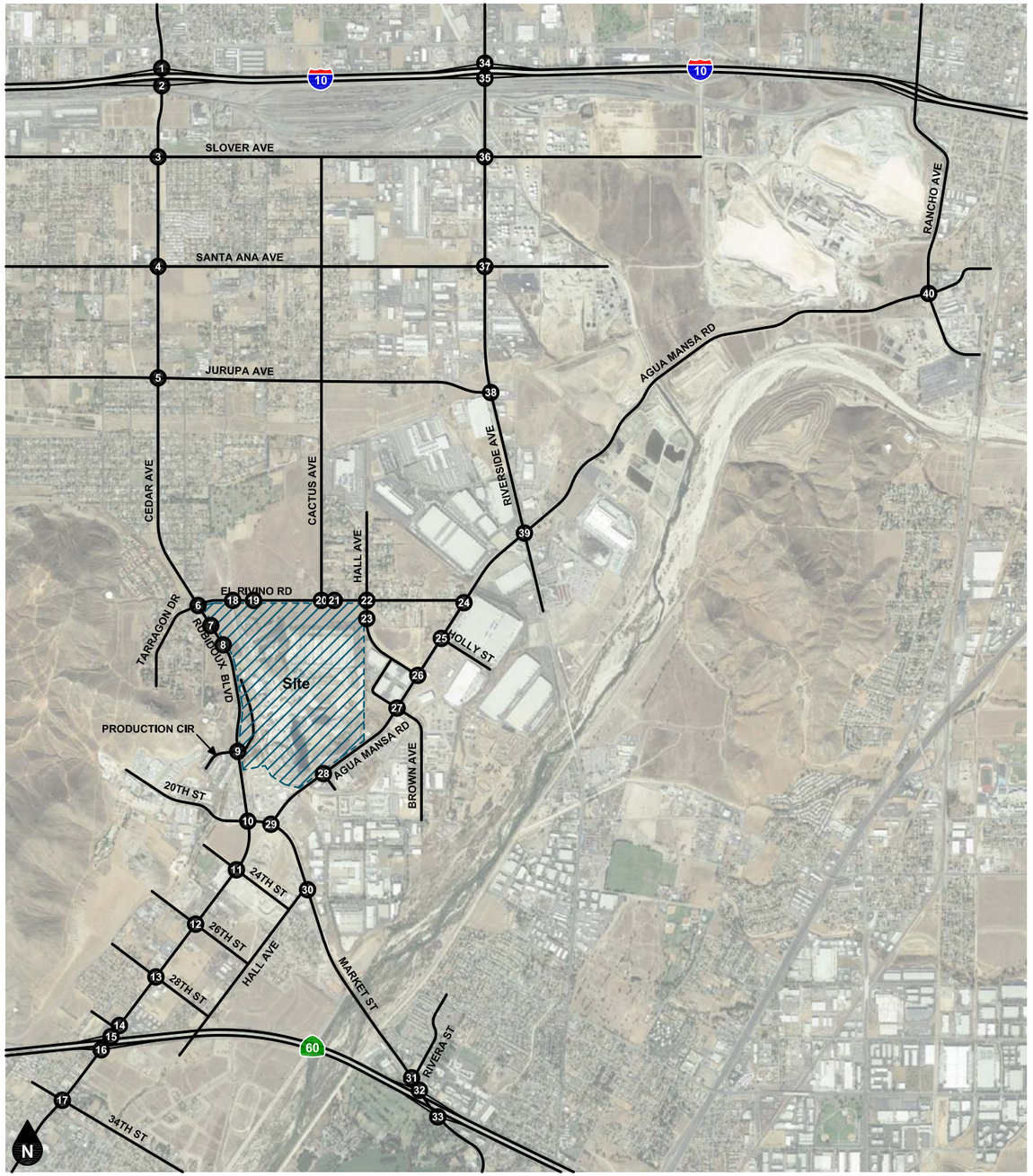


Figure 63
Opening Year (2020) With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 1



Legend
(#) Study Intersection

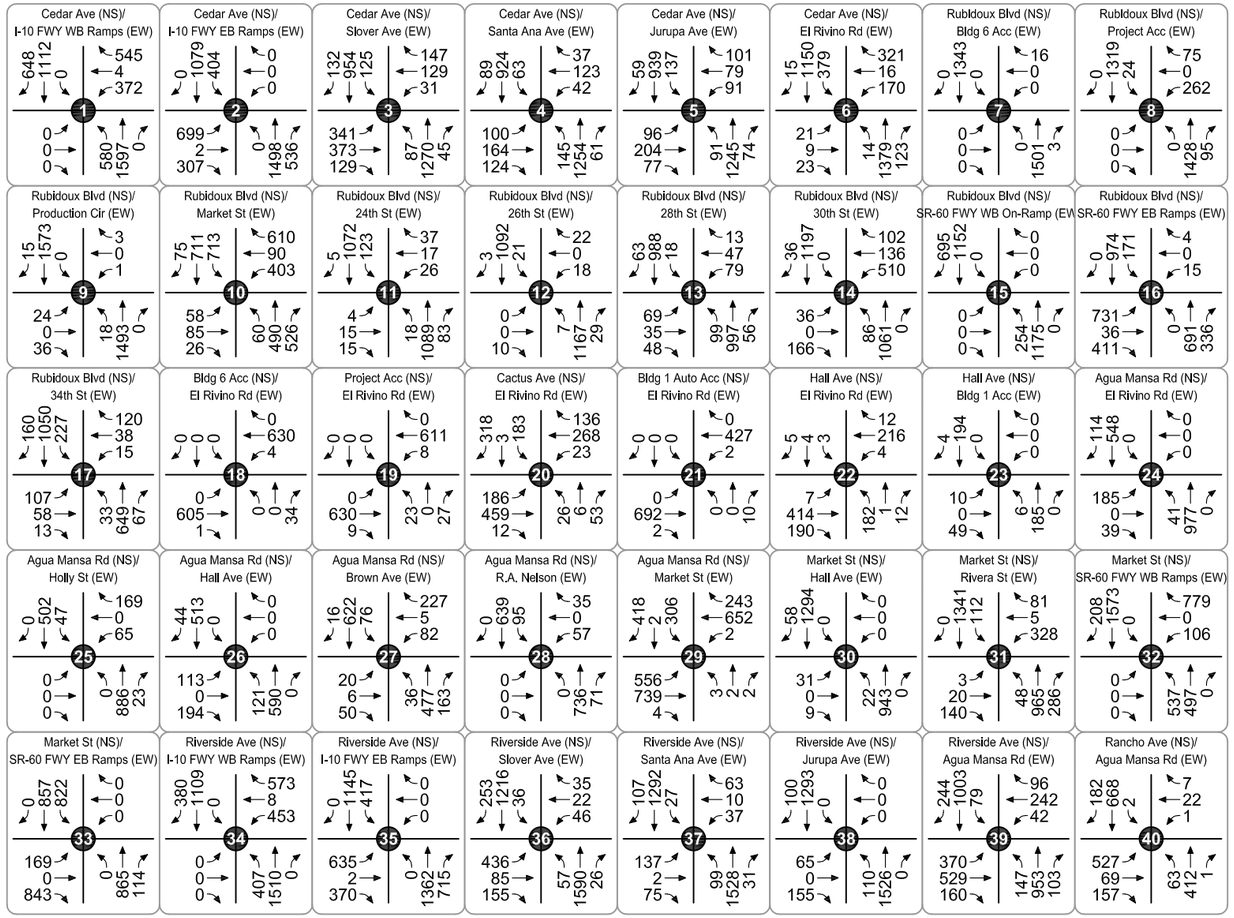
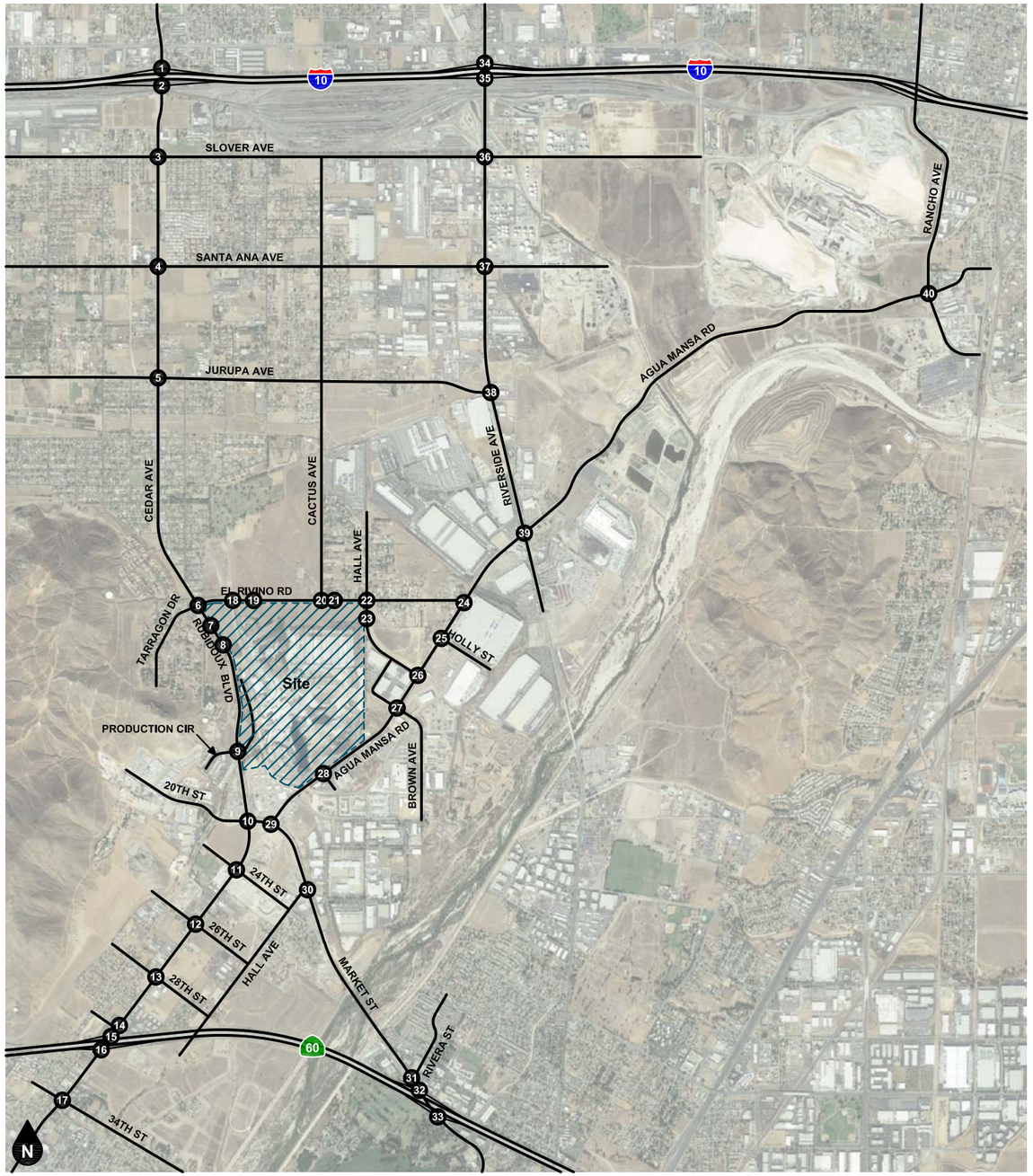


Figure 64
Opening Year (2020) With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 1



Legend

(#) Study Intersection

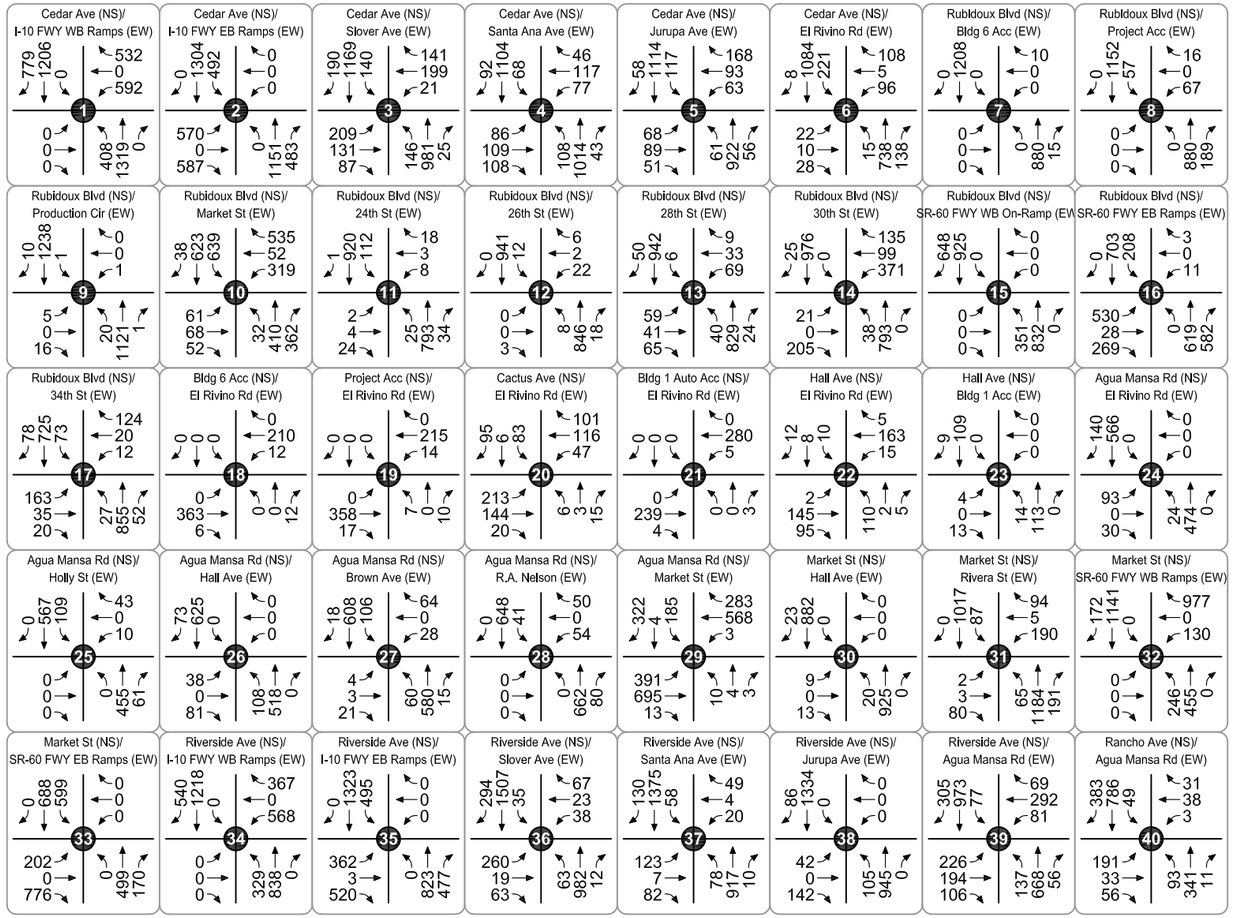
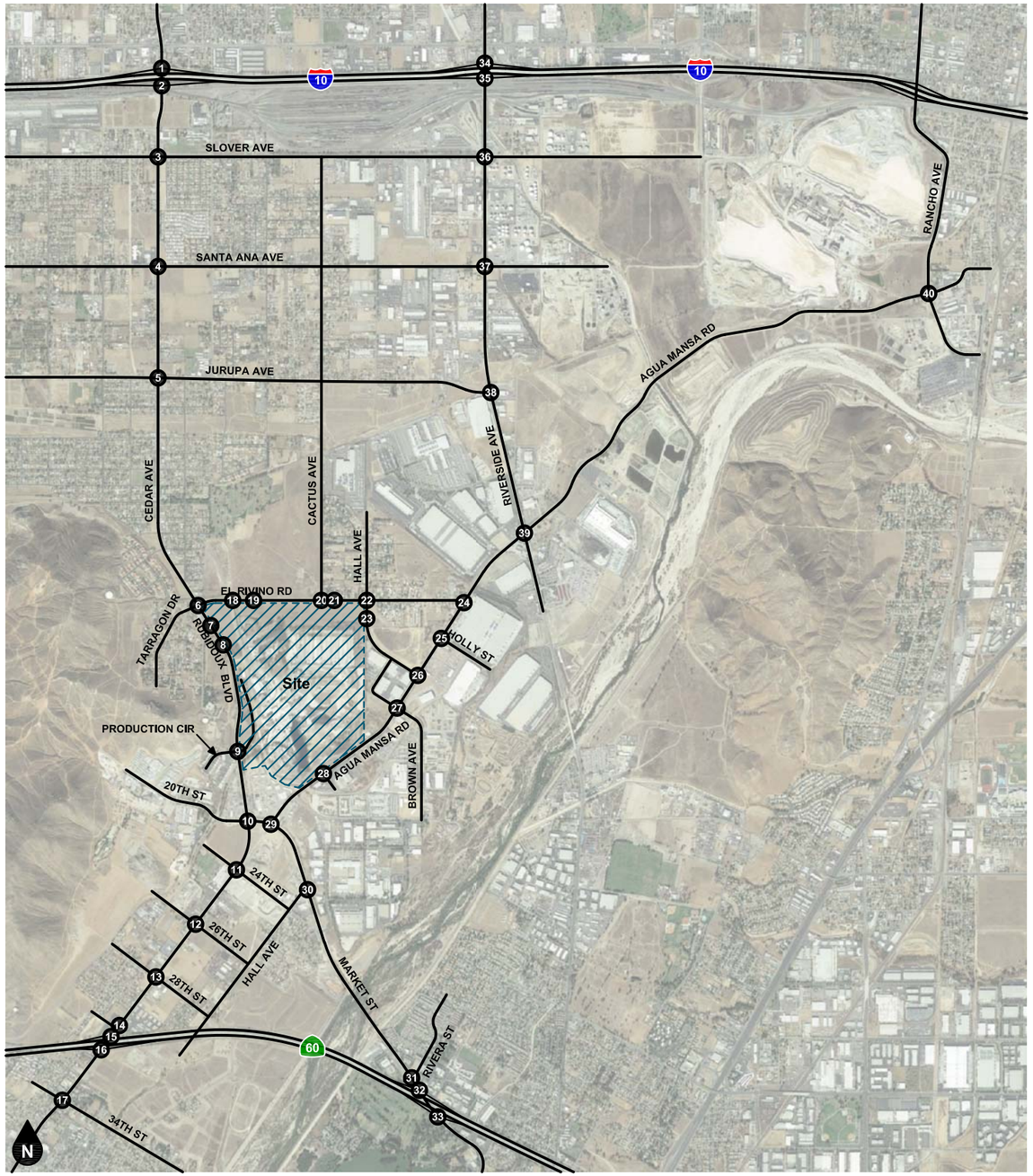


Figure 65
Opening Year (2020) With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 2



Legend
(#) Study Intersection

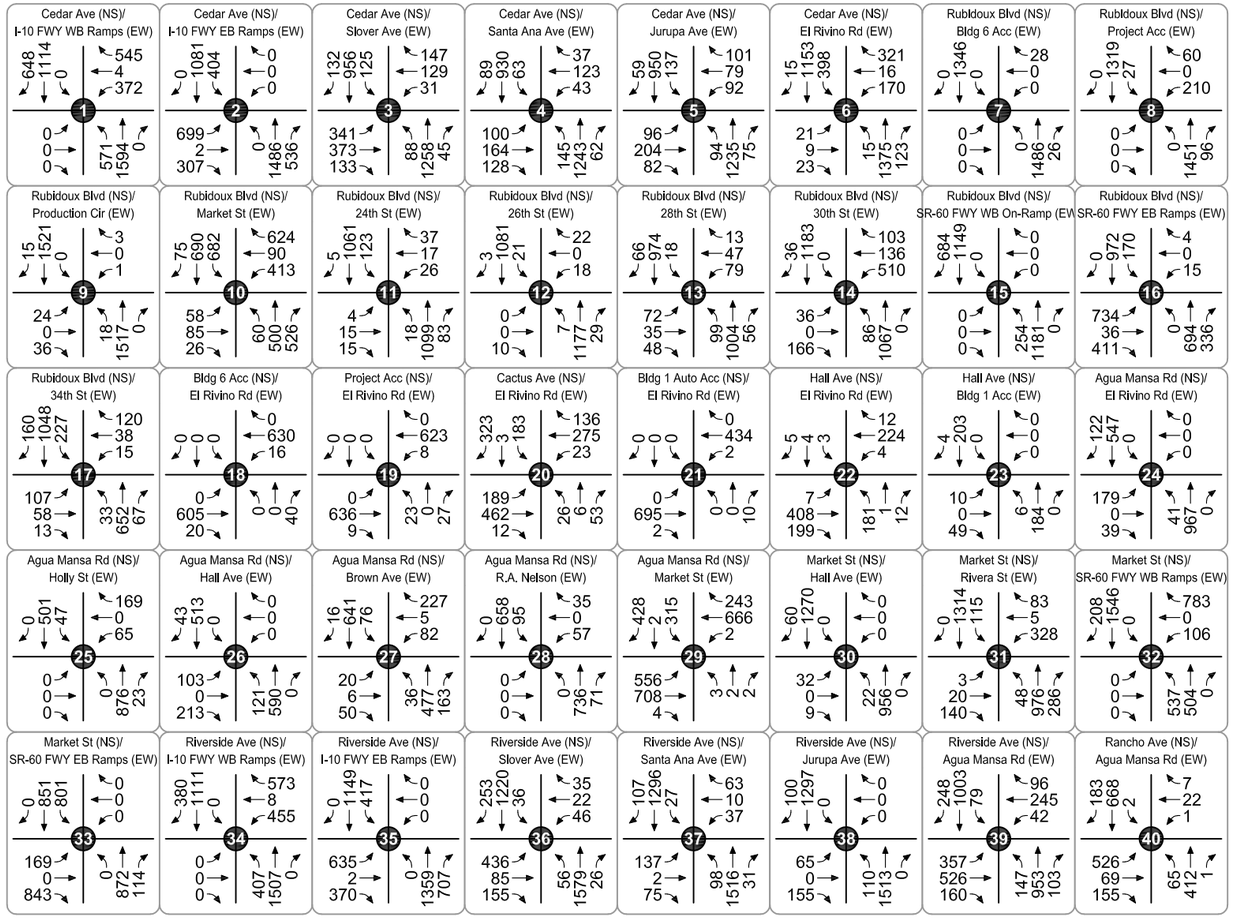
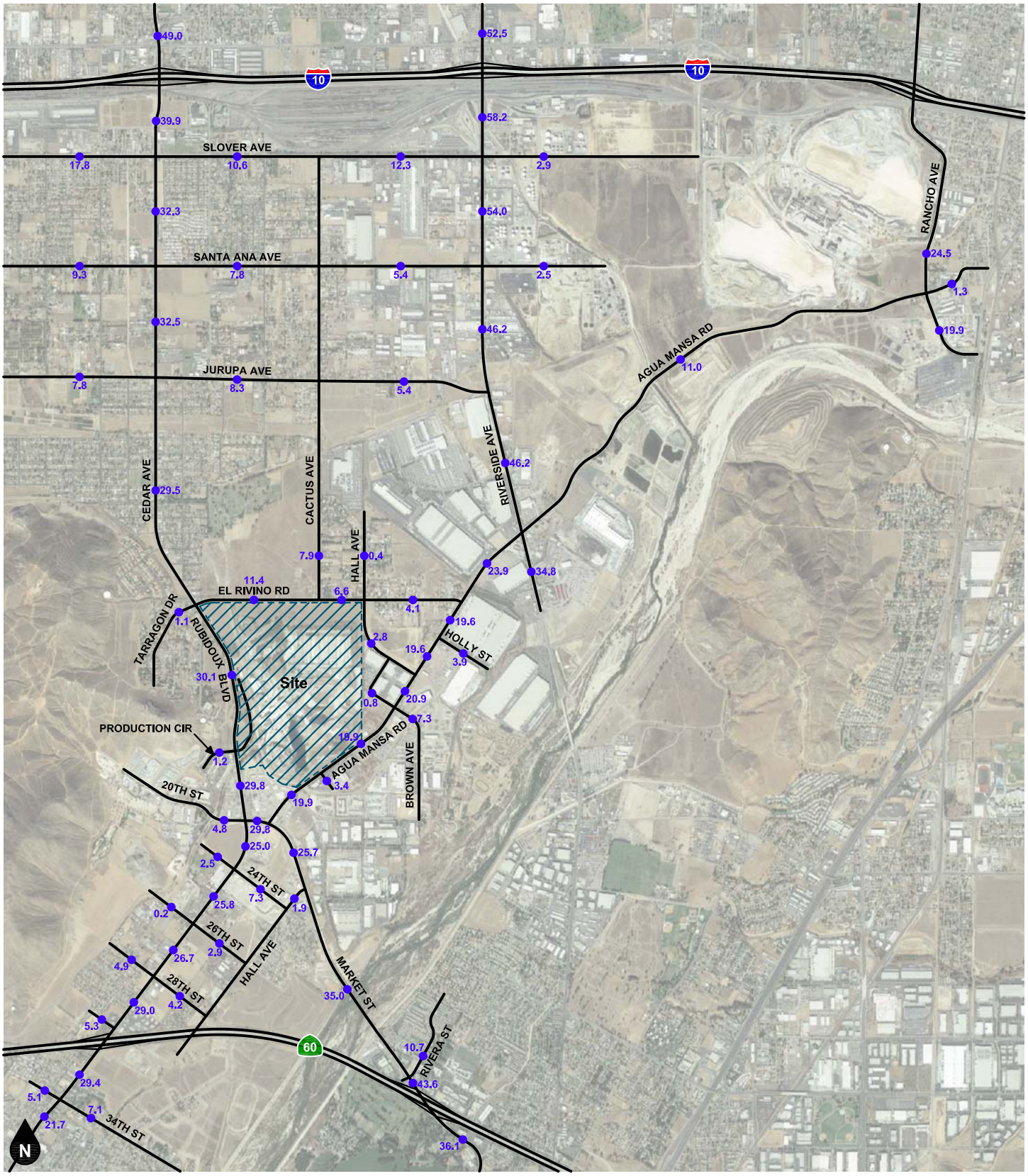


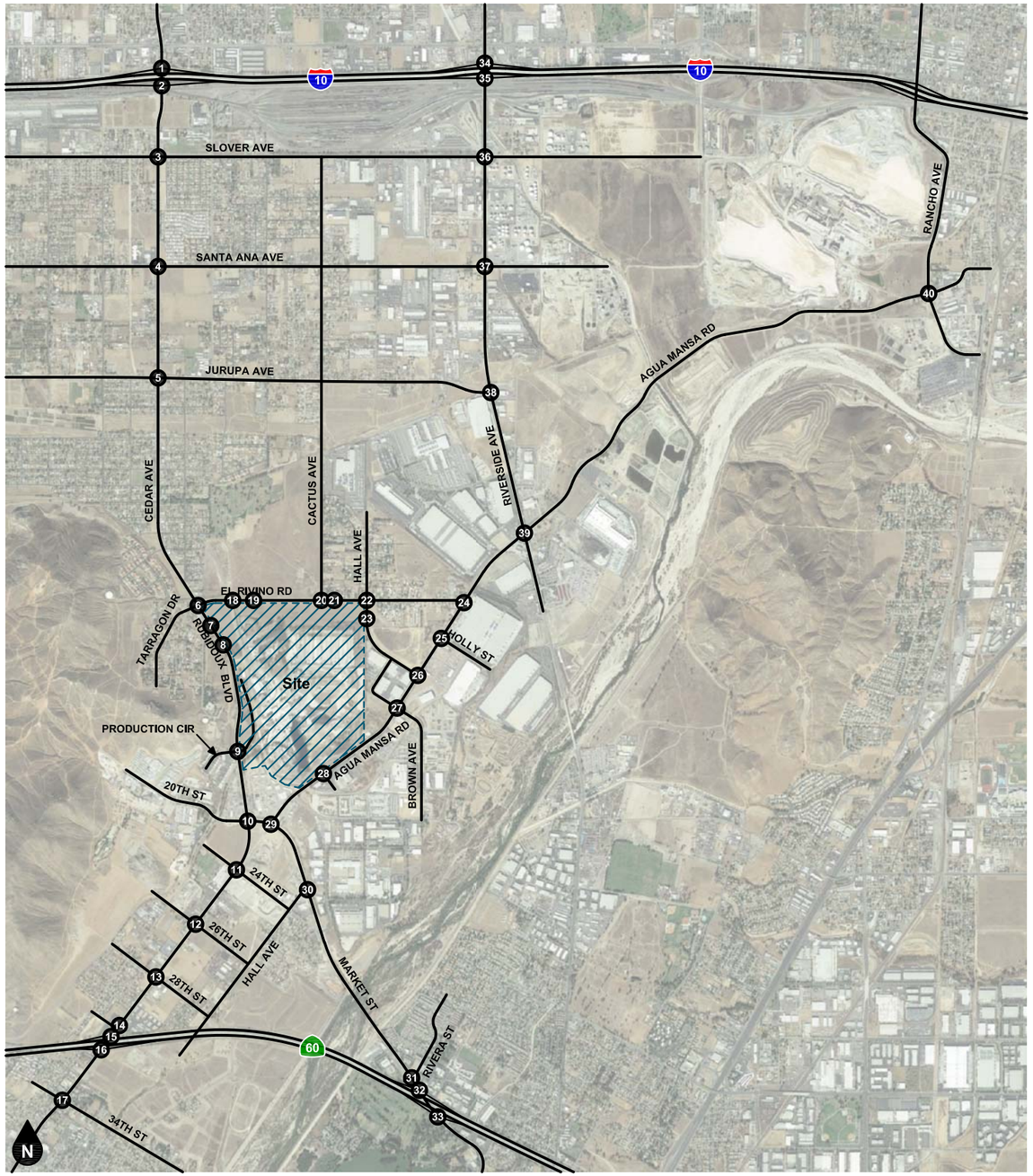
Figure 66
Opening Year (2020) With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 2



Legend

●## Vehicles Per Day (1,000's)

Figure 67
Year 2035 Without Project
Average Daily Traffic Volumes



Legend
(#) Study Intersection

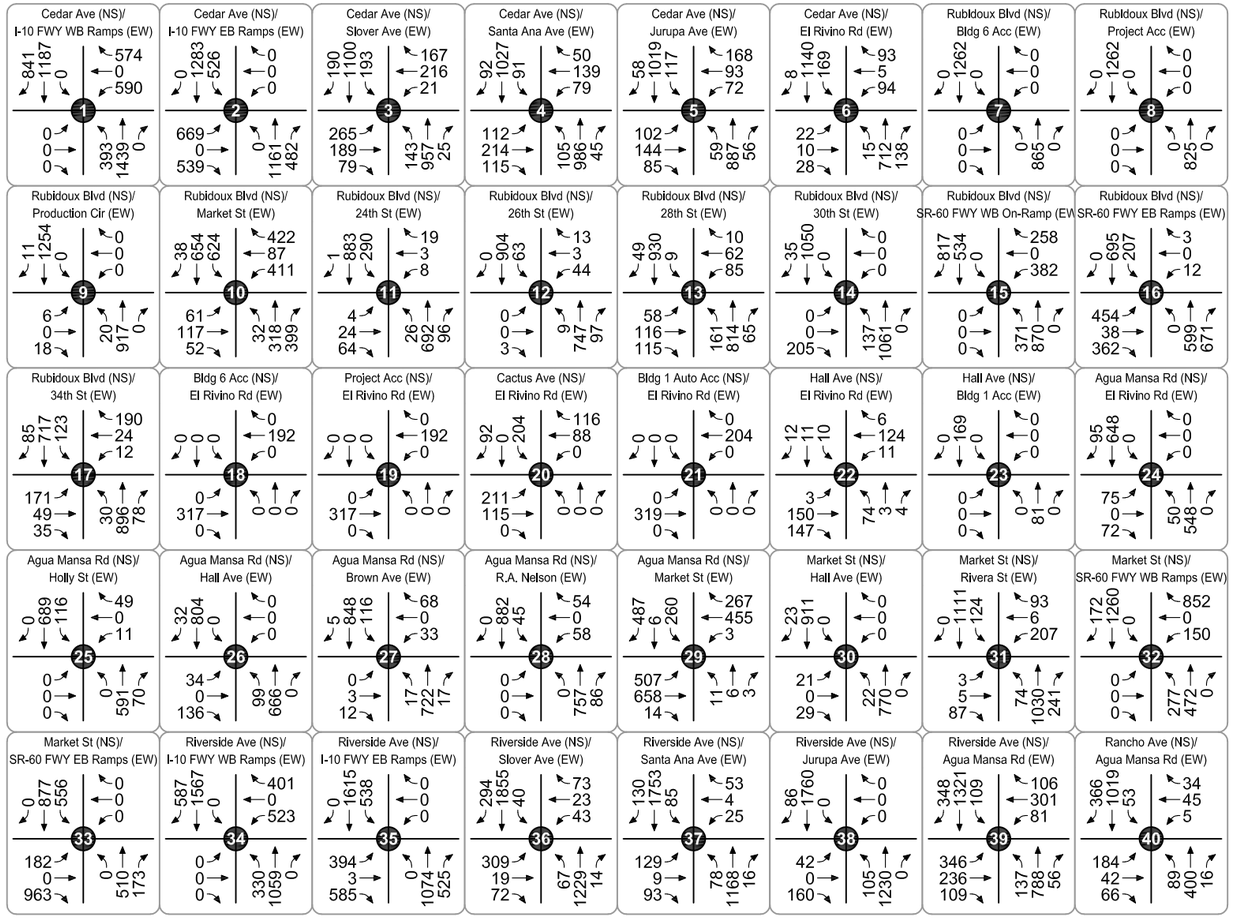
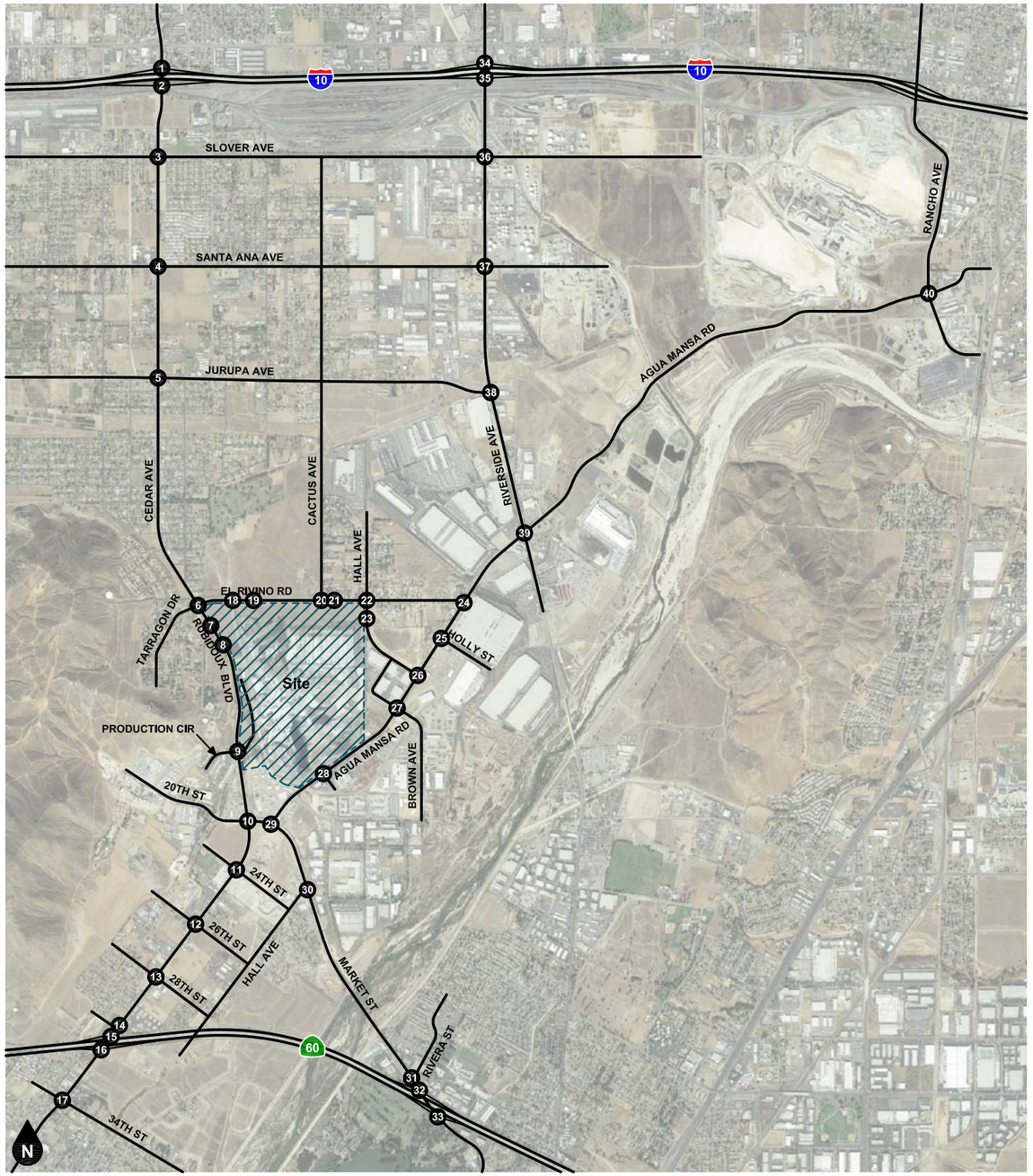


Figure 68
Year 2035 Without Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

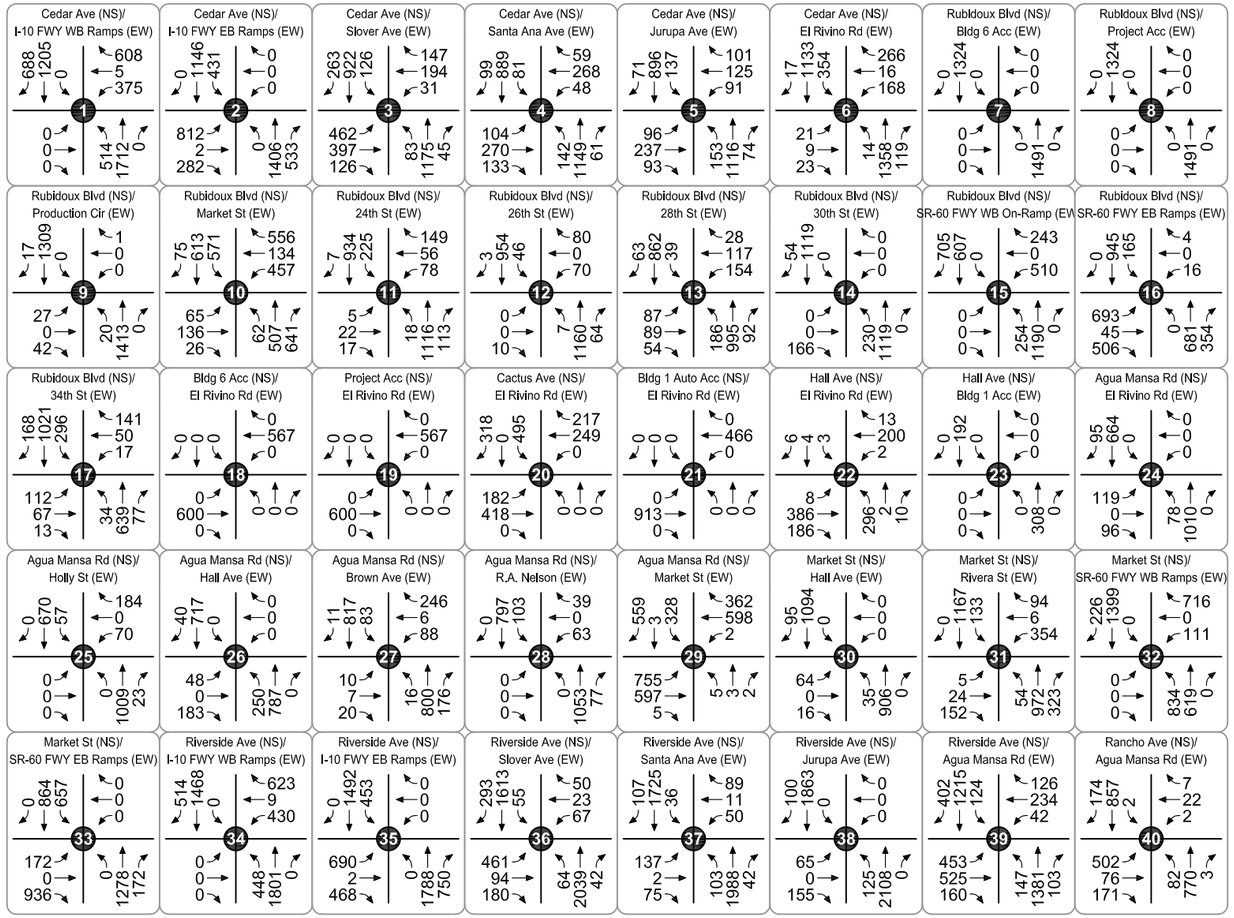
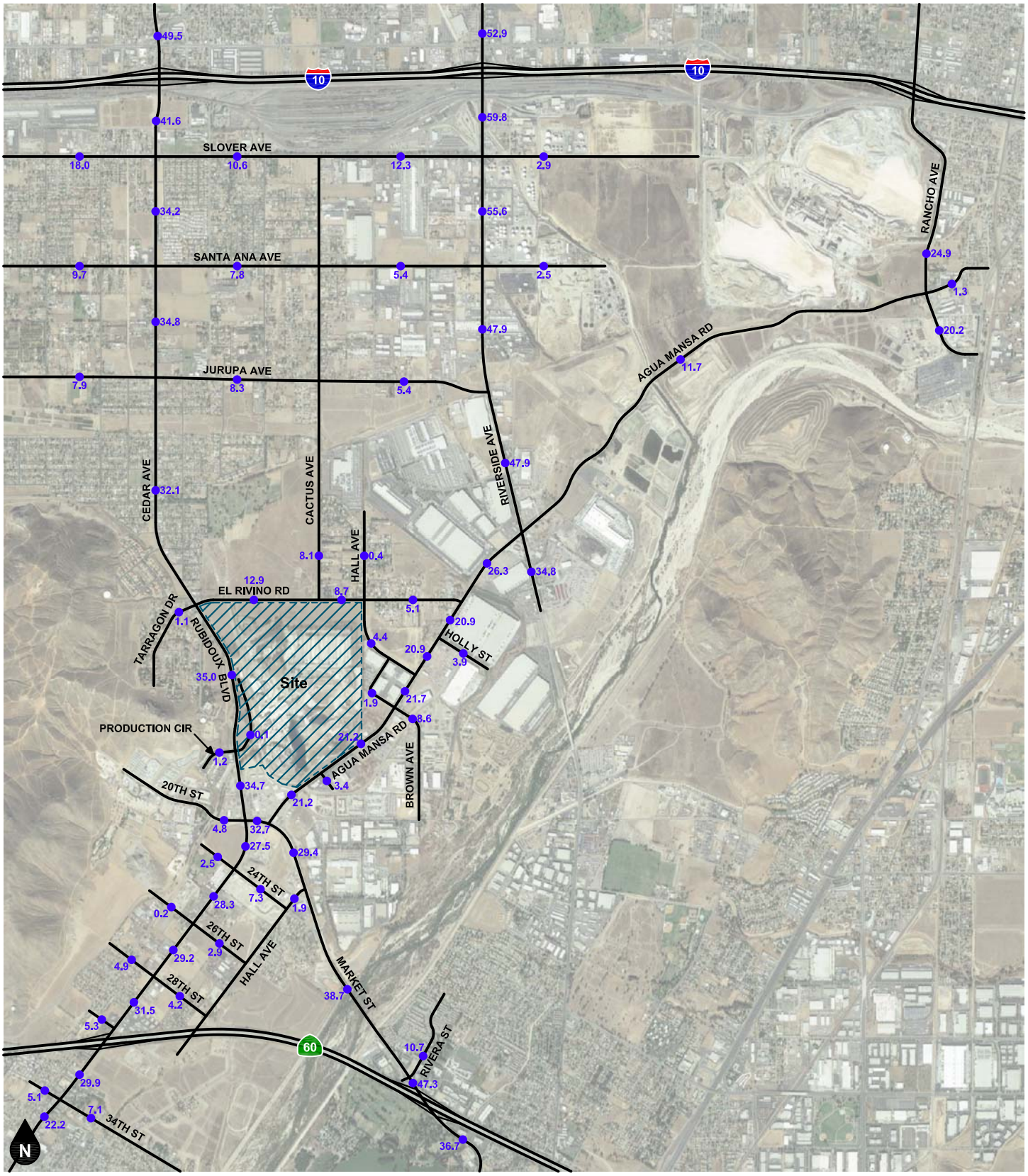


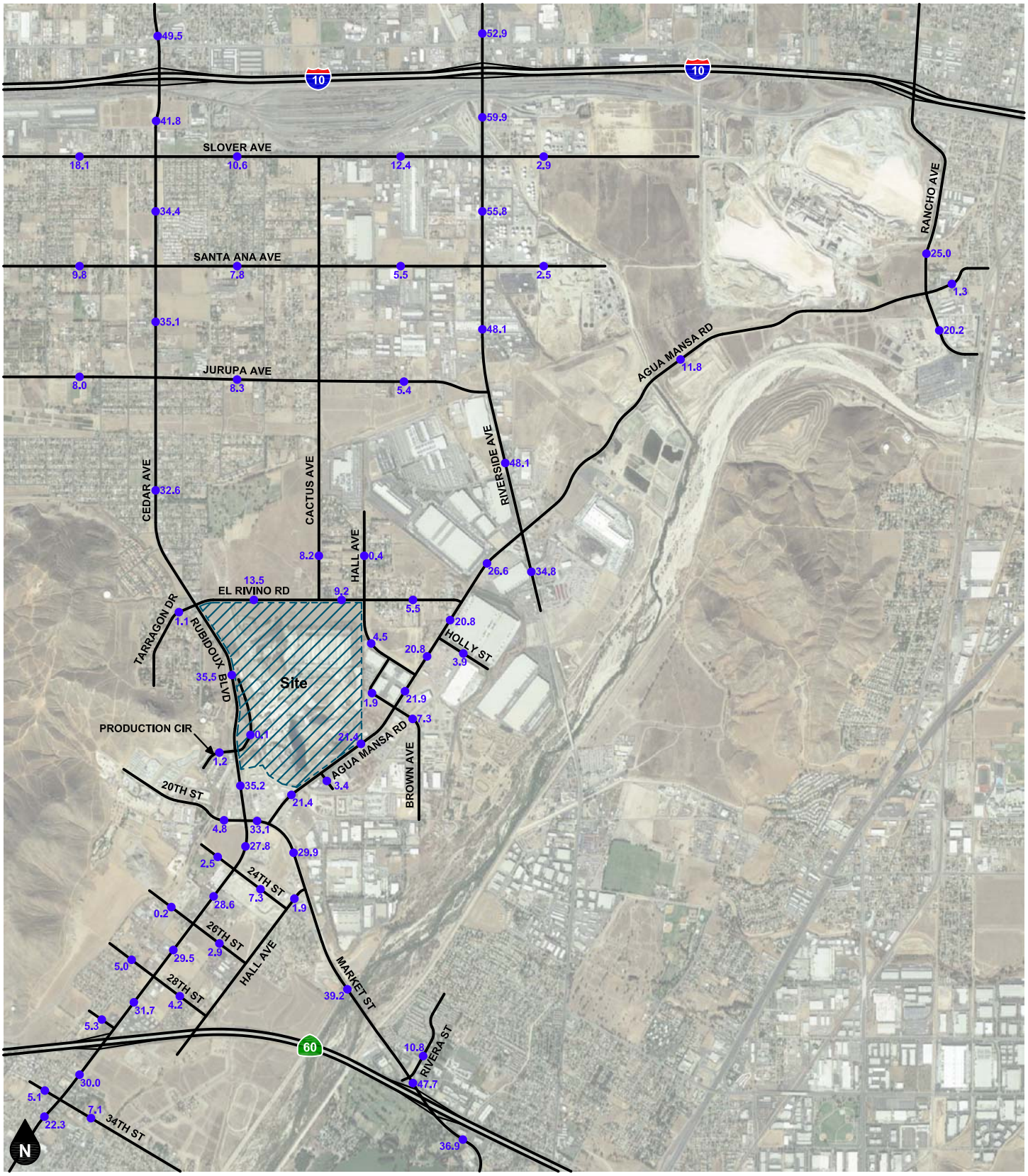
Figure 69
Year 2035 Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

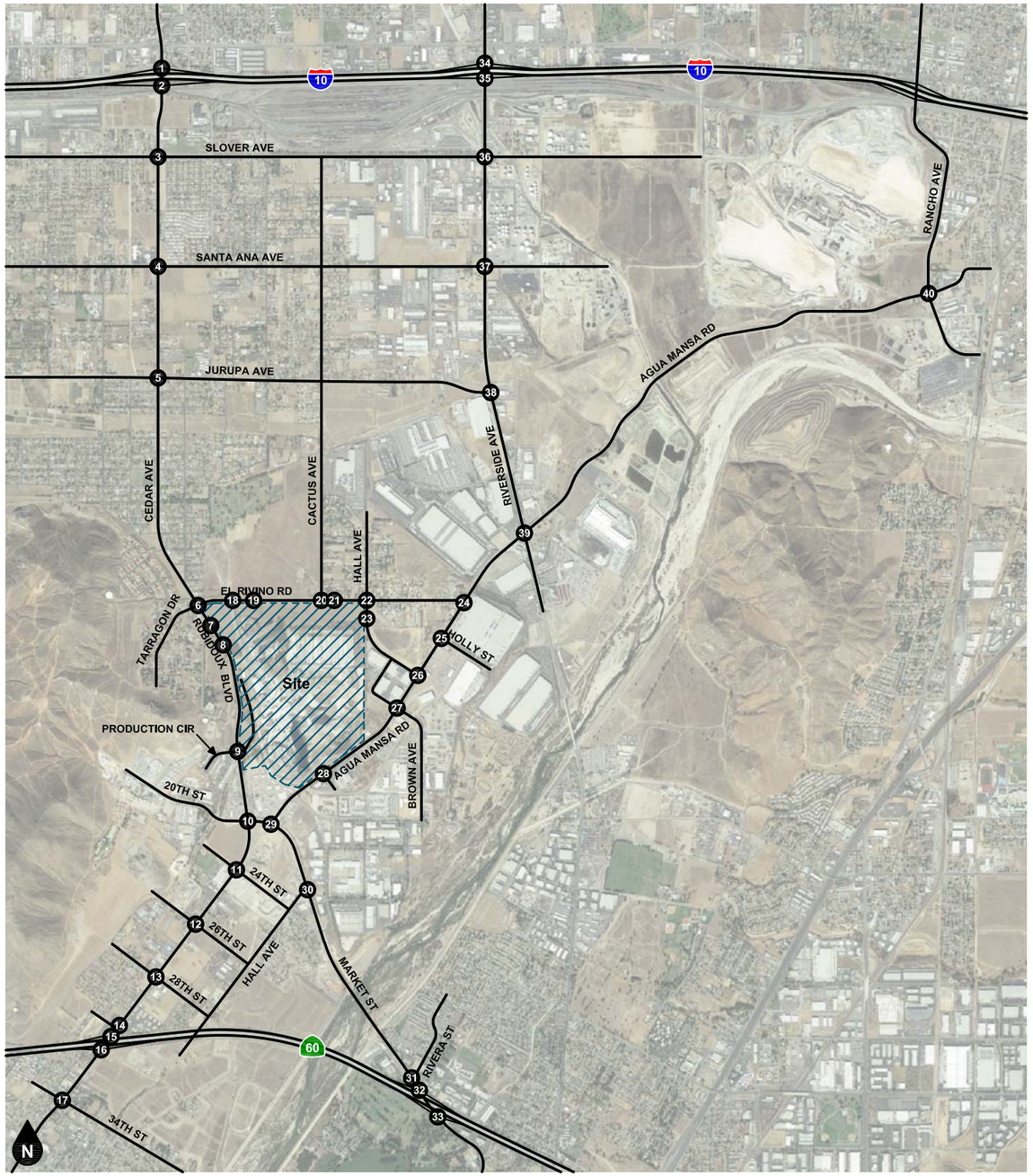
Figure 70
Year 2035 With Project
Average Daily Traffic Volumes - Alternative 1



Legend

●## Vehicles Per Day (1,000's)

Figure 71
Year 2035 With Project
Average Daily Traffic Volumes - Alternative 2



Legend
(#) Study Intersection

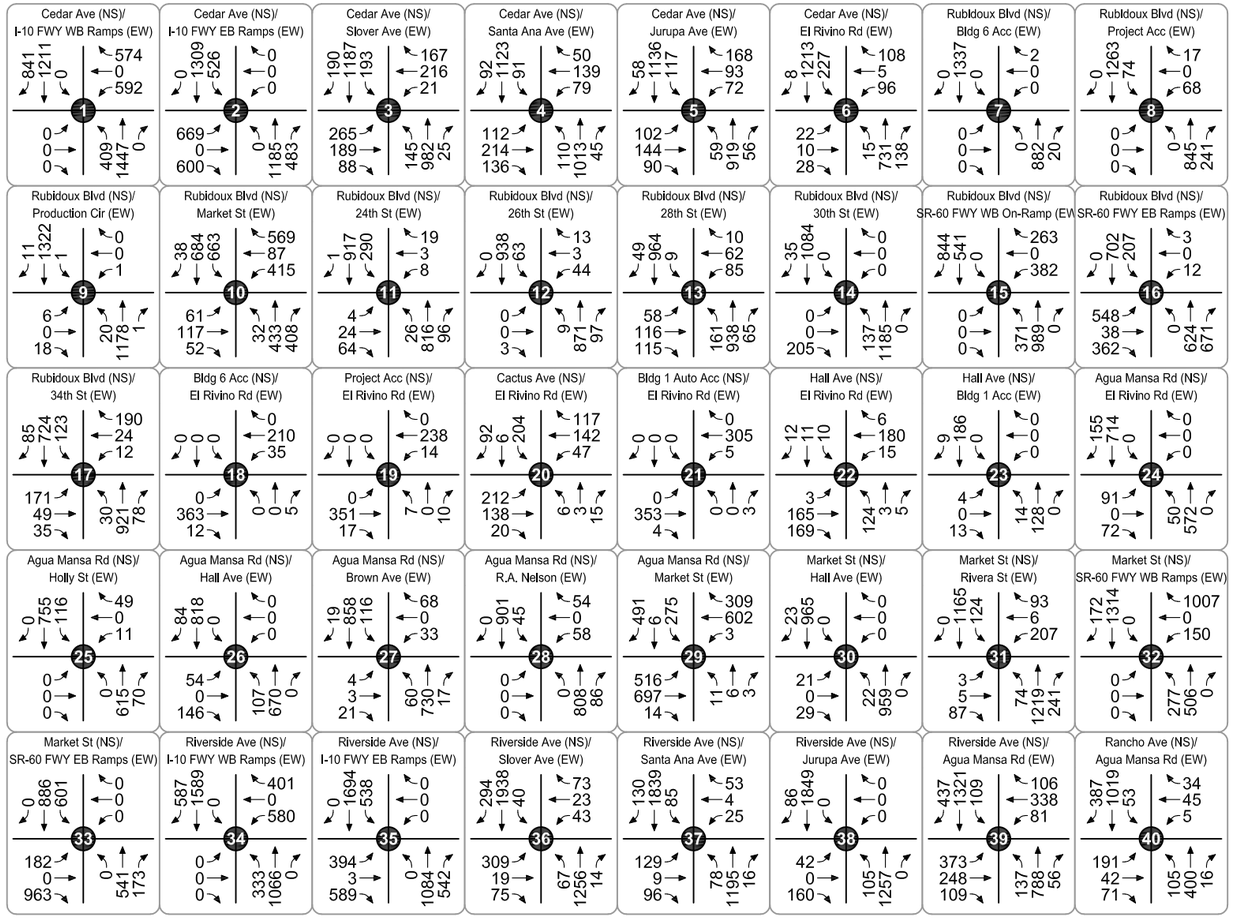
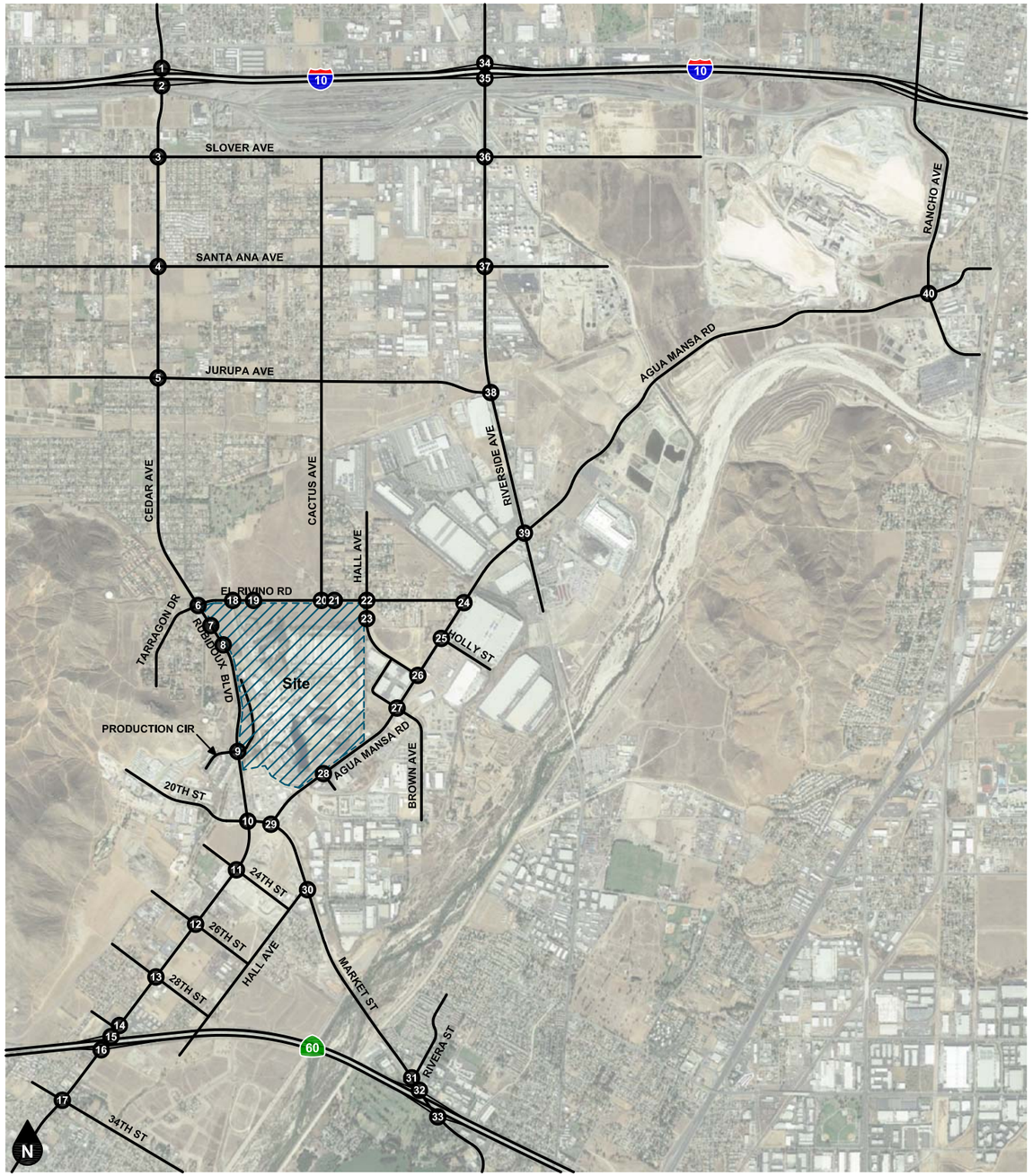


Figure 72
Year 2035 With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 1



Legend
(#) Study Intersection

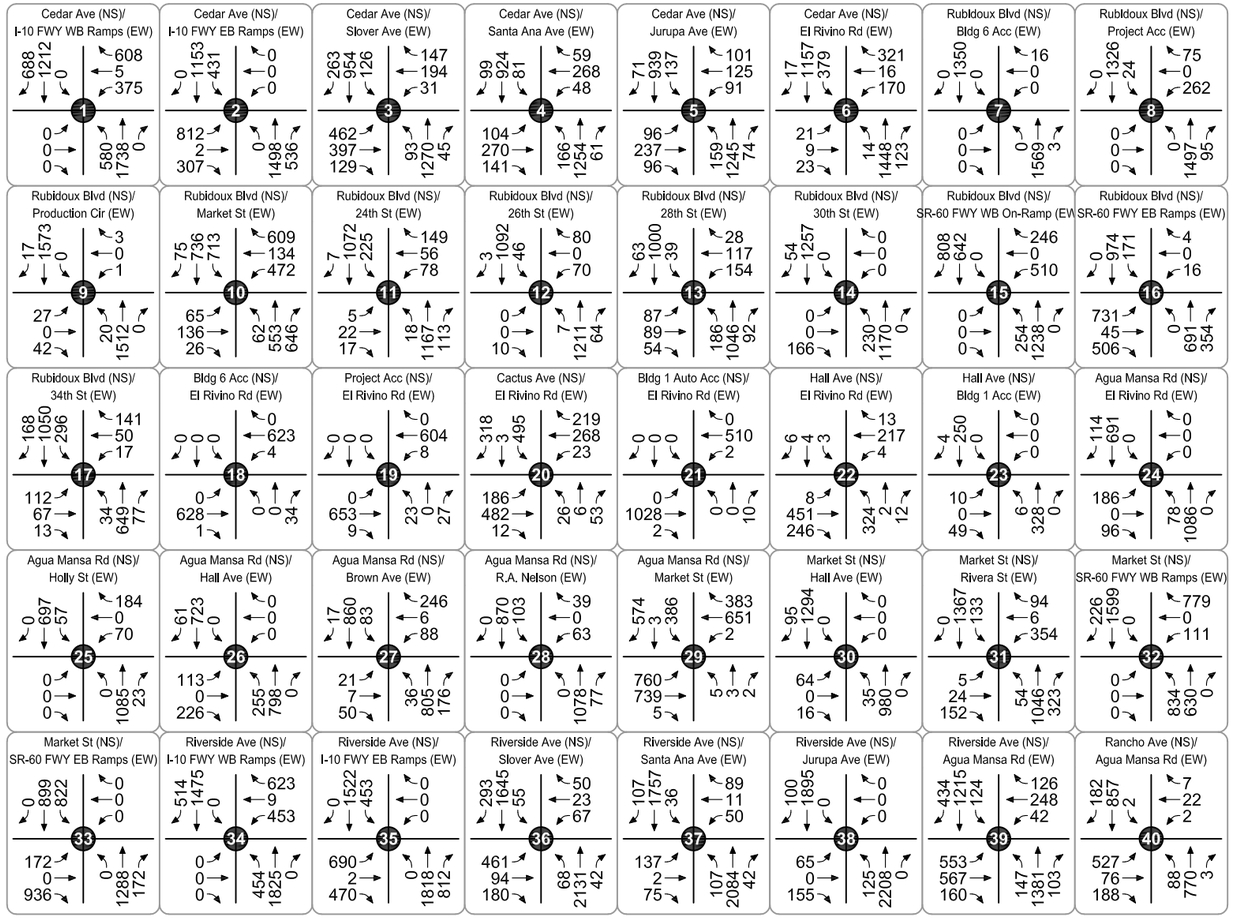
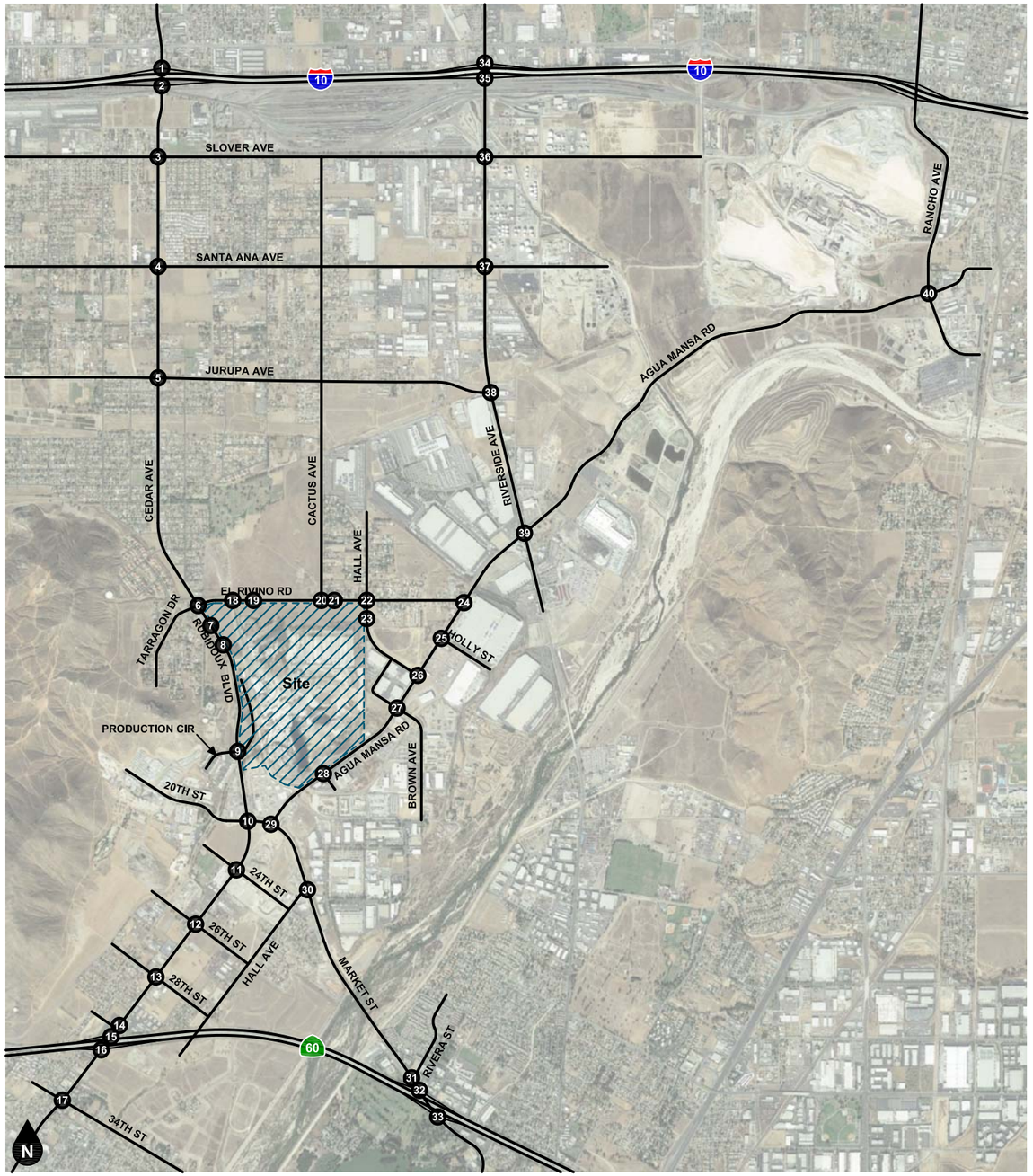


Figure 73
Year 2035 With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 1



Legend

(#) Study Intersection

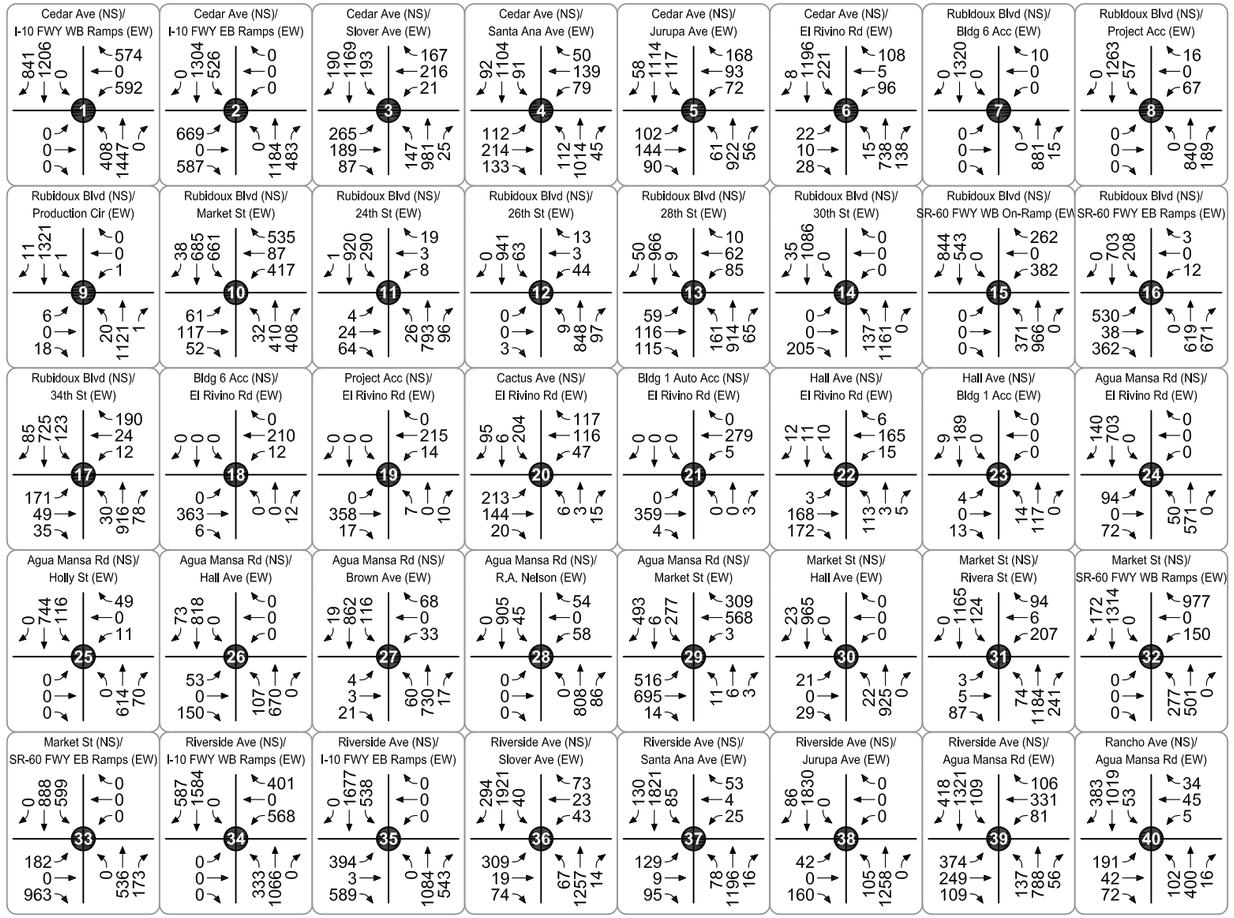
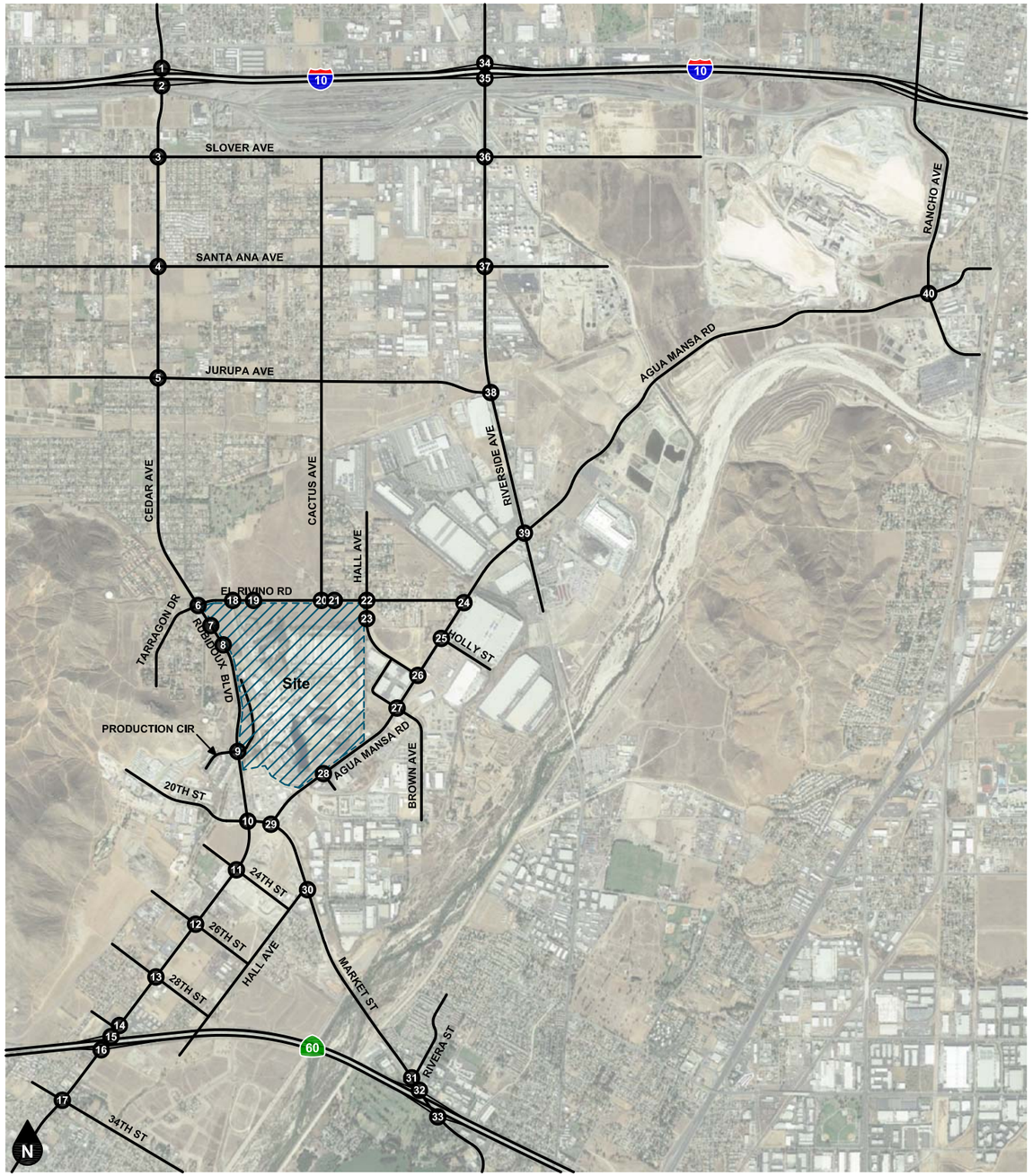


Figure 74
Year 2035 With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 2



Legend
(#) Study Intersection

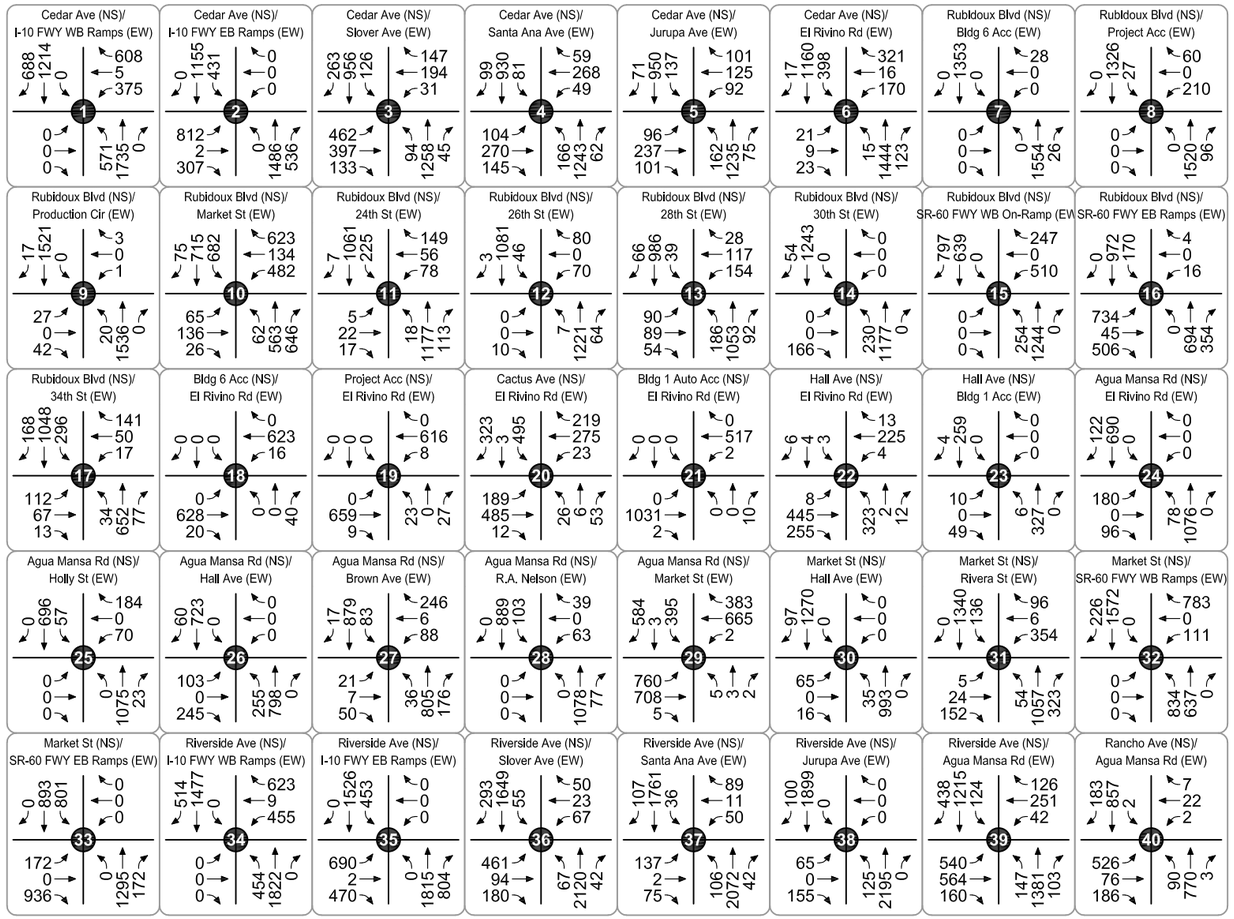


Figure 75
Year 2035 With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 2

6. TRAFFIC OPERATIONS

Detailed delay and Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix F. For "with project" traffic conditions, it is assumed that the proposed project will be fully responsible for site access related improvements (i.e., turning lanes and traffic signal equipment along project access intersections and roadway segments).

EXISTING PLUS PROJECT – ALTERNATIVE 1

For Existing Plus Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 12):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street

The following study roadway segment improvements are recommended for Existing Plus Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

For Existing Plus Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements.

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 13):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30

The following study intersection improvements are recommended for Existing Plus Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct a second westbound right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Existing Plus Project – Alternative 1 traffic conditions, with improvements.

EXISTING PLUS PROJECT – ALTERNATIVE 2

For Existing Plus Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 14):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street

The following study roadway segment improvements are recommended for Existing Plus Project – Alternative 2 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

For Existing Plus Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements.

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 15):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30

The following study intersection improvements are recommended for Existing Plus Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct a second westbound right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane

- Construct southbound left turn lane
- Construct westbound left turn lane
- Construct westbound right turn lane
- Install traffic signal

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Existing Plus Project – Alternative 2 traffic conditions, with improvements.

OPENING YEAR (2020) WITHOUT PROJECT

For Opening Year (2020) Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 16):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) Without Project traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segment that is projected to operate at an unacceptable Level of Service:

- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) Without Project traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 17):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 30th Street/SR-60 Freeway WB Off-Ramp - #14
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33

The following study intersection improvements are recommended for Opening Year (2020) Without Project traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane

- Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 30th Street/SR-60 Freeway WB Off-Ramp (EW) - #14
  - Construct westbound left turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) Without Project traffic conditions, with improvements.

OPENING YEAR (2020) WITH PROJECT – ALTERNATIVE 1

For Opening Year (2020) With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 18):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) With Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) With Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 19):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 30th Street/SR-60 Freeway WB Off-Ramp - #14
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Rubidoux Boulevard at SR-60 Freeway EB Ramps - #16
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33

The following study intersection improvements are recommended for Opening Year (2020) With Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 30th Street/SR-60 Freeway WB Off-Ramp (EW) - #14
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at SR-60 Freeway EB Ramps (EW) - #16
  - Construct northbound right turn lane
  - Construct eastbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) With Project – Alternative 1 traffic conditions, with improvements.

OPENING YEAR (2020) WITH PROJECT – ALTERNATIVE 2

For Opening Year (2020) With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 20):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) With Project – Alternative 2 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) With Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 21):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 30th Street/SR-60 Freeway WB Off-Ramp - #14
- Rubidoux Boulevard at SR-60 Freeway WB On-Ramp - #15
- Rubidoux Boulevard at SR-60 Freeway EB Ramps - #16
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33

The following study intersection improvements are recommended for Opening Year (2020) With Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 30th Street/SR-60 Freeway WB Off-Ramp (EW) - #14
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at SR-60 Freeway EB Ramps (EW) - #16
  - Construct northbound right turn lane
  - Construct eastbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane

- Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Construct north-south two-way left turn median

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) With Project – Alternative 2 traffic conditions, with improvements.

YEAR 2035 WITHOUT PROJECT

For Year 2035 Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 22):

- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 Without Project traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 Without Project traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 Without Project traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 23):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 Without Project traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane

- Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue(EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 Without Project traffic conditions, with improvements.

YEAR 2035 WITH PROJECT– ALTERNATIVE 1

For Year 2035 With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 24):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue

- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 25):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway WB Ramps - #32
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane

- Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Construct a second westbound through lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct eastbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway WB Ramps (EW) - #32
  - Restripe southbound right turn lane to shared through/right turn lane

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue (EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 1 traffic conditions, with improvements.

YEAR 2035 WITH PROJECT – ALTERNATIVE 2

For Year 2035 With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 26):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 2 traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 27):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9

- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway WB Ramps - #32
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct eastbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane

  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway WB Ramps (EW) - #32
  - Restripe southbound right turn lane to shared through/right turn lane

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue (EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 2 traffic conditions, with improvements.

FUTURE TRAFFIC SIGNAL WARRANT ANALYSIS

The application of traffic control devices is governed by Federal standards adopted by the State of California and contained in the California Manual on Uniform Traffic Control Devices ("California MUTCD", November 2014). Part 4C – Traffic Control Signal Needs Studies of the California MUTCD contains a series of warrants, or criteria, which serve to determine whether installation of a traffic signal is justified at a particular location. The California MUTCD states that a traffic control signal should not be installed unless one or more warrants are satisfied. Application of the traffic signal warrants should be based on engineering judgement and satisfaction of one or more traffic signal warrants shall not in itself require the installation of a traffic signal.

The unsignalized study intersections have been evaluated for the potential need to install a traffic signal using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California MUTCD.

For Existing Plus Project – Alternative 1 traffic conditions, a traffic signal is projected to be warranted at the following additional study intersection (see Appendix G):

Rubidoux Boulevard (NS) at:
Building 6 South Access (EW) - #8

For Existing Plus Project – Alternative 1 traffic conditions, the unsignalized intersections of Rubidoux Boulevard at Production Circle, Rubidoux Boulevard at 24th Street, and Rubidoux Boulevard at 26th Street are forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If these intersections were signalized, they are forecast to operate within acceptable Levels of Service (see Table 13). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

For Existing Plus Project – Alternative 2 traffic conditions, a traffic signal is projected to be warranted at the following additional study intersection (see Appendix G):

Rubidoux Boulevard (NS) at:
Building 6 South Access (EW) - #8

Traffic signals are not projected to be warranted at the following study intersections for Existing Plus Project – Alternative 2 traffic conditions (see Appendix G):

Rubidoux Boulevard (NS) at:
Production Circle (EW) - #9

Rubidoux Boulevard (NS) at:
24th Street (EW) - #11
26th Street (EW) - #12

For Existing Plus Project – Alternative 2 traffic conditions, the unsignalized intersections of Rubidoux Boulevard at Production Circle, Rubidoux Boulevard at 24th Street, and Rubidoux Boulevard at 26th Street are forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If these intersections were signalized, they are forecast to operate within acceptable Levels of Service (see Table 14). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

For Opening Year (2020) Without Project traffic conditions, a traffic signal is projected to be warranted at the following additional study intersection (see Appendix G):

Rubidoux Boulevard (NS) at:
24th Street (EW) - #11

For Opening Year (2020) Without Project traffic conditions, the intersections of Rubidoux Boulevard at Production Circle and Rubidoux Boulevard at 26th Street are forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If these intersections were signalized, they are forecast to operate within acceptable Levels of Service (see Table 17). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

For Opening Year (2020) With Project – Alternative 1 traffic conditions, a traffic signal is projected to be warranted at the following additional study intersection (see Appendix G):

Hall Avenue (NS) at:
El Rivino Road (EW) - #22

For Opening Year (2020) With Project – Alternative 1 traffic conditions, the intersections of Rubidoux Boulevard at Production Circle and Rubidoux Boulevard at 26th Street are forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If these intersections were signalized, they are forecast to operate within acceptable Levels of Service (see Table 19). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

For Opening Year (2020) With Project – Alternative 2 traffic conditions, a traffic signal is projected to be warranted at the following additional study intersection (see Appendix G):

Hall Avenue (NS) at:
El Rivino Road (EW) - #22

For Opening Year (2020) With Project – Alternative 2 traffic conditions, the intersections of Rubidoux Boulevard at Production Circle and Rubidoux Boulevard at 26th Street are forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If these intersections were signalized, they are forecast to operate within acceptable Levels of Service (see Table 21). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

For Year 2035 Without Project traffic conditions, traffic signals are projected to be warranted at the following additional study intersections (see Appendix G):

Rubidoux Boulevard (NS) at:
26th Street (EW) - #12

Market Street (NS) at:
Hall Avenue (EW) - #30

For Year 2035 Without Project traffic conditions, the intersection of Rubidoux Boulevard at Production Circle is forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If this intersections were signalized, it is forecast to operate within acceptable Levels of Service (see Table 23). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

For both Year 2035 With Project – Alternative 1 and Alternative 2 traffic conditions, the intersection of Rubidoux Boulevard at Production Circle is forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If this intersections were signalized, it is forecast to operate within acceptable Levels of Service (see Table 25). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

FREEWAY MAINLINE EVALUATION

The Riverside Traffic Analysis Model (RivTAM) provides freeway projections for Year 2035. The freeway peak hour volume forecasts have been developed using the peak period Riverside Traffic Analysis Model data directly. The general use lanes have an assumed capacity of 2,300 vehicles per hour, while high occupancy vehicle lanes have an assumed capacity of 1,600 vehicles per hour. The directional split of traffic volumes was computed using the k-factor (percentage of daily vehicles in the peak hour) and d-factors (directional split of peak hour traffic) provided in the 2015 Traffic Volumes on California State Highway System by the California Department of Transportation.

Table 28 presents the analysis for the Year 2035 morning peak hour traffic conditions. As shown in Table 28, the SR-60 Freeway currently provides 3 general use and 1 high occupancy vehicle lane in each direction within the study area. No freeway segments are projected to operate at an unacceptable Level of Service for Year 2035 With Project – Alternative 1 and Year 2035 With Project – Alternative 2 traffic conditions.

Table 29 presents the analysis for the Year 2035 evening peak hour traffic conditions. As shown in Table 29, the SR-60 Freeway currently provides 3 general use and 1 high occupancy vehicle lane in each direction within the study area. A total of 1 freeway segment is projected to operate at an unacceptable Level of Service for Year 2035 With Project – Alternative 1 and Year 2035 With Project – Alternative 2 traffic conditions. The eastbound SR-60 Freeway segment from Market Street to Main Street is projected to operate at an unacceptable Level of Service for Year 2035 evening peak hour traffic conditions. As shown on Table 33 and Table 34, the future construction of an additional eastbound general use lane or additional eastbound high occupancy vehicle lane would mitigate the deficient Level of Service. However, the Riverside County Transportation Commission (RCTC) does not have an improvement programmed for the SR-60 Freeway between Market Street and Main Street.

FREEWAY MERGE / DIVERGE ANALYSIS

A ramp junction is an area of competing traffic demands. Entering on-ramp vehicles merge into the adjacent traffic lane competing for space with upstream freeway traffic combining into one stream. In a merge area, individual on-ramp vehicles attempt to find gaps in the adjacent freeway lane traffic stream. The action of individual merging vehicles entering the traffic stream introduces turbulence to traffic flow in the vicinity of the ramp gore area. Approaching freeway vehicles move toward the left to avoid this turbulence, or create

gaps for entering vehicles. Exiting off-ramp vehicles diverge from upstream traffic separating into two streams. Exiting vehicles must occupy the lane adjacent to the freeway stream or the off-ramp. This has a redistributing effect on other freeway vehicles, as they move left to avoid the turbulence of the immediate diverge area.

Ramps have a limited storage capacity. If capacity is exceeded at the merge point, local congestion and queuing occurs, which may ultimately spill back onto the roadway network. The same is true for diverging vehicles. If capacity is exceeded at the diverge point, queuing can back onto the freeway mainline. Both queuing scenarios should be avoided.

The merge/diverge analysis analyzes the following interchanges: I-10 Freeway at Cedar Avenue, I-10 Freeway at Riverside Avenue, SR-60 Freeway at Rubidoux Boulevard, and SR-60 Freeway at Market Street. The Year 2035 traffic volume projections have been obtained from the Riverside Traffic Analysis Model (RivTAM) for Year 2035 traffic conditions.

Methodology

The freeway ramp merge/diverge analysis was conducted using the Transportation Research Board, 2010 Highway Capacity Manual, 2010 methodology merge/diverge density using the HCS+ software, Version 6.65. The analysis is based on the typical weekday AM and PM peak hour traffic volumes for Buildout Year (2035) traffic conditions.

Level of Service

Levels of Service in a merge influence area or diverge influence area is defined in terms of density for all cases of stable operation, Level of Service A through Level of Service E. Level of Service F exists when the demand exceeds the capacity of the on-ramp or off-ramp. The Transportation Research Board, 2010 Highway Capacity Manual states that Level of Service F is unacceptable because congestion is likely to occur, therefore Level of Service E should not be exceeded. The California Department of Transportation has defined Level of Service D as the maximum acceptable Level of Service.

Level of Service A:

> Unrestricted operations. Density is low enough to permit smooth merging/diverging, with virtually no turbulence in the traffic stream. Level of Service A represents a density of passenger cars per mile per lane of less than or equal to 10. The California Department of Transportation has defined Level of Service A as an acceptable Level of Service.

Level of Service B:

> Merging/diverging maneuvers become noticeable to through drivers and minimum turbulence occurs. Level of Service B represents a density of passenger cars per mile per lane of greater than 10 to 20. The California Department of Transportation has defined Level of Service B as an acceptable Level of Service.

Level of Service C:

> Speed within the influence area begins to decline as turbulence levels become noticeable. Both ramp and freeway vehicles begin to adjust their speed to accomplish smooth transitions. Level of Service C represents a density of passenger cars per mile per lane of greater than 20 to 28. The California Department of Transportation has defined Level of Service C as an acceptable Level of Service.

Level of Service D:

> Turbulence levels in the influence area become intrusive and virtually all vehicles slow to accommodate merging/diverging. Some ramp queues may form at heavily used on-ramps, but freeway operations remain stable. Level of Service D represents a density of passenger cars per mile per lane of greater than 28 to 35. The California Department of Transportation has defined Level of Service D as the maximum acceptable Level of Service.

Level of Service E:

> Conditions approaching capacity. Speeds reduce significantly and turbulence is felt by virtually all drivers. Flow levels approach capacity and small changes in demand or disruptions within the traffic stream can cause both ramp and freeway queues to form. Level of Service E represents a density of passenger cars per mile per lane of greater 35. The California Department of Transportation has defined Level of Service E as an unacceptable Level of Service.

Level of Service F:

> Demand exceeds the capacity of the on-ramp or off-ramp. The California Department of Transportation has defined Level of Service F as an unacceptable Level of Service.

Results

Table 30 summarizes results of the merge/diverge analyses conducted the I-10 Freeway at Cedar Avenue, I-10 Freeway at Riverside Avenue, SR-60 Freeway at Rubidoux Boulevard, and SR-60 Freeway at Market Street interchanges based on the projected traffic data and existing area measurements. Merge/diverge analysis worksheets are provided in Appendix J. Many of the merge/diverge locations are projected to operate at Level of Service E or F since the projected freeway volumes exceed the capacity available based on the number of lanes currently provided. As shown on Table 35, widening of the I-10 Freeway and the SR-60 Freeway in the both directions with one additional travel lane will accommodate the projected Year 2035 traffic conditions. Future potential interchange reconfigurations may be beneficial in reducing Levels of Service.

SYNCHRO SIGNAL TIMING AND DELAY ANALYSIS

The Synchro program is a macroscopic analysis and optimization software application that supports Highway Capacity Manual intersectional delay analysis. In addition to calculating capacity, it can also optimize cycle lengths and splits, eliminating the need to try multiple timing plans in search of the optimum. If the intersection is coordinated, Synchro explicitly calculates the progression factor and calculates the effects of coordination automatically and accurately.

A Synchro analysis has been conducted on the study intersections for Opening Year (2020) With Project – Alternative 1, Opening Year (2020) With Project – Alternative 2, Year 2035 With Project – Alternative 1, and Year 2035 With Project – Alternative 2 traffic conditions with improvements. At the request of City of Jurupa Valley staff, the Synchro analysis utilized the same cycle lengths as utilized in the previous intersection delay analysis using the Vistro software. As directed by City staff, the existing volumes were not converted into Passenger Car Equivalent (PCE) trips; instead the heavy vehicle percentage (by leg) was calculated from the existing volume counts and entered directly into the analysis software. The existing heavy vehicle percentages were maintained for Forecast Year 2020 and 2035 conditions. Table 31 summarizes the results of this analysis.

The study intersections are projected to operate within acceptable levels of service during the peak hours with recommended mitigation as recommended within this section of the report, except for the following intersections that required additional mitigation to operate at acceptable levels of service:.

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal [Opening Year (2020)]

- Agua Mansa Road (NS) at Hall Avenue (EW) - #26
  - Install traffic signal [Opening Year (2020) and Year 2035]

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct northbound left turn lane [Year 2035]
  - Install westbound right turn overlap [Year 2035]
  - Construct a second eastbound left turn lane [Year 2035]

- Riverside Avenue (NS) at Agua Mansa Road (EW) - #39
  - Construct northbound right turn lane [Opening Year (2020) and Year 2035]
  - Construct a second eastbound left turn lane [Year 2035]

It is recommended that the intersection delay analysis conducted with Vistro software take precedence over the Synchro analysis. This is due to the limitations present in analyzing future scenarios based on existing heavy vehicle percentages. Since the heavy vehicle percentage is also applied to project and other development volumes, which have been already converted to PCE trips, the analysis effectively multiplies the effect of project and other development truck trips. These factors overestimate the traffic volumes being computed for future scenarios. Synchro traffic signal timing and delay/Level of Service reports are provided in Appendix K.

Table 12

Existing Plus Project Roadway Segment Daily Capacity Analysis - Alternative 1

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	27,200	0.80	Acceptable	C
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	26,900	0.79	Acceptable	C
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	21,300	0.62	Acceptable	B
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	22,100	0.65	Acceptable	B
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	22,700	0.67	Acceptable	B
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	24,300	0.71	Acceptable	C
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	5,800	0.45	Acceptable	A
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	6,100	0.47	Acceptable	A
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	4,100	0.32	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	2,700	0.21	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	25,100	0.74	Acceptable	C
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	20,700	1.15	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	20,700	0.61	Acceptable	B
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	27,300	1.52	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	27,300	0.80	Approaches Capacity	D
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	12,600	0.97	Approaches Capacity	E
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	13,100	0.51	Acceptable	A
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	14,100	0.78	Acceptable	C

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 13 (1 of 2)
Existing Plus Project Intersection Delay and Level of Service - Alternative 1

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	56.5	E	40.4	D
	-With Improvements	CAL	TS	44.6	D	31.9	C
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	47.3	D	37.2	D
3.	Cedar Ave at Slover Ave	SB	TS	18.1	B	18.1	B
4.	Cedar Ave at Santa Ana Ave	SB	TS	11.2	B	12.2	B
5.	Cedar Ave at Jurupa Ave	SB	TS	34.2	C	42.0	D
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	13.2	B	22.8	C
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	10.5	B	14.7	B
8.	Rubidoux Blvd at Project Access	JV	**TS**	6.3	A	9.1	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.1	A	3.6	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	30.5	C	58.4	E
	-With Improvements	JV	TS	27.4	C	54.6	D
11.	Rubidoux Blvd at 24th St	JV	CSS	54.7	F	99.9	F
	-With Improvements	JV	**TS**	12.7	B	16.8	B
12.	Rubidoux Blvd at 26th St	JV	CSS	41.8	E	73.1	F
	-With Improvements	JV	**TS**	1.6	A	15.7	B
13.	Rubidoux Blvd at 28th St	JV	TS	48.3	D	42.5	D
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	TS	20.7	C	28.4	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	UN	50.0	E	24.7	C
	-With Improvements	CAL	**TS**	8.0	A	5.1	A
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	TS	39.3	D	40.4	D
17.	Rubidoux Blvd at 34th St	JV	TS	10.6	B	10.5	B
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	8.8	A	10.2	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	10.4	B	16.0	C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	9.6	A	8.6	A
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	8.8	A	10.0	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	13.1	B	24.2	C
23.	Hall Ave at Building 1 Access	JV	**CSS**	9.5	A	10.3	B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	45.5	E	99.9	F
	-With Improvements	RIA / SB	**TS**	7.5	A	6.4	A
25.	Agua Mansa Rd at Holly Place	SB	CSS	14.2	B	23.6	C
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	12.7	B	15.3	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.2	B	15.3	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	7.5	A	3.5	A
29.	Agua Mansa Rd at Market St	JV	TS	57.0	E	99.9	F
	-With Improvements	JV	TS	18.3	B	33.5	C
30.	Market St at Hall Ave	JV	CSS	39.5	E	97.6	F
	-With Improvements	JV	CSS	16.9	C	22.0	C
31.	Market St at Rivera St	RIV	TS	19.0	B	22.3	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	10.9	B	19.1	B

Table 13 (2 of 2)
Existing Plus Project Intersection Delay and Level of Service - Alternative 1

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	21.6	C	44.3	D
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	23.7	C	12.6	B
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	19.1	B	21.6	C
36.	Riverside Ave at Slover Ave	RIA	TS	22.8	C	20.8	C
37.	Riverside Ave at Santa Ana Ave	RIA	TS	10.4	B	9.4	A
38.	Riverside Ave at Jurupa Ave	RIA	TS	7.7	A	7.0	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	10.3	B	12.9	B
40.	Rancho Ave at Agua Mansa Rd	COL	TS	10.7	B	19.0	B

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 14

Existing Plus Project Roadway Segment Daily Capacity Analysis - Alternative 2

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	27,700	0.81	Approaches Capacity	D
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	27,400	0.80	Approaches Capacity	D
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	21,600	0.63	Acceptable	B
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	22,400	0.66	Acceptable	B
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	23,000	0.67	Acceptable	B
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	24,500	0.72	Acceptable	C
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	6,400	0.49	Acceptable	A
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	6,600	0.51	Acceptable	A
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	4,500	0.35	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	2,800	0.22	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	25,500	0.75	Acceptable	C
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	21,200	1.18	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	21,200	0.62	Acceptable	B
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	27,800	1.54	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	27,800	0.82	Approaches Capacity	D
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	12,800	0.98	Approaches Capacity	E
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	13,300	0.51	Acceptable	A
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	14,000	0.78	Acceptable	C

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 15 (1 of 2)
Existing Plus Project Intersection Delay and Level of Service - Alternative 2

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	56.4	E	39.2	D
	-With Improvements	CAL	TS	44.6	D	31.6	C
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	45.8	D	37.1	D
3.	Cedar Ave at Slover Ave	SB	TS	18.0	B	18.0	B
4.	Cedar Ave at Santa Ana Ave	SB	TS	11.1	B	12.3	B
5.	Cedar Ave at Jurupa Ave	SB	TS	26.4	C	30.5	C
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	13.1	B	23.4	C
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	10.6	B	15.2	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	6.0	A	8.1	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.1	A	3.6	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	30.4	C	54.4	D
11.	Rubidoux Blvd at 24th St	JV	CSS	53.1	F	99.9	F
	-With Improvements	JV	**TS**	12.5	B	16.8	B
12.	Rubidoux Blvd at 26th St	JV	CSS	40.7	E	73.2	F
	-With Improvements	JV	**TS**	1.6	A	15.7	B
13.	Rubidoux Blvd at 28th St	JV	TS	48.5	D	36.5	D
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	TS	20.7	C	28.0	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	UN	50.3	F	24.1	C
	-With Improvements	CAL	**TS**	8.1	A	5.1	A
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	TS	35.1	D	41.0	D
17.	Rubidoux Blvd at 34th St	JV	TS	10.5	B	10.5	B
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	8.8	A	10.2	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	10.4	B	16.2	C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	9.4	A	8.7	A
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	8.8	A	10.0	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	12.7	B	24.5	C
23.	Hall Ave at Building 1 Access	JV	**CSS**	9.5	A	10.4	B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	44.3	E	99.9	F
	-With Improvements	RIA / SB	**TS**	7.4	A	6.3	A
25.	Agua Mansa Rd at Holly Place	SB	CSS	14.1	B	23.1	C
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	12.7	B	15.0	B
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.2	B	15.3	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	7.5	A	3.4	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	18.0	B	36.1	D
30.	Market St at Hall Ave	JV	CSS	37.6	E	96.8	F
	-With Improvements	JV	CSS	16.6	C	21.8	C
31.	Market St at Rivera St	RIV	TS	19.1	B	22.4	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	10.9	B	18.6	B
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	21.3	C	42.5	D

Table 15 (2 of 2)
Existing Plus Project Intersection Delay and Level of Service - Alternative 2

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	23.2	C	12.6	B
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	19.2	B	21.3	C
36.	Riverside Ave at Slover Ave	RIA	TS	22.4	C	20.7	C
37.	Riverside Ave at Santa Ana Ave	RIA	TS	10.3	B	9.4	A
38.	Riverside Ave at Jurupa Ave	RIA	TS	7.7	A	7.0	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	10.3	B	12.3	B
40.	Rancho Ave at Agua Mansa Rd	COL	TS	10.6	B	19.0	B

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 16

Opening Year (2020) Without Project Roadway Segment Daily Capacity Analysis

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	30,100	0.88	Approaches Capacity	D
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	29,800	0.87	Approaches Capacity	D
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	25,000	0.73	Acceptable	C
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	25,800	0.76	Acceptable	C
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	26,700	0.78	Acceptable	C
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	28,100	0.82	Approaches Capacity	D
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	10,100	0.78	Acceptable	C
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	6,000	0.46	Acceptable	A
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	4,100	0.32	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	2,500	0.19	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	29,700	0.87	Approaches Capacity	D
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	25,700	1.43	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	25,700	0.75	Acceptable	C
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	35,000	1.94	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	35,000	1.03	Potentially Exceeds Capacity	F
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	15,600	1.20	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	15,600	0.60	Acceptable	B
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	16,600	0.64	Acceptable	B
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	15,900	0.88	Approaches Capacity	D

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).
number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points
of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 17 (1 of 2)
Opening Year (2020) Without Project Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	83.1	F	64.2	E
	-With Improvements	CAL	TS	44.9	D	42.8	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	62.5	E	49.5	D
	-With Improvements	CAL	TS	42.9	D	37.5	D
3.	Cedar Ave at Slover Ave	SB	TS	25.2	C	29.1	C
4.	Cedar Ave at Santa Ana Ave	SB	TS	14.1	B	16.4	B
5.	Cedar Ave at Jurupa Ave	SB	TS	61.1	E	92.7	F
	-With Improvements	SB	TS	18.3	B	19.2	B
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	14.0	B	28.8	C
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	6.0	A	7.4	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	70.8	E	99.9	F
	-With Improvements	JV	TS	35.0	C	46.5	D
11.	Rubidoux Blvd at 24th St	JV	CSS	85.4	F	99.9	F
	-With Improvements	JV	**TS**	11.1	B	12.6	B
12.	Rubidoux Blvd at 26th St	JV	CSS	59.7	F	99.9	F
	-With Improvements	JV	**TS**	18.1	B	25.4	C
13.	Rubidoux Blvd at 28th St	JV	TS	25.1	C	34.3	C
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	TS	30.1	C	73.6	E
	-With Improvements	CAL	TS	18.2	B	22.9	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	UN	99.9	F	43.7	E
	-With Improvements	CAL	**TS**	10.0	A	6.1	A
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	TS	48.0	D	48.8	D
17.	Rubidoux Blvd at 34th St	JV	TS	11.5	B	11.5	B
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	11.7	B	12.2	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	13.0	B	25.8	D
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	53.6	F	99.9	F
	-With Improvements	RIA / SB	**TS**	7.3	A	7.9	A
25.	Agua Mansa Rd at Holly Place	SB	CSS	14.5	B	24.3	C
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	13.5	B	15.9	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	10.5	B	14.7	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	4.3	A	3.4	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	24.8	C	37.2	D
30.	Market St at Hall Ave	JV	CSS	51.2	F	99.9	F
	-With Improvements	JV	CSS	18.4	C	24.6	C
31.	Market St at Rivera St	RIV	TS	17.1	B	25.3	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	12.3	B	24.2	C
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	28.6	C	58.8	E
	-With Improvements	CAL	TS	17.5	B	33.7	C
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	29.3	C	14.6	B

Table 17 (2 of 2)
Opening Year (2020) Without Project Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	24.2	C	31.1	C
36.	Riverside Ave at Slover Ave	RIA	TS	47.2	D	33.5	C
37.	Riverside Ave at Santa Ana Ave	RIA	TS	12.1	B	11.7	B
38.	Riverside Ave at Jurupa Ave	RIA	TS	8.8	A	8.1	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	16.6	B	17.8	B
40.	Rancho Ave at Agua Mansa Rd	COL	TS	12.7	B	26.4	C

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 18
Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis - Alternative 1

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	35,000	1.03	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	34,700	1.02	Potentially Exceeds Capacity	F
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	27,500	0.81	Approaches Capacity	D
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	28,300	0.83	Approaches Capacity	D
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	29,200	0.86	Approaches Capacity	D
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	30,600	0.90	Approaches Capacity	D
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	11,600	0.89	Approaches Capacity	D
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	8,100	0.62	Acceptable	B
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	5,100	0.39	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	4,100	0.32	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	32,600	0.96	Approaches Capacity	E
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	29,400	1.63	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	29,400	0.86	Approaches Capacity	D
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	38,700	2.15	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	38,700	1.13	Potentially Exceeds Capacity	F
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	16,900	1.30	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	16,900	0.65	Acceptable	B
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	17,400	0.67	Acceptable	B
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	17,200	0.96	Approaches Capacity	E

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).
number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points
of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 19 (1 of 2)
Opening Year (2020) With Project Intersection Delay and Level of Service - Alternative 1

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	85.3	F	72.0	E
	-With Improvements	CAL	TS	46.4	D	50.1	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	67.4	E	50.9	D
	-With Improvements	CAL	TS	44.9	D	39.1	D
3.	Cedar Ave at Slover Ave	SB	TS	27.1	C	32.1	C
4.	Cedar Ave at Santa Ana Ave	SB	TS	15.8	B	18.6	B
5.	Cedar Ave at Jurupa Ave	SB	TS	54.9	D	99.9	F
	-With Improvements	SB	TS	19.8	B	19.6	B
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	16.0	B	39.2	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	11.7	B	16.3	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	6.4	A	9.8	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	5.3	A	6.0	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	92.5	F	99.9	F
	-With Improvements	JV	TS	24.0	C	41.5	D
11.	Rubidoux Blvd at 24th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	11.0	B	12.7	B
12.	Rubidoux Blvd at 26th St	JV	CSS	79.0	F	99.9	F
	-With Improvements	JV	**TS**	15.6	B	22.9	C
13.	Rubidoux Blvd at 28th St	JV	TS	24.2	C	38.1	D
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	TS	31.8	C	76.9	E
	-With Improvements	CAL	TS	18.7	B	26.5	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	UN	99.9	F	64.3	F
	-With Improvements	CAL	**TS**	10.0	A	6.8	A
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	TS	99.9	F	54.4	D
	-With Improvements	CAL	TS	33.4	C	24.4	C
17.	Rubidoux Blvd at 34th St	JV	TS	11.6	B	11.6	B
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	9.4	A	10.6	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	12.6	B	21.6	C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	12.7	B	13.0	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.0	A	10.7	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	16.8	C	46.7	E
	-With Improvements	JV / SB	**TS**	6.0	A	7.8	A
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.1	B	11.1	B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	99.9	F	99.9	F
	-With Improvements	RIA / SB	**TS**	8.7	A	11.3	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	15.3	C	28.8	D
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	14.2	B	20.1	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.6	B	16.2	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	4.2	A	3.3	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F

Table 19 (2 of 2)
Opening Year (2020) With Project Intersection Delay and Level of Service - Alternative 1

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
	-With Improvements	JV	TS	22.3	C	36.9	D
30.	Market St at Hall Ave	JV	CSS	76.7	F	99.9	F
	-With Improvements	JV	CSS	21.0	C	29.9	D
31.	Market St at Rivera St	RIV	TS	20.0	B	26.0	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	12.5	B	34.1	C
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	33.8	C	89.2	F
	-With Improvements	CAL	TS	18.7	B	37.3	D
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	33.1	C	15.0	B
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	25.6	C	38.7	D
36.	Riverside Ave at Slover Ave	RIA	TS	54.2	D	38.2	D
37.	Riverside Ave at Santa Ana Ave	RIA	TS	12.6	B	12.1	B
38.	Riverside Ave at Jurupa Ave	RIA	TS	9.2	A	8.2	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	21.0	C	32.7	C
40.	Rancho Ave at Agua Mansa Rd	COL	TS	13.9	B	32.0	C

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 20

Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis - Alternative 2

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	35,500	1.04	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	35,200	1.03	Potentially Exceeds Capacity	F
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	27,800	0.82	Approaches Capacity	D
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	28,600	0.84	Approaches Capacity	D
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	29,500	0.87	Approaches Capacity	D
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	30,800	0.90	Approaches Capacity	E
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	12,200	0.94	Approaches Capacity	E
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	8,600	0.66	Acceptable	B
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	5,500	0.42	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	4,200	0.32	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	33,000	0.97	Approaches Capacity	E
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	29,900	1.66	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	29,900	0.88	Approaches Capacity	D
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	39,200	2.18	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	39,200	1.15	Potentially Exceeds Capacity	F
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	17,100	1.32	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	17,100	0.66	Acceptable	B
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	17,600	0.68	Acceptable	B
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	17,100	0.95	Approaches Capacity	E

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 21 (1 of 2)
Opening Year (2020) With Project Intersection Delay and Level of Service - Alternative 2

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	85.2	F	70.9	E
	-With Improvements	CAL	TS	46.3	D	49.3	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	66.2	E	50.6	D
	-With Improvements	CAL	TS	44.8	D	39.0	D
3.	Cedar Ave at Slover Ave	SB	TS	26.8	C	31.7	C
4.	Cedar Ave at Santa Ana Ave	SB	TS	15.5	B	18.7	B
5.	Cedar Ave at Jurupa Ave	SB	TS	53.3	D	99.9	F
	-With Improvements	SB	TS	19.7	B	19.9	B
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	15.9	B	39.9	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	11.8	B	17.0	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	6.1	A	8.6	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	5.3	A	6.1	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	92.9	F	99.9	F
	-With Improvements	JV	TS	27.0	C	42.4	D
11.	Rubidoux Blvd at 24th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	11.1	B	12.7	B
12.	Rubidoux Blvd at 26th St	JV	CSS	76.0	F	99.9	F
	-With Improvements	JV	**TS**	15.4	B	22.8	C
13.	Rubidoux Blvd at 28th St	JV	TS	24.3	C	44.6	D
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	TS	31.8	C	76.4	E
	-With Improvements	CAL	TS	18.7	B	26.1	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	UN	99.9	F	61.7	F
	-With Improvements	CAL	**TS**	10.1	B	6.7	A
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	TS	99.9	F	55.0	D
	-With Improvements	CAL	TS	33.2	C	24.4	C
17.	Rubidoux Blvd at 34th St	JV	TS	11.6	B	11.6	B
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	9.4	A	10.6	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	12.5	B	21.9	C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	12.5	B	13.1	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.0	A	10.8	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	15.9	C	47.6	E
	-With Improvements	JV / SB	**TS**	5.8	A	7.8	A
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.0	A	11.2	B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	99.9	F	99.9	F
	-With Improvements	RIA / SB	**TS**	8.5	A	11.0	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	15.2	C	28.1	D
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	14.2	B	19.3	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.6	B	16.3	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	4.2	A	3.2	A

Table 21 (2 of 2)
Opening Year (2020) With Project Intersection Delay and Level of Service - Alternative 2

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	25.1	C	38.9	D
30.	Market St at Hall Ave	JV	CSS	72.3	F	99.9	F
	-With Improvements	JV	CSS	20.6	C	29.7	D
31.	Market St at Rivera St	RIV	TS	17.6	B	26.1	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	12.5	B	32.2	C
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	33.3	C	85.5	F
	-With Improvements	CAL	TS	18.6	B	37.4	D
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	32.2	C	15.0	B
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	25.7	C	37.2	D
36.	Riverside Ave at Slover Ave	RIA	TS	53.0	D	37.4	D
37.	Riverside Ave at Santa Ana Ave	RIA	TS	12.4	B	12.0	B
38.	Riverside Ave at Jurupa Ave	RIA	TS	9.1	A	8.2	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	20.7	C	30.5	C
40.	Rancho Ave at Agua Mansa Rd	COL	TS	13.8	B	31.8	C

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 22

Year 2035 Without Project Roadway Segment Daily Capacity Analysis

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	30,100	0.88	Approaches Capacity	D
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	29,800	0.87	Approaches Capacity	D
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	25,000	0.73	Acceptable	C
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	25,800	0.76	Acceptable	C
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	26,700	0.78	Acceptable	C
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	29,000	0.85	Approaches Capacity	D
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	11,400	0.88	Approaches Capacity	D
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	6,600	0.51	Acceptable	A
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	4,100	0.32	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[10]	4	25,900	2	13,000	2,800	0.22	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	29,800	0.87	Approaches Capacity	D
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	25,700	1.43	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	25,700	0.75	Acceptable	C
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	35,000	1.94	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	35,000	1.03	Potentially Exceeds Capacity	F
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	19,900	1.53	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	19,900	0.77	Acceptable	C
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	20,900	0.81	Approaches Capacity	D
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	19,600	1.09	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	19,900	0.77	Acceptable	C

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 23 (1 of 2)
Year 2035 Without Project Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	79.6	E	61.5	E
	-With Improvements	CAL	TS	45.0	D	40.7	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	61.8	E	49.0	D
	-With Improvements	CAL	TS	42.6	D	37.6	D
3.	Cedar Ave at Slover Ave	SB	TS	40.8	D	48.2	D
4.	Cedar Ave at Santa Ana Ave	SB	TS	29.8	C	31.2	C
5.	Cedar Ave at Jurupa Ave	SB	TS	73.4	E	99.9	F
	-With Improvements	SB	TS	22.4	C	27.3	C
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	12.6	B	27.5	C
9.	Rubidoux Blvd at Production Circle	JV	CSS	93.5	F	99.9	F
	-With Improvements	JV	**TS**	3.7	A	5.5	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	42.1	D	53.8	D
11.	Rubidoux Blvd at 24th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	12.9	B	22.8	C
12.	Rubidoux Blvd at 26th St	JV	CSS	81.5	F	99.9	F
	-With Improvements	JV	**TS**	10.3	B	12.0	B
13.	Rubidoux Blvd at 28th St	JV	TS	32.5	C	78.4	E
	-With Improvements	JV	TS	15.6	B	17.7	B
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp[6]	CAL	CSS	17.0	C	16.5	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp[6]	CAL	TS	21.9	C	14.7	B
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps[6]	CAL	TS	33.7	C	43.6	D
17.	Rubidoux Blvd at 34th St	JV	TS	12.5	B	12.1	B
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	13.0	B	16.6	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	12.6	B	58.6	F
	-With Improvements	JV / SB	**TS**	5.1	A	9.4	A
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	46.2	E	99.9	F
	-With Improvements	RIA / SB	**TS**	9.6	A	9.3	A
25.	Agua Mansa Rd at Holly Place	SB	CSS	16.2	C	36.8	E
	-With Improvements	SB	**TS**	8.9	A	11.7	B
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	15.5	C	22.6	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	10.6	B	14.1	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	3.8	A	3.4	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	32.8	C	43.9	D
30.	Market St at Hall Ave	JV	CSS	53.8	F	99.9	F
	-With Improvements	JV	**TS**	7.1	A	10.0	A
31.	Market St at Rivera St	RIV	TS	17.0	B	26.3	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	12.4	B	50.5	D
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	30.6	C	91.0	F
	-With Improvements	CAL	TS	18.8	B	42.3	D
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	21.9	C	22.2	C
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	26.9	C	40.2	D

Table 23 (2 of 2)
Year 2035 Without Project Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
36.	Riverside Ave at Slover Ave	RIA	TS	31.6	C	57.3	E
	-With Improvements	RIA	TS	22.9	C	48.4	D
37.	Riverside Ave at Santa Ana Ave	RIA	TS	11.9	B	12.5	B
38.	Riverside Ave at Jurupa Ave	RIA	TS	9.7	A	9.9	A
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	22.4	C	32.7	C
40.	Rancho Ave at Agua Mansa Rd	COL	TS	21.7	C	43.1	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

(6) Intersection geometrics consistent with SR-60 / Rubidoux Boulevard Interchange Plans Alternative 2.

Table 24
Year 2035 With Project Roadway Segment Daily Capacity Analysis - Alternative 1

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	35,000	1.03	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	34,700	1.02	Potentially Exceeds Capacity	F
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	27,500	0.81	Approaches Capacity	D
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	28,300	0.83	Approaches Capacity	D
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	29,200	0.86	Approaches Capacity	D
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	31,500	0.92	Approaches Capacity	E
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	12,900	0.99	Approaches Capacity	E
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	8,700	0.67	Acceptable	B
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	5,100	0.39	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[10]	4	25,900	2	13,000	4,400	0.34	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	32,700	0.96	Approaches Capacity	E
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	29,400	1.63	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	29,400	0.86	Approaches Capacity	D
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	38,700	2.15	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	34,100	1.00	Potentially Exceeds Capacity	E
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	21,200	1.63	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	21,200	0.82	Approaches Capacity	D
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	21,700	0.84	Approaches Capacity	D
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	20,900	1.16	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	20,900	0.81	Approaches Capacity	D

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 25 (1 of 2)
Year 2035 With Project Intersection Delay and Level of Service - Alternative 1

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	81.6	F	69.5	E
	-With Improvements	CAL	TS	46.4	D	48.2	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	66.2	E	51.8	D
	-With Improvements	CAL	TS	44.6	D	38.0	D
3.	Cedar Ave at Slover Ave	SB	TS	41.5	D	50.1	D
4.	Cedar Ave at Santa Ana Ave	SB	TS	30.6	C	34.2	C
5.	Cedar Ave at Jurupa Ave	SB	TS	91.2	F	27.3	C
	-With Improvements	SB	TS	21.1	C	27.3	C
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	13.4	B	37.1	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	11.4	B	16.1	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	6.2	A	9.4	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.6	A	5.3	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	36.9	D	41.7	D
11.	Rubidoux Blvd at 24th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	13.4	B	23.2	C
12.	Rubidoux Blvd at 26th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	10.3	B	12.2	B
13.	Rubidoux Blvd at 28th St	JV	TS	34.7	C	85.1	F
	-With Improvements	JV	TS	15.7	B	18.6	B
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp[6]	CAL	CSS	17.5	C	18.5	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp[6]	CAL	TS	23.1	C	17.2	B
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps[6]	CAL	TS	34.1	C	48.6	D
17.	Rubidoux Blvd at 34th St	JV	TS	12.6	B	12.1	B
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	9.3	A	10.5	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	12.3	B	20.7	C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	14.0	B	18.8	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.3	A	12.2	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	15.2	C	99.9	F
	-With Improvements	JV / SB	**TS**	5.8	A	11.3	B
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.6	B	12.8	B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	75.7	F	99.9	F
	-With Improvements	RIA / SB	**TS**	9.9	A	12.2	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	17.1	C	45.8	E
	-With Improvements	SB	**TS**	8.6	A	11.4	B
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	16.4	C	32.1	D
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.8	B	15.3	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	3.8	A	3.4	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	30.8	C	49.9	D

Table 25 (2 of 2)
Year 2035 With Project Intersection Delay and Level of Service - Alternative 1

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
30.	Market St at Hall Ave	JV	CSS	82.3	F	99.9	F
	-With Improvements	JV	**TS**	7.3	A	13.3	B
31.	Market St at Rivera St	RIV	TS	17.4	B	26.3	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	12.6	B	66.6	E
	-With Improvements	CAL	TS	11.5	B	44.5	D
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	36.1	D	99.9	F
	-With Improvements	CAL	TS	20.1	C	51.4	D
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	22.7	C	22.6	C
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	26.7	C	43.5	D
36.	Riverside Ave at Slover Ave	RIA	TS	34.8	C	62.6	E
	-With Improvements	RIA	TS	24.9	C	53.8	D
37.	Riverside Ave at Santa Ana Ave	RIA	TS	12.1	B	13.0	B
38.	Riverside Ave at Jurupa Ave	RIA	TS	10.0	A	10.1	B
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	21.6	C	50.7	D
40.	Rancho Ave at Agua Mansa Rd	COL	TS	21.7	C	49.3	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

(6) Intersection geometrics consistent with SR-60 / Rubidoux Boulevard Interchange Plans Alternative 2.

Table 26

Year 2035 With Project Roadway Segment Daily Capacity Analysis - Alternative 2

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	35,500	1.04	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	35,200	1.03	Potentially Exceeds Capacity	F
	20th Street	24th Street	JV	Major Highway	4	34,100	4	34,100	27,800	0.82	Approaches Capacity	D
	24th Street	26th Street	JV	Major Highway	4	34,100	4	34,100	28,600	0.84	Approaches Capacity	D
	26th Street	28th Street	JV	Major Highway	4	34,100	4	34,100	29,500	0.87	Approaches Capacity	D
	28th Street	30th Street	JV	Major Highway	4	34,100	4	34,100	31,700	0.93	Approaches Capacity	E
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	13,500	1.04	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	13,500	0.52	Acceptable	A
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	9,200	0.71	Acceptable	C
	Hall Avenue	Agua Mansa Road	JV / SB	Secondary Highway	4	25,900	2	13,000	5,500	0.42	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[10]	4	25,900	2	13,000	4,500	0.35	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	33,100	0.97	Approaches Capacity	E
	Agua Mansa Road	Hall Avenue	JV	Major Highway	4	34,100	2	18,000	29,900	1.66	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	34,100	29,900	0.88	Approaches Capacity	D
	Hall Avenue	Rivera Street	JV / RIV	Major Highway	4	34,100	2	18,000	39,200	2.18	Potentially Exceeds Capacity	F
		- With Improvements		Major Highway	4	34,100	**4**	53,900	34,100	0.63	Acceptable	B
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	21,400	1.65	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	21,400	0.83	Approaches Capacity	D
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	21,900	0.85	Approaches Capacity	D
	Hall Avenue	El Rivino Road	JV / SB	Secondary Highway	4	25,900	2	18,000	20,800	1.16	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	20,800	0.80	Approaches Capacity	D

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflec widths west of Agua Mansa Road (see Table 1).
number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points
of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 27 (1 of 2)
Year 2035 With Project Intersection Delay and Level of Service - Alternative 2

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
1.	Cedar Ave at I-10 Freeway WB Ramps	CAL	TS	81.4	F	68.5	E
	-With Improvements	CAL	TS	46.3	D	46.7	D
2.	Cedar Ave at I-10 Freeway EB Ramps	CAL	TS	65.1	E	51.6	D
	-With Improvements	CAL	TS	44.1	D	37.9	D
3.	Cedar Ave at Slover Ave	SB	TS	41.3	D	49.7	D
4.	Cedar Ave at Santa Ana Ave	SB	TS	31.2	C	37.4	D
5.	Cedar Ave at Jurupa Ave	SB	TS	88.0	F	26.8	C
	-With Improvements	SB	TS	21.9	C	26.8	C
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	13.3	B	38.8	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	11.5	B	16.6	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	5.9	A	8.3	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.6	A	5.2	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	36.3	D	41.8	D
11.	Rubidoux Blvd at 24th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	13.3	B	23.3	C
12.	Rubidoux Blvd at 26th St	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	10.3	B	12.2	B
13.	Rubidoux Blvd at 28th St	JV	TS	34.9	C	85.4	F
	-With Improvements	JV	TS	15.8	B	18.5	B
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp[6]	CAL	CSS	17.6	C	18.3	C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp[6]	CAL	TS	23.1	C	16.9	B
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps[6]	CAL	TS	34.0	C	48.3	D
17.	Rubidoux Blvd at 34th St	JV	TS	12.6	B	12.1	B
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	9.4	A	10.6	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	12.2	B	21.0	C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	13.8	B	19.0	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.3	A	12.2	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	14.7	B	99.9	F
	-With Improvements	JV / SB	**TS**	5.7	A	11.3	B
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.5	B	12.9	B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	CSS	74.3	F	99.9	F
	-With Improvements	RIA / SB	**TS**	10.0	A	12.0	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	17.0	C	44.5	E
	-With Improvements	SB	**TS**	8.7	A	11.4	B
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	16.4	C	30.3	D
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.8	B	15.3	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	3.8	A	3.3	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	30.9	C	51.2	D
30.	Market St at Hall Ave	JV	CSS	77.3	F	99.9	F
	-With Improvements	JV	**TS**	7.2	A	12.4	B

Table 27 (2 of 2)
Year 2035 With Project Intersection Delay and Level of Service - Alternative 2

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
31.	Market St at Rivera St	RIV	TS	17.3	B	26.3	C
32.	Market St at SR-60 Freeway WB Ramps	CAL	TS	12.6	B	65.0	E
	-With Improvements	CAL	TS	11.5	B	43.5	D
33.	Market St at SR-60 Freeway EB Ramps	CAL	TS	35.6	D	99.9	F
	-With Improvements	CAL	TS	20.0	B	50.8	D
34.	Riverside Ave at I-10 Freeway WB Ramps	CAL	TS	22.5	C	22.7	C
35.	Riverside Ave at I-10 Freeway EB Ramps	CAL	TS	26.8	C	43.1	D
36.	Riverside Ave at Slover Ave	RIA	TS	34.8	C	61.9	E
	-With Improvements	RIA	TS	24.2	C	52.9	D
37.	Riverside Ave at Santa Ana Ave	RIA	TS	12.0	B	12.9	B
38.	Riverside Ave at Jurupa Ave	RIA	TS	10.0	A	10.1	B
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	TS	21.4	C	52.7	D
40.	Rancho Ave at Agua Mansa Rd	COL	TS	23.5	C	49.4	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

(6) Intersection geometrics consistent with SR-60 / Rubidoux Boulevard Interchange Plans Alternative 2.

Table 28
Buildout Year (2035) Freeway Mainline Morning Peak Hour Operations Analysis[1]

Alternative 1											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	120	8,017	0.94	E	8,137	0.96	E
	Market Street to Rubidoux Boulevard	3	1	8,500	4	7,833	0.92	D	7,837	0.92	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	6	7,648	0.90	D	7,654	0.90	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	69	7,435	0.87	D	7,504	0.88	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	0	7,556	0.89	D	7,556	0.89	D
	Market Street to Main Street	3	1	8,500	11	7,572	0.89	D	7,583	0.89	D

Alternative 2											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	90	8,017	0.94	E	8,107	0.95	E
	Market Street to Rubidoux Boulevard	3	1	8,500	2	7,833	0.92	D	7,835	0.92	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	7	7,648	0.90	D	7,655	0.90	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	52	7,435	0.87	D	7,487	0.88	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	0	7,556	0.89	D	7,556	0.89	D
	Market Street to Main Street	3	1	8,500	12	7,572	0.89	D	7,584	0.89	D

Alternative 1 - With Improvements											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	120	8,017	0.94	E	8,137	0.96	E
	Market Street to Rubidoux Boulevard	3	1	8,500	4	7,833	0.92	D	7,837	0.92	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	6	7,648	0.90	D	7,654	0.90	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	69	7,435	0.87	D	7,504	0.88	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	0	7,556	0.89	D	7,556	0.89	D
	Market Street to Main Street	**4**	1	10,800	11	7,572	0.70	C	7,583	0.70	C

Alternative 2 - With Improvements											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	90	8,017	0.94	E	8,107	0.95	E
	Market Street to Rubidoux Boulevard	3	1	8,500	2	7,833	0.92	D	7,835	0.92	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	7	7,648	0.90	D	7,655	0.90	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	52	7,435	0.87	D	7,487	0.88	D
	Rubidoux Boulevard to Valley Way	3	1	8,500	0	7,556	0.89	D	7,556	0.89	D
	Market Street to Main Street	**4**	1	10,800	12	7,572	0.70	C	7,584	0.70	C

Notes:

(1) **BOLD** = Improvement

Table 29
Buildout Year (2035) Freeway Mainline Evening Peak Hour Operations Analysis[1]

Alternative 1											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	22	7,982	0.94	E	8,004	0.94	E
	Market Street to Rubidoux Boulevard	3	1	8,500	0	7,933	0.93	E	7,933	0.93	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	82	7,448	0.88	D	7,530	0.89	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	12	8,206	0.97	E	8,218	0.97	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	5	8,405	0.99	E	8,410	0.99	E
	Market Street to Main Street	3	1	8,500	142	8,601	1.01	F	8,743	1.03	F

Alternative 2											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	24	7,982	0.94	E	8,006	0.94	E
	Market Street to Rubidoux Boulevard	3	1	8,500	0	7,933	0.93	E	7,933	0.93	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	72	7,448	0.88	D	7,520	0.88	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	14	8,206	0.97	E	8,220	0.97	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	3	8,405	0.99	E	8,408	0.99	E
	Market Street to Main Street	3	1	8,500	122	8,601	1.01	F	8,723	1.03	F

Alternative 1 - With Improvements											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	22	7,982	0.94	E	8,004	0.94	E
	Market Street to Rubidoux Boulevard	3	1	8,500	0	7,933	0.93	E	7,933	0.93	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	82	7,448	0.88	D	7,530	0.89	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	12	8,206	0.97	E	8,218	0.97	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	5	8,405	0.99	E	8,410	0.99	E
	Market Street to Main Street	**4**	1	10,800	142	8,601	0.80	D	8,743	0.81	D

Alternative 2 - With Improvements											
		Lanes				Year 2035 W/O Project			Year 2035 W/Project		
Freeway	Segment	Gen. Use	HOV	Capacity	Project Trips	Trips	Vol/ Cap	LOS	Trips	Vol/ Cap	LOS
SR-60 Freeway Westbound	Main Street to Market Street	3	1	8,500	24	7,982	0.94	E	8,006	0.94	E
	Market Street to Rubidoux Boulevard	3	1	8,500	0	7,933	0.93	E	7,933	0.93	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	72	7,448	0.88	D	7,520	0.88	D
SR-60 Freeway Eastbound	Valley Way to Rubidoux Boulevard	3	1	8,500	14	8,206	0.97	E	8,220	0.97	E
	Rubidoux Boulevard to Valley Way	3	1	8,500	3	8,405	0.99	E	8,408	0.99	E
	Market Street to Main Street	**4**	1	10,800	122	8,601	0.80	D	8,723	0.81	D

Notes:

(1) **BOLD** = Improvement

Table 30
Merge/Diverge Analysis[1]

Intersection	Year 2035 Without Project		Year 2035 With Project - Alternative 1		Year 2035 With Project - Alternative 2	
	Peak Hour Density-Level of Service		Peak Hour Density-Level of Service		Peak Hour Density-Level of Service	
	Morning	Evening	Morning	Evening	Morning	Evening
Cedar Avenue (NS) at:						
I-10 Freeway WB On-Ramp (EW) - #1						
Merge	38.5-F	24.4-C	38.7-F	26.1-C	38.7-F	26.0-C
- With Improvements	30.7-D	21.2-C	30.9-D	21.8-C	30.9-D	21.8-C
I-10 Freeway WB Off-Ramp (EW) - #1						
Diverge	25.2-C	13.3-B	25.2-C	13.3-B	25.2-C	13.3-B
I-10 Freeway EB Off-Ramp (EW) - #2						
Diverge	11.8-B	25.5-C	12.3-B	25.7-C	12.2-B	25.7-C
I-10 Freeway EB On-Ramp (EW) - #2						
Merge	21.7-C	37.7-F	21.7-C	37.7-F	21.7-C	37.7-F
- With Improvements	18.7-B	29.9-D	18.7-B	29.9-D	18.7-B	29.9-D
Riverside Avenue (NS) at:						
I-10 Freeway WB On-Ramp (EW) - #33						
Merge	25.0-C	16.3-B	25.0-C	16.4-B	25.0-C	16.4-B
I-10 Freeway WB Off-Ramp (EW) - #33						
Diverge	36.6-F	22.0-C	37.2-F	22.3-C	37.1-F	22.3-C
- With Improvements	29.4-D	18.9-B	29.9-D	19.1-B	29.8-D	19.1-B
I-10 Freeway EB Off-Ramp (EW) - #34						
Diverge	12.0-B	32.4-F	12.0-B	32.4-F	12.0-B	32.4-F
- With Improvements	10.3-B	25.2-C	10.4-B	25.2-C	10.4-B	25.2-C
I-10 Freeway EB On-Ramp (EW) - #34						
Merge	22.0-C	39.4-F	22.2-C	40.1-F	22.2-C	40.0-F
- With Improvements	19.0-B	31.6-D	19.2-B	32.3-D	19.2-B	32.2-D
Rubidoux Boulevard (NS) at:						
SR-60 Freeway WB On-Ramp (EW) - #15						
Merge	35.5-E	33.2-D	35.9-E	34.4-D	35.9-E	34.4-D
- With Improvements	28.7-D	27.0-C	29.0-D	27.6-C	29.0-D	27.5-C
SR-60 Freeway WB Off-Ramp (EW) - #15						
Diverge	34.2-D	35.1-E	34.2-D	35.2-E	34.2-D	35.2-E
- With Improvements	28.3-D	29.2-D	28.4-D	29.2-D	28.4-D	29.2-D
SR-60 Freeway EB Off-Ramp (EW) - #16						
Diverge	33.6-D	38.4-E	34.5-D	38.7-E	34.4-D	38.8-E
- With Improvements	28.0-C	32.2-D	28.8-D	32.5-D	28.7-D	32.6-D
SR-60 Freeway EB On-Ramp (EW) - #16						
Merge	33.3-D	33.3-D	33.3-D	33.4-D	33.3-D	33.4-D
Market Street (NS) at:						
SR-60 Freeway WB On-Ramp (EW) - #31						
Merge	31.2-D	36.0-E	31.2-D	36.0-E	31.2-D	36.0-E
- With Improvements	24.2-C	28.9-D	24.2-C	28.9-D	24.2-C	28.9-D
SR-60 Freeway WB Off-Ramp (EW) - #31						
Diverge	36.9-E	35.9-E	38.5-E	36.6-E	38.3-E	36.6-E
- With Improvements	30.9-D	30.0-D	32.3-D	30.6-D	32.1-D	30.6-D
SR-60 Freeway EB Off-Ramp (EW) - #32						
Diverge	35.9-E	38.9-E	35.9-D	38.9-E	35.9-E	38.9-E
- With Improvements	30.2-D	32.6-D	30.2-D	32.6-D	30.2-D	32.6-D
SR-60 Freeway EB On-Ramp (EW) - #32						
Merge	32.4-D	36.4-F	33.0-D	38.2-F	32.9-D	38.0-F
- With Improvements	25.7-C	28.6-D	26.2-C	30.4-D	26.2-C	30.2-D

Notes:

(1) The freeway ramp merge/diverge analysis was conducted using the Transportation Research Board, 2010 Highway Capacity Manual, 2010 merge/diverge density methodology using the HCS+ software, Version 6.65.

(2) The improvement is the addition of a freeway lane from the existing four lanes to five lanes.

Note: Volumes are in pc/mi/ln.

Table 31
Synchro Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[2]	Year 2020 -Alternative 1 Peak Hour Delay-LOS[1]		Year 2020 -Alternative 2 Peak Hour Delay-LOS[1]		Year 2035 -Alternative 1 Peak Hour Delay-LOS[1]		Year 2035 -Alternative 2 Peak Hour Delay-LOS[1]	
			Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	14.6-B	37.4-D	14.5-B	38.9-D	12.4-B	37.7-D	12.3-B	39.1-D
7.	Rubidoux Blvd at Building 4 North Access	JV	11.2-B	14.9-B	11.3-B	15.3-C	11.0-B	14.9-B	11.1-B	15.3-C
8.	Rubidoux Blvd at Building 4 South Access	JV	5.5-A	12.7-B	5.2-A	10.7-B	5.3-A	12.1-B	5.0-A	10.6-B
9.	Rubidoux Blvd at Production Circle / Project Access	JV	3.6-A	4.1-A	3.6-A	4.0-A	3.3-A	4.2-A	3.3-A	4.2-A
10.	Rubidoux Blvd at 20th St / Market St	JV	43.5-D	39.7-D	37.0-D	40.9-D	39.4-D	49.7-D	38.6-D	51.3-D
11.	Rubidoux Blvd at 24th St	JV	10.6-B	12.1-B	10.6-B	12.1-B	19.0-B	27.6-C	18.9-B	27.8-C
12.	Rubidoux Blvd at 26th St	JV	27.6-C	36.9-D	27.4-C	37.5-D	9.0-A	16.5-B	9.0-A	16.7-B
13.	Rubidoux Blvd at 28th St	JV	19.9-B	27.7-C	19.9-B	27.9-C	18.3-B	20.9-C	18.3-B	20.7-C
14.	Rubidoux Blvd at 30th St / SR-60 Freeway WB Off-Ramp	CAL	17.8-B	17.0-B	18.0-B	17.0-B	15.9-C	17.7-C	15.9-C	17.4-C
15.	Rubidoux Blvd at SR-60 Freeway WB On-Ramp	CAL	15.2-B	4.4-A	15.4-B	4.4-A	31.8-C	22.8-C	31.7-C	22.6-C
16.	Rubidoux Blvd at SR-60 Freeway EB Ramps	CAL	37.5-D	43.5-D	37.4-D	43.6-D	46.3-D	28.5-C	46.2-D	28.4-C
17.	Rubidoux Blvd at 34th St	JV	13.7-B	17.6-B	13.7-B	17.6-B	19.0-B	19.6-B	18.8-B	19.6-B
18.	Building 4 Access at El Rivino Rd	JV / SB	9.3-A	10.0-B	9.4-A	10.1-B	9.3-A	10.0-B	9.3-A	10.0-B
19.	Building 2/3 Access at El Rivino Rd	JV / RIA	12.3-B	18.0-C	12.2-B	18.2-C	12.0-B	17.3-C	12.0-B	17.5-C
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	24.0-C	15.9-B	23.6-C	22.2-C	27.7-C	33.9-C	27.1-C	32.5-C
21.	Building 1 Access at El Rivino Rd	JV / SB	8.9-A	10.3-B	8.9-A	10.3-B	9.3-A	11.5-B	9.3-A	11.5-B
22.	Hall Ave at El Rivino Rd	JV / SB	24.5-C	13.3-B	24.6-C	13.4-B	22.8-C	17.6-B	23.1-C	17.7-B
23.	Hall Ave at Building 1 Access	JV	9.9-A	10.7-B	9.9-A	10.8-B	10.4-B	12.3-B	10.4-B	12.4-B
24.	Agua Mansa Rd at El Rivino Rd	RIA / SB	12.8-B	12.0-B	13.0-B	11.7-B	14.4-B	19.0-B	14.5-B	18.6-B
25.	Agua Mansa Rd at Holly Place	SB	6.0-A	7.5-A	6.0-A	7.5-A	9.4-A	12.5-B	9.4-A	12.5-B
26.	Agua Mansa Rd at Hall Ave	JV / SB	7.1-A	9.6-A	7.2-A	10.0-A	8.1-A	11.5-B	8.1-A	12.0-B
27.	Agua Mansa Rd at Brown Ave	JV / SB	14.0-B	21.3-C	13.9-B	21.2-C	13.0-B	18.9-B	13.0-B	18.9-B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	4.3-A	6.3-A	4.4-A	6.3-A	5.4-A	5.0-A	5.4-A	5.1-A
29.	Agua Mansa Rd at Market St	JV	25.8-C	28.5-C	28.8-C	30.3-C	28.0-C	40.8-D	27.8-C	41.6-D
39.	Riverside Ave at Agua Mansa Rd	RIA / COL	46.1-D	42.5-D	46.1-D	42.4-D	44.1-D	49.6-D	44.0-D	47.5-D

Notes:

(1) Delay and Level of Service have been calculated using the following analysis software: Synchro 10. Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

(2) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

7. RECOMMENDATIONS

MITIGATION MEASURES

The following summarizes the roadway segment and intersection mitigation measures for Year 2035 With Project traffic conditions for Alternative 1 and Alternative 2. Existing Plus Project and Opening Year (2020) With Project mitigation measures are located in the Executive Summary and Section 6.

Year 2035 With Project – Alternative 1

For Year 2035 With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 24):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes
- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 1 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 1 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 25):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2

- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway WB Ramps - #32
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane

- Construct southbound left turn lane
- Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct eastbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway WB Ramps (EW) - #32
  - Restripe southbound right turn lane to shared through/right turn lane

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue (EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 1 traffic conditions, with improvements.

Year 2035 With Project – Alternative 2

For Year 2035 With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 26):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue
- Market Street, Agua Mansa Road to Hall Avenue
- Market Street, Hall Avenue to Rivera Street
- Agua Mansa Road, Market Street to Brown Avenue
- Agua Mansa Road, Hall Avenue to El Rivino Road

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 2 traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Hall Avenue to Rivera Street
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Hall Avenue to El Rivino Road
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 2 traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- Market Street, Hall Avenue to Rivera Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 2 traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 27):

- Cedar Avenue at I-10 Freeway WB Ramps - #1
- Cedar Avenue at I-10 Freeway EB Ramps - #2
- Cedar Avenue at Jurupa Avenue - #5
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Rubidoux Boulevard at 24th Street - #11
- Rubidoux Boulevard at 26th Street - #12
- Rubidoux Boulevard at 28th Street - #13
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at El Rivino Road - #24
- Agua Mansa Road at Holly Place - #25
- Agua Mansa Road at Market Street - #29
- Market Street at Hall Avenue - #30
- Market Street at SR-60 Freeway WB Ramps - #32
- Market Street at SR-60 Freeway EB Ramps - #33
- Riverside Avenue at Slover Avenue - #36

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 2 traffic conditions:

- Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW) - #1
  - Construct westbound left turn lane
  - Construct a second westbound right turn lane

- Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW) - #2
  - Construct eastbound right turn lane

- Cedar Avenue (NS) at Jurupa Avenue (EW) - #5
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane

- Construct southbound left turn lane
- Construct westbound left turn lane
- Construct westbound right turn lane
- Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Rubidoux Boulevard (NS) at 24th Street (EW) - #11
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 26th Street (EW) - #12
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 28th Street (EW) - #13
  - Construct eastbound left turn lane
  - Construct westbound left turn lane

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Construct a second westbound through lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct eastbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at El Rivino Road (EW) - #24
  - Install traffic signal

- Agua Mansa Road (NS) at Holly Place (EW) - #25
  - Install traffic signal

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

- Market Street (NS) at Hall Avenue (EW) - #30
  - Install traffic signal

- Market Street (NS) at SR-60 Freeway WB Ramps (EW) - #32
  - Restripe southbound right turn lane to shared through/right turn lane

- Market Street (NS) at SR-60 Freeway EB Ramps (EW) - #33
  - Construct a second southbound left turn lane

- Riverside Avenue (NS) at Slover Avenue (EW) - #36
  - Construct southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 2 traffic conditions, with improvements.

FAIR SHARE

The project fair share has been calculated in Table 32 for Year 2035 With Project – Alternative 1 and in Table 33 for Year 2035 With Project – Alternative 2 for the recommended off-site improvements identified above. The project fair share is based on the proportion of project peak hour traffic volumes contributed to the improvement location relative to the total new peak hour traffic volume for cumulative traffic conditions. The project fair share shown is intended only for the discussion purposes of this traffic impact analysis and does not imply any legal responsibility or formula for contributions or mitigation.

The project fair share has also been calculated using the Caltrans formula found in the Guide for the Preparation of Traffic Impact Studies by the State of California Department of Transportation, December 2002. As a means of calculating the fair share percentage, this formula is based on the proportion of project

peak hour traffic volumes contributed to the improvement location relative to the buildout year traffic volume minus the existing and other development traffic volume. Instead of analyzing the total new peak hour traffic volume from existing to Year 2035 conditions, which accounts for ambient growth, other development, and project volumes, the Caltrans fair share methodology effectively considers other development trips as existing traffic volume. Thus, the new traffic growth between existing and Year 2035 conditions does not include other development trips. It should be noted that this methodology is not representative of the intent of fair share. That intent being that the responsibility for off-site improvements is shared among all development being analyzed and contributing trips to the roadway network.

Table 34 exhibits the summary of intersection improvements for each analysis scenario. This includes the study intersections projected to operate at unacceptable Levels of Service during the peak hour, jurisdiction each intersection is located within, recommended mitigation measures, the scenarios each mitigation measure is required for, whether not the improvement has a funding source, and the intersection fair share percentage.

Table 32
Project Fair Share Contribution - Alternative 1

Intersection/Roadway Segment	Peak Hour	Existing Traffic Volume	Year 2035 With Project Traffic Volume	New Trips	Project Trips	Other Development Trips	Caltrans Formula Project Share of New Trips	Standard Formula Project Share of New Trips
Cedar Avenue (NS) at:								
I-10 Freeway WB Ramps (EW) - #1	Morning	4,337	5,074	737	50	380	14.0%	6.8%
	Evening	4,149	5,206	1,057	99	509	18.1%	9.4%
I-10 Freeway EB Ramps (EW) - #2	Morning	3,820	4,772	952	112	586	30.6%	11.8%
	Evening	3,574	4,739	1,165	127	736	29.6%	10.9%
Jurupa Avenue (EW) - #5	Morning	2,237	3,014	777	154	434	44.9%	19.8%
	Evening	2,419	3,371	952	181	539	43.8%	19.0%
Rubidoux Boulevard (NS) at:								
20th Street / Market Street (EW) - #10	Morning	2,238	3,559	1,321	344	552	44.7%	26.0%
	Evening	2,657	4,227	1,570	384	670	42.7%	24.5%
24th Street (EW) - #11	Morning	1,425	2,268	843	158	287	28.4%	18.7%
	Evening	1,846	2,929	1,083	189	350	25.8%	17.5%
26th Street (EW) - #12	Morning	1,361	2,041	680	158	287	40.2%	23.2%
	Evening	1,752	2,583	831	189	350	39.3%	22.7%
28th Street (EW) - #13	Morning	1,419	2,632	1,213	158	387	19.1%	13.0%
	Evening	1,714	2,955	1,241	189	482	24.9%	15.2%
Hall Avenue (NS) at:								
El Rivino Road (EW) - #22	Morning	302	703	401	148	105	50.0%	36.9%
	Evening	701	1,290	589	174	124	37.4%	29.5%
Agua Mansa Road (NS) at:								
El Rivino Road (EW) - #24	Morning	980	1,654	674	166	150	31.7%	24.6%
	Evening	1,464	2,251	787	189	176	30.9%	24.0%
Holly Place (EW) - #25	Morning	989	1,616	627	90	114	17.5%	14.4%
	Evening	1,374	2,116	742	103	135	17.0%	13.9%
Market Street (EW) - #29	Morning	1,732	2,933	1,201	256	421	32.8%	21.3%
	Evening	2,013	3,513	1,500	294	496	29.3%	19.6%
Market Street (NS) at:								
Hall Avenue (EW) - #30	Morning	1,254	2,019	765	243	358	59.7%	31.8%
	Evening	1,611	2,484	873	274	413	59.6%	31.4%
SR-60 Freeway WB Ramps (EW) - #32	Morning	2,410	3,426	1,016	243	409	40.0%	23.9%
	Evening	2,802	4,179	1,377	274	486	30.8%	19.9%
SR-60 Freeway EB Ramps (EW) - #33	Morning	2,451	3,346	895	85	294	14.1%	9.5%
	Evening	2,935	4,289	1,354	210	378	21.5%	15.5%
Riverside Avenue (NS) at:								
Slover Avenue (EW) - #36	Morning	2,791	4,151	1,360	113	331	11.0%	8.3%
	Evening	3,207	5,109	1,902	128	400	8.5%	6.7%
Market Street,								
Agua Mansa to Hall Avenue	Daily	17,000	29,400	12,400	3,700	8,000	84.1%	29.8%
Hall Avenue to Rivera Street	Daily	23,600	38,700	15,100	3,700	10,200	75.5%	24.5%
Agua Mansa Road,								
Market Street to Brown Avenue	Daily	11,300	21,200	9,900	1,300	3,300	19.7%	13.1%
Hall Avenue to El Rivino Road	Daily	12,800	20,900	8,100	1,300	2,300	22.4%	16.0%

Table 33
Project Fair Share Contribution - Alternative 2

Intersection/Roadway Segment	Peak Hour	Existing Traffic Volume	Year 2035 With Project Traffic Volume	New Trips	Project Trips	Other Development Trips	Caltrans Formula Project Share of New Trips	Standard Formula Project Share of New Trips
Cedar Avenue (NS) at:								
I-10 Freeway WB Ramps (EW) - #1	Morning	4,337	5,068	731	44	380	12.5%	6.0%
	Evening	4,149	5,196	1,047	89	509	16.5%	8.5%
I-10 Freeway EB Ramps (EW) - #2	Morning	3,820	4,753	933	93	586	26.8%	10.0%
	Evening	3,574	4,729	1,155	117	736	27.9%	10.1%
Jurupa Avenue (EW) - #5	Morning	2,237	2,997	760	137	434	42.0%	18.0%
	Evening	2,419	3,382	963	192	539	45.3%	19.9%
Rubidoux Boulevard (NS) at:								
20th Street / Market Street (EW) - #10	Morning	2,238	3,503	1,265	288	552	40.4%	22.8%
	Evening	2,657	4,209	1,552	366	670	41.5%	23.6%
24th Street (EW) - #11	Morning	1,425	2,248	823	138	287	25.7%	16.8%
	Evening	1,846	2,928	1,082	188	350	25.7%	17.4%
26th Street (EW) - #12	Morning	1,361	2,021	660	138	287	37.0%	20.9%
	Evening	1,752	2,582	830	188	350	39.2%	22.7%
28th Street (EW) - #13	Morning	1,419	2,612	1,193	138	387	17.1%	11.6%
	Evening	1,714	2,954	1,240	188	482	24.8%	15.2%
Hall Avenue (NS) at:								
El Rivino Road (EW) - #22	Morning	302	683	381	128	105	46.4%	33.6%
	Evening	701	1,300	599	184	124	38.7%	30.7%
Agua Mansa Road (NS) at:								
El Rivino Road (EW) - #24	Morning	980	1,630	650	142	150	28.4%	21.8%
	Evening	1,464	2,242	778	180	176	29.9%	23.1%
Holly Place (EW) - #25	Morning	989	1,604	615	78	114	15.6%	12.7%
	Evening	1,374	2,105	731	92	135	15.4%	12.6%
Market Street (EW) - #29	Morning	1,732	2,901	1,169	224	421	29.9%	19.2%
	Evening	2,013	3,515	1,502	296	496	29.4%	19.7%
Market Street (NS) at:								
Hall Avenue (EW) - #30	Morning	1,254	1,985	731	209	358	56.0%	28.6%
	Evening	1,611	2,476	865	266	413	58.8%	30.8%
SR-60 Freeway WB Ramps (EW) - #32	Morning	2,410	3,391	981	208	409	36.4%	21.2%
	Evening	2,802	4,163	1,361	258	486	29.5%	19.0%
SR-60 Freeway EB Ramps (EW) - #33	Morning	2,451	3,341	890	80	294	13.4%	9.0%
	Evening	2,935	4,269	1,334	190	378	19.9%	14.2%
Riverside Avenue (NS) at:								
Slover Avenue (EW) - #36	Morning	2,791	4,134	1,343	96	331	9.5%	7.1%
	Evening	3,207	5,101	1,894	120	400	8.0%	6.3%
Market Street,								
Agua Mansa to Hall Avenue	Daily	17,000	29,900	12,900	4,200	8,000	85.7%	32.6%
Hall Avenue to Rivera Street	Daily	23,600	39,200	15,600	4,200	10,200	77.8%	26.9%
Agua Mansa Road,								
Market Street to Brown Avenue	Daily	11,300	21,400	10,100	1,500	3,300	22.1%	14.9%
Hall Avenue to El Rivino Road	Daily	12,800	20,800	8,000	1,200	2,300	21.1%	15.0%

Table 34 (1 of 2)
Summary of Intersection Improvements

ID	Intersection	Jurisdiction[1]	Improvement[2]	Required for:									Improvement Source				
				Existing Plus Project		Direct Project Impact[3]	Opening Year (2020)			Year 2035			Project Specific[4]	Program Improvement[5]	Non-Program Improvement	Fair Share - Alt 1[6]	Fair Share - Alt 2[6]
				- Alt 1	- Alt 2		Without Project	With Project - Alt 1	With Project - Alt 2	Without Project	With Project - Alt 1	With Project - Alt 2					
1.	Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW)	CAL	Construct WBL turn lane				X	X	X	X	X	X		X			
			Construct a second WBR turn lane	X	X	X	X	X	X	X	X	X		X			
2.	Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW)	CAL	Construct EBR turn lane				X	X	X	X	X	X		X			
5.	Cedar Avenue (NS) at Jurupa Avenue (EW)	SB	Construct EBL turn lane				X	X	X	X	X	X		X			
			Construct WBL turn lane				X	X	X	X	X	X		X			
7.	Rubidoux Boulevard (NS) at Building 6 Access (EW)	JV	Construct WBR turn lane	X	X			X	X		X	X	X				
8.	Rubidoux Boulevard (NS) at Project Access (EW)	JV	Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct SBL turn lane	X	X			X	X		X	X	X				
			Construct WBL turn lane	X	X			X	X		X	X	X				
			Construct WBR turn lane	X	X			X	X		X	X	X				
			Install traffic signal	X	X			X	X		X	X	X				
10.	Rubidoux Boulevard (NS) at 20th Street / Market Street (EW)	JV	Install NBR turn overlap	X		X		X	X	X	X	X			X	26.0%	23.6%
			Construct a second SBL turn lane					X	X		X	X			X	26.0%	23.6%
			Construct two WBL turn lanes	X		X	X	X	X	X	X	X		X			
			Modify traffic signal phasing	X		X	X	X	X	X	X	X			X	26.0%	23.6%
11.	Rubidoux Boulevard (NS) at 24th Street (EW)	JV	Construct NBL turn lane				X	X	X	X	X	X			X	18.7%	17.4%
			Construct SBL turn lane				X	X	X	X	X	X			X	18.7%	17.4%
			Install traffic signal				X	X	X	X	X	X			X	18.7%	17.4%
12.	Rubidoux Boulevard (NS) at 26th Street (EW)	JV	Construct NBL turn lane							X	X	X			X	23.2%	22.7%
			Construct SBL turn lane							X	X	X			X	23.2%	22.7%
			Install traffic signal							X	X	X			X	23.2%	22.7%
13.	Rubidoux Boulevard (NS) at 28th Street (EW)	JV	Construct EBL turn lane							X	X	X			X	15.2%	15.2%
			Construct WBL turn lane							X	X	X			X	15.2%	15.2%
14.	Rubidoux Boulevard (NS) at 30th Street / SR-60 WB Off-Ramp (EW)	CAL	Construct a second WBL turn lane				X	X	X					X			
16.	Rubidoux Boulevard (NS) at SR-60 Freeway EB Ramps (EW)	CAL	Construct NBR turn lane					X	X					X			
			Construct EBL turn lane					X	X					X			
18.	Building 6 Access (NS) at El Rivino Road (EW)	JV / SB	Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a second WBT lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				
19.	Project Access (NS) at El Rivino Road (EW)	JV / RIA	Construct NBL turn lane	X	X			X	X		X	X	X				
			Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a second WBT lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				

Table 34 (2 of 2)
Summary of Intersection Improvements

ID	Intersection	Jurisdiction[1]	Improvement[2]	Required for:									Improvement Source				
				Existing Plus Project		Direct Project Impact[3]	Opening Year (2020)			Year 2035			Project Specific[4]	Program Improvement[5]	Non-Program Improvement	Fair Share - Alt 1[6]	Fair Share - Alt 2[6]
				- Alt 1	- Alt 2		Without Project	With Project - Alt 1	With Project - Alt 2	Without Project	With Project - Alt 1	With Project - Alt 2					
20.	Cactus Avenue / Project Access (NS) at El Rivino Road (EW)	JV / RIA / SB	Construct NBL turn lane	X	X			X	X		X	X	X				
			Construct NB sharedT/right turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a WB shared T/R turn lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				
21.	Building 1 Auto Access (NS) at El Rivino Road (EW)	JV / SB	Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a second WBT lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				
22.	Hall Avenue (NS) at El Rivino Road (EW)	JV / SB	Construct NBL turn lane					X	X	X	X	X			X	36.9%	33.6%
			Construct SBL turn lane					X	X	X	X	X			X	36.9%	33.6%
			Construct EBL turn lane					X	X	X	X	X		X		36.9%	33.6%
			Construct WBL turn lane					X	X	X	X	X		X		36.9%	33.6%
			Install traffic signal					X	X	X	X	X			X	36.9%	33.6%
23.	Hall Avenue (NS) at Building 1 Access (EW)	JV	Construct NBL turn lane	X	X			X	X		X	X	X				
			Construct SBR turn lane	X	X			X	X		X	X	X				
			Construct EBL turn lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
24.	Agua Mansa Road (NS) at El Rivino Road (EW)	RIA / SB	Install traffic signal	X	X		X	X	X	X	X	X			X	24.6%	23.1%
25.	Agua Mansa Road (NS) at Holly Place (EW)	SB	Install traffic signal							X	X	X			X	14.4%	12.7%
29.	Agua Mansa Road (NS) at Market Street (EW)	JV	Construct SBL turn lane	X	X		X	X	X	X	X	X			X	21.3%	19.7%
			Construct SBT lane				X	X	X	X	X	X			X	21.3%	19.7%
			Construct a second SBR turn lane							X	X	X			X	21.3%	19.7%
30.	Market Street (NS) at Hall Avenue (EW)	JV	Install traffic signal							X	X	X			X	31.8%	30.8%
32.	Market Street (NS) at SR-60 Freeway WB Ramps (EW)	CAL	Restripe SBR turn lane to shared T/R turn lane								X	X			X	23.9%	21.2%
33.	Market Street (NS) at SR-60 Freeway EB Ramps (EW)	CAL	Construct a second SBL turn lane				X	X	X	X	X	X			X	15.5%	14.2%
36.	Riverside Avenue (NS) at Slover Avenue (EW)	RIA	Construct SBR turn lane							X	X	X			X	8.3%	7.1%

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; L = Left; T = Through; R = Right

(3) A direct project impact has been determined when an intersection currently operates at acceptable Levels of Service during the peak hours for Existing traffic conditions, and the intersection is projected to operate at unacceptable Levels of Service during the peak hours with the addition of project traffic (Existing Plus Project traffic conditions).

(4) Improvement relates to a project access point and the project is fully responsible for the construction of the improvement.

(5) Source: Western Riverside Council of Governments Transportation TUMF Improvements from Jurupa Valley Center, County of San Bernardino Regional Transportation Development Mitigation Plan Report (updated July 22, 2014), and San Bernardino Associated Governments, Development Mitigation Nexus Study, Appendix K of the Congestion Management Program (February 2016).

(6) See Tables 32 and 33.

(7) Widening of El Rivino Road for a second westbound through lane conditioned as the responsibility of properties adjacent to El Rivino Road to the north of the roadway.

8. INDUSTRIAL PARK ALTERNATIVE ACCESS ANALYSIS

The analysis contained in this section of the report evaluates the project if connectivity between Buildings 1 to 5 (Industrial Park) and Rubidoux Boulevard does not exist because access is not possible across the railroad spur line. Figure 76 shows the project site plan. Alternative 1 has been analyzed as Alternative 1A and Alternative 2 has been analyzed as Alternative 2A.

Both alternatives have been analyzed for the following roadway segments:

Rubidoux Boulevard, El Rivino Road to Production Circle
Rubidoux Boulevard, Production Circle to 20th Street
El Rivino Road, Cedar Avenue to Cactus Avenue
El Rivino Road, Cactus Avenue to Hall Avenue
Hall Avenue, El Rivino Road to Agua Mansa Road
Market Street, Rubidoux Boulevard to Agua Mansa Road
Agua Mansa Road, Market Street to Brown Avenue
Agua Mansa Road, Brown Avenue to Hall Avenue

The remaining study area roadway segments are not affected by this analysis as the trip distributions do not change apart from the identified project access and project adjacent intersections identified.

Both alternatives have been analyzed for intersections 6 – 10, 18 – 23, and 26 to 29. The remaining study area intersections are not affected by this analysis as the trip distributions do not change apart from the identified project access and project adjacent intersections identified. Appendix L contains the level of service worksheets.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figures 77 to 88 show the forecast directional distributions of the project generated trips. The project trip distributions are based upon RivTAM select zone traffic model runs and refined by City of Jurupa Valley Engineering Department staff. The trip distributions have been separated for cars and trucks for industrial land uses as these trips have different distributional patterns. For instance, car trips to/from industrial land uses generally have more localized residential or commercial destination points. Whereas, truck trips are usually going to/from industrial land uses via the freeway network to more regional destination points which include other industrial land uses and ports.

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 89 for Alternative 1A and Figure 90 for Alternative 2A. Morning and evening peak hour intersection turning movement volumes expected from the project for Alternative 1A are shown on Figures 91 and 92, respectively. Morning and evening peak hour intersection turning movement volumes expected from the project for Alternative 2A are shown on Figures 93 and 94, respectively.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project to provide project site access:

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane
- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane

- Construct westbound left turn lane
- Construct westbound right turn lane
- Install traffic signal

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

ANALYSIS SCENARIO VOLUME FORECASTS

Existing Plus Project Traffic Volumes

The traffic volumes for existing plus project conditions have been derived by adding the project generated trips to existing traffic volumes.

Existing plus project average daily traffic volumes are depicted on Figure 95 for Alternative 1A and Figure 96 for Alternative 2A. Existing plus project morning and evening peak hour intersection turning movement volumes are shown for Alternative 1A on Figures 97 and 98, respectively. Existing plus project morning and evening peak hour intersection turning movement volumes are shown for Alternative 2A on Figures 99 and 100, respectively.

Opening Year (2020) With Project Traffic Volumes

To assess Opening Year (2020) With Project traffic conditions, the project generated trips are added to Opening Year (2020) Without Project traffic volumes.

Opening Year (2020) With Project average daily traffic volumes are depicted on Figure 101 for Alternative 1A and Figure 102 for Alternative 2A. Opening Year (2020) With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 1A on Figures 103 and 104, respectively. Opening Year (2020) With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 2A on Figures 105 and 106, respectively.

Year 2035 With Project Traffic Volumes

To assess Year 2035 With Project traffic conditions, the project generated trips are added to Year 2035 Without Project traffic volumes.

Year 2035 With Project average daily traffic volumes are depicted on Figure 107 for Alternative 1A and Figure 108 for Alternative 2A. Year 2035 With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 1A on Figures 109 and 110, respectively. Year 2035 With Project morning and evening peak hour intersection turning movement volumes are shown for Alternative 2A on Figures 111 and 112, respectively.

TRAFFIC OPERATIONS

The following is the roadway segment and intersection analysis for the "With Project" scenarios:

Existing Plus Project – Alternative 1A

For Existing Plus Project – Alternative 1A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service (see Table 35).

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project – Alternative 1A traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 36):

- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Agua Mansa Road at Market Street - #29

The following study intersection improvements are recommended for Existing Plus Project – Alternative 1 traffic conditions:

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Existing Plus Project – Alternative 1A traffic conditions, with improvements.

Existing Plus Project – Alternative 2A

For Existing Plus Project – Alternative 2A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segment that is projected to operate at an unacceptable Level of Service, without improvements (see Table 37):

- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvement is recommended for Existing Plus Project – Alternative 2A traffic conditions:

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Existing Plus Project – Alternative 2A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements.

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project – Alternative 2A traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 38):

- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street (EW) - #10
- Agua Mansa Road at Market Street - #29

The following study intersection improvements are recommended for Existing Plus Project – Alternative 2A traffic conditions:

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane
- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Existing Plus Project – Alternative 2A traffic conditions, with improvements.

Opening Year (2020) With Project – Alternative 1A

For Opening Year (2020) With Project – Alternative 1A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 39):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) With Project – Alternative 1A traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) With Project – Alternative 1A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) With Project – Alternative 1A traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 40):

- Cedar Avenue at Tarragona Drive/El Rivino Road (EW) - #6
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at Market Street - #29

The following study intersection improvements are recommended for Opening Year (2020) With Project – Alternative 1A traffic conditions:

- Rubidoux Boulevard (NS) at Tarragona Drive/El Rivino Road (EW) - #6
  - Construct northbound right turn lane
  - Construct eastbound left turn lane
  - Restripe westbound shared left/through lane to through/right turn lane
  - Restripe westbound right turn lane to shared through/right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) With Project – Alternative 1A traffic conditions, with improvements.

Opening Year (2020) With Project – Alternative 2

For Opening Year (2020) With Project – Alternative 2A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 41):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Opening Year (2020) With Project – Alternative 2A traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Opening Year (2020) With Project – Alternative 2A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year (2020) With Project – Alternative 2A traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 42).

- Cedar Avenue at Tarragona Drive/El Rivino Road (EW) - #6
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at Market Street - #29

The following study intersection improvements are recommended for Opening Year (2020) With Project – Alternative 2A traffic conditions:

- Rubidoux Boulevard (NS) at Tarragona Drive/El Rivino Road (EW) - #6
  - Construct northbound right turn lane
  - Construct eastbound left turn lane
  - Restripe westbound shared left/through lane to through/right turn lane
  - Restripe westbound right turn lane to shared through/right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Opening Year (2020) With Project – Alternative 2 traffic conditions, with improvements.

Year 2035 With Project– Alternative 1A

For Year 2035 With Project – Alternative 1A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 43):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue

- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 1 traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Agua Mansa Road, Market Street to Brown Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 1A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 1A traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 44):

- Cedar Avenue at Tarragona Drive/El Rivino Road (EW) - #6
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at Market Street - #29

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 1A traffic conditions:

- Rubidoux Boulevard (NS) at Tarragona Drive/El Rivino Road (EW) - #6
  - Construct northbound right turn lane
  - Construct eastbound left turn lane
  - Restripe westbound shared left/through lane to through/right turn lane
  - Restripe westbound right turn lane to shared through/right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane
  - Construct southbound left turn lane
  - Construct westbound left turn lane
  - Construct westbound right turn lane
  - Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes

- Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane
  - Construct eastbound right turn lane

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 1A traffic conditions, with improvements.

Year 2035 With Project – Alternative 2A

For Year 2035 With Project – Alternative 2A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, except for the following roadway segments that are projected to operate at unacceptable Levels of Service, without improvements (see Table 45):

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street
- El Rivino Road, Cedar Avenue to Cactus Avenue
- Agua Mansa Road, Market Street to Brown Avenue

The following study roadway segment improvements are recommended for Year 2035 With Project – Alternative 2A traffic conditions:

- El Rivino Road, Cedar Avenue to Cactus Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

- Market Street, Agua Mansa Road to Hall Avenue
  - Construct two additional lanes to widen from two lanes to four lanes

For Year 2035 With Project – Alternative 2A traffic conditions, the study roadway segments are projected to operate at acceptable Levels of Service, with improvements, except for the following roadway segments that are projected to operate at unacceptable Levels of Service:

- Rubidoux Boulevard, El Rivino Road to Production Circle
- Rubidoux Boulevard, Production Circle to 20th Street

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Year 2035 With Project – Alternative 2A traffic conditions, except for the following study intersections that are projected to operate at unacceptable Levels of Service during the peak hours (see Table 46):

- Cedar Avenue at Tarragona Drive/El Rivino Road (EW) - #6
- Rubidoux Boulevard at Production Circle - #9
- Rubidoux Boulevard at 20th Street/Market Street - #10
- Hall Avenue at El Rivino Road - #22
- Agua Mansa Road at Market Street - #29

The following study intersection improvements are recommended for Year 2035 With Project – Alternative 2A traffic conditions:

- Rubidoux Boulevard (NS) at Tarragona Drive/El Rivino Road (EW) - #6
  - Construct northbound right turn lane
  - Construct eastbound left turn lane
  - Restripe westbound shared left/through lane to through/right turn lane
  - Restripe westbound right turn lane to shared through/right turn lane

- Rubidoux Boulevard (NS) at Building 6 Access (EW) - #7
  - Construct westbound right turn lane

- Rubidoux Boulevard (NS) at Project Access (EW) - #8
  - Construct northbound right turn lane

- Construct southbound left turn lane
- Construct westbound left turn lane
- Construct westbound right turn lane
- Install traffic signal

- Rubidoux Boulevard (NS) at 20th Street/Market Street (EW) - #10
  - Install northbound right turn overlap
  - Construct a second southbound left turn lane
  - Construct two westbound left turn lanes
  - Modify traffic signal phasing

- Building 6 Access (NS) at El Rivino Road (EW) - #18
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Project Access (NS) at El Rivino Road (EW) - #19
  - Construct northbound left turn lane
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane
  - Install traffic signal

- Cactus Avenue/Project Access (NS) at El Rivino Road (EW) - #20
  - Construct northbound left turn lane
  - Construct northbound shared through/right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct westbound left turn lane
  - Construct a second westbound through lane (shared through/right turn lane)

- Building 1 Auto Access (NS) at El Rivino Road (EW) - #21
  - Construct northbound right turn lane
  - Construct a second eastbound through lane
  - Construct eastbound right turn lane
  - Construct a second westbound through lane
  - Construct westbound left turn lane

- Hall Avenue (NS) at El Rivino Road (EW) - #22
  - Construct northbound left turn lane
  - Construct southbound left turn lane
  - Construct eastbound left turn lane
  - Construct westbound left turn lane
  - Install traffic signal

- Hall Avenue (NS) at Building 1 Access (EW) - #23
  - Construct northbound left turn lane
  - Construct southbound right turn lane
  - Construct eastbound left turn lane

- Construct eastbound right turn lane

- Agua Mansa Road (NS) at Market Street (EW) - #29
  - Construct southbound left turn lane
  - Construct southbound through lane
  - Construct a second southbound right turn lane

The proposed project is forecast to result in no significant traffic impacts at the study intersections for Year 2035 With Project – Alternative 2A traffic conditions, with improvements.

FUTURE TRAFFIC SIGNAL WARRANT ANALYSIS

The application of traffic control devices is governed by Federal standards adopted by the State of California and contained in the California Manual on Uniform Traffic Control Devices ("California MUTCD", November 2014). Part 4C – Traffic Control Signal Needs Studies of the California MUTCD contains a series of warrants, or criteria, which serve to determine whether installation of a traffic signal is justified at a particular location. The California MUTCD states that a traffic control signal should not be installed unless one or more warrants are satisfied. Application of the traffic signal warrants should be based on engineering judgement and satisfaction of one or more traffic signal warrants shall not in itself require the installation of a traffic signal.

The unsignalized study intersections have been evaluated for the potential need to install a traffic signal using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California MUTCD.

For Existing Plus Project – Alternative 1A traffic conditions, traffic signals are projected to be warranted at the following additional study intersections (see Appendix G):

Rubidoux Boulevard (NS) at:
Building 6 Access (EW) - #8

Project Access (NS) at:
El Rivino Road (EW) - #19

For Existing Plus Project – Alternative 2A traffic conditions, a traffic signal is projected to be warranted at the following study intersection (see Appendix G):

Project Access (NS) at:
El Rivino Road (EW) - #19

For all of the access alternative scenarios, the unsignalized intersections of Rubidoux Boulevard at Production Circle is forecast to operate at an unacceptable Level of Service during the peak hours based on the intersection delay analysis. If this intersection were signalized, it is forecast to operate within acceptable Levels of Service (see Tables 36, 38, 30, 42, 44, and 46). However, a traffic signal is not forecast to be warranted based on the peak hour volumes and the State-established criteria.

SYMCHRO SIGNAL TIMING AND DELAY ANALYSIS

A Synchro analysis has been conducted on the study intersections for Opening Year (2020) With Project – Alternative 1A, Opening Year (2020) With Project – Alternative 2A, Year 2035 With Project – Alternative 1A, and Year 2035 With Project – Alternative 2A traffic conditions with improvements. At the request of City of Jurupa Valley staff, the Synchro analysis utilized the same cycle lengths as utilized in the Intersection Delay analysis. Additionally, the existing traffic counts were not converted into passenger car equivalent's and instead the heavy vehicle percentage (by leg) was calculated and utilized in the analysis. Forecasted year 2020

and 2035 turning movement counts were also not converted to passenger car equivalent's, and existing heavy vehicle percentages were utilized. Table 31 exhibits the results of this analysis.

For these scenarios, the study intersections are projected to operate within acceptable levels of service during the peak hours with recommended mitigation as recommended within this section of the report, except for the following intersections that required additional mitigation to operate at acceptable levels of service:.

- Agua Mansa Road (NS) at Hall Avenue (EW) - #26
  - Install traffic signal (Opening Year (2020) and Year 2035)

As previously noted, it is recommended that the intersection delay analysis conducted with Vistro software take precedence over the Synchro analysis. This is due to the limitations present in analyzing future scenarios based on existing heavy vehicle percentages. Since the heavy vehicle percentage is also applied to project and other development volumes, which have been already converted to PCE trips, the analysis effectively multiplies the effect of project and other development truck trips. These factors overestimate the traffic volumes being computed for future scenarios. Synchro traffic signal timing and delay/Level of Service reports are provided in Appendix K.

FAIR SHARE

The project fair share has been calculated in Table 48 for Year 2035 With Project – Alternative 1A and in Table 49 for Year 2035 With Project – Alternative 2A for the recommended off-site improvements identified above. The project fair share is based on the proportion of project peak hour traffic volumes contributed to the improvement location relative to the total new peak hour traffic volume for cumulative traffic conditions. The project fair share shown is intended only for the discussion purposes of this traffic impact analysis and does not imply any legal responsibility or formula for contributions or mitigation.

The project fair share has also been calculated using the Caltrans formula found in the Guide for the Preparation of Traffic Impact Studies by the State of California Department of Transportation, December 2002. As a means of calculating the fair share percentage, this formula is based on the proportion of project peak hour traffic volumes contributed to the improvement location relative to the buildout year traffic volume minus the existing and other development traffic volume. Instead of analyzing the total new peak hour traffic volume from existing to Year 2035 conditions, which accounts for ambient growth, other development, and project volumes, the Caltrans fair share methodology effectively considers other development trips as existing traffic volume. Thus, the new traffic growth between existing and Year 2035 conditions does not include other development trips. It should be noted that this methodology is not representative of the intent of fair share. That intent being that the responsibility for off-site improvements is shared among all development being analyzed and contributing trips to the roadway network.

Table 50 exhibits the summary of intersection improvements for each analysis scenario for the Industrial Park Access Alternative. This includes the study intersections projected to operate at unacceptable Levels of Service during the peak hour, jurisdiction each intersection is located within, recommended mitigation measures, the scenarios each mitigation measure is required for, whether not the improvement has a funding source, and the intersection fair share percentage.

Table 35

Existing Plus Project Roadway Segment Daily Capacity Analysis - Alternative 1A

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	26,900	0.79	Acceptable	C
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	26,500	0.78	Acceptable	C
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	10,200	0.78	Acceptable	C
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	6,400	0.49	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	2,600	0.20	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	25,300	0.74	Acceptable	C
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	13,000	1.00	Potentially Exceeds Capacity	E
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	13,000	0.50	Acceptable	A

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect t widths west of Agua Mansa Road (see Table 1).
number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points
of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 36
Existing Plus Project Intersection Delay and Level of Service - Alternative 1A

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	17.1	B	34.8	C
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	11.2	B	14.9	B
8.	Rubidoux Blvd at Project Access	JV	**TS**	4.4	A	5.8	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.1	A	3.6	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	31.4	C	64.6	E
	-With Improvements	JV	TS	20.5	C	46.8	D
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	9.4	A	10.6	B
19.	Project Access at El Rivino Rd	JV / RIA	**TS**	5.1	A	6.7	A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	9.7	A	9.8	A
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	8.8	A	10.0	A
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	13.2	B	25.5	D
23.	Hall Ave at Building 1 Access	JV	**CSS**	9.6	A	10.5	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	14.2	B	23.6	C
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	12.7	B	15.3	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.6	B	15.7	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	7.4	A	3.4	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	18.3	B	35.0	C

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 37
Existing Plus Project Roadway Segment Daily Capacity Analysis - Alternative 2A

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	27,400	0.80	Approaches Capacity	D
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	27,100	0.79	Acceptable	C
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	10,900	0.84	Approaches Capacity	D
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	7,000	0.54	Acceptable	A
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	2,700	0.21	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	25,700	0.75	Acceptable	C
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	13,200	1.02	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	13,200	0.51	Acceptable	A
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	13,200	0.51	Acceptable	A

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect t widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 38
Existing Plus Project Intersection Delay and Level of Service - Alternative 2A

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	17.0	B	36.5	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	11.2	B	15.4	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	4.2	A	4.5	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.1	A	3.6	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	31.3	C	58.9	E
	-With Improvements	JV	TS	20.1	C	45.6	D
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	9.4	A	10.6	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	5.2	A	6.7	A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	9.5	A	9.9	A
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	8.8	A	10.0	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	12.8	B	25.9	D
23.	Hall Ave at Building 1 Access	JV	**CSS**	9.6	A	10.6	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	14.1	B	23.1	C
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	12.7	B	14.9	B
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.6	B	15.7	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	7.4	A	3.4	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	18.2	B	37.8	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 39
Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis - Alternative 1A

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	34,600	1.01	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	34,300	1.01	Potentially Exceeds Capacity	F
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	16,000	1.23	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	16,000	0.62	Acceptable	B
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	8,400	0.65	Acceptable	B
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	4,000	0.31	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	32,800	0.96	Approaches Capacity	E
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	17,300	1.33	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	17,300	0.67	Acceptable	B
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	17,300	0.67	Acceptable	B

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect t widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 40

Opening Year (2020) With Project Intersection Delay and Level of Service - Alternative 1A

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	22.5	C	77.6	E
	-With Improvements	JV	TS	17.0	B	39.7	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	12.5	B	16.6	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	4.4	A	5.6	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	5.3	A	6.0	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.8	F	99.9	F
	-With Improvements	JV	TS	27.0	C	39.0	D
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	10.1	B	11.0	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	5.2	A	6.5	A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	12.9	B	14.2	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.0	A	10.7	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	17.0	C	50.2	F
	-With Improvements	JV / SB	**TS**	6.0	A	8.1	A
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.2	B	11.4	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	15.3	C	28.8	D
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	14.3	B	20.1	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.9	B	16.6	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	4.2	A	3.3	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	25.3	C	35.2	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 41

Opening Year (2020) With Project Roadway Segment Daily Capacity Analysis - Alternative 2A

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	35,200	1.03	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	34,900	1.02	Potentially Exceeds Capacity	F
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	16,700	1.28	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	16,700	0.64	Acceptable	B
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	9,000	0.69	Acceptable	B
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	4,100	0.32	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	33,200	0.97	Approaches Capacity	E
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	17,500	1.35	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	17,500	0.68	Acceptable	B
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	17,500	0.68	Acceptable	B

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect t widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 42
Opening Year (2020) With Project Intersection Delay and Level of Service - Alternative 2A

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	26.5	C	84.8	F
	-With Improvements	JV	TS	16.9	B	41.3	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	12.6	B	17.3	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	4.2	A	4.3	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	5.3	A	6.2	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	27.1	C	42.2	D
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	10.2	B	11.1	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	5.2	A	6.5	A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	12.7	B	14.3	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.0	A	10.7	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	16.2	C	53.1	F
	-With Improvements	JV / SB	**TS**	5.9	A	8.1	A
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.1	B	11.4	B
25.	Agua Mansa Rd at Holly Place	SB	CSS	15.2	C	28.1	D
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	14.2	B	19.3	C
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	11.9	B	16.7	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	4.2	A	3.2	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	25.4	C	39.8	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 43
Year 2035 With Project Roadway Segment Daily Capacity Analysis - Alternative 1A

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	34,600	1.01	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	34,300	1.01	Potentially Exceeds Capacity	F
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	17,300	1.33	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	17,300	0.67	Acceptable	B
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	9,000	0.69	Acceptable	B
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	4,300	0.33	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	32,900	0.96	Approaches Capacity	E
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	21,600	1.66	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	21,600	0.83	Approaches Capacity	D
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	21,600	0.83	Approaches Capacity	D

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect t widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 44
Year 2035 With Project Intersection Delay and Level of Service - Alternative 1A

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
				Delay[3,4]	LOS[5]	Delay[3,4]	LOS[5]
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	18.0	B	77.9	E
	-With Improvements	JV	TS	14.8	B	38.2	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	12.1	B	16.4	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	4.4	A	5.5	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.6	A	5.3	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	38.2	D	40.8	D
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	10.0	A	10.9	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	5.1	A	6.4	A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	14.3	B	19.3	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.3	A	12.1	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	15.4	C	99.9	F
	-With Improvements	JV / SB	**TS**	5.9	A	11.7	B
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.7	B	13.1	B
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	16.5	C	31.8	D
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	12.1	B	15.7	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	3.8	A	3.3	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	32.3	C	49.7	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 45
Year 2035 With Project Roadway Segment Daily Capacity Analysis - Alternative 2A

Roadway	Segment		Jurisdiction[2]	Roadway Standards[1]			Roadway Segment				Capacity Threshold	LOS[8]
	From	To		Classification	Lanes	Capacity[3]	Lanes[4]	Capacity[5]	ADT[6]	V/C[7]		
Rubidoux Boulevard	El Rivino Road	Production Circle	JV	Major Highway	4	34,100	4	34,100	35,200	1.03	Potentially Exceeds Capacity	F
	Production Circle	20th Street	JV	Major Highway	4	34,100	4	34,100	34,900	1.02	Potentially Exceeds Capacity	F
El Rivino Road	Cedar Avenue	Cactus Avenue	JV / RIA / SB	Secondary Highway	4	25,900	2	13,000	18,000	1.38	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	18,000	0.69	Acceptable	B
	Cactus Avenue	Hall Avenue	JV /SB	Secondary Highway	4	25,900	2	13,000	9,600	0.74	Acceptable	C
Hall Avenue	El Rivino Road	Agua Mansa Road	JV	Not Classified[9]	4	25,900	2	13,000	4,400	0.34	Acceptable	A
Market Street	Rubidoux Boulevard	Agua Mansa Road	JV	Major Highway	4	34,100	4	34,100	33,300	0.98	Approaches Capacity	E
Agua Mansa Road	Market Street	Brown Avenue	JV	Secondary Highway	4	25,900	2	13,000	21,800	1.68	Potentially Exceeds Capacity	F
		- With Improvements		Secondary Highway	4	25,900	**4**	25,900	21,800	0.84	Approaches Capacity	D
	Brown Avenue	Hall Avenue	JV / SB	Secondary Highway	4	25,900	4	25,900	21,800	0.84	Approaches Capacity	D

Notes:

(1) See Table 1.

(2) SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside

(3) The County of Riverside roadway maximum capacity at Level of Service "E" (see Table 1).

(4) Based on the part of the roadway segment with the fewest amount of lanes.

(5) Roadway maximum capacity at Level of Service "E" for roadway classification. Capacity adjustment to reflect t widths west of Agua Mansa Road (see Table 1).

number of existing number of travel lanes and is based on existing lane geometrics, existing roadway design, points

of conflict, and existing curb-to-curb widths to determine the nearest roadway classification and capacity.

(6) ADT = Average Daily Traffic Volume.

(7) V/C = Volume to Capacity Ratio.

(8) LOS = Level of Service (Based on the Level of Service standards on Table 1).

(9) Equivalent to a Secondary for County of Riverside Roadway Classifications based on existing curb-to-curb and lane

Table 46
Year 2035 With Project Intersection Delay and Level of Service - Alternative 2A

ID	Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour Delay[3,4]	AM Peak Hour LOS[5]	PM Peak Hour Delay[3,4]	PM Peak Hour LOS[5]
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	TS	17.9	B	82.0	F
	-With Improvements	JV	TS	14.7	B	39.7	D
7.	Rubidoux Blvd at Building 6 Access	JV	**CSS**	12.2	B	16.9	C
8.	Rubidoux Blvd at Project Access	JV	**TS**	4.2	A	4.2	A
9.	Rubidoux Blvd at Production Circle	JV	CSS	99.9	F	99.9	F
	-With Improvements	JV	**TS**	3.6	A	5.2	A
10.	Rubidoux Blvd at 20th St / Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	36.1	D	41.6	D
18.	Building 6 Access at El Rivino Rd	JV / SB	**CSS**	10.0	B	11.0	B
19.	Project Access at El Rivino Rd	JV / RIA	**CSS**	5.1	A	8.8	A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	TS	14.1	B	19.5	B
21.	Building 1 Auto Access at El Rivino Rd	JV / SB	**CSS**	9.3	A	12.2	B
22.	Hall Ave at El Rivino Rd	JV / SB	CSS	14.8	B	99.9	F
	-With Improvements	JV / SB	**TS**	5.7	A	11.7	B
23.	Hall Ave at Building 1 Access	JV	**CSS**	10.6	B	13.2	B
26.	Agua Mansa Rd at Hall Ave	JV / SB	CSS	16.4	C	30.0	D
27.	Agua Mansa Rd at Brown Ave	JV / SB	TS	12.1	B	15.7	B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	TS	3.8	A	3.3	A
29.	Agua Mansa Rd at Market St	JV	TS	99.9	F	99.9	F
	-With Improvements	JV	TS	31.3	C	51.9	D

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(3) Delay is shown in seconds/vehicle. Delay is reported for un-signalized study intersections and all study intersections within California Department of Transportation jurisdiction. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(4) 99.9-F = Delay High, Intersection Unstable, Level of Service F.

(5) LOS = Level of Service

Table 47
Synchro Intersection Delay and Level of Service

ID	Study Intersection	Jurisdiction[2]	Year 2020 -Alternative 1 Peak Hour Delay-LOS[1/3]		Year 2020 -Alternative 2 Peak Hour Delay-LOS[1/4]		Year 2035 -Alternative 1 Peak Hour Delay-LOS[1/7]		Year 2035 -Alternative 2 Peak Hour Delay-LOS[1/8]	
			Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening
6.	Cedar Ave / Rubidoux Blvd at Tarragona Dr / El Rivino Rd	JV	16.9-B	41.5-D	16.7-B	42.9-D	14.5-B	41.3-D	14.4-B	42.3-D
7.	Rubidoux Blvd at Building 4 North Access	JV	11.9-B	15.1-C	12.0-B	15.6-C	11.7-B	15.1-C	11.7-B	15.5-C
8.	Rubidoux Blvd at Building 4 South Access	JV	3.5-A	5.1-A	3.1-A	3.4-A	3.4-A	5.0-A	3.0-A	3.3-A
9.	Rubidoux Blvd at Production Circle / Project Access	JV	3.6-A	4.1-A	3.6-A	5.2-A	3.3-A	4.2-A	3.3-A	4.2-A
10.	Rubidoux Blvd at 20th St / Market St	JV	40.7-D	36.0-D	36.0-D	41.0-D	40.6-D	40.5-D	38.5-D	41.7-D
18.	Building 4 Access at El Rivino Rd	JV / SB	10.0-B	10.5-B	10.1-B	10.5-B	9.9-A	10.4-B	10.0-B	10.4-B
19.	Building 2/3 Access at El Rivino Rd	JV / RIA	3.5-A	4.7-A	3.4-A	4.7-A	3.4-A	4.6-A	3.4-A	4.6-A
20.	Cactus Ave / Project Access at El Rivino Rd	JV / RIA / SB	23.4-C	24.8-C	23.0-C	19.9-B	27.3-C	33.4-C	26.7-C	33.9-C
21.	Building 1 Access at El Rivino Rd	JV / SB	9.0-A	9.3-A	9.0-A	9.3-A	9.3-A	10.4-B	9.3-A	10.4-B
22.	Hall Ave at El Rivino Rd	JV / SB	24.5-C	15.0-B	24.6-C	17.5-B	22.8-C	18.0-B	23.1-C	20.8-C
23.	Hall Ave at Building 1 Access	JV	10.0-B	10.9-B	10.0-B	11.0-B	10.6-B	12.6-B	10.5-B	12.6-B
26.	Agua Mansa Rd at Hall Ave	JV / SB	7.1-A	9.3-A	7.2-A	9.7-A	8.1-A	11.1-B	8.2-A	11.6-B
27.	Agua Mansa Rd at Brown Ave	JV / SB	15.2-B	22.3-C	15.2-B	22.3-C	14.3-B	19.8-B	14.2-B	19.8-B
28.	Agua Mansa Rd at R.A. Nelson / Regional Park Access	JV	4.3-A	6.3-A	4.4-A	6.3-A	5.4-A	5.1-A	5.5-A	5.1-A
29.	Agua Mansa Rd at Market St	JV	29.2-C	26.6-C	29.1-C	30.7-C	32.1-C	49.1-D	34.1-C	42.1-D

Notes:
(1) Delay and Level of Service have been calculated using the following analysis software: SYNCHRO 10. Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

(2) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

Table 48
Project Fair Share Contribution - Alternative 1A

Intersection	Peak Hour	Existing Traffic Volume	Year 2035 With Project Traffic Volume	New Trips	Project Trips	Other Development Trips	Caltrans Formula Project Share of New Trips	Standard Formula Project Share of New Trips
Rubidoux Boulevard (NS) at:								
Tarragona Drive / El Rivino Road (EW) - #6	Morning	1,790	2,796	1,006	362	486	69.6%	36.0%
	Evening	2,777	3,944	1,167	446	578	75.7%	38.2%
20th Street / Market Street (EW) - #10	Morning	2,238	3,551	1,313	364	552	47.8%	27.7%
	Evening	2,657	4,225	1,568	382	670	42.5%	24.4%
Hall Avenue (NS) at:								
El Rivino Road (EW) - #22	Morning	302	713	411	158	105	51.6%	38.4%
	Evening	701	1,308	607	192	124	39.8%	31.6%
Agua Mansa Road (NS) at:								
Market Street (EW) - #29	Morning	1,732	2,949	1,217	272	421	34.2%	22.4%
	Evening	2,013	3,531	1,518	312	496	30.5%	20.6%
Agua Mansa Road,								
Market Street to Brown Avenue	Daily	11,300	21,600	10,300	1,700	3,300	24.3%	16.5%

Table 49
Project Fair Share Contribution - Alternative 2A

Intersection	Peak Hour	Existing Traffic Volume	Year 2035 With Project Traffic Volume	New Trips	Project Trips	Other Development Trips	Caltrans Formula Project Share of New Trips	Standard Formula Project Share of New Trips
Rubidoux Boulevard (NS) at:								
Tarragona Drive / El Rivino Road (EW) - #6	Morning	1,790	2,780	990	346	486	68.7%	34.9%
	Evening	2,777	3,963	1,186	465	578	76.5%	39.2%
20th Street / Market Street (EW) - #10	Morning	2,238	3,495	1,257	280	552	39.7%	22.3%
	Evening	2,657	4,207	1,550	364	670	41.4%	23.5%
Hall Avenue (NS) at:								
El Rivino Road (EW) - #22	Morning	302	693	391	138	105	48.3%	35.3%
	Evening	701	1,318	617	202	124	41.0%	32.7%
Agua Mansa Road (NS) at:								
Market Street (EW) - #29	Morning	1,732	2,917	1,185	240	421	31.4%	20.3%
	Evening	2,013	3,533	1,520	314	496	30.7%	20.7%
Agua Mansa Road,								
Market Street to Brown Avenue	Daily	11,300	21,800	10,500	1,900	3,300	26.4%	18.1%

Table 50 (1 of 2)

Summary of Intersection Improvements for Industrial Park Access Alternatives (1A and 2A)

ID	Intersection	Jurisdiction[1]	Improvement[2]	Required for:									Improvement Source				
				Existing Plus Project		Direct Project Impact[3]	Opening Year (2020)			Year 2035			Project Specific[4]	Program Improvement[5]	Non-Program Improvement	Fair Share - Alt 1A[6]	Fair Share - Alt 2A[6]
				- Alt 1A	- Alt 2A		Without Project	With Project - Alt 1A	With Project - Alt 2A	Without Project	With Project - Alt 1A	With Project - Alt 2A					
6.	Rubidoux Boulevard (NS) at Tarragona Drive / El Rivino Road (EW)	JV	Construct NBR turn lane					X	X		X	X			X	38.2%	39.2%
			Construct EBL turn lane					X	X		X	X			X	38.2%	39.2%
			Restripe WB L/T lane to T/R turn lane					X	X		X	X		X			
			Restripe WBR turn lane to T/R turn lane					X	X		X	X		X			
7.	Rubidoux Boulevard (NS) at Building 6 Access (EW)	JV	Construct WBR turn lane	X	X			X	X		X	X	X				
8.	Rubidoux Boulevard (NS) at Project Access (EW)	JV	Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct SBL turn lane	X	X			X	X		X	X	X				
			Construct WBL turn lane	X	X			X	X		X	X	X				
			Construct WBR turn lane	X	X			X	X		X	X	X				
			Install traffic signal	X	X			X	X		X	X	X				
10.	Rubidoux Boulevard (NS) at 20th Street / Market Street (EW)	JV	Install NBR turn overlap	X	X	X		X	X	X	X	X			X	27.7%	23.5%
			Construct a second SBL turn lane					X	X		X	X			X	27.7%	23.5%
			Construct two WBL turn lanes	X	X	X	X	X	X	X	X	X		X			
			Modify traffic signal phasing	X	X	X	X	X	X	X	X	X			X	27.7%	23.5%
18.	Building 6 Access (NS) at El Rivino Road (EW)	JV / SB	Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a second WBT lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				
19.	Project Access (NS) at El Rivino Road (EW)	JV / RIA	Construct NBL turn lane	X	X			X	X		X	X	X				
			Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a second WBT lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				
			Install traffic signal	X	X			X	X		X	X	X				
20.	Cactus Avenue / Project Access (NS) at El Rivino Road (EW)	JV / RIA / SB	Construct NBL turn lane	X	X			X	X		X	X	X				
			Construct NB sharedT/right turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a WB T/R turn lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				
21.	Building 1 Auto Access (NS) at El Rivino Road (EW)	JV / SB	Construct NBR turn lane	X	X			X	X		X	X	X				
			Construct a second EBT lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
			Construct a second WBT lane[7]	X	X			X	X		X	X					
			Construct WBL turn lane	X	X			X	X		X	X	X				

Table 50 (2 of 2)

Summary of Intersection Improvements for Industrial Park Access Alternatives (1A and 2A)

ID	Intersection	Jurisdiction[1]	Improvement[2]	Required for:									Improvement Source				
				Existing Plus Project		Direct Project Impact[3]	Opening Year (2020)			Year 2035			Project Specific[4]	Program Improvement[5]	Non-Program Improvement	Fair Share - Alt 1A[6]	Fair Share - Alt 2A[6]
				- Alt 1A	- Alt 2A		Without Project	With Project - Alt 1A	With Project - Alt 2A	Without Project	With Project - Alt 1A	With Project - Alt 2A					
22.	Hall Avenue (NS) at El Rivino Road (EW)	JV / SB	Construct NBL turn lane					X	X	X	X	X			X	38.4%	35.3%
			Construct SBL turn lane					X	X	X	X	X			X	38.4%	35.3%
			Construct EBL turn lane					X	X	X	X	X		X		38.4%	35.3%
			Construct WBL turn lane					X	X	X	X	X		X		38.4%	35.3%
			Install traffic signal					X	X	X	X	X			X	38.4%	35.3%
23.	Hall Avenue (NS) at Building 1 Access (EW)	JV	Construct NBL turn lane	X	X			X	X		X	X	X				
			Construct SBR turn lane	X	X			X	X		X	X	X				
			Construct EBL turn lane	X	X			X	X		X	X	X				
			Construct EBR turn lane	X	X			X	X		X	X	X				
29.	Agua Mansa Road (NS) at Market Street (EW)	JV	Construct SBL turn lane	X	X		X	X	X	X	X	X			X	22.4%	20.7%
			Construct SBT lane				X	X	X	X	X	X			X	22.4%	20.7%
			Construct a second SBR turn lane							X	X	X			X	22.4%	20.7%

Notes:

(1) CAL = Caltrans; SB = County of San Bernardino; JV = City of Jurupa Valley; RIA = City of Rialto; RIV = City of Riverside; COL = City of Colton

(2) NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; L = Left; T = Through; R = Right

(3) A direct project impact has been determined when an intersection currently operates at acceptable Levels of Service during the peak hours for Existing traffic conditions, and the intersection is projected to operate at unacceptable Levels of Service during the peak hours with the addition of project traffic (Existing Plus Project traffic conditions).

(4) Improvement relates to a project access point and the project is fully responsible for the construction of the improvement.

(5) Source: Western Riverside Council of Governments Transportation TUMF Improvements from Jurupa Valley Center, County of San Bernardino Regional Transportation Development Mitigation Plan Report (updated July 22, 2014), and San Bernardino Associated Governments, Development Mitigation Nexus Study, Appendix K of the Congestion Management Program (February 2016).

(6) See Tables 48 and 49.

(7) Widening of El Rivino Road for a second westbound through lane conditioned as the responsibility of properties adjacent to El Rivino Road to the north of the roadway.

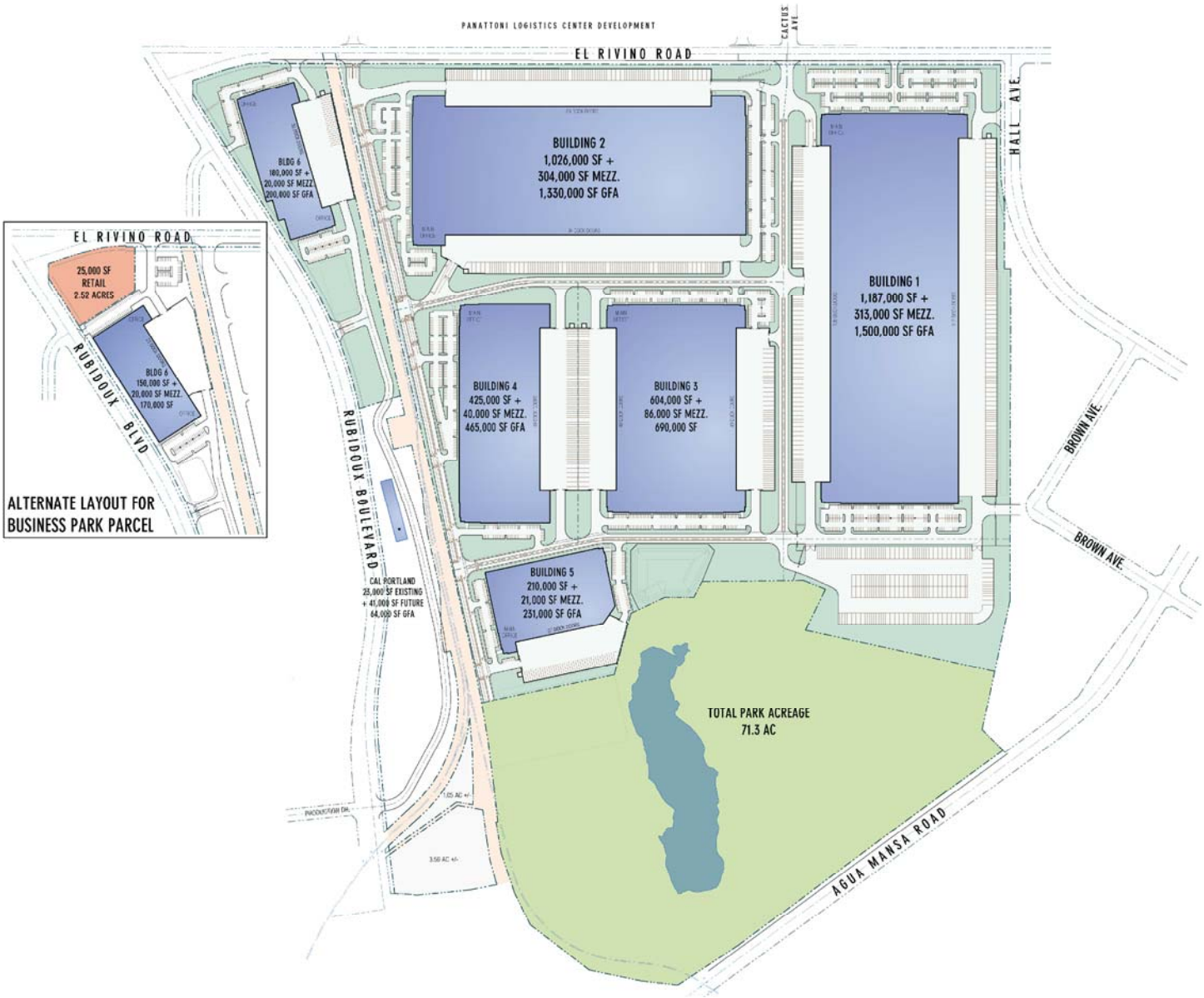
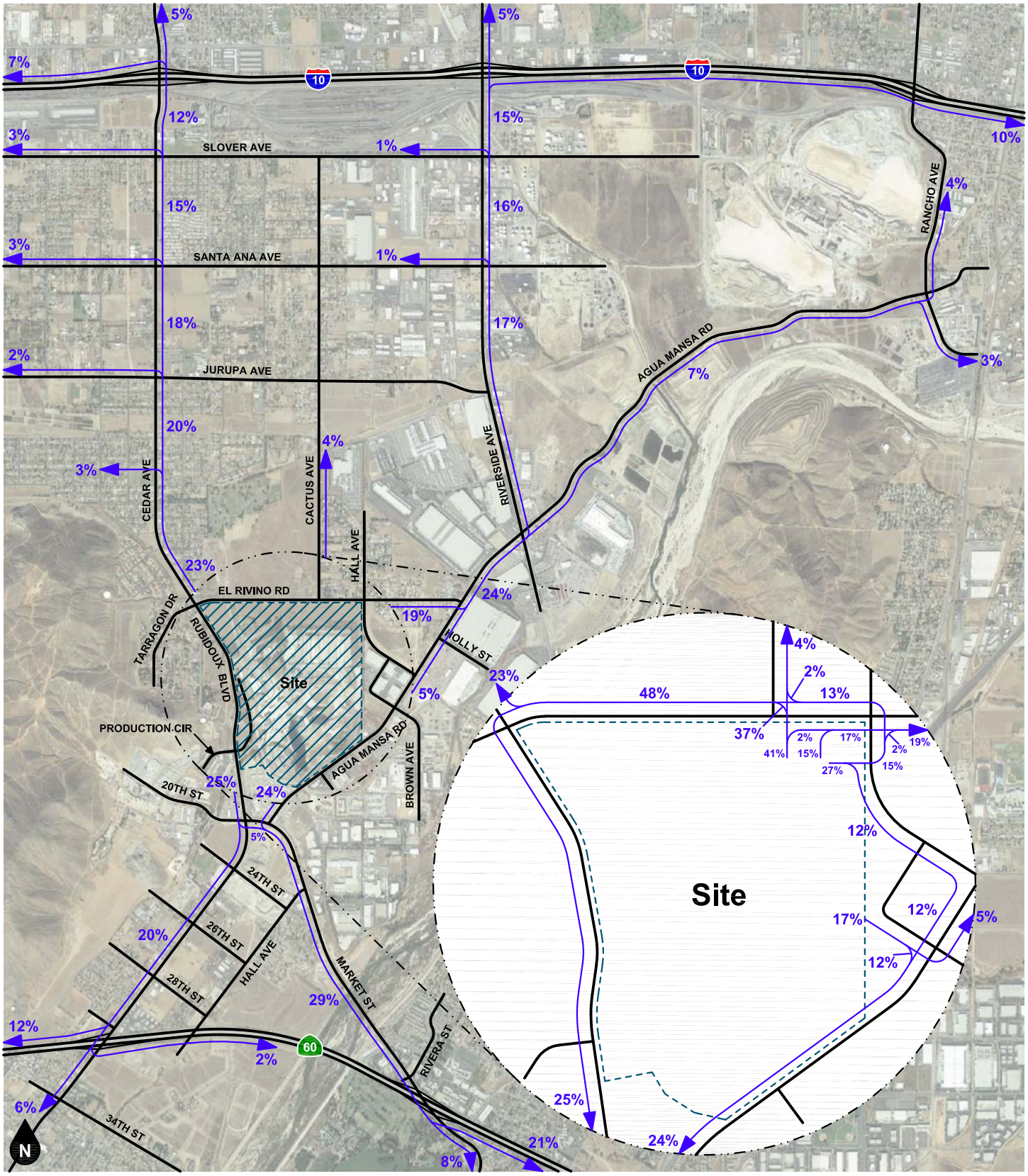


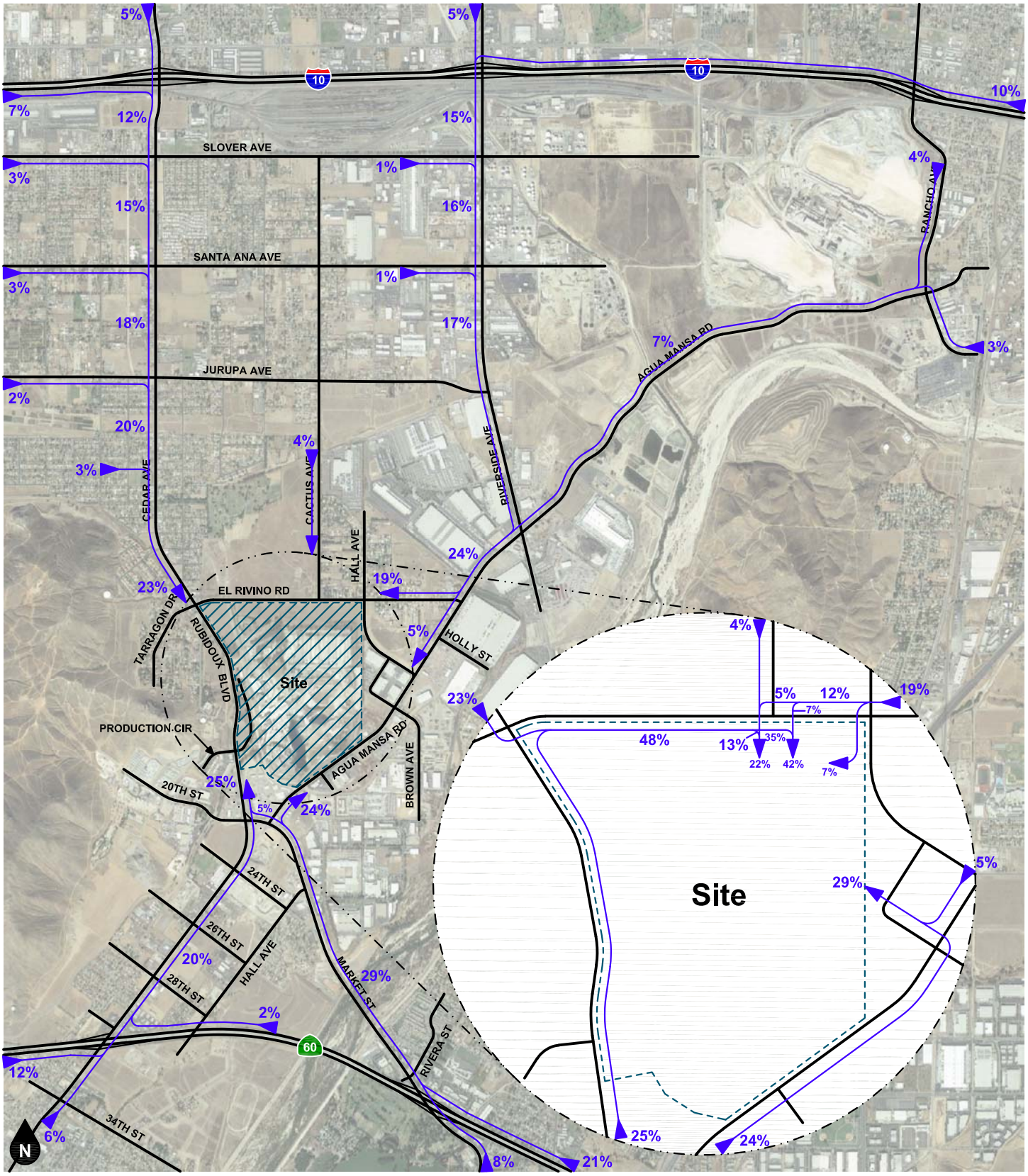
Figure 76
Site Plan Alternative 1A & 2A



Legend

10% Percent From Project

Figure 77
Project Outbound Trip Distribution - Building 1 (Cars) - Alternatives 1A & 2A



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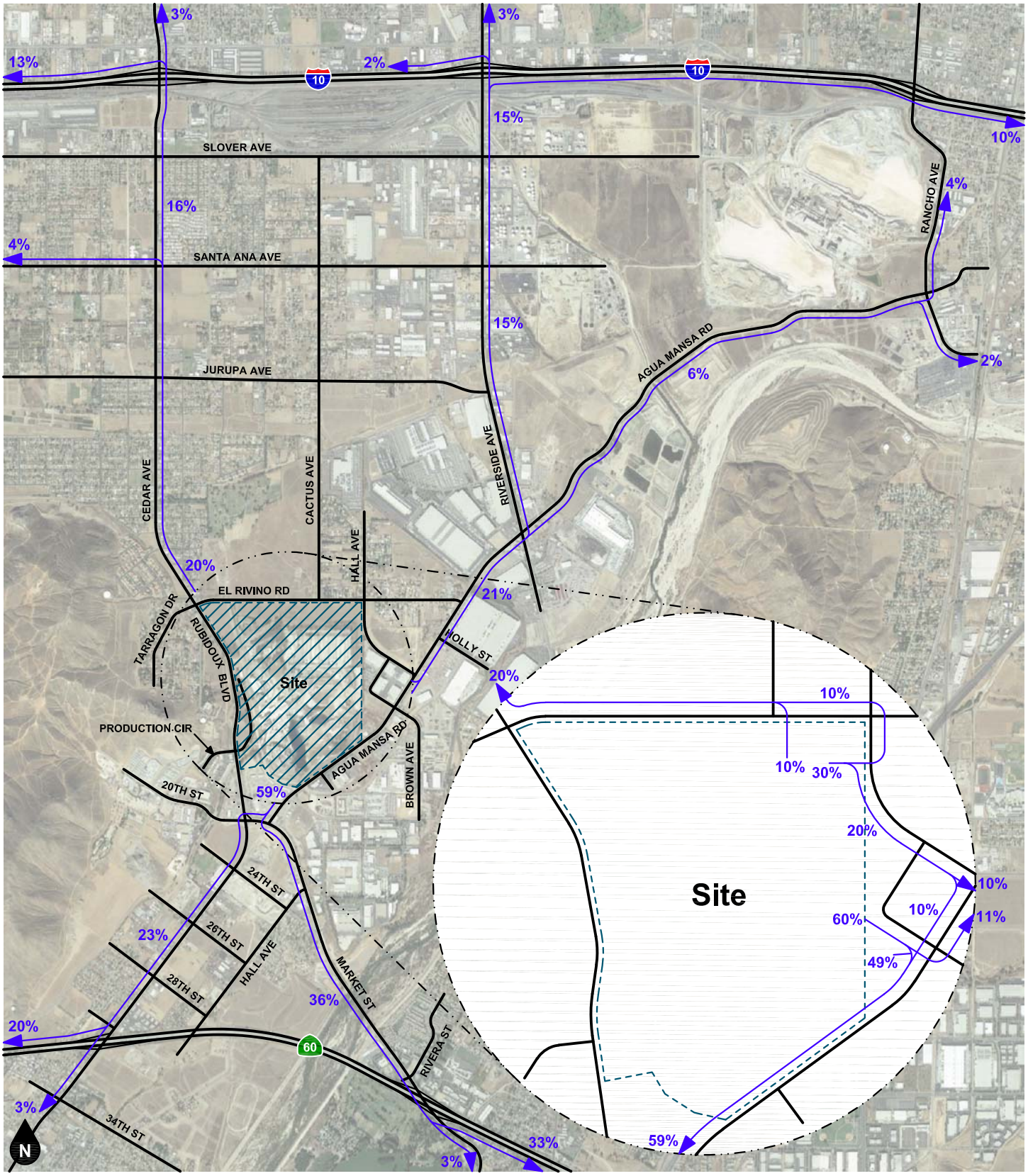
10% Percent To Project

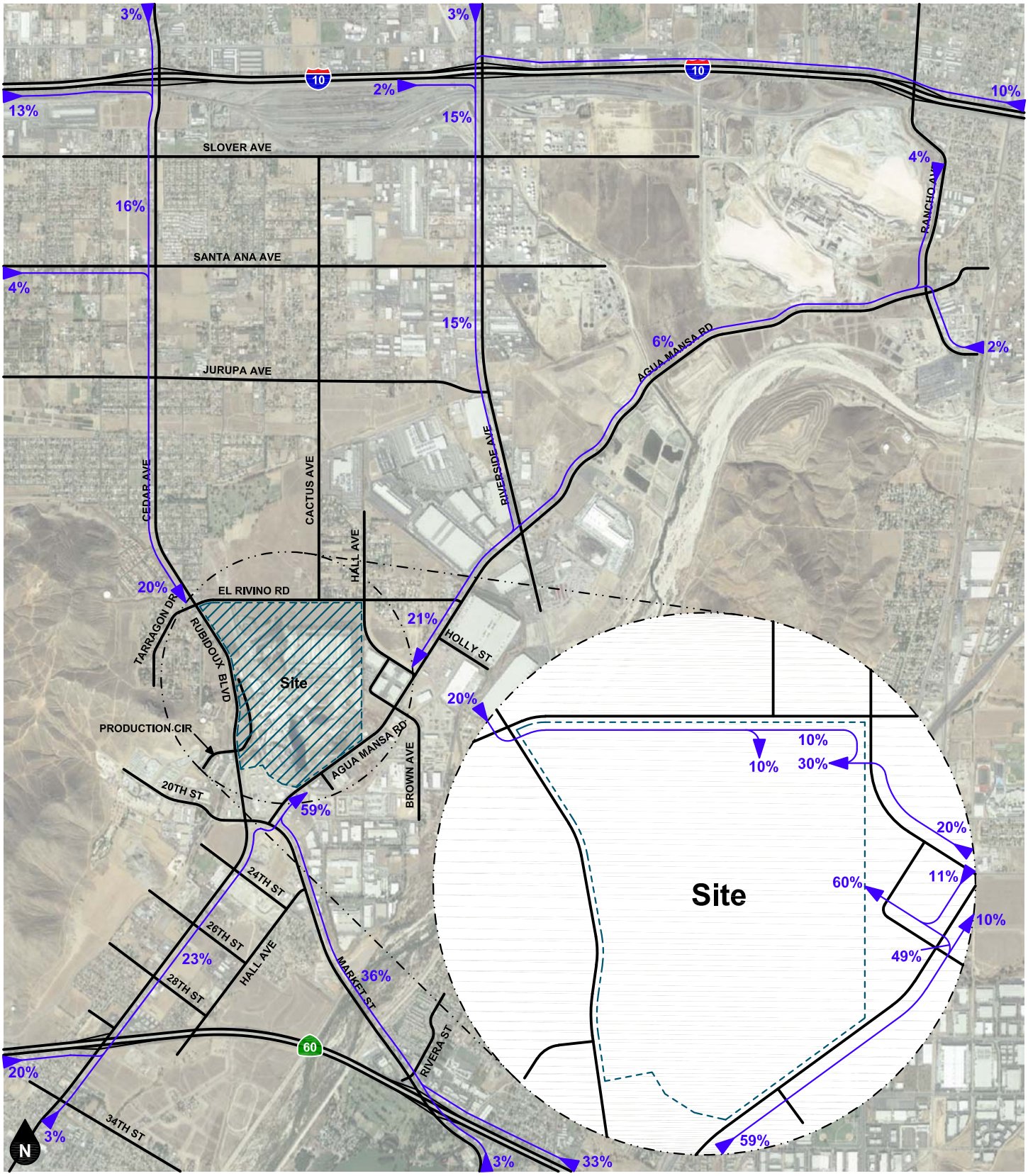
Figure 78
Project Inbound Trip Distribution - Building 1 (Cars) - Alternatives 1A & 2A



Legend

10% Percent From Project

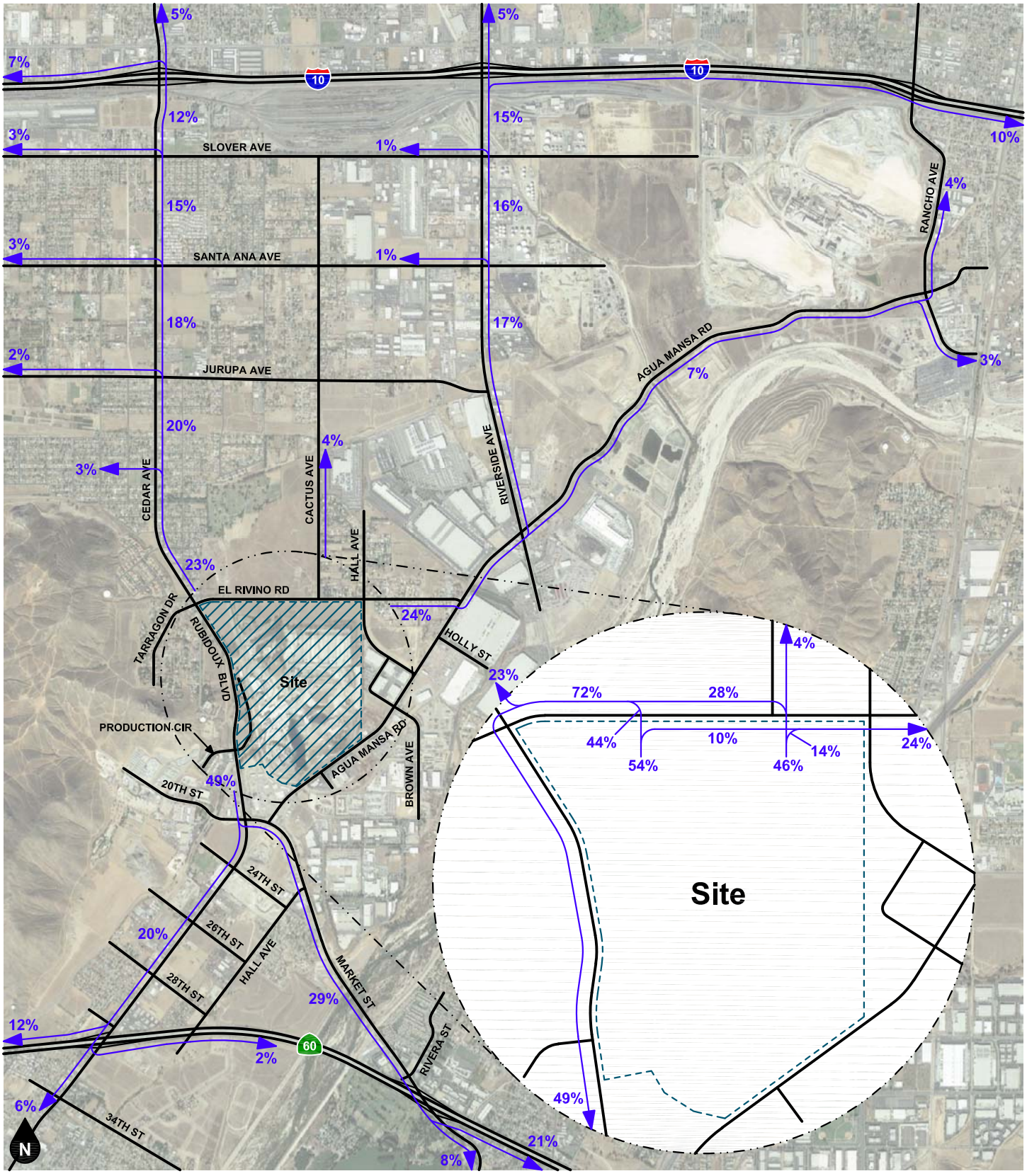
Figure 79
Project Outbound Trip Distribution - Building 1 (Trucks) - Alternatives 1A & 2A



Legend

10% Percent To Project

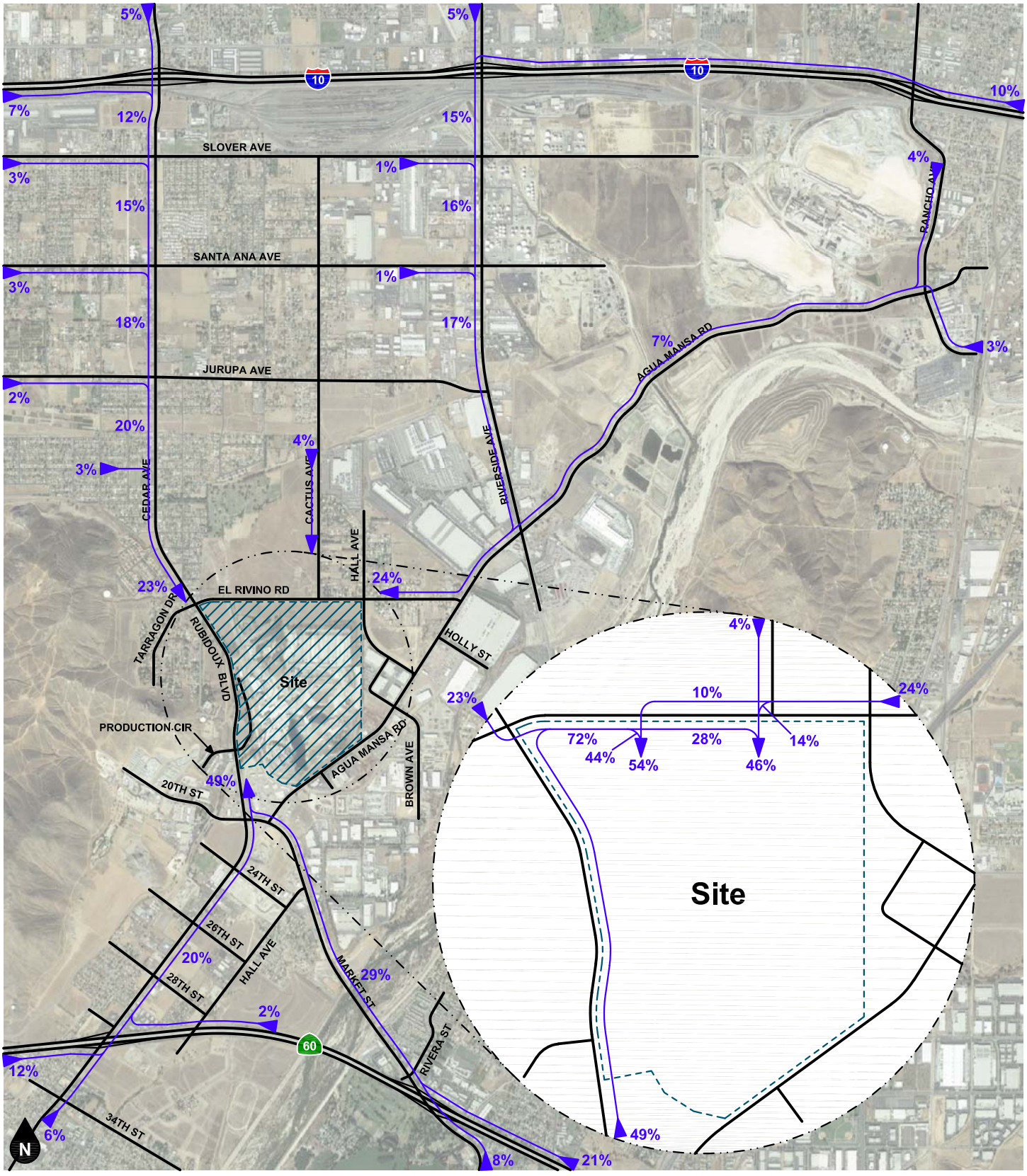
Figure 80
Project Inbound Trip Distribution - Building 1 (Trucks) - Alternatives 1A & 2A



Legend

10% Percent From Project

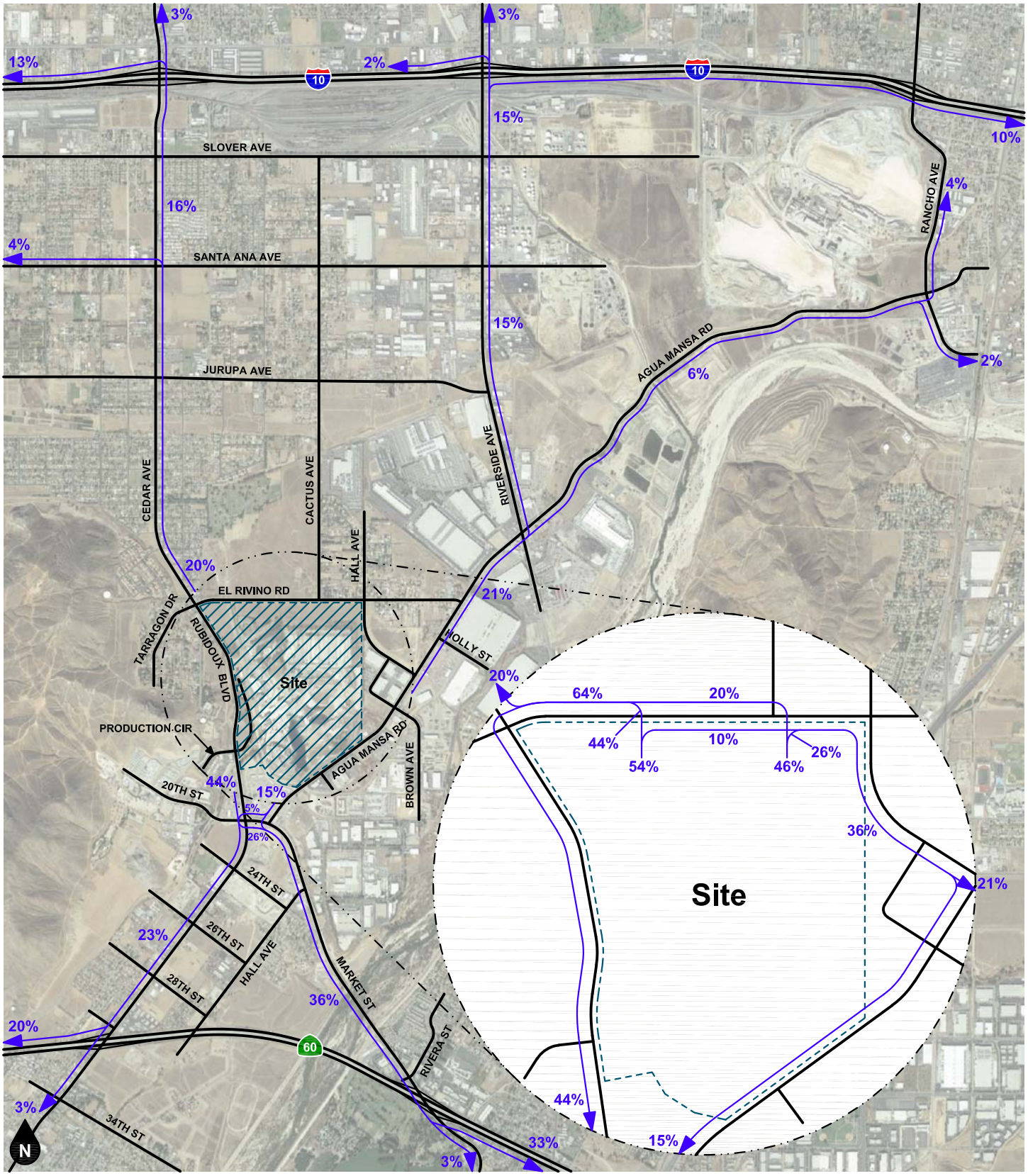
Figure 81
Project Outbound Trip Distribution - Building 2 (Cars) - Alternatives 1A & 2A



Legend

10% Percent To Project

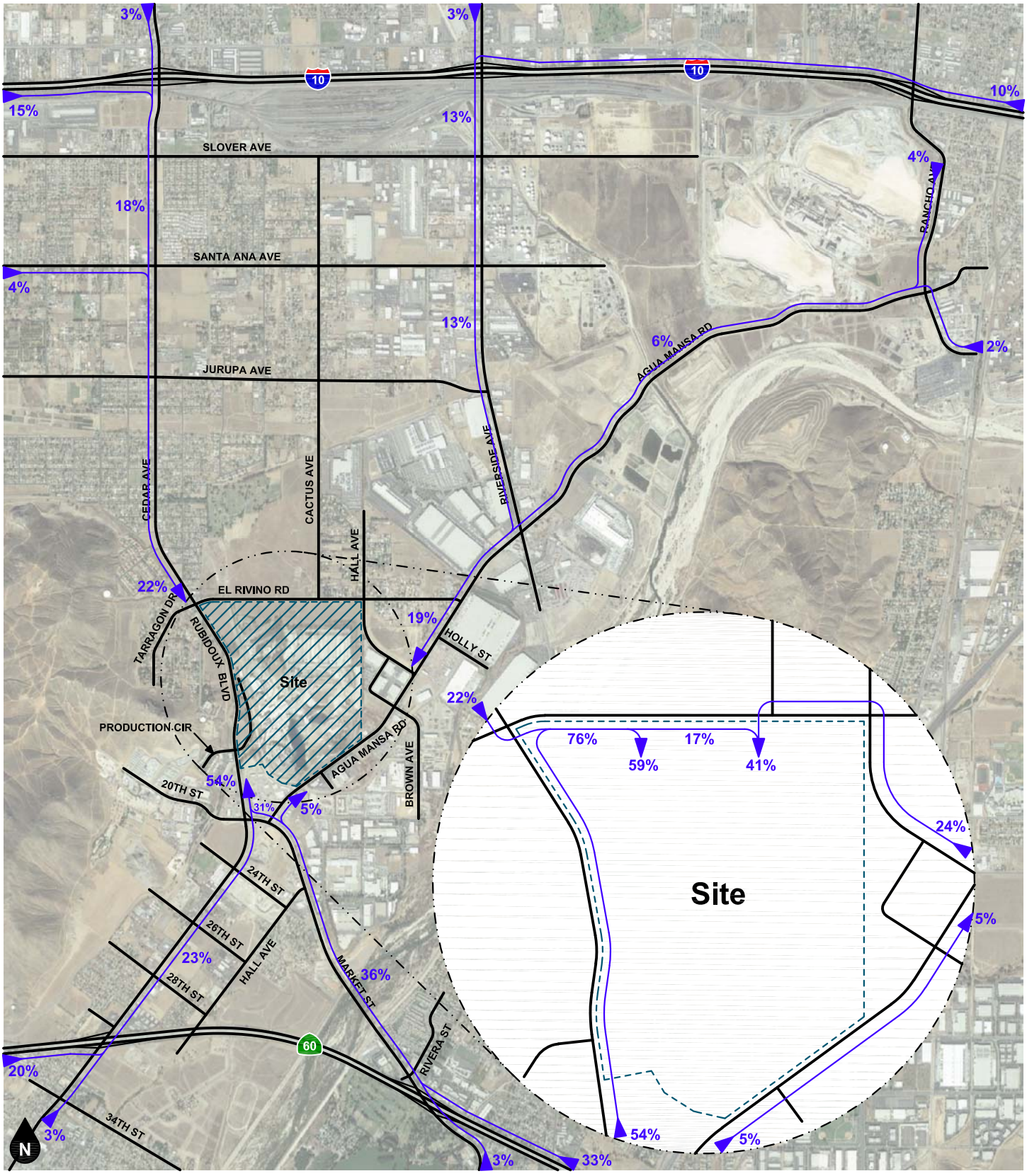
Figure 82
Project Inbound Trip Distribution - Building 2 (Cars) - Alternatives 1A & 2A



Legend

10% Percent From Project

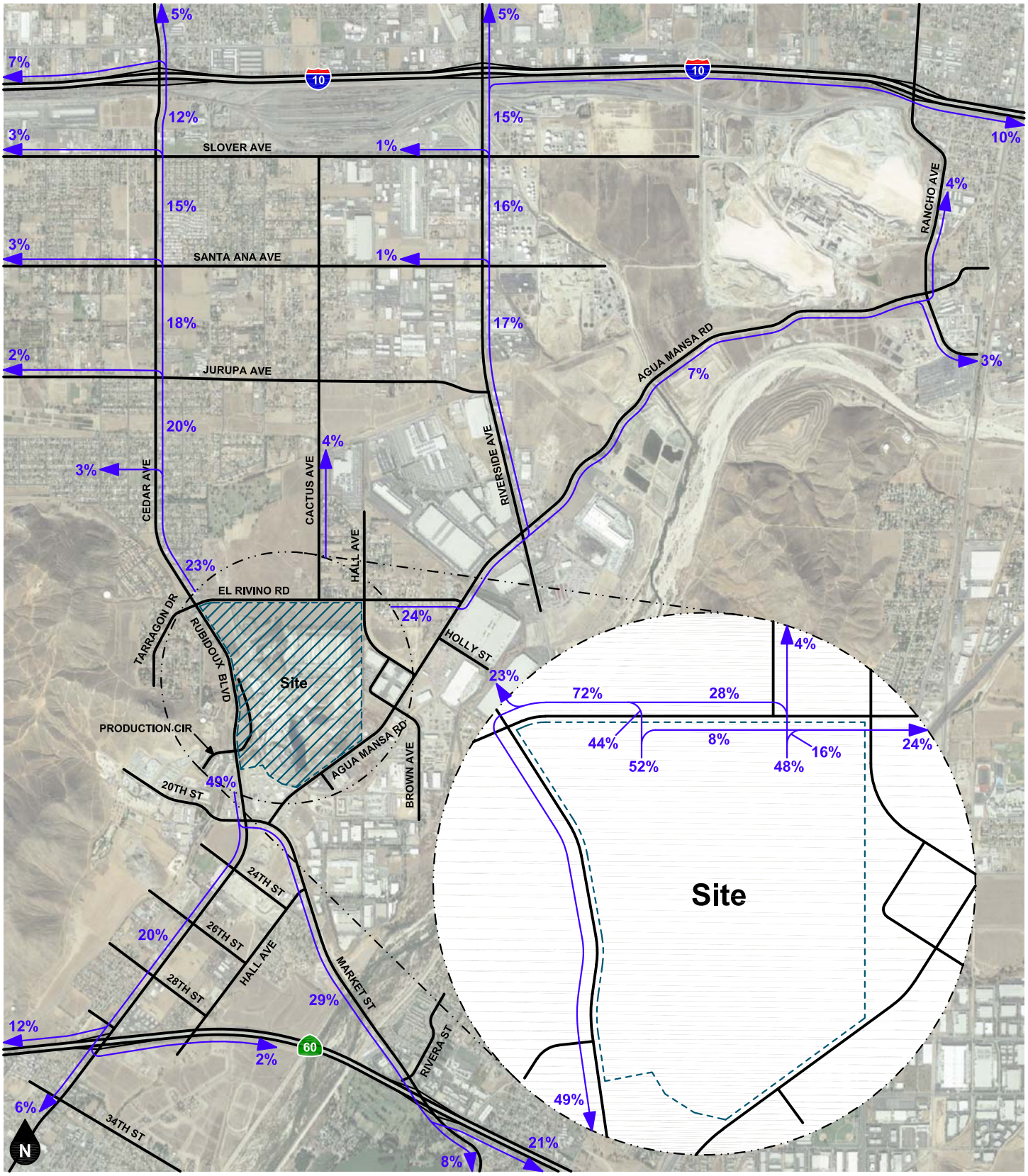
Figure 83
Project Outbound Trip Distribution - Building 2 (Trucks) - Alternatives 1A & 2A



Legend

10% Percent To Project

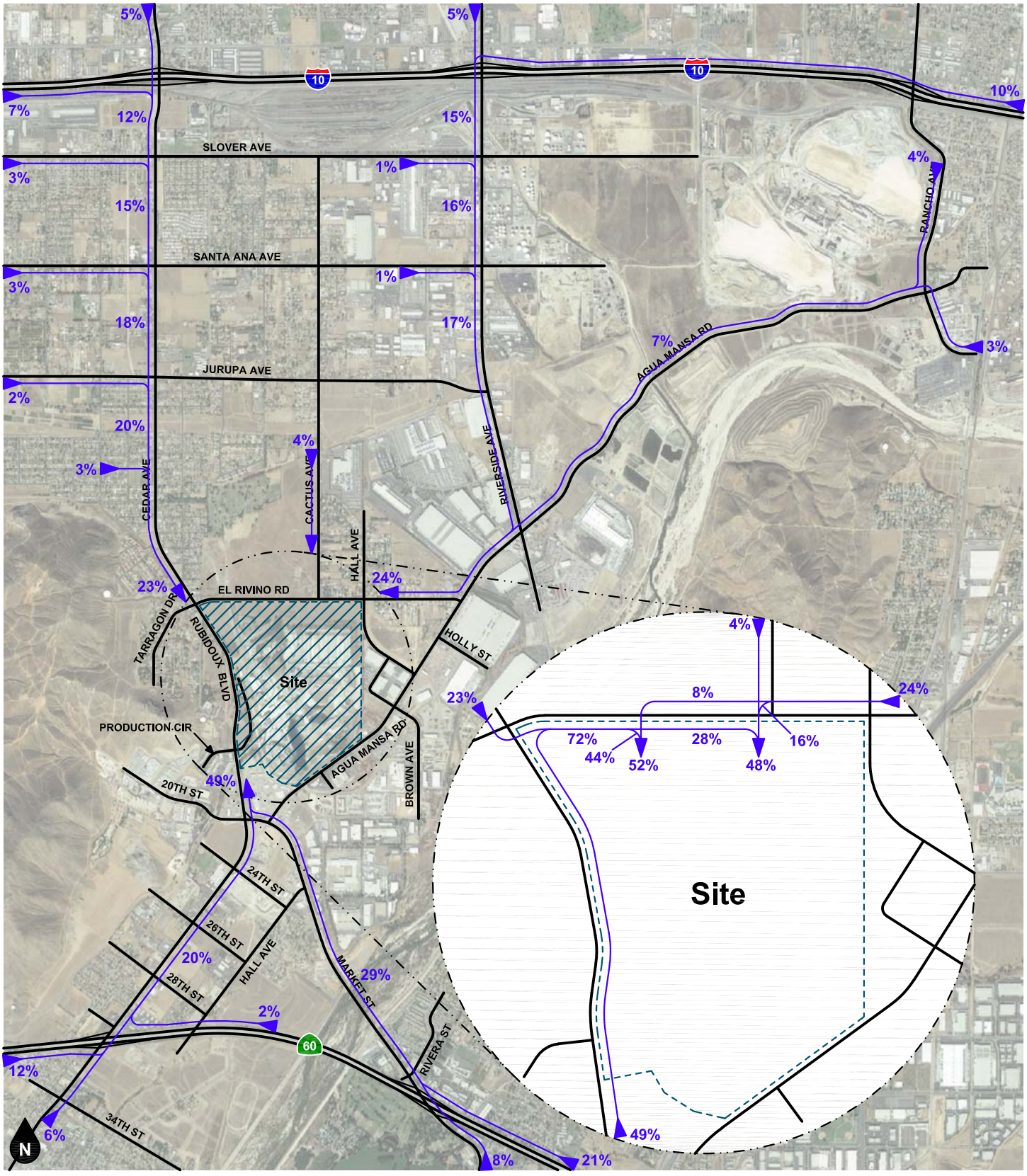
Figure 84
Project Inbound Trip Distribution - Building 2 (Trucks) - Alternativeas 1A & 2A



Legend

10% Percent From Project

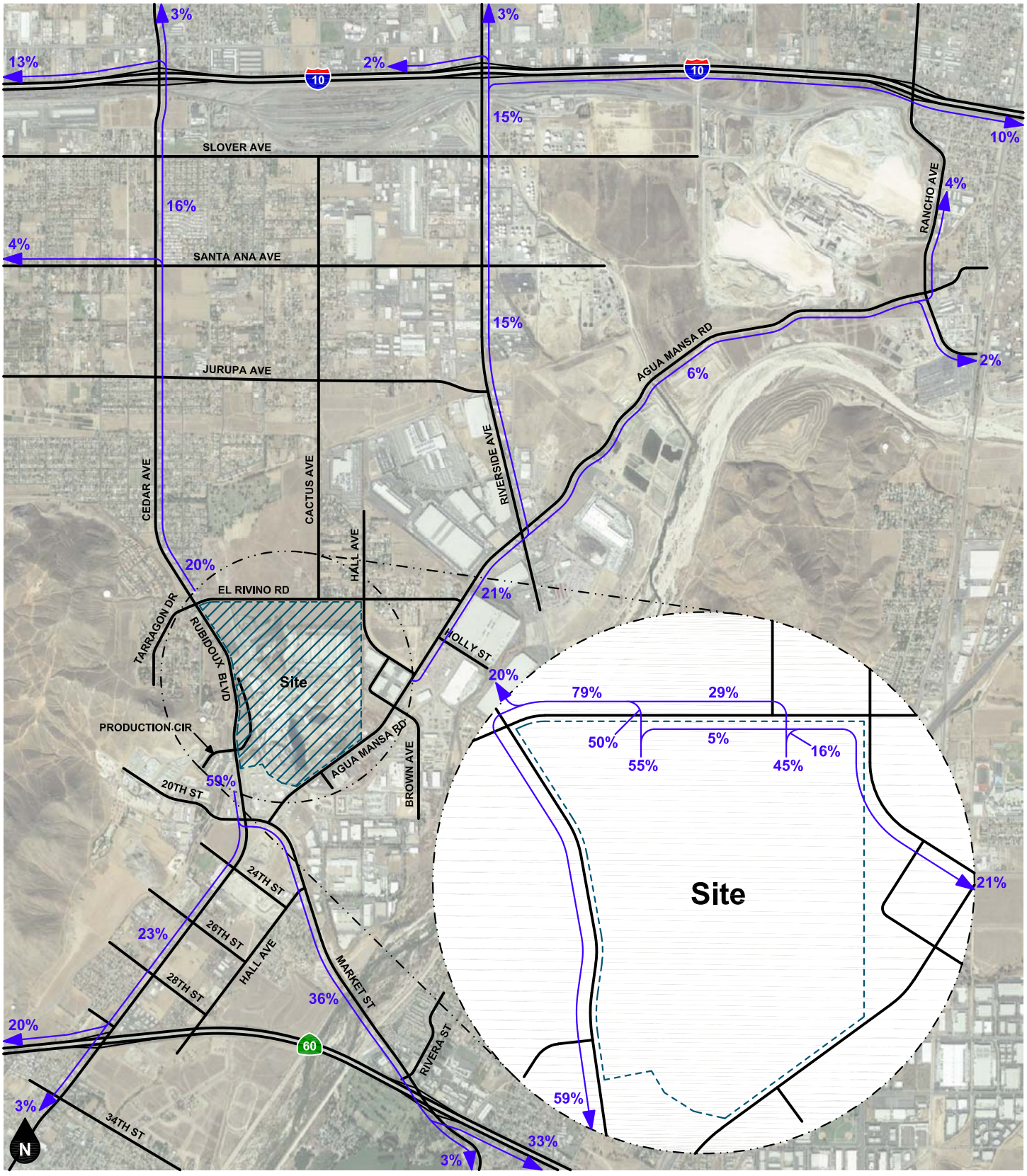
Figure 85
Project Outbound Trip Distribution - Buildings 3, 4, and 5 (Cars) - Alternatives 1A & 2A



Legend

10% Percent To Project

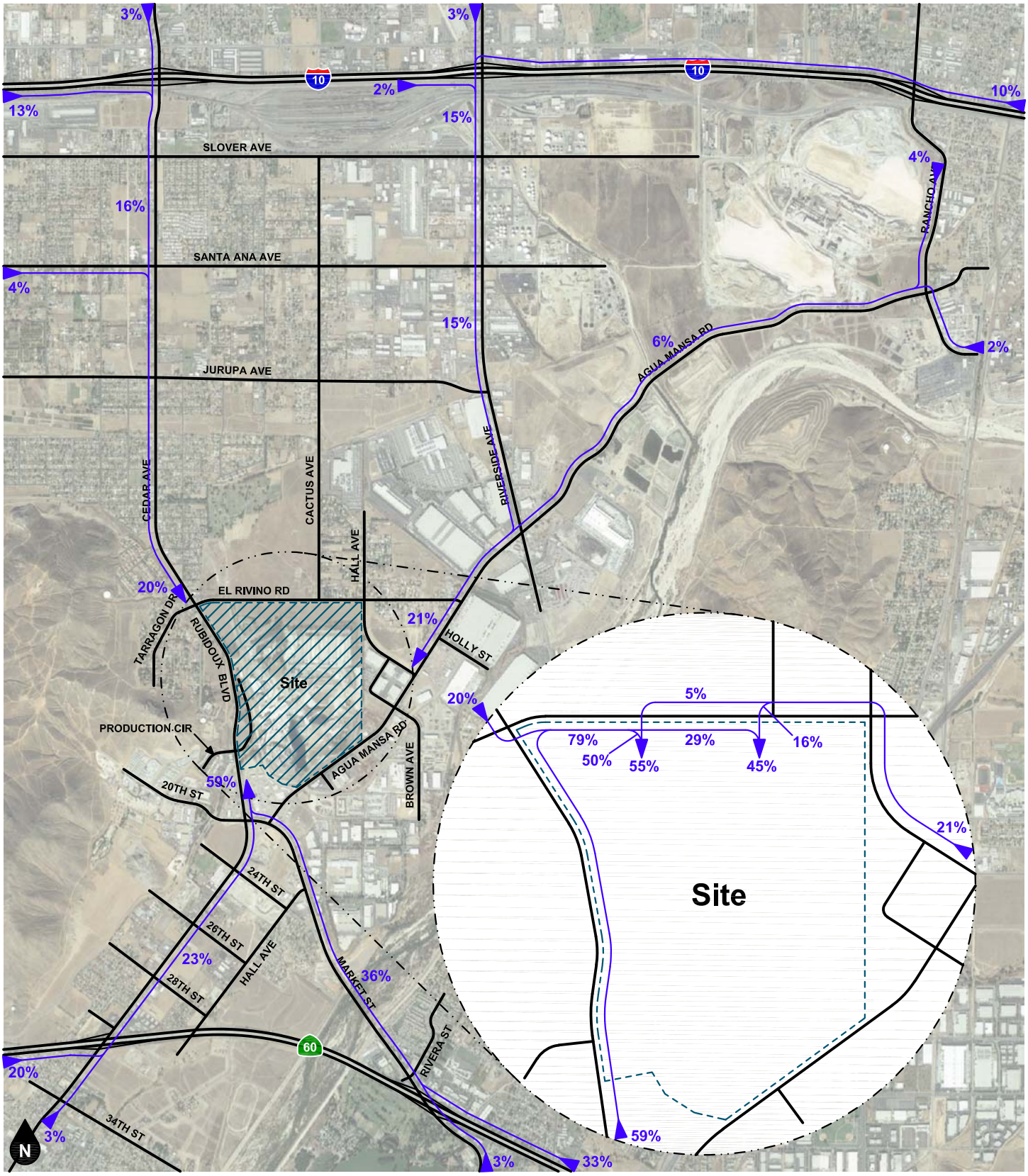
Figure 86
Project Inbound Trip Distribution - Buildings 3, 4, and 5 (Cars) - Alternatives 1A & 2A



Legend

10% Percent From Project

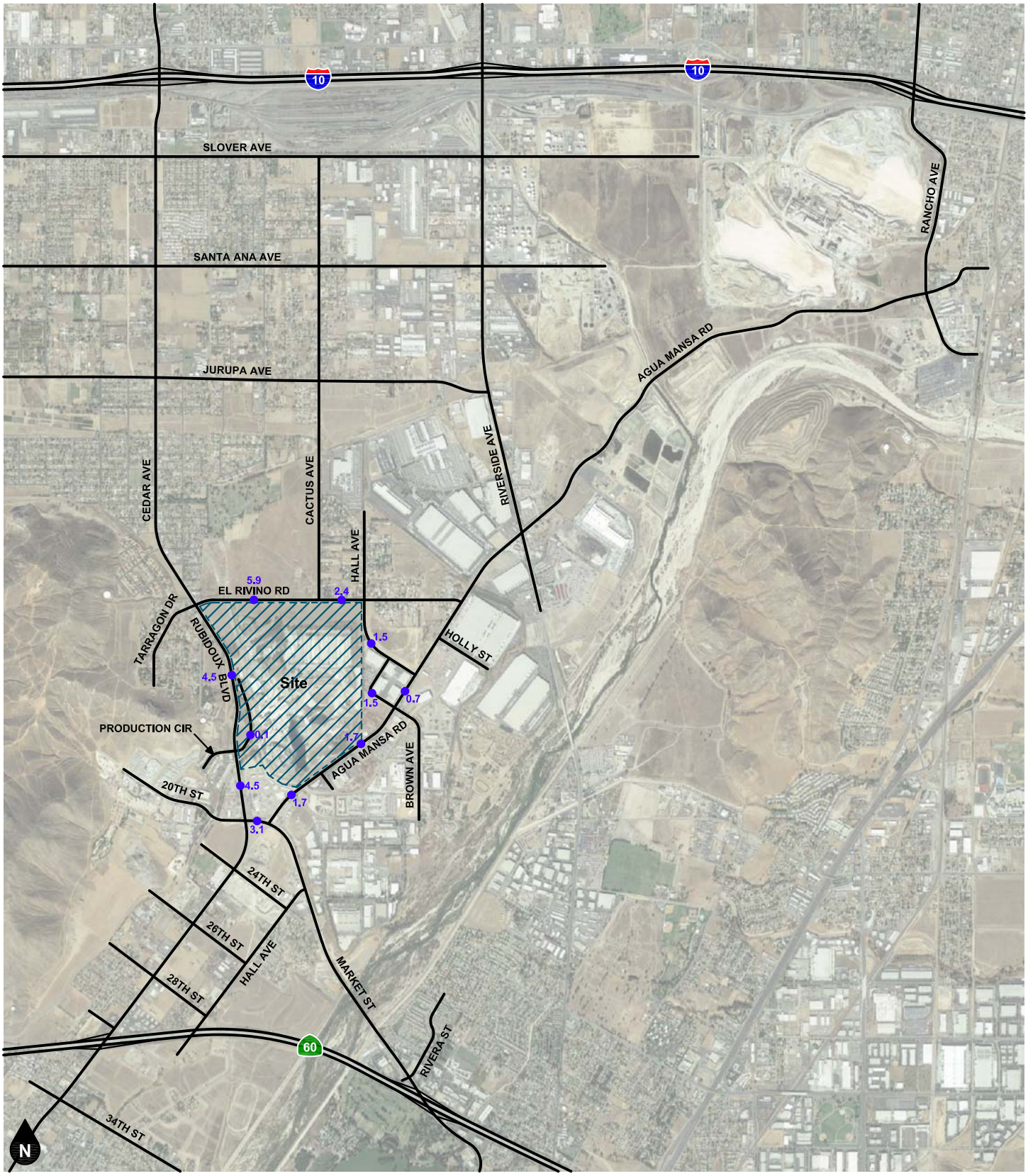
Figure 87
Project Outbound Trip Distribution - Buildings 3, 4, and 5 (Trucks) - Alternatives 1A & 2A



Legend

10% Percent To Project

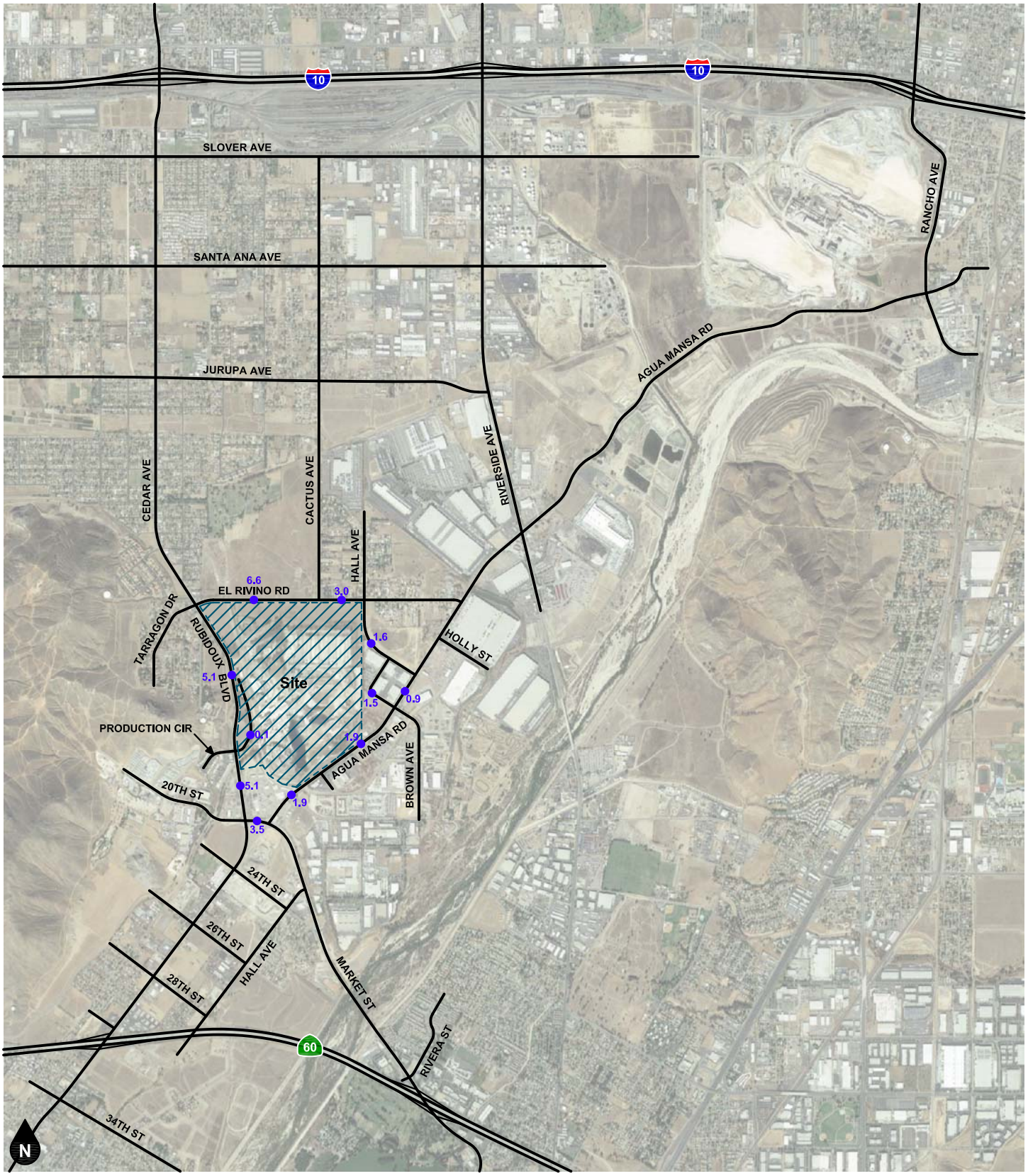
Figure 88
Project Inbound Trip Distribution - Buildings 3, 4, and 5 (Trucks) - Alternatives 1A & 2A



Legend

●## Vehicles Per Day (1,000's)

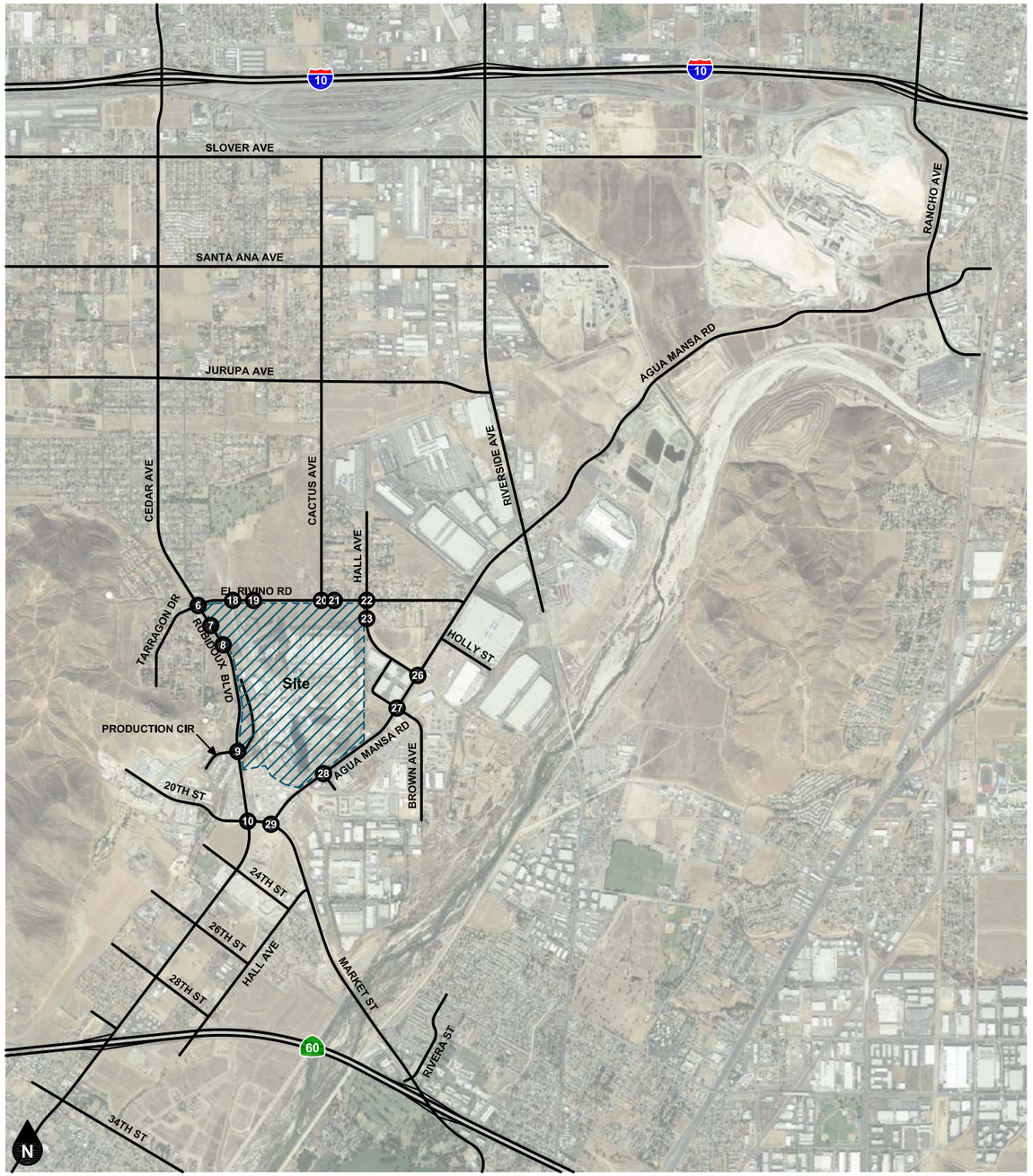
Figure 89
Project Average Daily Traffic Volumes - Alternative 1A

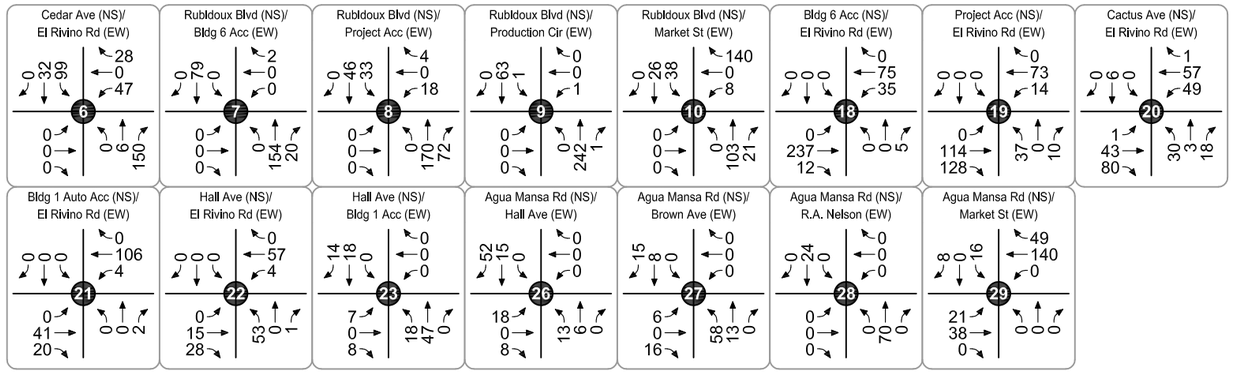


Legend

●## Vehicles Per Day (1,000's)

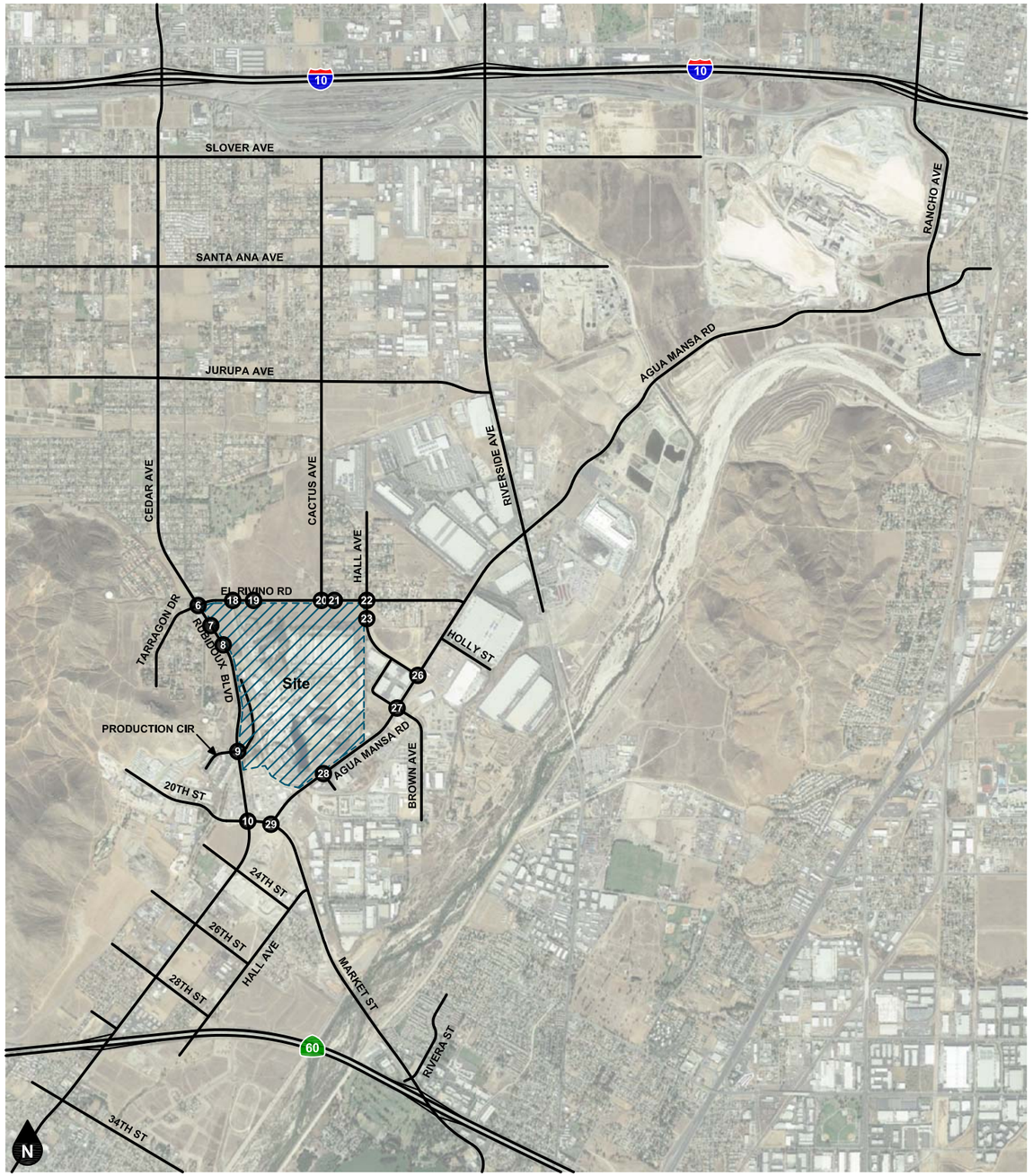
Figure 90
Project Average Daily Traffic Volumes - Alternative 2A

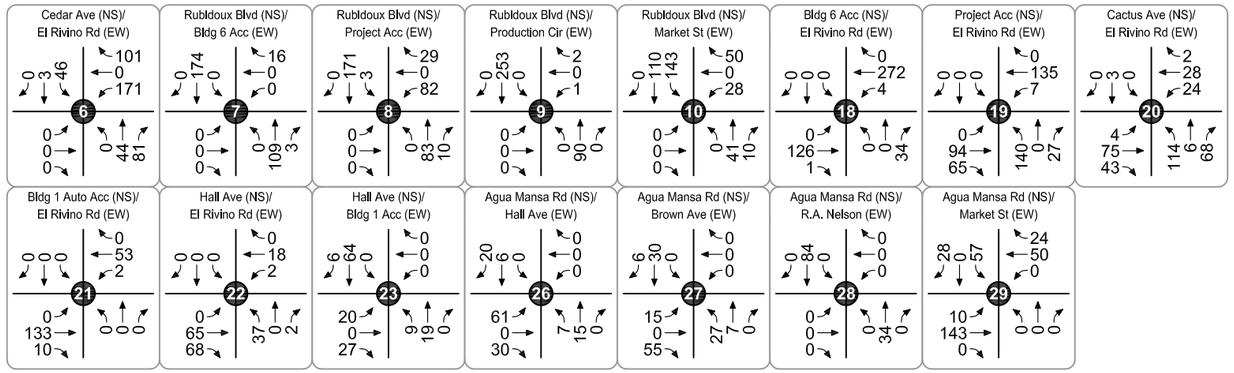




Legend
Study Intersection

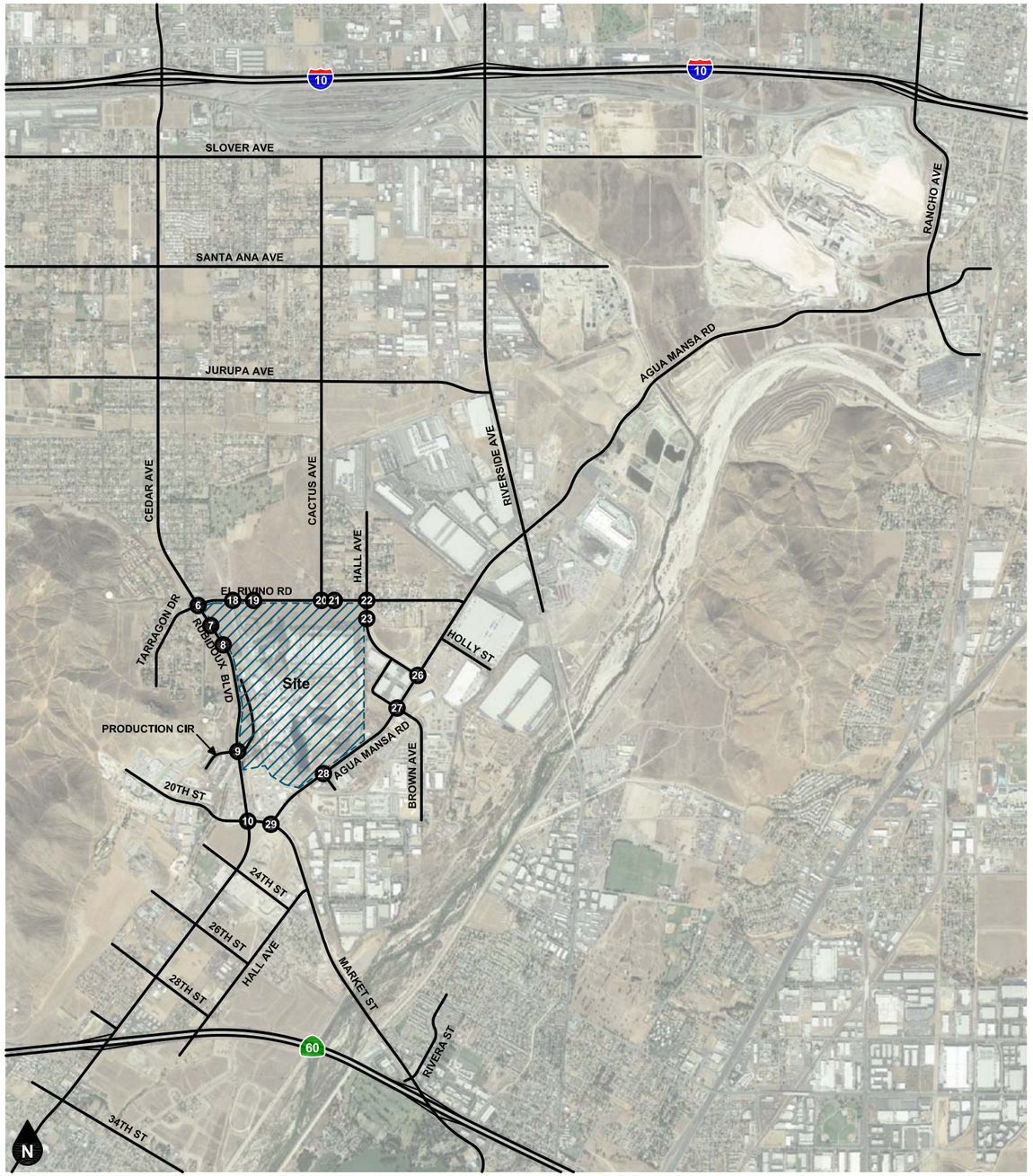
Figure 91
Project AM Peak Hour Intersection Turning Movement Volumes
- Alternative 1A

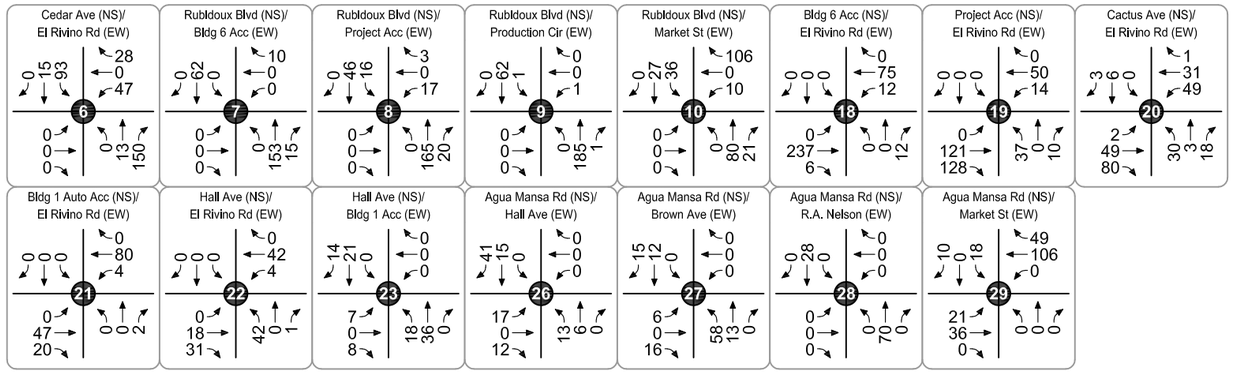




Legend
Study Intersection

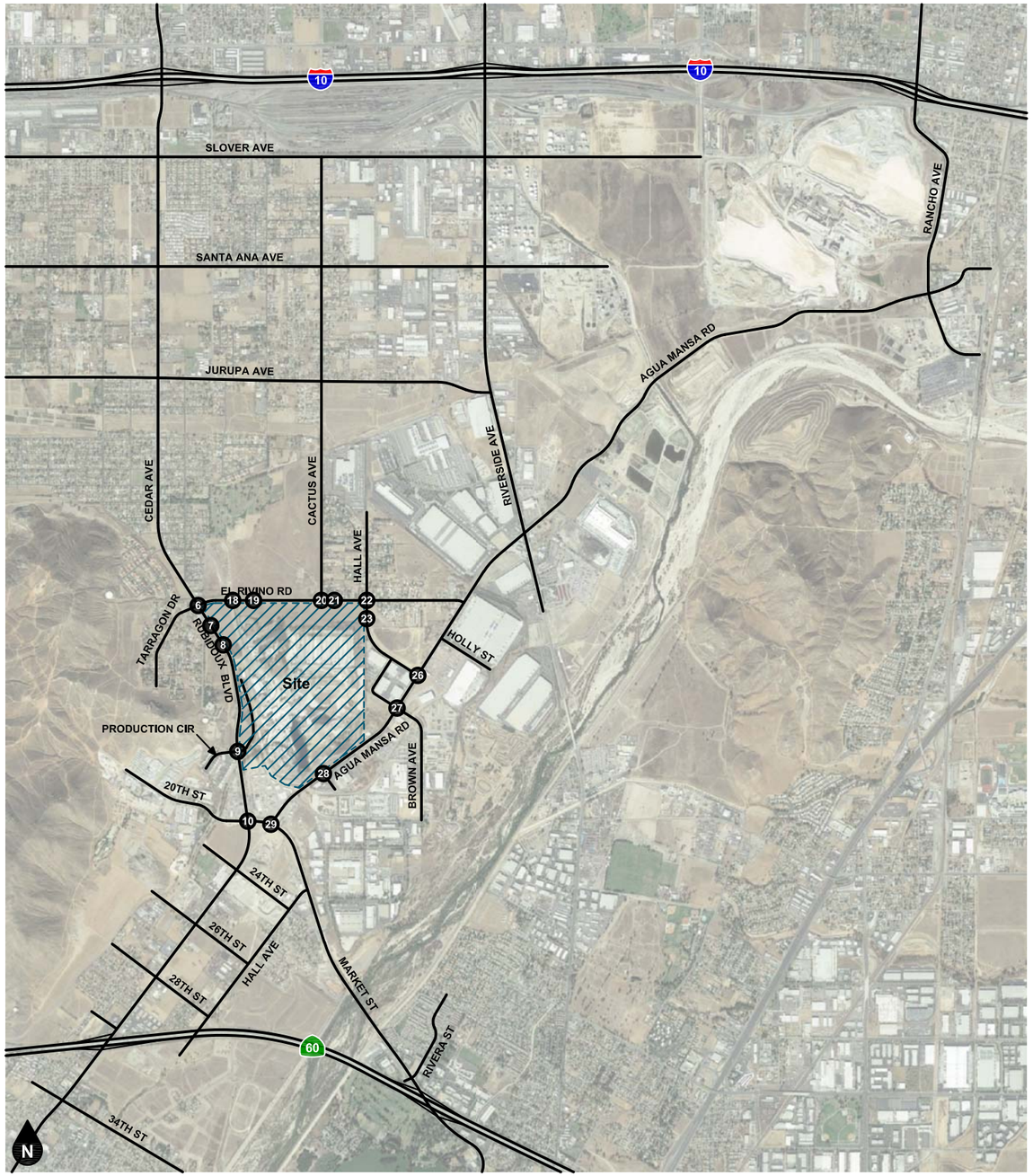
Figure 92
Project PM Peak Hour Intersection Turning Movement Volumes
- Alternative 1A

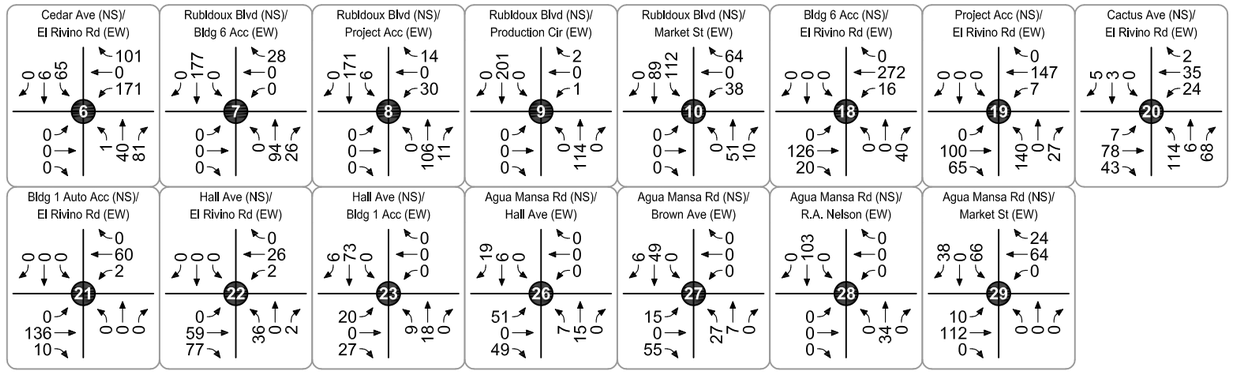




Legend
Study Intersection

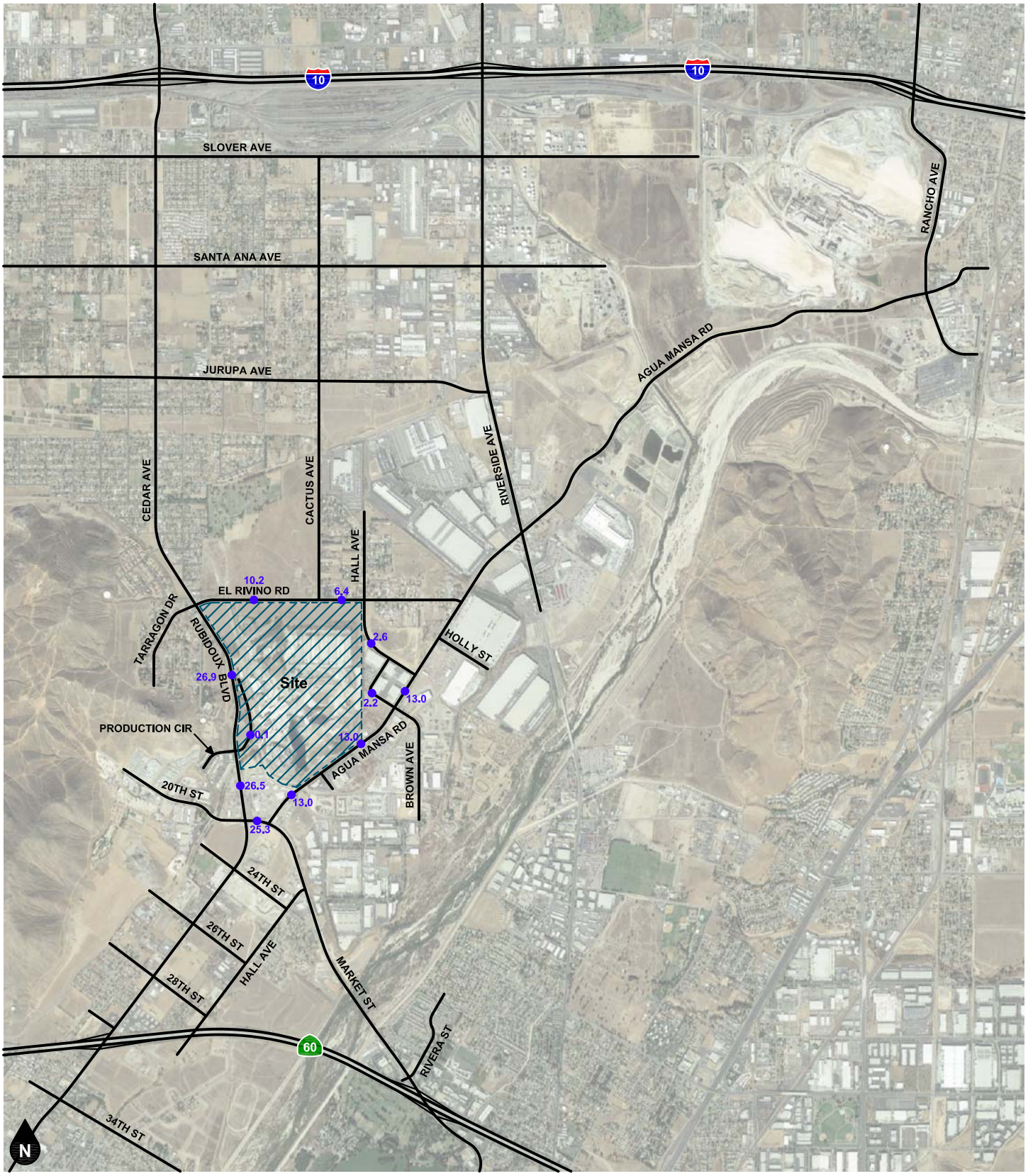
Figure 93
Project AM Peak Hour Intersection Turning Movement Volumes
- Alternative 2A





Legend
Study Intersection

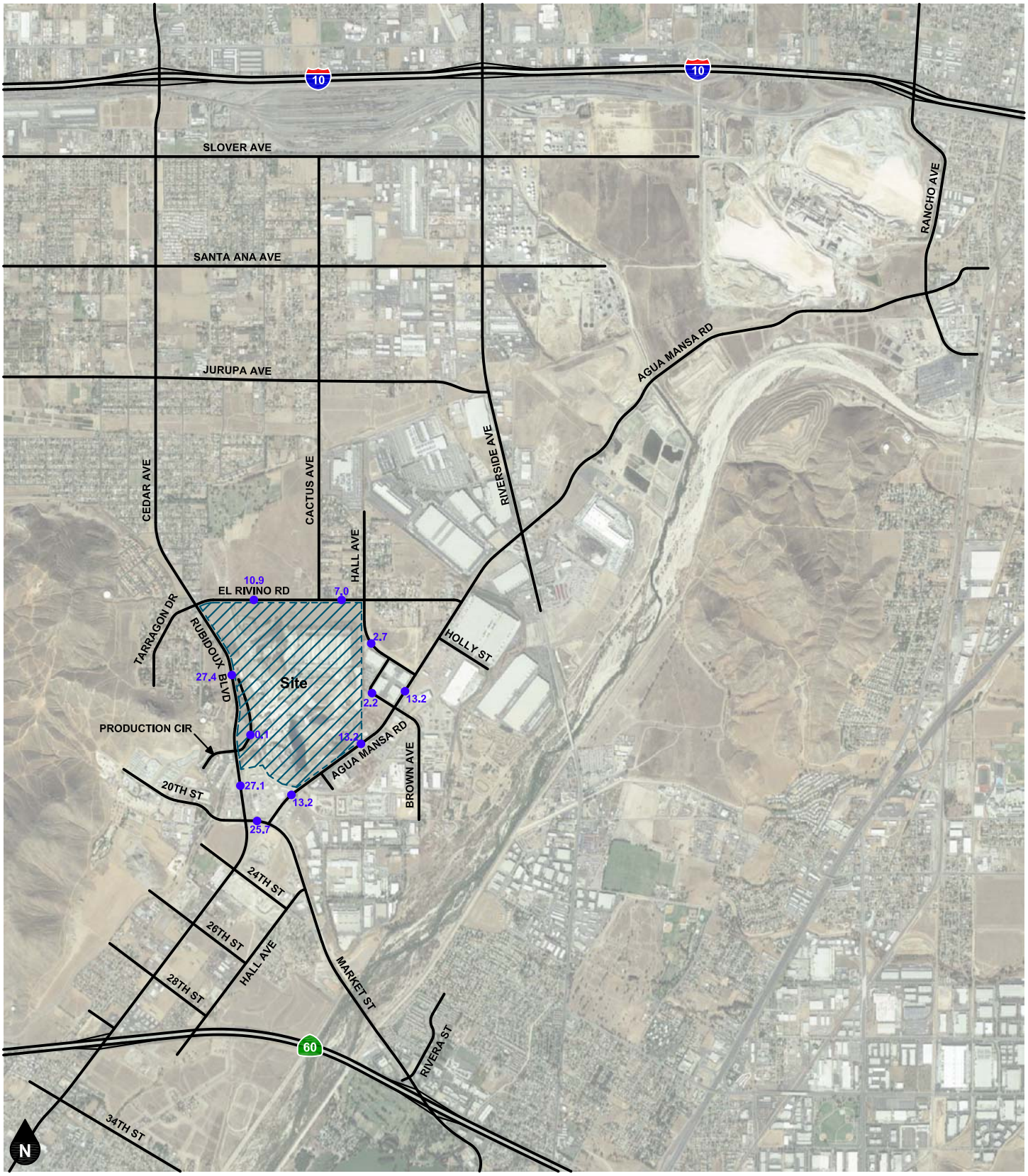
Figure 94
Project PM Peak Hour Intersection Turning Movement Volumes
- Alternative 2A



Legend

●## Vehicles Per Day (1,000's)

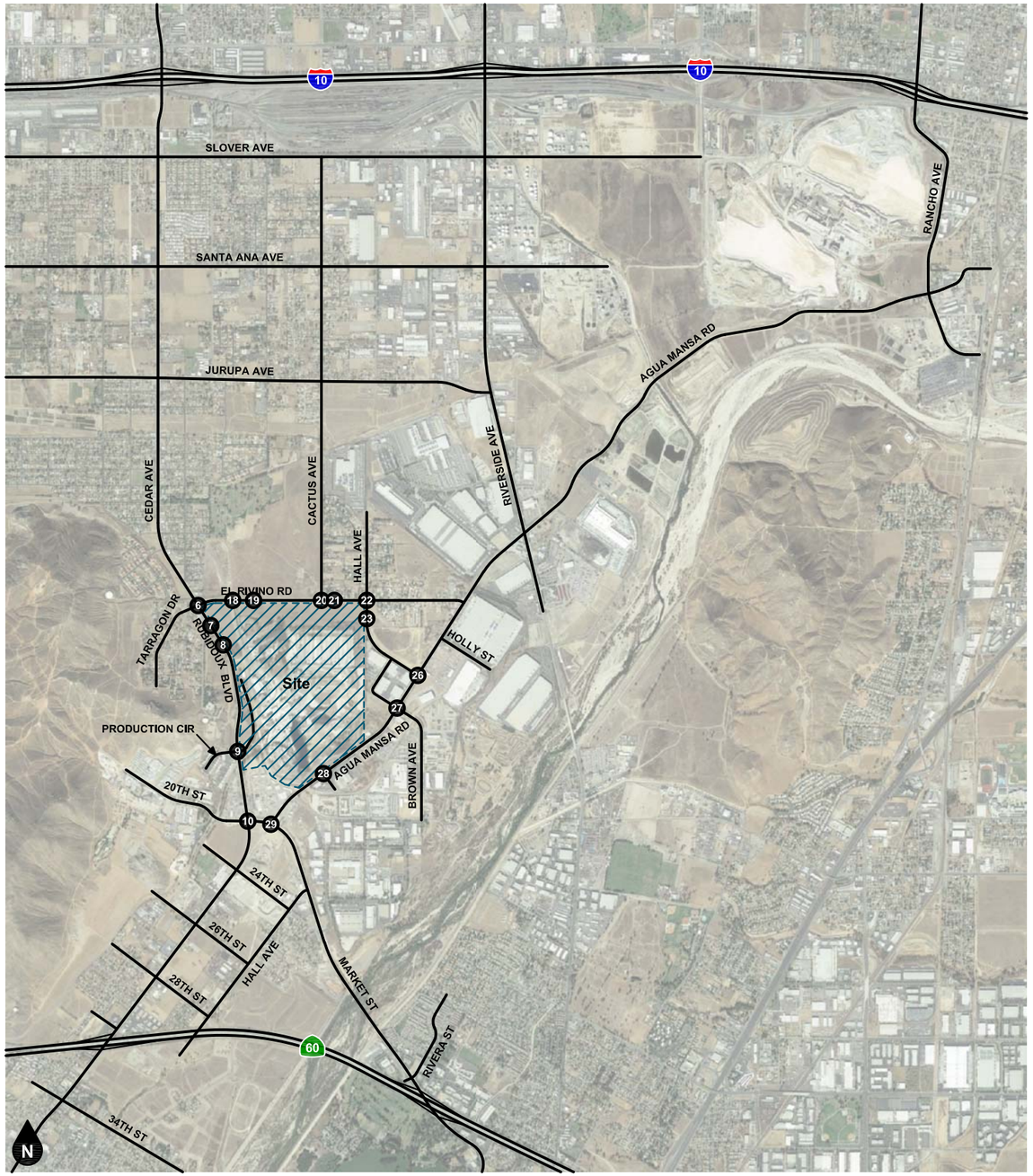
Figure 95
Existing Plus Project Average Daily Traffic Volumes - Alternative 1A

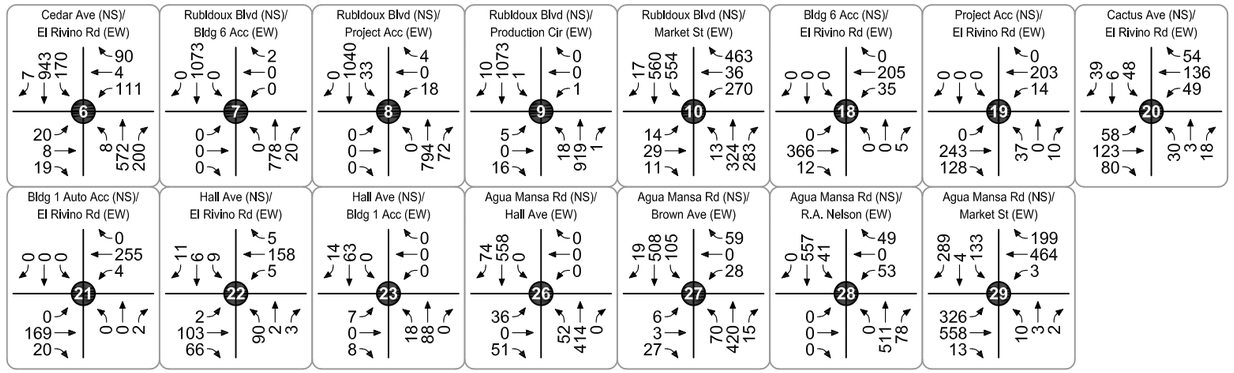


Legend

●## Vehicles Per Day (1,000's)

Figure 96
Existing Plus Project Average Daily Traffic Volumes - Alternative 2A

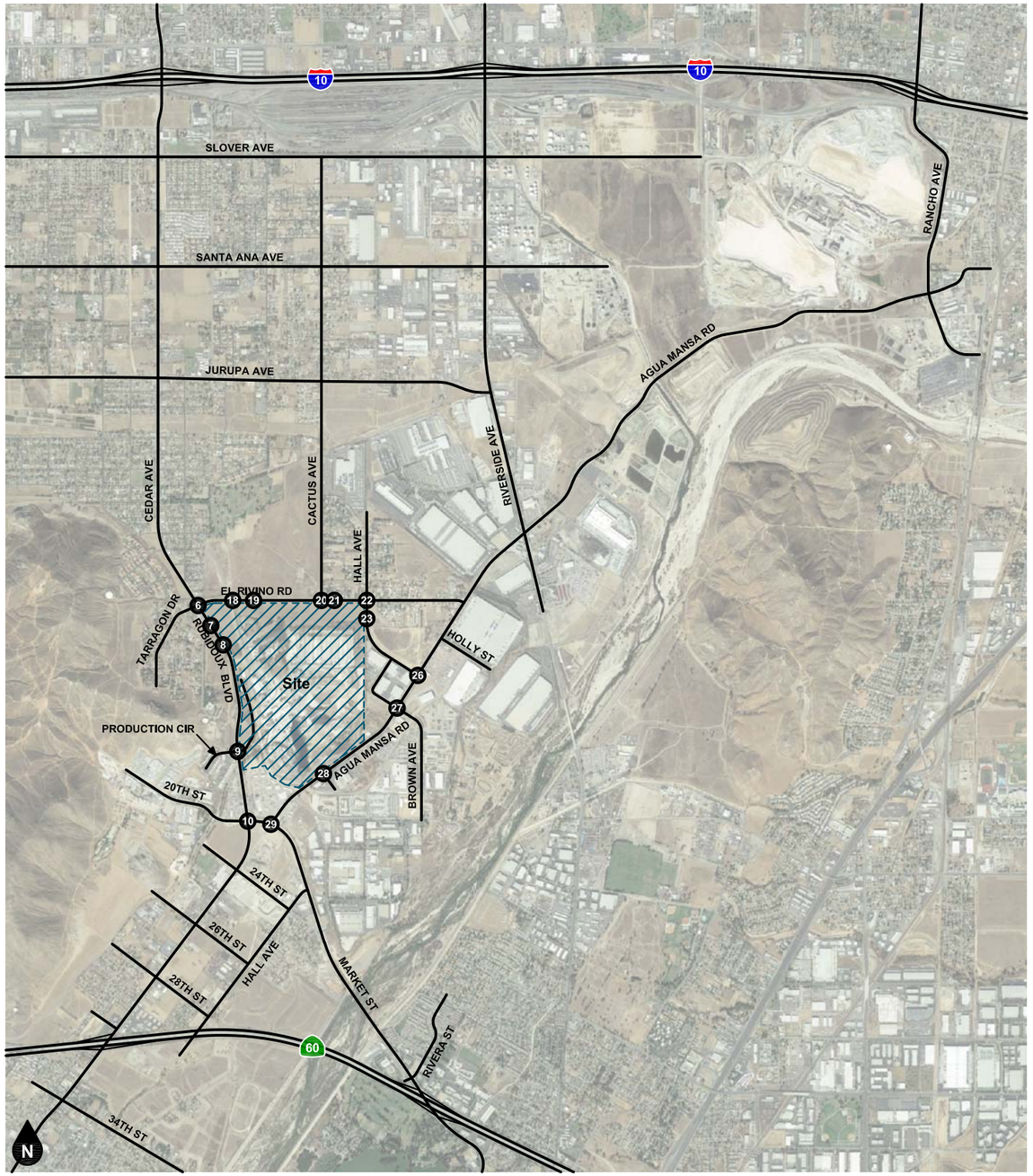


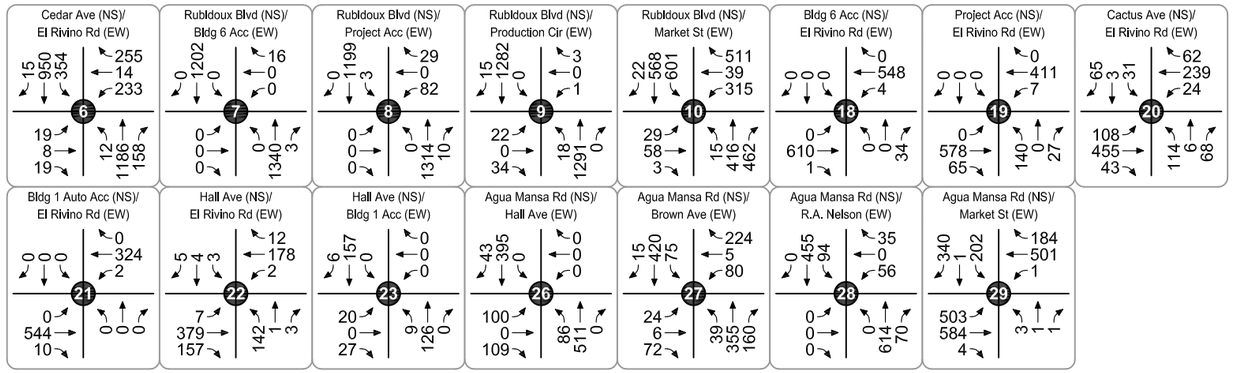


Legend

(#) Study Intersection

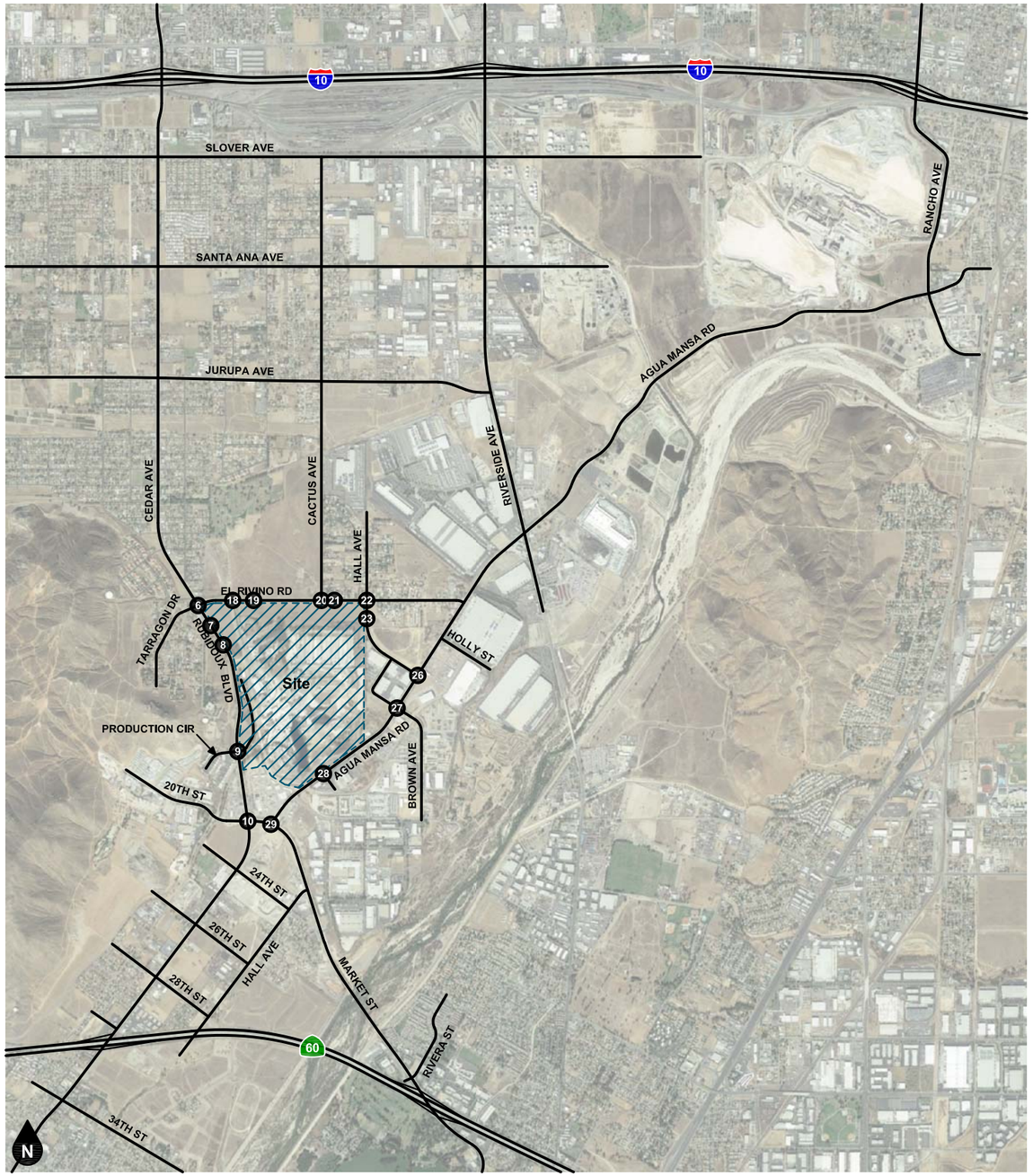
Figure 97
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 1A

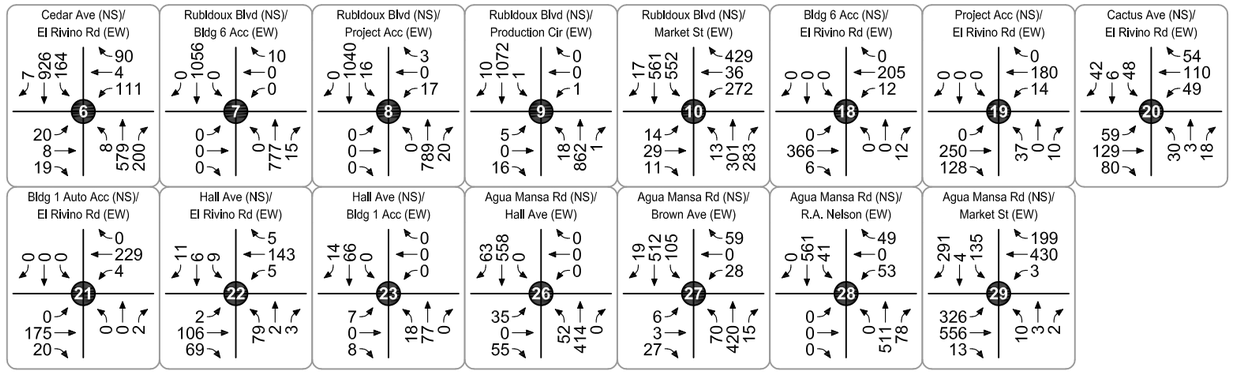




Legend
Study Intersection

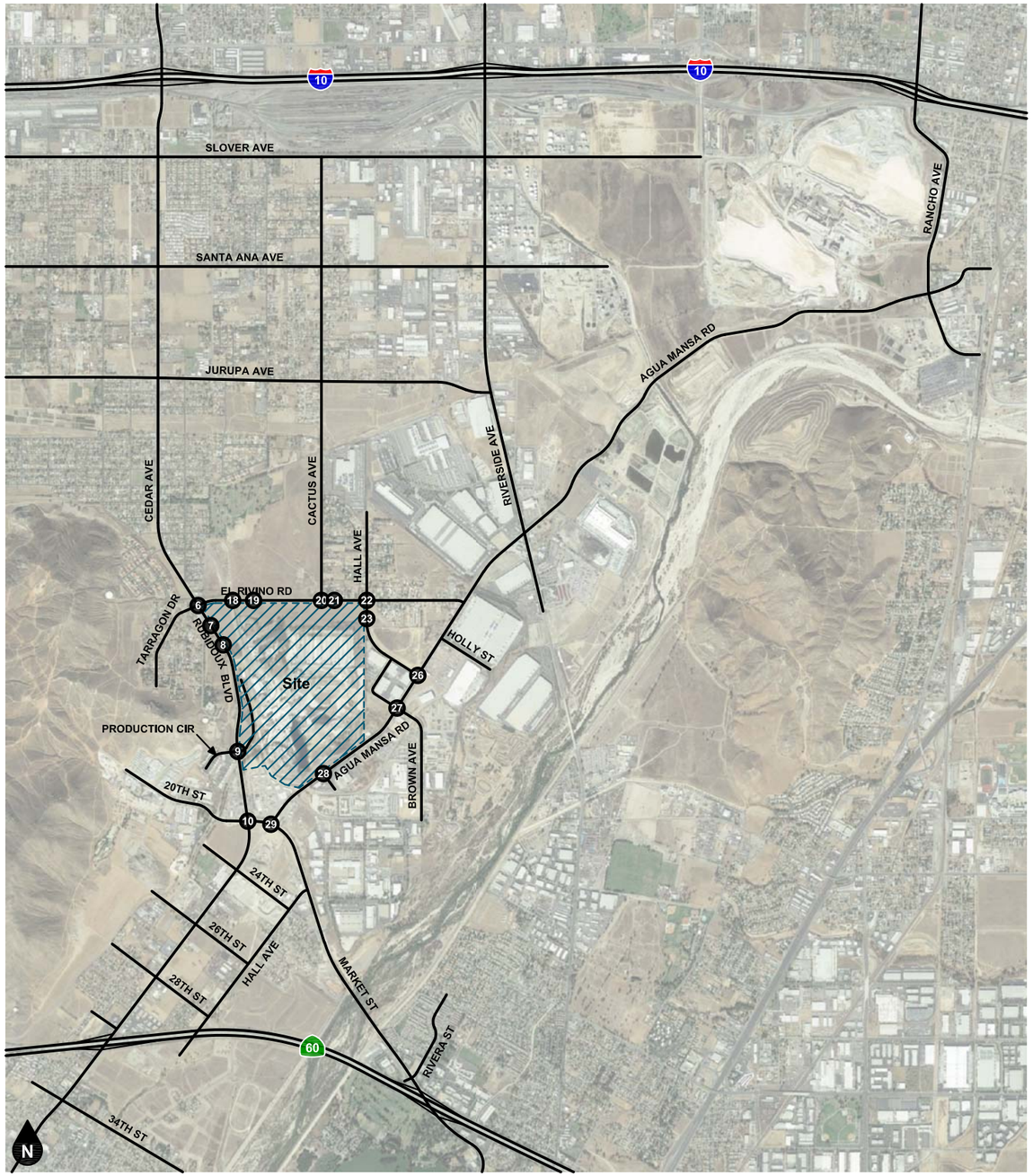
Figure 98
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 1A

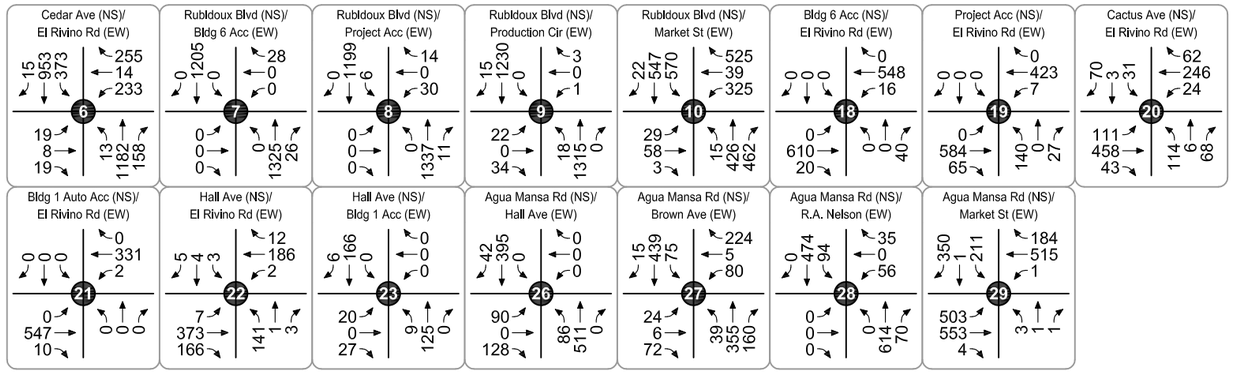




Legend
Study Intersection

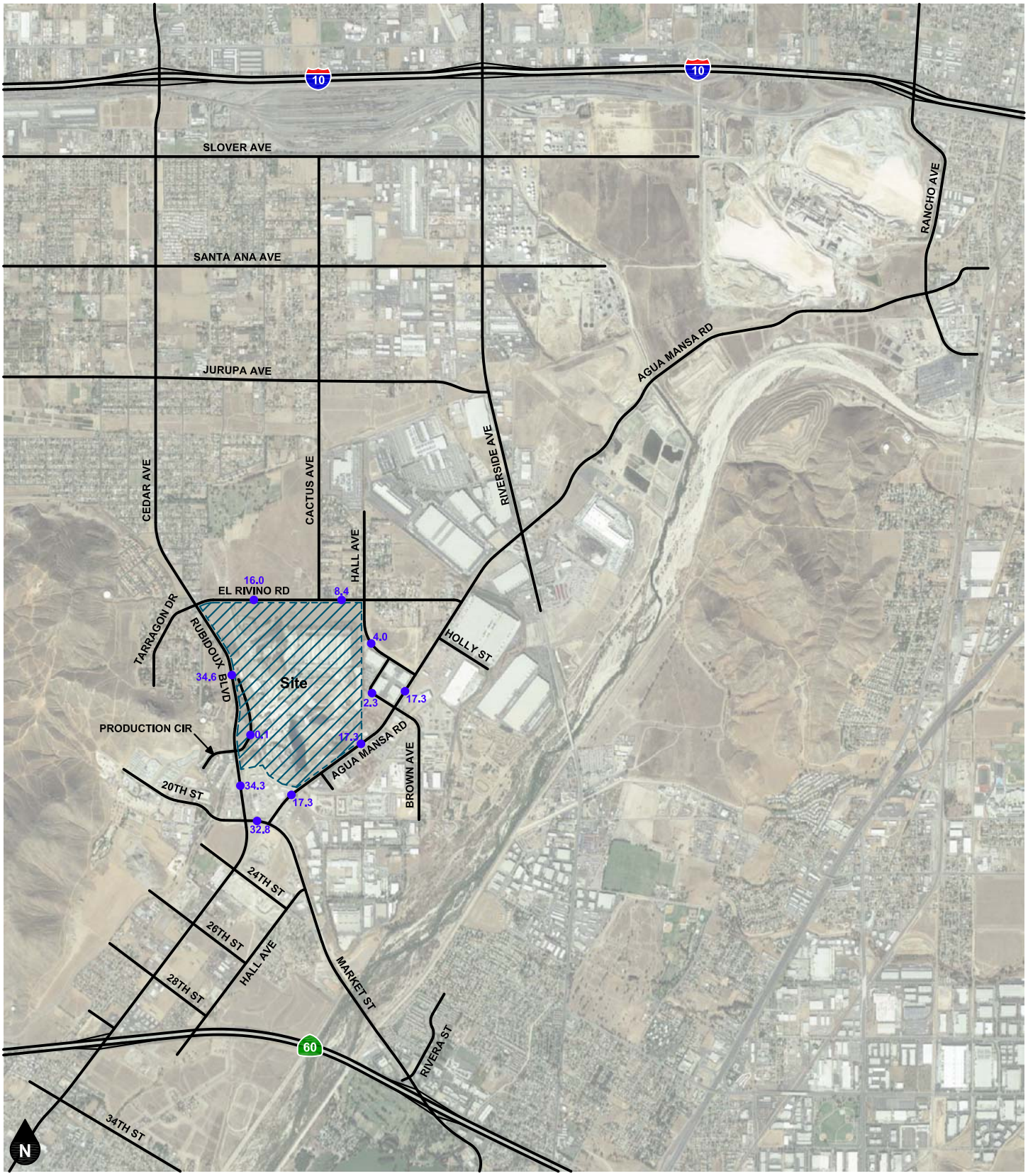
Figure 99
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 2A





Legend
Study Intersection

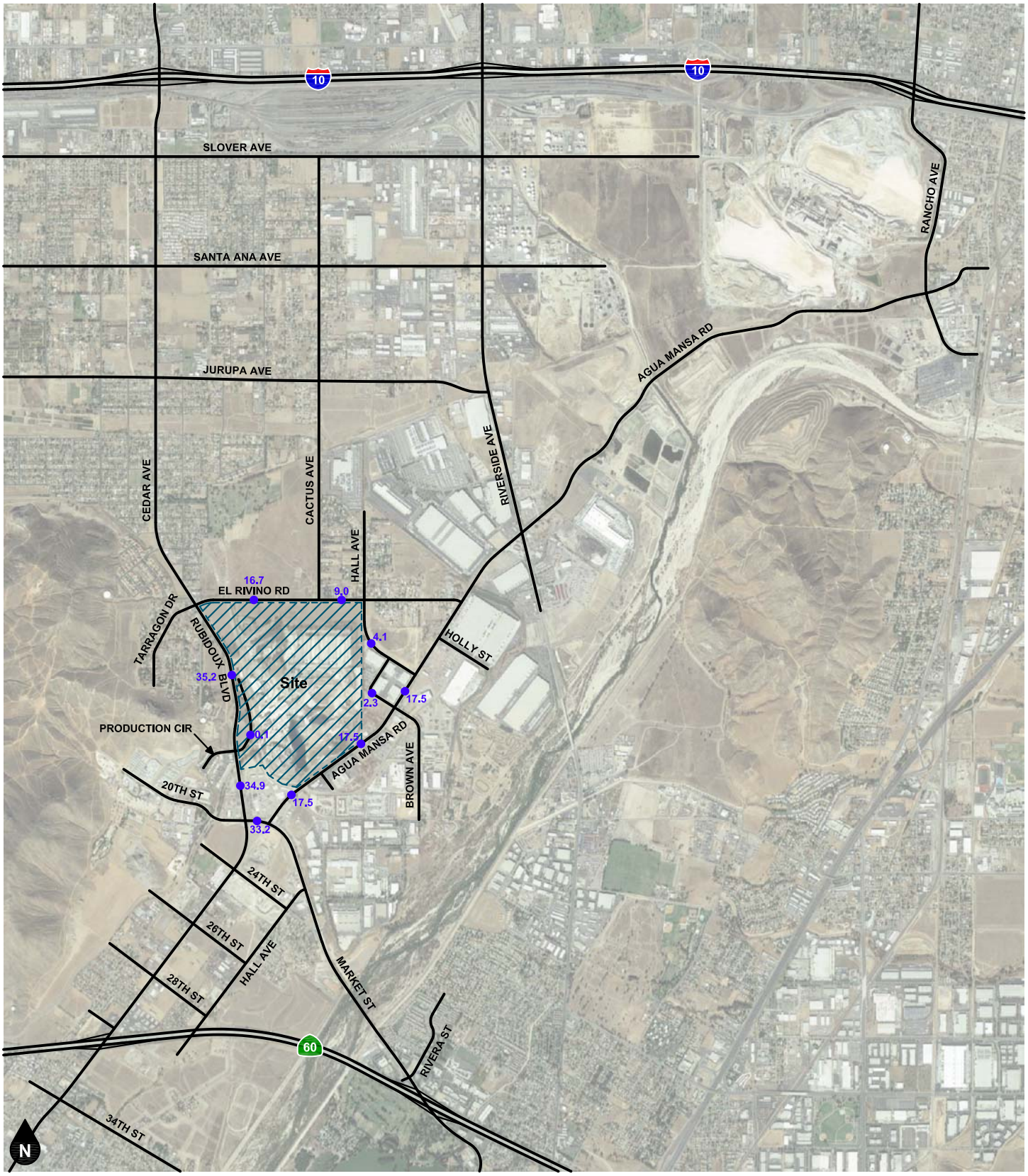
Figure 100
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 2A



Legend

●## Vehicles Per Day (1,000's)

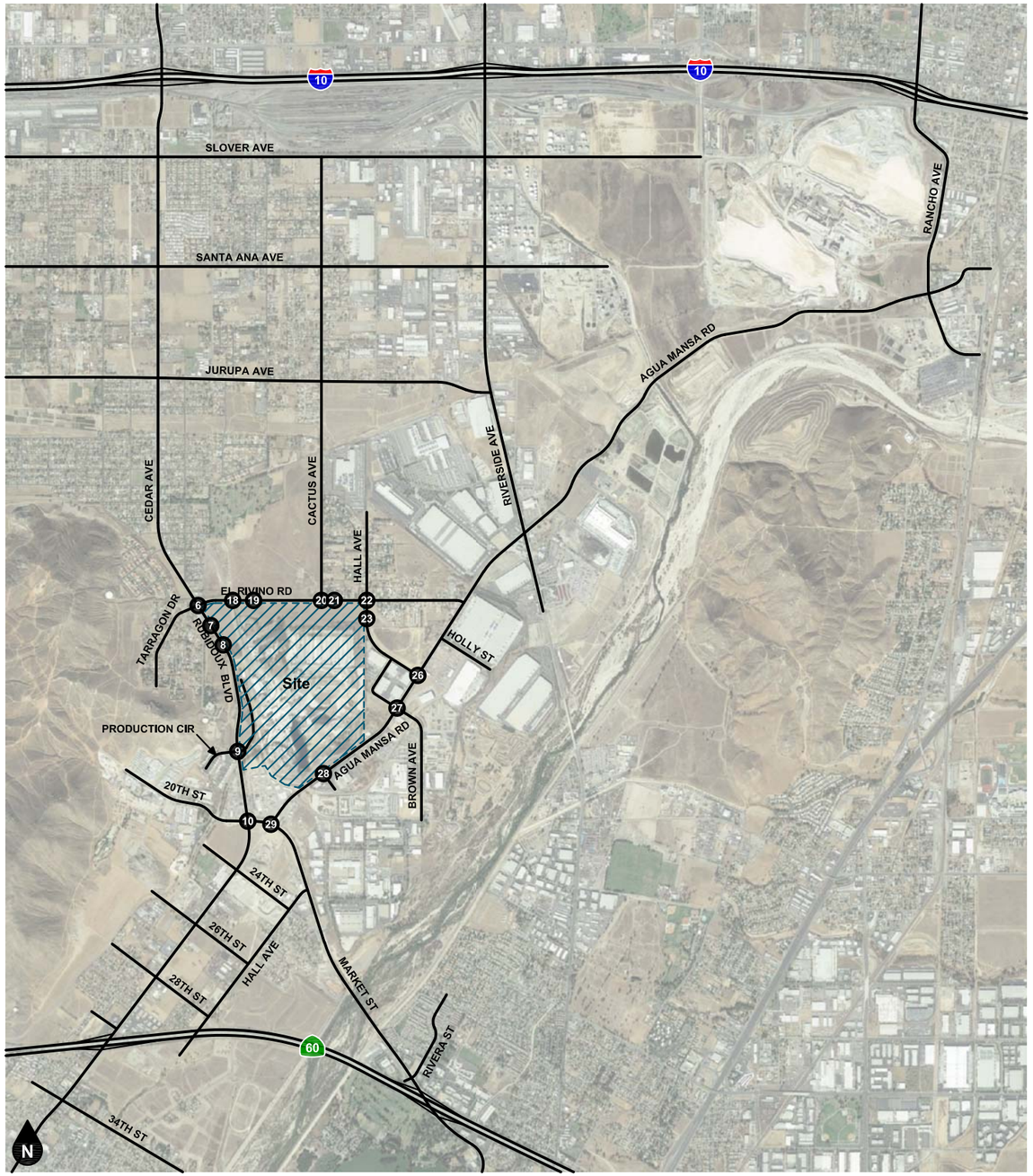
Figure 101
Opening Year (2020) With Project
Average Daily Traffic Volumes - Alternative 1A

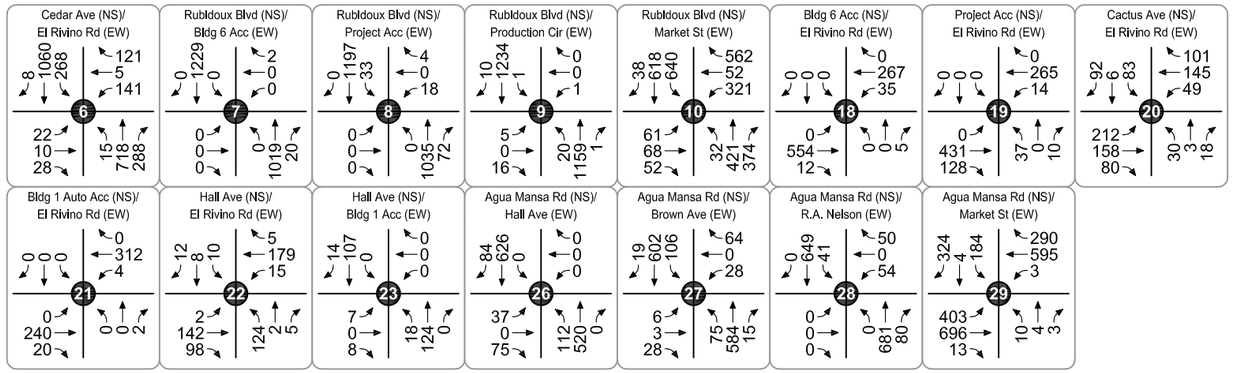


Legend

●## Vehicles Per Day (1,000's)

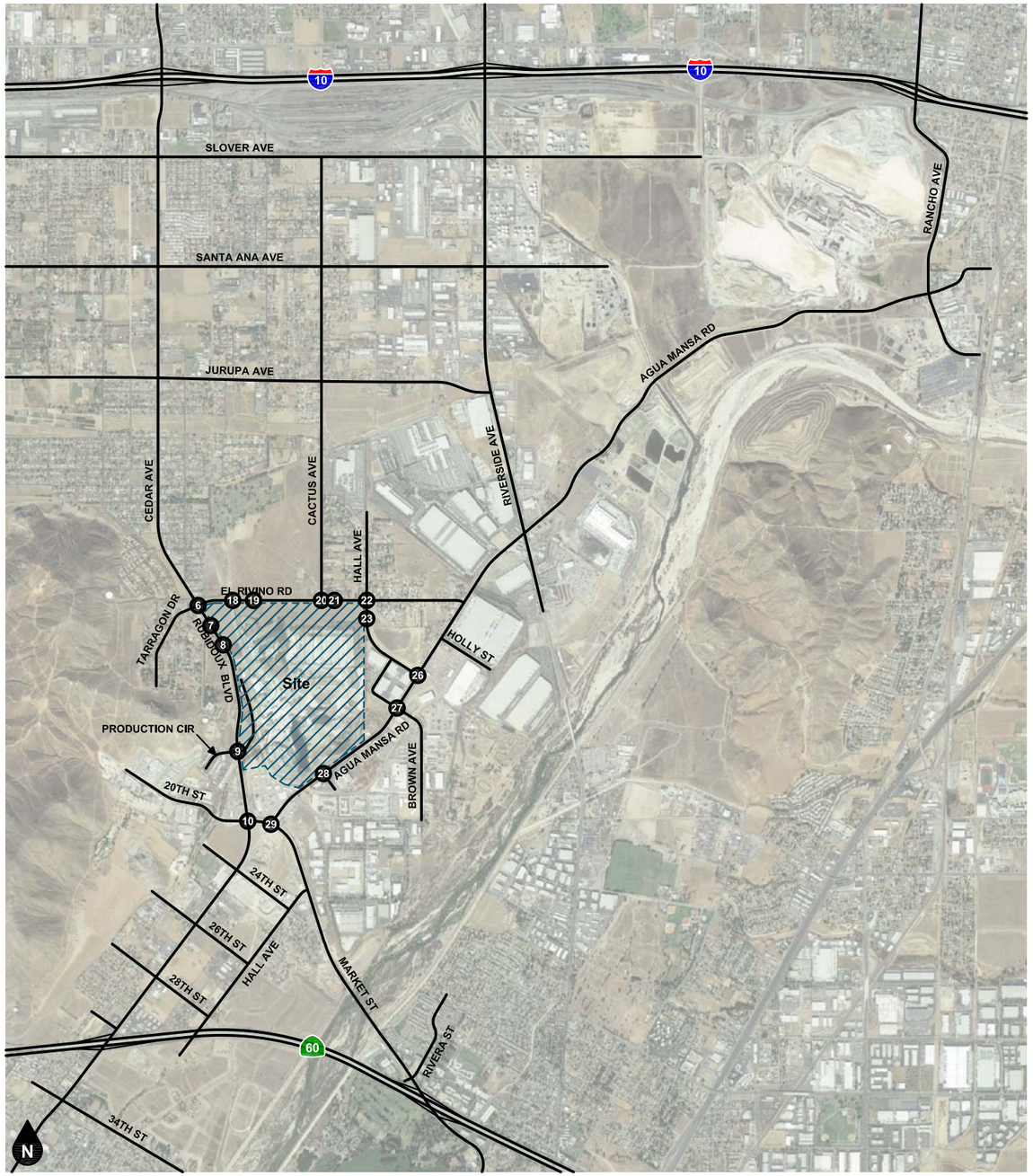
Figure 102
Opening Year (2020) With Project
Average Daily Traffic Volumes - Alternative 2A

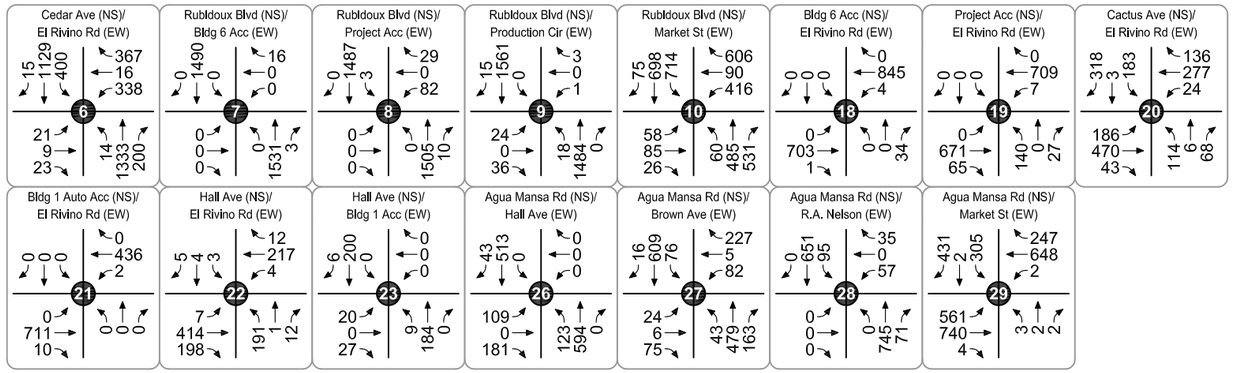




Legend
Study Intersection

Figure 103
Opening Year (2020) With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 1A

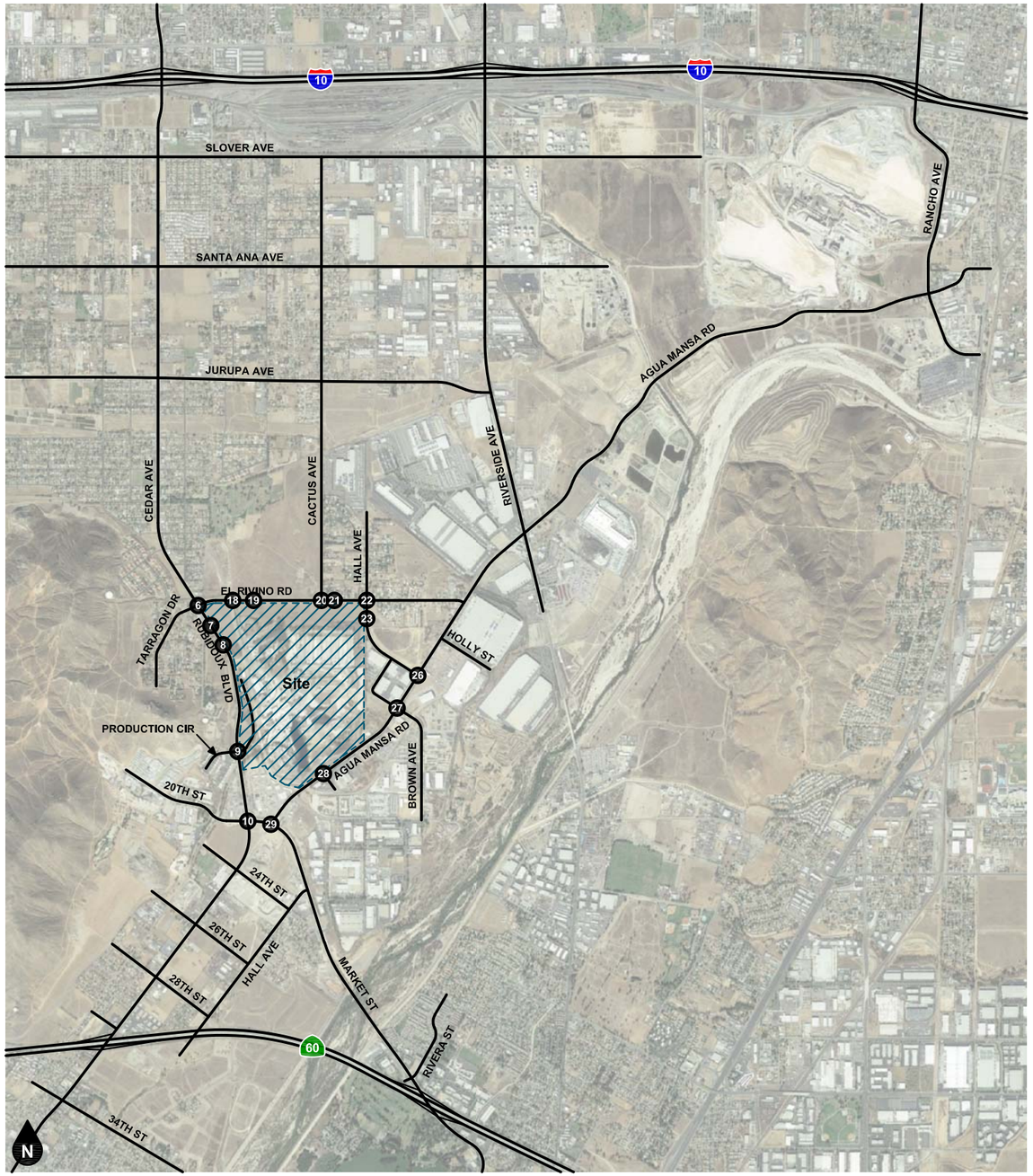


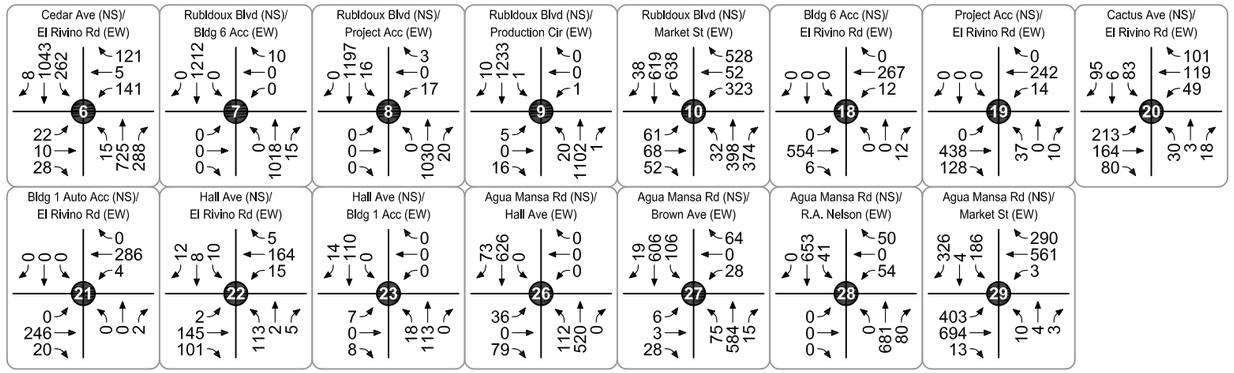


Legend

(#) Study Intersection

Figure 104
Opening Year (2020) With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 1A

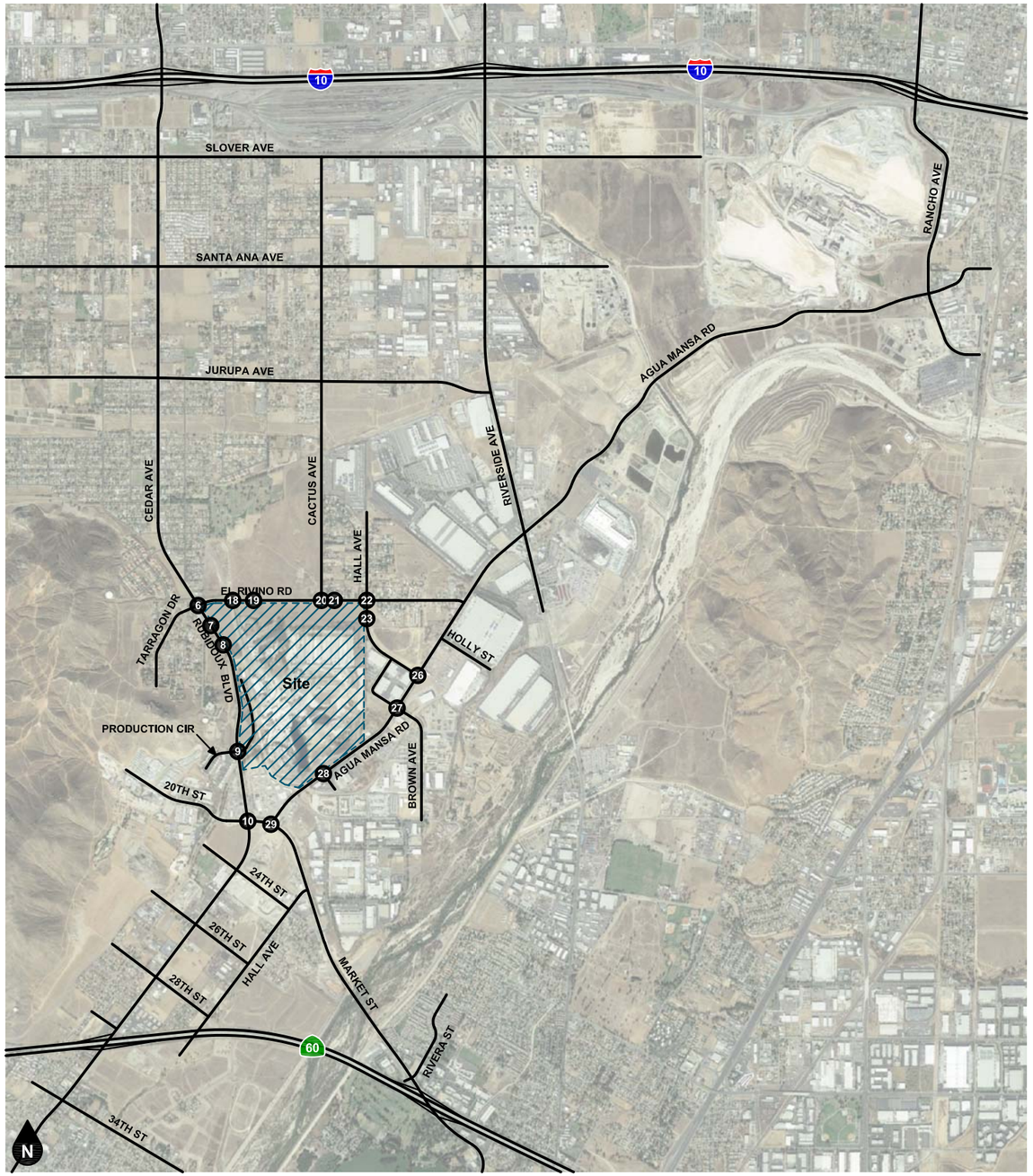




Legend

(#) Study Intersection

Figure 105
Opening Year (2020) With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 2A



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(#) Study Intersection

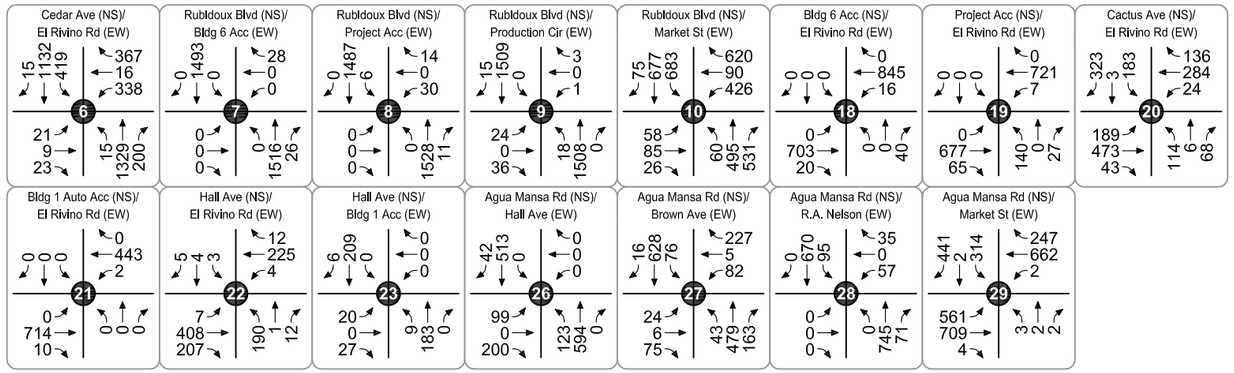
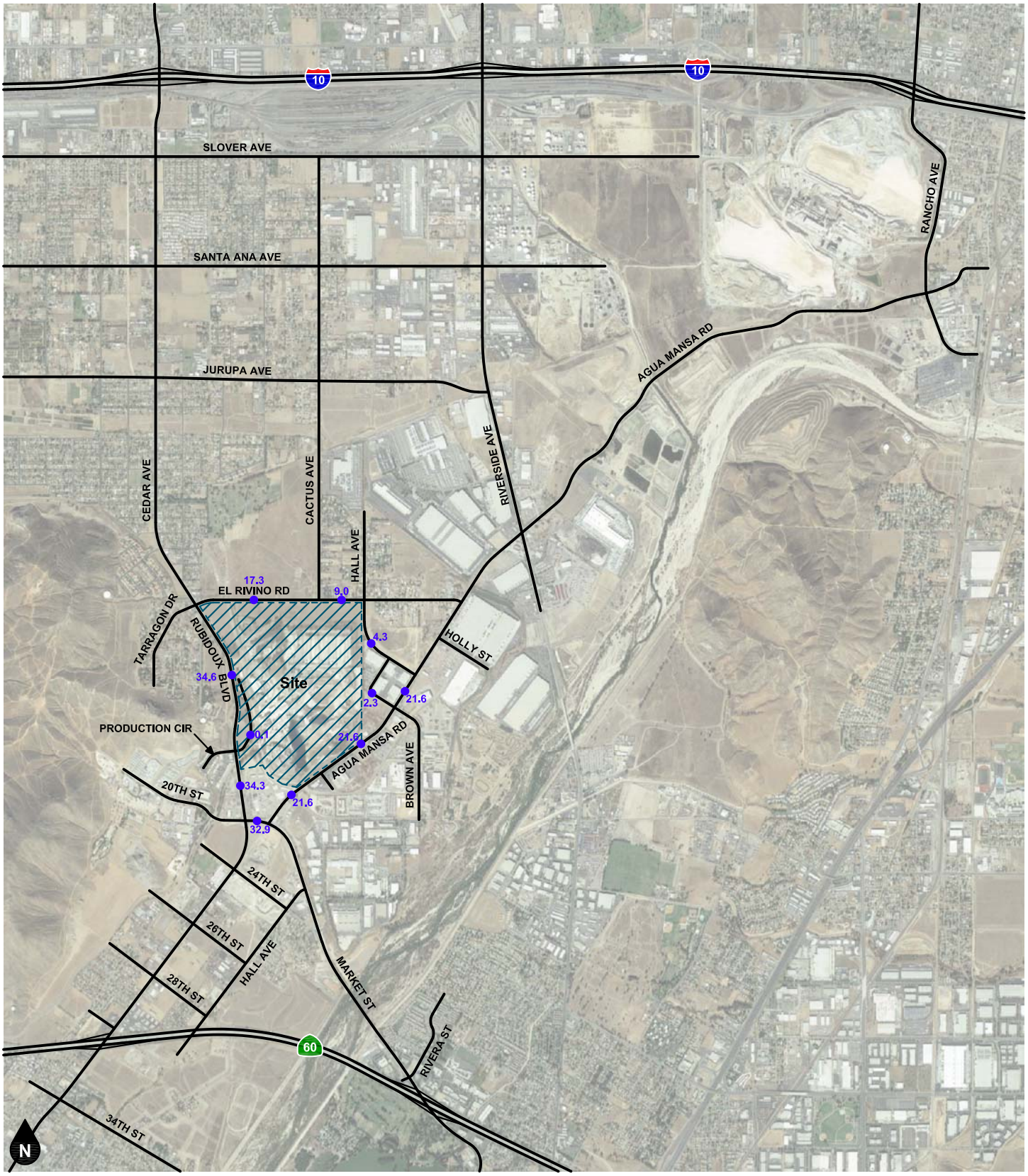


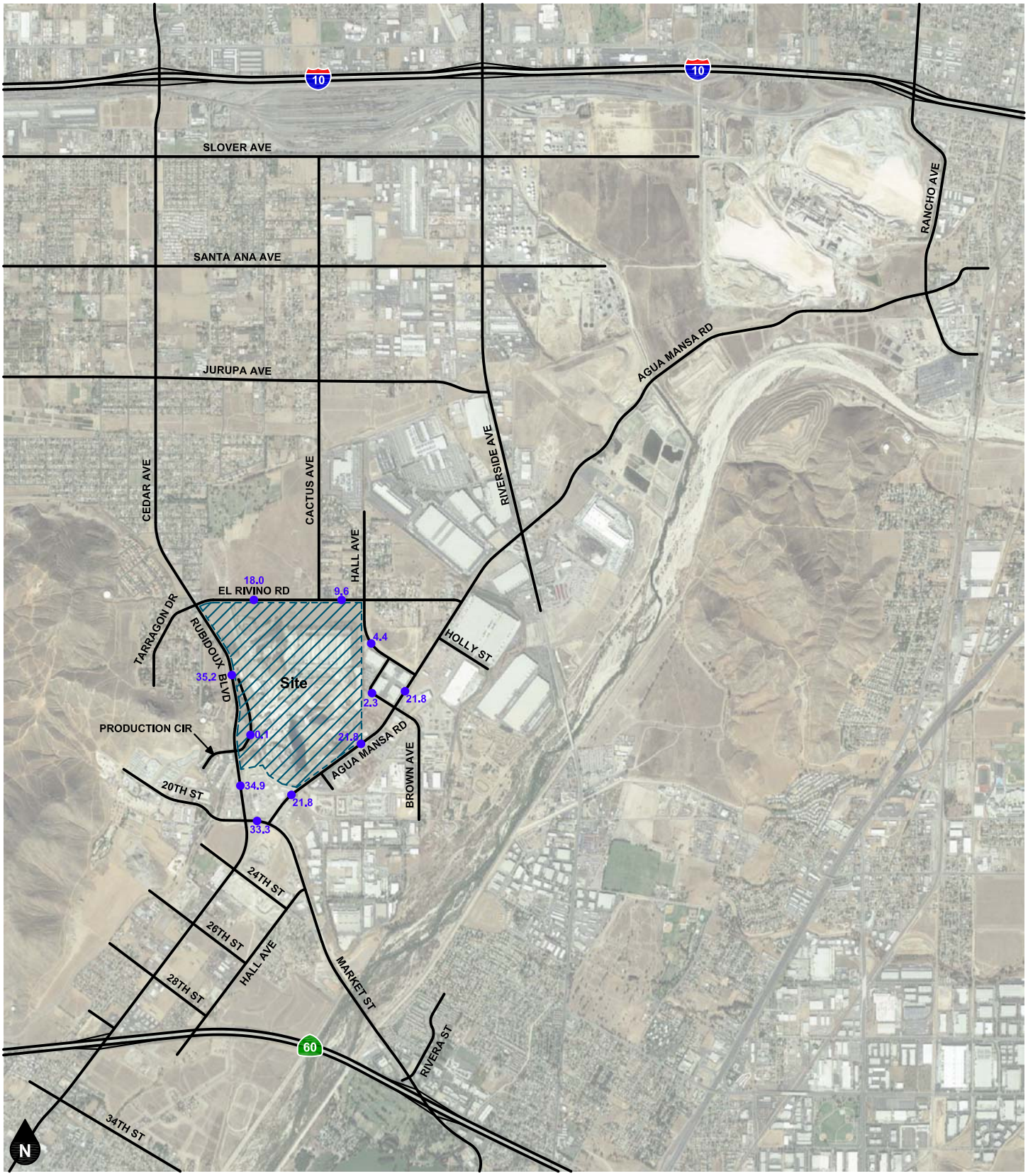
Figure 106
Opening Year (2020) With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 2A



Legend

●## Vehicles Per Day (1,000's)

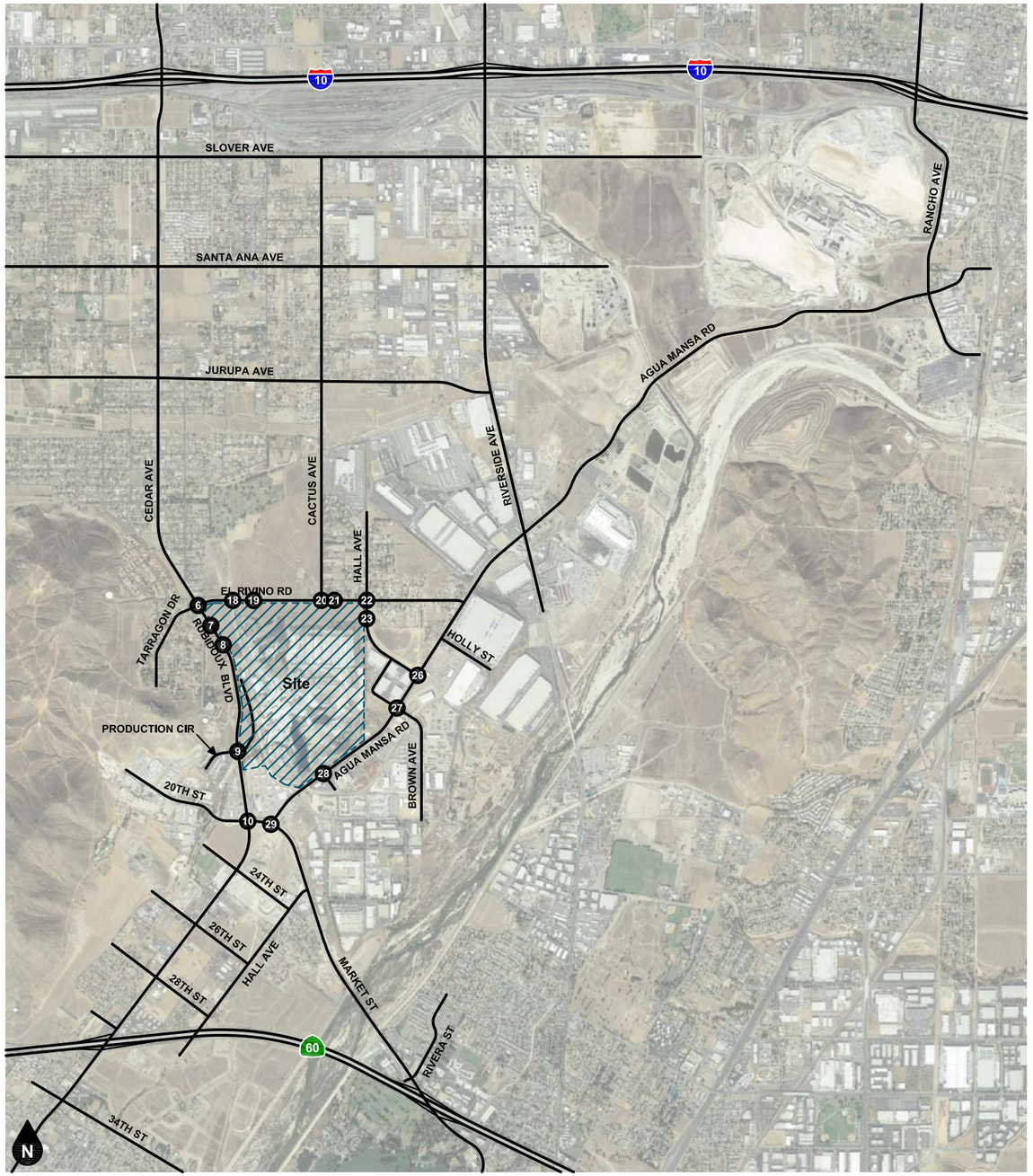
Figure 107
Year 2035 With Project
Average Daily Traffic Volumes - Alternative 1A

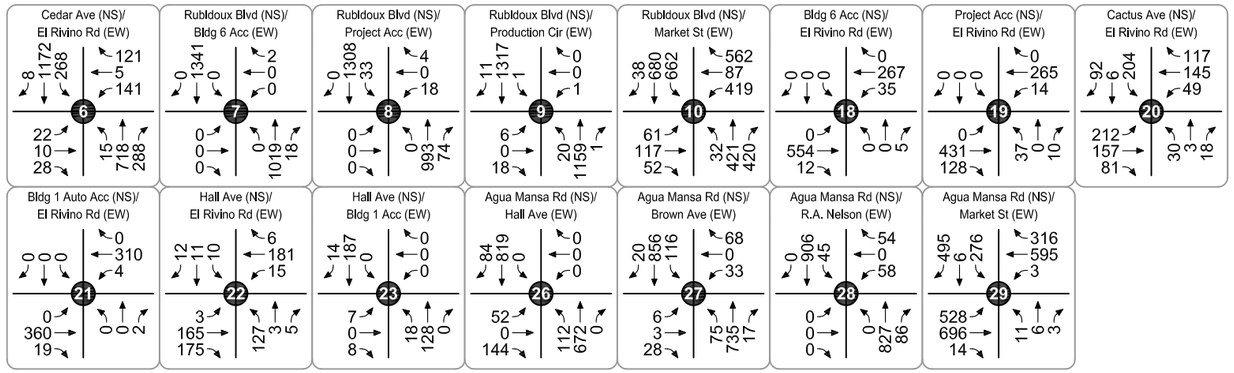


Legend

●## Vehicles Per Day (1,000's)

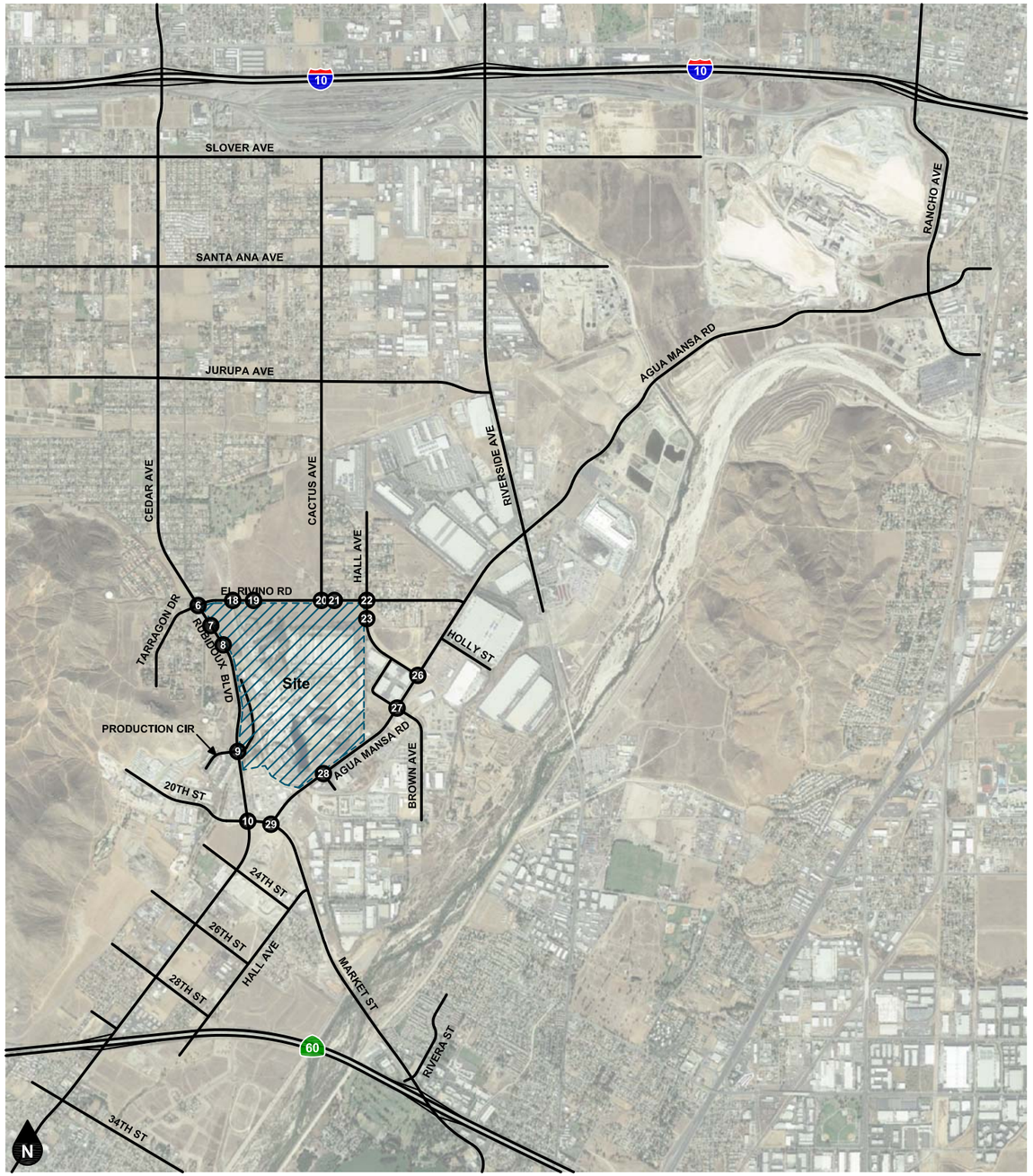
Figure 108
Year 2035 With Project
Average Daily Traffic Volumes - Alternative 2A

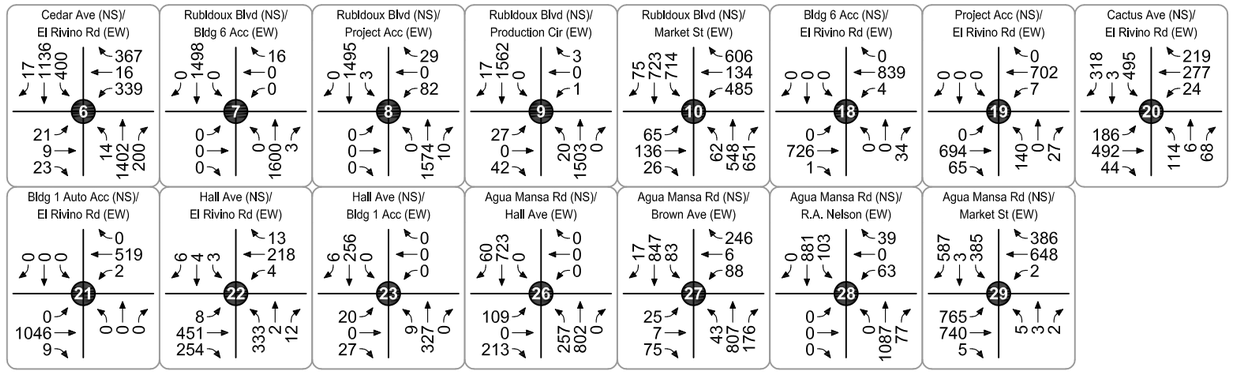




Legend
Study Intersection

Figure 109
Year 2035 With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 1A

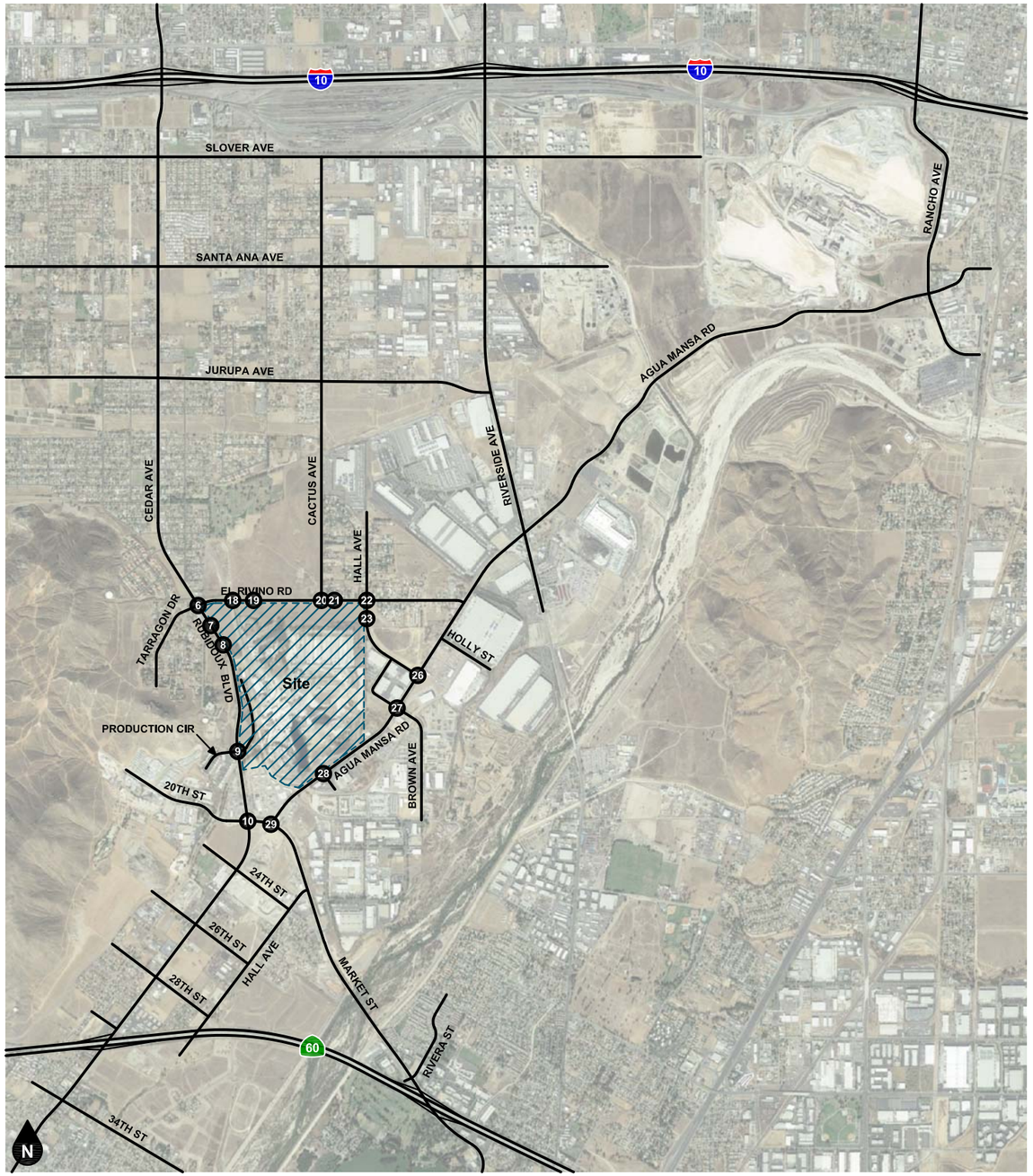


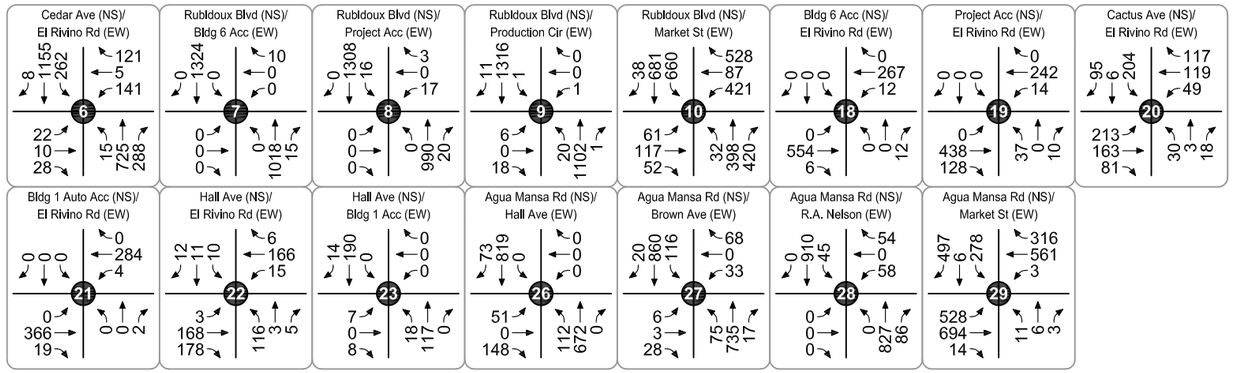


Legend

(#) Study Intersection

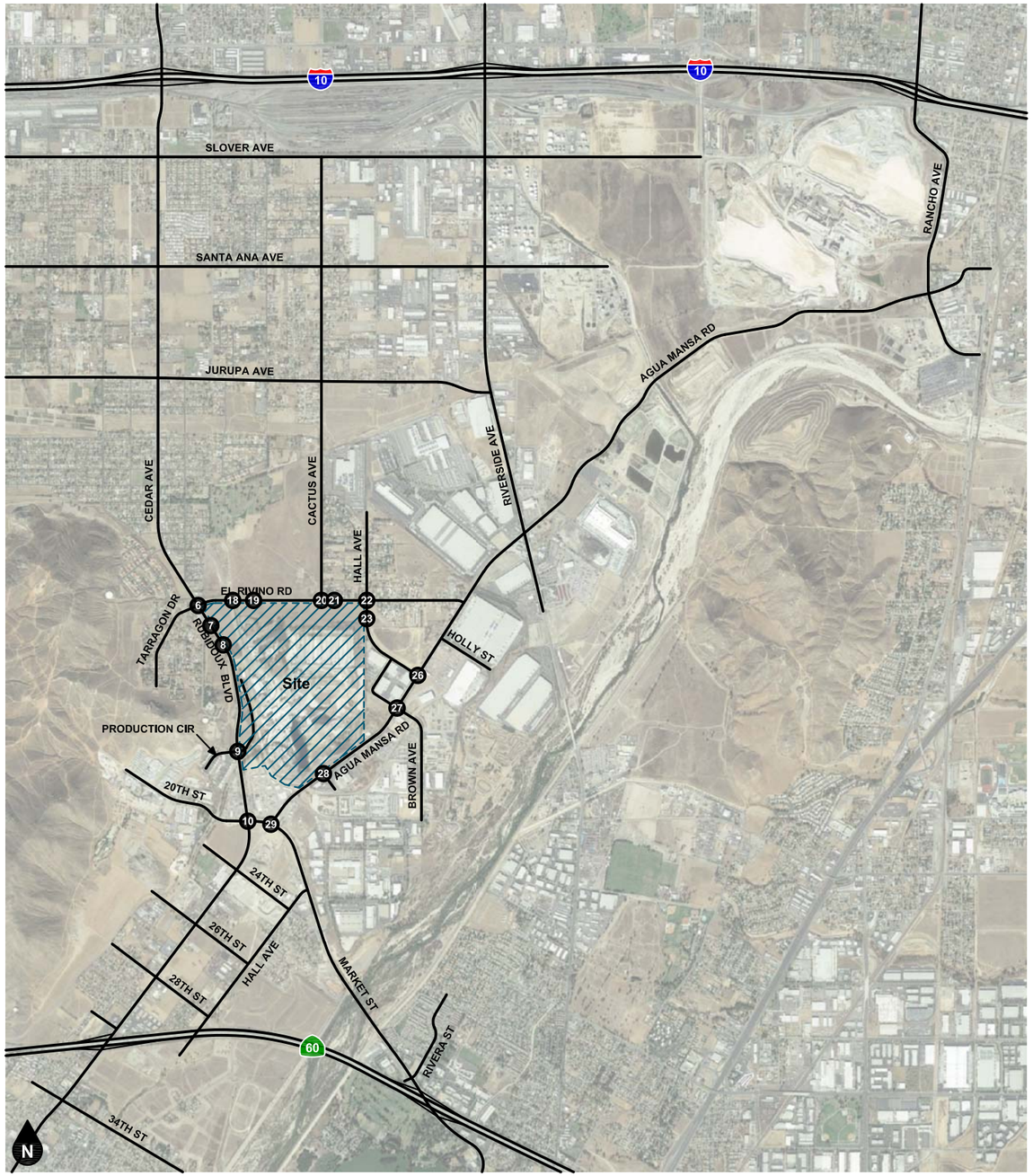
Figure 110
Year 2035 With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 1A

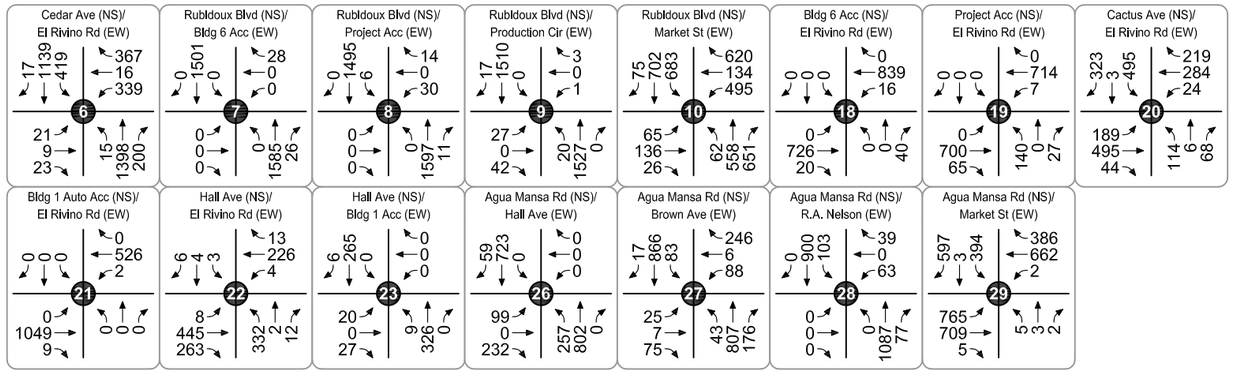




Legend
Study Intersection

Figure 111
Year 2035 With Project
AM Peak Hour Intersection Turning Movement Volumes - Alternative 2A





Legend
Study Intersection

Figure 112
Year 2035 With Project
PM Peak Hour Intersection Turning Movement Volumes - Alternative 2A

9. CONCLUSIONS

Site-specific circulation and access recommendations are depicted on Figure 113 for Alternative 1 and Alternative 2.

Site-specific circulation and access recommendations are depicted on Figure 114 for Alternative 1A and Alternative 2A.

All on-site and site-adjacent improvements, including traffic signing/striping and project driveways, should be constructed as approved by the City of Jurupa Valley Public Works Department.

Rubidoux Boulevard along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

Hall Avenue along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

El Rivino Road along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

Sufficient on-site parking shall be provided to meet City of Jurupa Valley parking code requirements.

The proposed project driveways shall be constructed in conformance with City of Jurupa Valley standards, including provisions for sight distance requirements.

Prior to the issuance of any building permits, the project applicant shall make required per unit fee payments associated with Western Riverside County Transportation Uniform Mitigation Fees (TUMF) and the City of Jurupa Valley Development Impact Fee (DIF).

El Rivino Road along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

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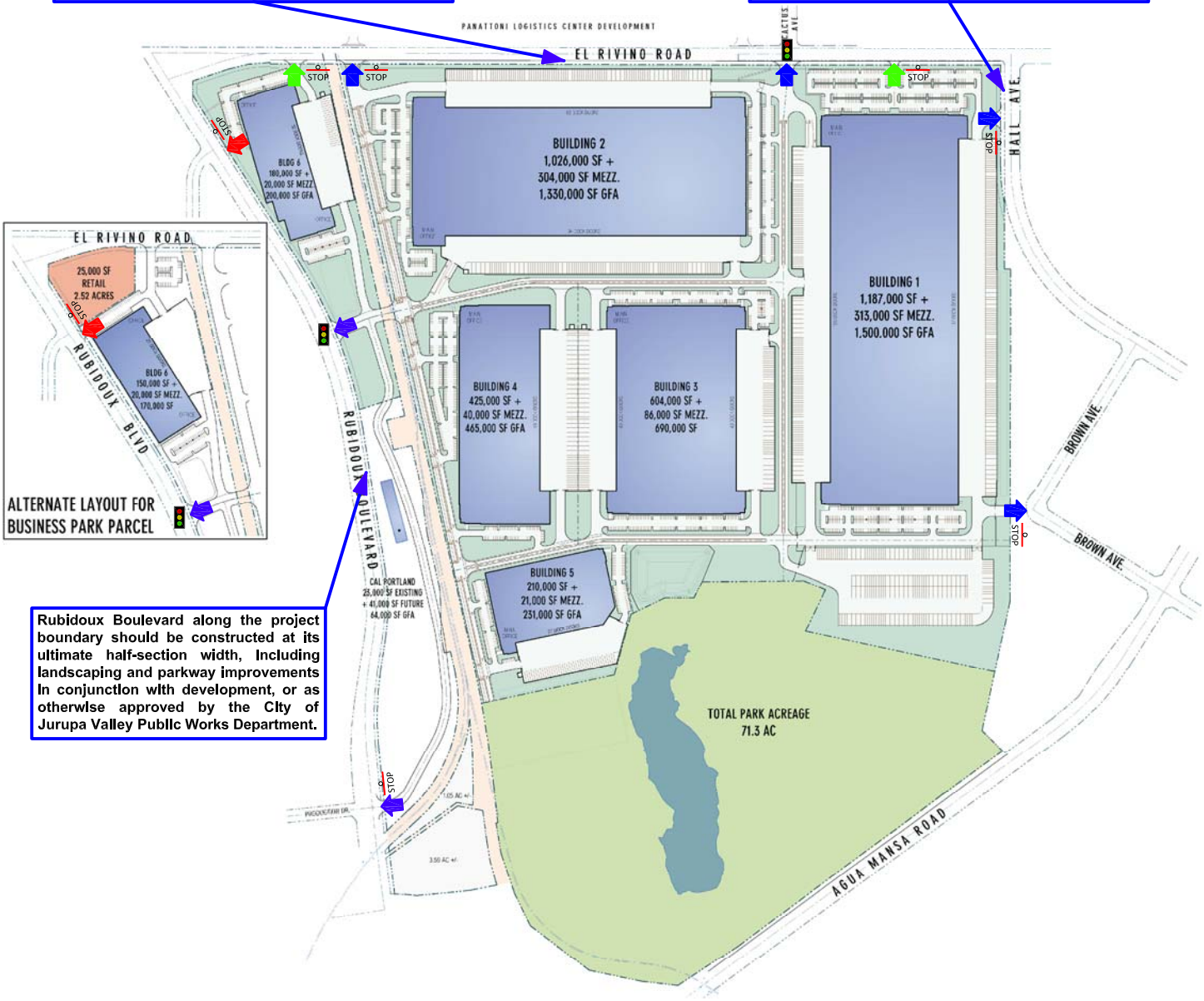

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The proposed project driveways shall be constructed in conformance with City of Jurupa Valley standards, including provisions for sight distance requirements.

Prior to the issuance of any building permits, the project applicant shall make required per unit fee payments associated with Western Riverside County Transportation Uniform Mitigation Fees (TUMF) and the City of Jurupa Valley Development Impact Fee (DIF).

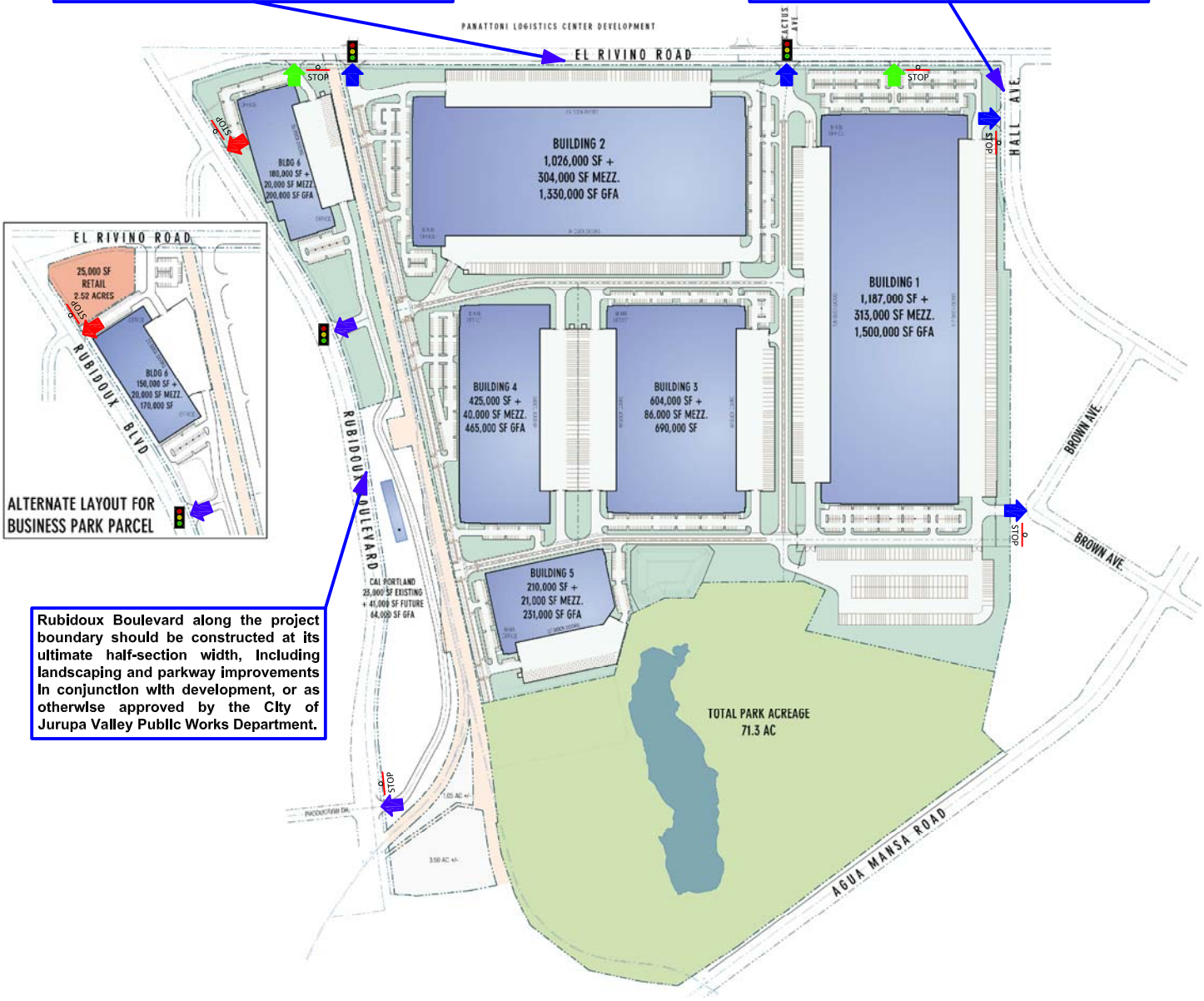
N

Legend
- Traffic Signal
- Stop Sign
- Full Access Driveway
- Right Turns In/Out Only Access Driveway
- Right Turns In/Out and Left Turns In Only Access Driveway

Figure 113
Circulation Recommendations - Alternative 1 & 2

El Rivino Road along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

Hall Avenue along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.



Rubidoux Boulevard along the project boundary should be constructed at its ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise approved by the City of Jurupa Valley Public Works Department.

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The proposed project driveways shall be constructed in conformance with City of Jurupa Valley standards, including provisions for sight distance requirements.

Prior to the issuance of any building permits, the project applicant shall make required per unit fee payments associated with Western Riverside County Transportation Uniform Mitigation Fees (TUMF) and the City of Jurupa Valley Development Impact Fee (DIF).

N

Legend
- Traffic Signal
- Stop Sign
- Full Access Driveway
- Right Turns In/Out Only Access Driveway
- Right Turns In/Out and Left Turns In Only Access Driveway

Figure 114
Circulation Recommendations - Alternative 1A & 2A

APPENDICES

Appendix A Glossary

Appendix B Scoping Agreement

Appendix C Volume Count Worksheets

Appendix D RivTAM Plots

Appendix E Future Growth Increment Worksheets

Appendix F Level of Service Worksheets

Appendix G Traffic Signal Warrant Worksheets

Appendix H Project Study Report for SR-60 / Rubidoux Boulevard Interchange Project

Appendix I Other Development Trip Distributions

Appendix J Merge / Diverge Worksheets

Appendix K SYNCHRO Worksheets

Appendix L Level of Service Worksheets – Alternative Analysis

Appendix M SYNCHRO Worksheets – Alternative Analysis

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT

Exhibit B
SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Jurupa Valley requirements for traffic impact analysis of the following project. The analysis must follow the standards adopted by the City and listed in the Riverside County Transportation Department's document *Traffic Study Guidelines* dated April 2008, and requirements identified by the City of Jurupa Valley Engineering Department.

Case No. MA16170

Related Cases – *(List all that apply; e.g., SP, PP, SDP, EIR, GPA, EIR, etc., Include City MA #.)*

Project Name: Agua Mansa Commerce Park Specific Plan

Project Address: East of Rubidoux Blvd between El Rivino Road, Agua Mansa Road, and Hall Ave

Project Description: Five high-cube warehouse distribution center buildings totaling 4,216,000 square feet, an approximately 71.3 acre regional park, 200,000 square feet of light industrial (alternative 1) or 180,000 square feet of light industrial and 25,000 square feet of commercial retail (alternative 2), and 64,000 square feet of research and development (for Cal Portland)

	Consultant	Developer
Name:	GANDDINI GROUP, INC.	CRESTMORE REDEVELOPMENT, LLC
Address:	550 Parkcenter Drive, Suite 202 Santa Ana, CA 92705	1805 Shea Center Drive, Suite 250 Highland Ranch, CO 80129
Telephone:	1-714-795-3100 x 104 – Bryan Crawford	1-720-317-2025 – Erik Zitek
Fax:		
Email:	bryan@ganddini.com	ezitek@viridianpartners.com

A. Trip Generation Source: (ITE 10th Edition, 2017 and Fontana Truck Trip Generation Study {modified})

Current GP Land Use	HI	Proposed Land Use	HI
Current Zoning	M-H	Proposed Zoning	M-H

Alternative 1 (PCE)

	Current Trip Generation			*Proposed Trip Generation*		
Period	*In*	*Out*	*Total*	*In*	*Out*	*Total*
AM Trips				581	165	746
PM Trips				231	637	868
Daily Trips				5,688	5,688	11,376

Alternative 2 (PCE)

	Current Trip Generation			*Proposed Trip Generation*		
Period	*In*	*Out*	*Total*	*In*	*Out*	*Total*
AM Trips				479	178	657
PM Trips				286	588	874
Daily Trips				6,588	6,588	13,176

Internal Trip Allowance ☐ Yes ☒ No 0 % Trip Discount

Pass-By Trip Allowance ☐ Yes ☒ No 0 % Trip Discount

A pass-by trip discount may be allowed for appropriate land uses. Justification for trip discounts must be provided. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N _____% S _____% E _____% W _____%
(See attached exhibits for detailed assignment of cars and trucks – based on RivTAM Select Zone Model Run and refined by City of Jurupa Valley Engineering Department staff.)

C. Background Traffic:

Project Build-out Year: 2020 Annual Ambient Growth Rate: Based on RivTAM interpolation
Phase Year(s) N/A
(Provide realistic opening year, considering time needed for approvals and construction.)

Other area projects or issues to be analyzed: Other Development may be identical to projects utilized in the previous version of the traffic impact analysis dated May 16, 2018, and to be confirmed by City of Jurupa Valley Planning Department. Developments in adjacent cities of Rialto, Riverside, Fontana, Colton, and County of San Bernardino will be identical to the traffic impact analysis dated May 16, 2018.

Model/Forecast methodology: Existing + Growth + Cumulative Projects

D. Study intersections: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies. Intersections to be analyzed using HCM 2010 methodology. Intersections along existing and future signalized corridors to be analyzed using microsimulation analysis. When using microsimulation program and for exporting volumes for air and noise impact analyses, volumes are to be analyzed with actual auto/truck volumes using truck percentages and NOT converted into Passenger Car Equivalents {PCEs} to maintain accurate simulation results.)*

1. Cedar Avenue (NS) at I-10 Freeway WB Ramps (EW)
2. Cedar Avenue (NS) at I-10 Freeway EB Ramps (EW)
3. Cedar Avenue (NS) at Slover Avenue (EW)
4. Cedar Avenue (NS) at Santa Ana Avenue (EW)
5. Cedar Avenue (NS) at Jurupa Avenue (EW)
6. Cedar Avenue / Rubidoux Boulevard (NS) at Tarragona Drive / El Rivino Road (EW)
7. Rubidoux Boulevard (NS) at Building 6 North Access (EW)
8. Rubidoux Boulevard (NS) at Building 6 South Access (EW)
9. Rubidoux Boulevard (NS) at Production Circle / Project Access (EW)
10. Rubidoux Boulevard (NS) at 20th Street / Market Street (EW)
11. Rubidoux Boulevard (NS) at 24th Street (EW)
12. Rubidoux Boulevard (NS) at 26th Avenue (EW)
13. Rubidoux Boulevard (NS) at 28th Street (EW)
14. Rubidoux Boulevard (NS) at 30th Street / SR-60 Freeway WB Off-Ramp (EW)
15. Rubidoux Boulevard (NS) at SR-60 Freeway EB Off-Ramp (EW)
16. Rubidoux Boulevard (NS) at SR-60 Freeway EB On-Ramp (EW)
17. Rubidoux Boulevard (NS) at 34th Street (EW)
18. Building 6 Access (NS) at El Rivino Road (EW)
19. Project Access (NS) at El Rivino Road (EW)
20. Cactus Avenue /Project Access (NS) at El Rivino Road (EW)
21. Building 1 Auto Access (NS) at El Rivino Road (EW)
22. Hall Avenue (NS) at El Rivino Road (EW)
23. Hall Avenue (NS) at Building 1 Access (EW)
24. Agua Mansa Road (NS) at El Rivino Road (EW)
25. Agua Mansa Road (NS) at Holly Place (EW)
26. Agua Mansa Road (NS) at Hall Avenue (EW)
27. Agua Mansa Road (NS) at Brown Avenue (EW)
28. Agua Mansa Road (NS) at Regional Park Access (EW)
29. Agua Mansa Road (NS) at Market Street (EW)
30. Market Street (NS) at Hall Avenue (EW)
31. Market Street (NS) at Rivera Street (EW)
32. Market Street (NS) at SR-60 Freeway WB Ramps (EW)

33. Market Street (NS) at SR-60 Freeway EB Ramps (EW)
34. Riverside Avenue (NS) at I-10 Freeway WB Ramps (EW)
35. Riverside Avenue (NS) at I-10 Freeway EB Ramps (EW)
36. Riverside Avenue (NS) at Slover Avenue (EW)
37. Riverside Avenue (NS) at Santa Ana Avenue (EW)
38. Riverside Avenue (NS) at Jurupa Avenue (EW)
39. Riverside Avenue (NS) at Agua Mansa Road (EW)
40. Rancho Avenue (NS) at Agua Mansa Road (EW)

E. Study Roadway Segments: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies. Roadway segment volume-to-capacity analysis for roadway segments within the City of Jurupa Valley only.)*

1. Cedar Avenue, I-10 Freeway EB Ramps to Slover Avenue
2. Cedar Avenue, Slover Avenue to Santa Ana Avenue
3. Cedar Avenue, Santa Ana Avenue to Jurupa Avenue
4. Cedar Avenue, Jurupa Avenue to El Rivino Road
5. Rubidoux Boulevard, El Rivino Road to Production Circle
6. Rubidoux Boulevard, Production Circle to 20th Street
7. Rubidoux Boulevard, 20th Street to 24th Street
8. Rubidoux Boulevard, 24th Street to 26th Street
9. Rubidoux Boulevard, 26th Street to 28th Street
10. Rubidoux Boulevard, 28th Street to 30th Street / SR-60 Freeway WB Off-Ramp
11. El Rivino Road, Cedar Avenue to Cactus Avenue
12. El Rivino Road, Cactus Avenue to Hall Avenue
13. El Rivino Road, Hall Avenue to Agua Mansa Road
14. Hall Avenue, El Rivino Road to Agua Mansa Road
15. Market Street, Rubidoux Boulevard to Agua Mansa Road
16. Market Street, Agua Mansa Road to Hall Avenue
17. Market Street, Hall Avenue to Rivera Street
18. Market Street, Rivera Street to SR-60 Freeway WB Ramps
19. Agua Mansa Road, Market Street to Brown Avenue
20. Agua Mansa Road, Brown Avenue to Hall Avenue,
21. Agua Mansa Road, Hall Avenue to El Rivino Road
22. Agua Mansa Road, El Rivino Road to Riverside Avenue
23. Agua Mansa Road, Riverside Avenue to Rancho Avenue
24. Riverside Avenue, I-10 Freeway EB Ramps to Slover Avenue
25. Riverside Avenue, Slover Avenue to Santa Ana Avenue
26. Riverside Avenue, Santa Ana Avenue to Jurupa Avenue
27. Riverside Avenue, Jurupa Avenue to Riverside Avenue

G. Caltrans Analyses:

Per comments from Caltrans and adjacent jurisdictions, the following analyses are required:

Ramp Merge/Diverge Analyses:
1. SR-60 Westbound Off-Ramp at Market Street
2. SR-60 Westbound On-Ramp at Market Street
3. SR-60 Eastbound Off-Ramp at Market Street
4. SR-60 Eastbound On-Ramp at Market Street
5. SR-60 Westbound Off-Ramp at Rubidoux Boulevard
6. SR-60 Westbound On-Ramp at Rubidoux Boulevard
7. SR-60 Eastbound Off-Ramp at Rubidoux Boulevard
8. SR-60 Eastbound On-Ramp at Rubidoux Boulevard
9. I-10 Westbound Off-Ramp at Cedar Avenue
10. I-10 Westbound On-Ramp at Cedar Avenue
11. I-10 Eastbound Off-Ramp at Cedar Avenue
12. I-10 Eastbound On-Ramp at Cedar Avenue
13. I-10 Westbound Off-Ramp at S. Riverside Avenue

14. I-10 Westbound On-Ramp at S. Riverside Avenue
15. I-10 Eastbound Off-Ramp at S. Riverside Avenue
16. I-10 Eastbound On-Ramp at S. Riverside Avenue

Freeway Mainline Analyses:
SR-60 Westbound east of Market Street
SR-60 Westbound between Market Street and Rubidoux Boulevard
SR-60 Westbound between Rubidoux Boulevard and Valley Way
SR-60 Eastbound east of Market Street
SR-60 Eastbound between Market Street and Rubidoux Boulevard
SR-60 Eastbound between Rubidoux Boulevard and Valley Way

G. Other Jurisdictional Impacts:

☒ Yes ☐ No

Is this project within another City's Sphere of Influence or one-mile radius of another City's boundaries?

If so, name of City Jurisdiction: Fontana, Rialto, Riverside, County of San Bernardino

F. Site Plan (See attached.) *Verify that latest version is used for site access and trip assignments.*

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by the City Engineering Department)
Existing, Existing Plus Project, Opening Year (2020) Without Project, Opening Year (2020) With Project, Year 2035 Without Project, and Year 2035 With Project. - Alternatives 1 and 2

RivTAM GPU has been acquired from LSA Associates for analysis.

Synchro analysis for Rubidoux Boulevard from El Rivino Road to 34th Street, El Rivino Road from Rubidoux Boulevard to Agua Mansa Road, and Agua Mansa Road from proposed traffic signal north of El Rivino Road to Market Street – Year 2020 and Year 2035 With Project scenarios only. Note that Synchro analyses are to be conducted using actual auto and truck volumes and NOT volumes converted to PCEs. Also Note that the use of Right Turn Overlaps can only be at locations where conflicting U-turn movements are not allowed. If U-turn movements are necessary, RTOs will not be allowed.

(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of Counts:

Traffic counts from the latest version of this traffic impact analysis dated May 16, 2018 will be increased by an annual growth rate of 1% for passenger vehicle and truck classification. These include 3-hour AM peak-period, 2-hour midday, and 3-hour PM peak-period classification counts for intersections within and on the border of the City of Jurupa Valley and 2-hour AM and 2-hour PM classification counts for intersections outside of the city limits. Midday day counts are required to determine what traffic signal timings will required outside of the AM and PM peak periods.

Roadway segment counts to be utilized from the latest version of this traffic impact analysis dated May 16, 2018, and shall be classification counts for a two-day period within the City of Jurupa Valley and at least one day outside of the city limits.

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Fees are collected through the Planning Department as part of the planning application fees. Contact the Planning Department for a schedule of fees. City staff will not process the Scoping Agreement prior to receipt of the applicable fees.**

Proposed by:

	9/7/18		9-12-18
Consultant's Representative	Date	City of Jurupa Valley	Date

Approved Scoping Agreement:

Scoping Agreement Submitted on 7/5/17

Revised on 9/7/18

Table 1

Project Trip Generation Building 1[1]

Descriptor	Quantity	Units[2]	Type of Vehicle					Total
			Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	
Land Use: High Cube	1,500.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			1,302	128	184	487	799	2,101
Morning Peak Hour								
Inbound			56	6	8	21	35	91
Outbound			19	2	3	7	12	31
Total			75	8	11	28	47	122
Evening Peak Hour								
Inbound			28	3	4	10	17	45
Outbound			65	6	9	24	39	104
Total			93	9	13	34	56	149
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			1,302	192	368	1,461	2,021	3,323
Morning Peak Hour								
Inbound			56	9	16	63	88	144
Outbound			19	3	6	21	30	49
Total			75	12	22	84	118	193
Evening Peak Hour								
Inbound			28	5	8	30	43	71
Outbound			65	9	18	72	99	164
Total			93	14	26	102	142	235

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 2

Project Trip Generation Building 2[1]

Descriptor	Quantity	Units[2]	Type of Vehicle					Total
			Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	
Land Use: High Cube	1,330.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			1,154	113	163	432	708	1,862
Morning Peak Hour								
Inbound			49	5	7	18	30	79
Outbound			16	2	2	6	10	26
Total			65	7	9	24	40	105
Evening Peak Hour								
Inbound			25	2	3	9	14	39
Outbound			58	6	8	22	36	94
Total			83	8	11	31	50	133
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			1,154	170	326	1,296	1,792	2,946
Morning Peak Hour								
Inbound			49	8	14	54	76	125
Outbound			16	3	4	18	25	41
Total			65	11	18	72	101	166
Evening Peak Hour								
Inbound			25	3	6	27	36	61
Outbound			58	9	16	66	91	149
Total			83	12	22	93	127	210

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 3

Project Trip Generation Building 3[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	690.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			599	59	84	224	367	966
Morning Peak Hour								
Inbound			26	3	4	10	17	43
Outbound			9	1	1	3	5	14
Total			35	4	5	13	22	57
Evening Peak Hour								
Inbound			13	1	2	5	8	21
Outbound			30	3	4	11	18	48
Total			43	4	6	16	26	69
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			599	89	168	672	929	1,528
Morning Peak Hour								
Inbound			26	5	8	30	43	69
Outbound			9	2	2	9	13	22
Total			35	7	10	39	56	91
Evening Peak Hour								
Inbound			13	2	4	15	21	34
Outbound			30	5	8	33	46	76
Total			43	7	12	48	67	110

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 4

Project Trip Generation Building 4[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	465.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			404	40	57	151	248	652
Morning Peak Hour								
Inbound			17	2	2	6	10	27
Outbound			6	1	1	2	4	10
Total			23	3	3	8	14	37
Evening Peak Hour								
Inbound			9	1	1	3	5	14
Outbound			20	2	3	8	13	33
Total			29	3	4	11	18	47
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			404	60	114	453	627	1,031
Morning Peak Hour								
Inbound			17	3	4	18	25	42
Outbound			6	2	2	6	10	16
Total			23	5	6	24	35	58
Evening Peak Hour								
Inbound			9	2	2	9	13	22
Outbound			20	3	6	24	33	53
Total			29	5	8	33	46	75

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 5

Project Trip Generation Building 5[1]

Descriptor	Quantity	Units[2]	Type of Vehicle					Total
			Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	
Land Use: High Cube	231.000	TSF	62.00%	6.08%	8.74%	23.18%	38.00%	100%
Trip Generation Rates in trips per TSF								
Daily			0.868	0.085	0.122	0.325	0.532	1.40
Morning Peak Hour			0.050	0.005	0.007	0.019	0.030	0.08
Evening Peak Hour			0.062	0.006	0.009	0.023	0.038	0.10
Trip Generation in Vehicles								
Daily			201	20	28	75	123	324
Morning Peak Hour								
Inbound			9	1	1	3	5	14
Outbound			3	-	-	1	1	4
Total			12	1	1	4	6	18
Evening Peak Hour								
Inbound			4	-	1	2	3	7
Outbound			10	1	1	4	6	16
Total			14	1	2	6	9	23
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			201	30	56	225	311	512
Morning Peak Hour								
Inbound			9	2	2	9	13	22
Outbound			3	-	-	3	3	6
Total			12	2	2	12	16	28
Evening Peak Hour								
Inbound			4	-	2	6	8	12
Outbound			10	2	2	12	16	26
Total			14	2	4	18	24	38

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 154 and City of Fontana, Truck Trip Generation Study, August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Table 6

Project Trip Generation Building 6[1]

Descriptor	Quantity	Units[2]	Type of Vehicle					Total
			Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	
Land Use: Light Industrial	200.000	TSF	78.6%	8.0%	3.9%	9.5%	21.4%	100%
Trip Generation Rates in trips per TSF								
Daily			3.899	0.397	0.193	0.471	1.061	4.96
Morning Peak Hour			0.550	0.056	0.027	0.067	0.150	0.70
Evening Peak Hour			0.495	0.050	0.025	0.060	0.135	0.63
Trip Generation in Vehicles								
Daily			780	79	39	94	212	992
Morning Peak Hour								
Inbound			97	10	5	12	27	124
Outbound			13	1	1	2	4	17
Total			110	11	6	14	31	141
Evening Peak Hour								
Inbound			13	1	1	2	4	17
Outbound			86	9	4	10	23	109
Total			99	10	5	12	27	126
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Trip Generation in PCE's								
Daily			780	119	78	282	479	1,259
Morning Peak Hour								
Inbound			97	15	10	36	61	158
Outbound			13	2	2	6	10	23
Total			110	17	12	42	71	181
Evening Peak Hour								
Inbound			13	2	2	6	10	23
Outbound			86	14	8	30	52	138
Total			99	16	10	36	62	161

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 110 and City of Fontana, Truck Trip Generation Study, August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments.

Table 7

Total Project Trip Generation[1]

Alternative 1										
				Morning Peak Hour			Evening Peak Hour			
Descriptor	Land Use	Quantity	Units[2]	Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
Trip Generation Rates	Research and Development[3]	21.501	TSF	0.31	0.11	0.42	0.07	0.42	0.49	11.26
	Regional Park[4]	71.3	AC	0.01	0.01	0.02	0.06	0.05	0.11	0.78
Trips Generated	Building 1 - Cars	1,500.000	TSF	56	19	75	28	65	93	1,302
	Building 1 - Trucks	1,500.000	TSF	88	30	118	43	99	142	2,021
	Building 2 - Cars	1,330.000	TSF	49	16	65	25	58	83	1,154
	Building 2 - Trucks	1,330.000	TSF	76	25	101	36	91	127	1,792
	Building 3 - Cars	690.000	TSF	26	9	35	13	30	43	599
	Building 3 - Trucks	690.000	TSF	43	13	56	21	46	67	929
	Building 4 - Cars	465.000	TSF	17	6	23	9	20	29	404
	Building 4 - Trucks	465.000	TSF	25	10	35	13	33	46	627
	Building 5 - Cars	231.000	TSF	9	3	12	4	10	14	201
	Building 5 - Trucks	231.000	TSF	13	3	16	8	16	24	311
	Building 6 - Cars	200.000	TSF	97	13	110	13	86	99	780
	Building 6- Trucks	200.000	TSF	61	10	71	10	52	62	479
	Research and Development	64.000	TSF	20	7	27	4	27	31	721
	Regional Park	71.3	AC	1	1	2	4	4	8	56
	Total			581	165	746	231	637	868	11,376

Alternative 2										
				Morning Peak Hour			Evening Peak Hour			
Land Use	Land Use	Quantity	Units[2]	Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
Trip Generation Rates	Business Park[5]	150.000	TSF	0.24	0.16	0.4	0.19	0.23	0.42	12.44
	Commercial Retail[6]	25.000	TSF	0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Research and Development[3]	21.501	TSF	0.31	0.11	0.42	0.07	0.42	0.49	11.26
	Regional Park[4]	71.3	AC	0.01	0.01	0.02	0.06	0.05	0.11	0.78
Trips Generated	Building 1 - Cars	1,500.000	TSF	56	19	75	28	65	93	1,302
	Building 1 - Trucks	1,500.000	TSF	88	30	118	43	99	142	2,021
	Building 2 - Cars	1,330.000	TSF	49	16	65	25	58	83	1,154
	Building 2 - Trucks	1,330.000	TSF	76	25	101	36	91	127	1,792
	Building 3 - Cars	690.000	TSF	26	9	35	13	30	43	599
	Building 3 - Trucks	690.000	TSF	43	13	56	21	46	67	929
	Building 4 - Cars	465.000	TSF	17	6	23	9	20	29	404
	Building 4 - Trucks	465.000	TSF	25	10	35	13	33	46	627
	Building 5 - Cars	231.000	TSF	9	3	12	4	10	14	201
	Building 5 - Trucks	231.000	TSF	13	3	16	8	16	24	311
	Business Park	170.000	TSF	41	27	68	32	39	71	2,115
	Commercial Retail	25.000	TSF	15	9	24	46	50	96	944
	Research and Development	64.000	TSF	20	7	27	4	27	31	721
	Regional Park	71.3	AC	1	1	2	4	4	8	56
	Total			479	178	657	286	588	874	13,176

[1] See Tables 1 to 4.

[2] TSF = Thousand Square Feet; AC = Acres

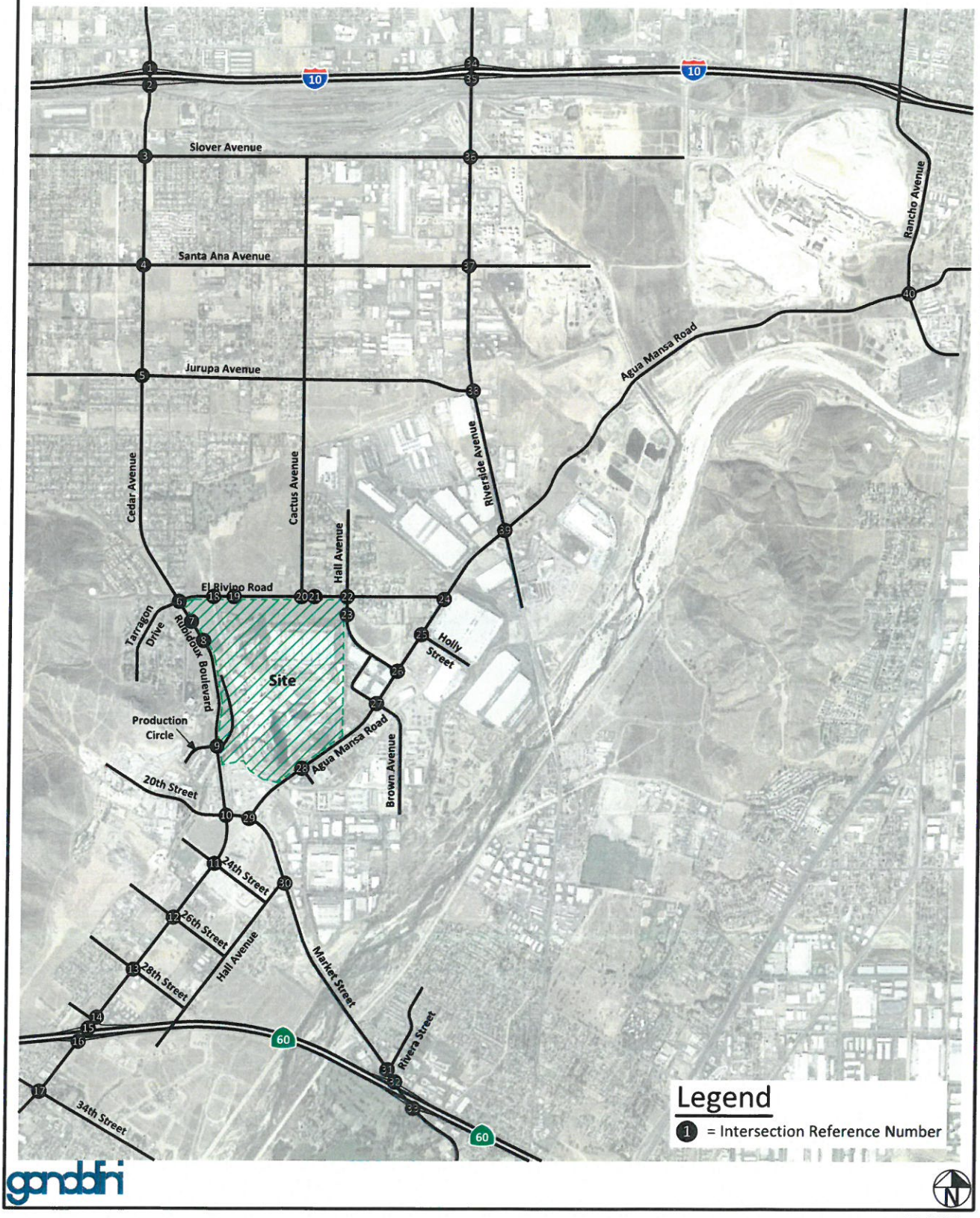
[3] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 760.

[4] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 417.

[5] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 770.

[6] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Code 820.

Figure 1
Project Location Map



JN 6491e

Figure 2
Site Plan



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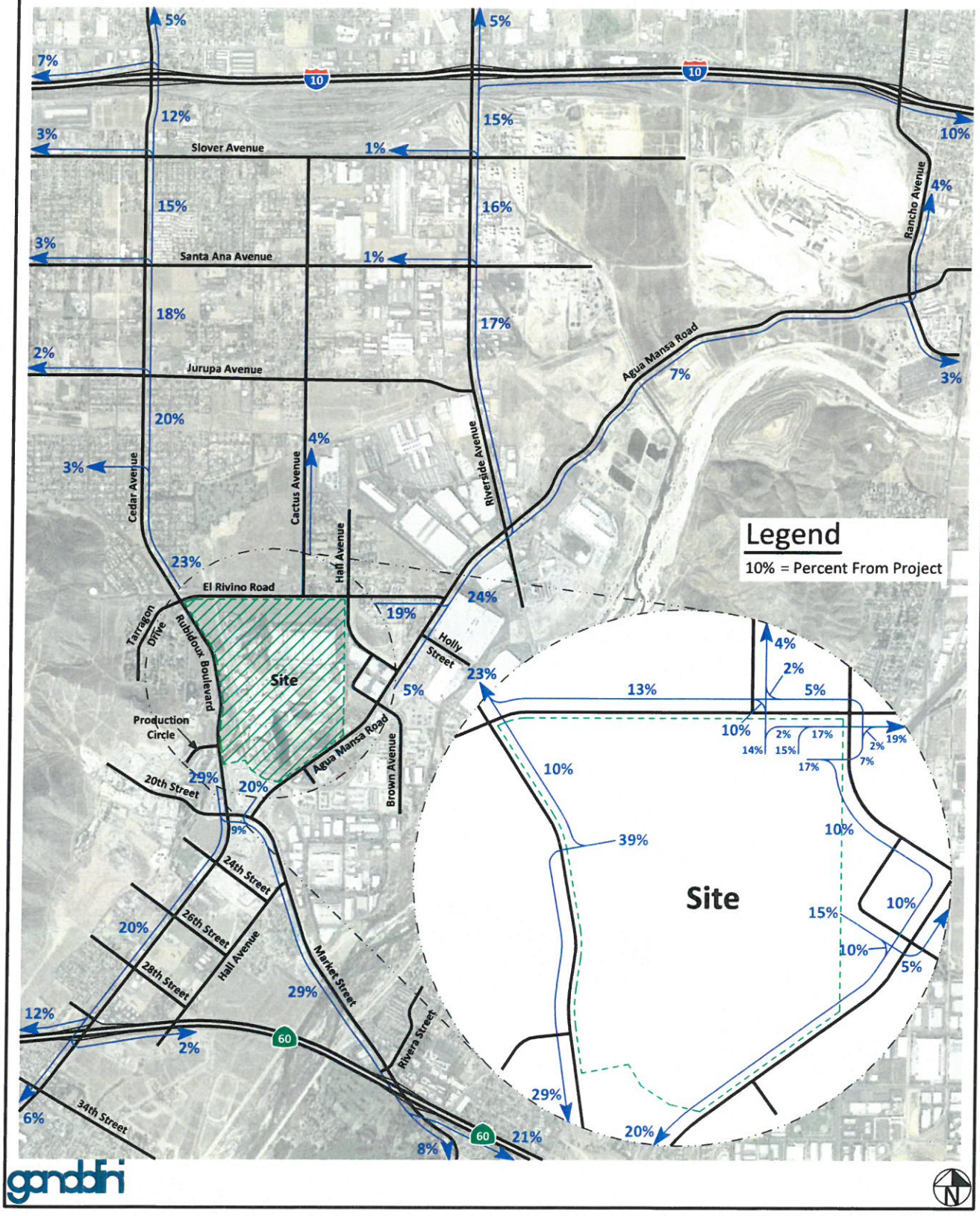
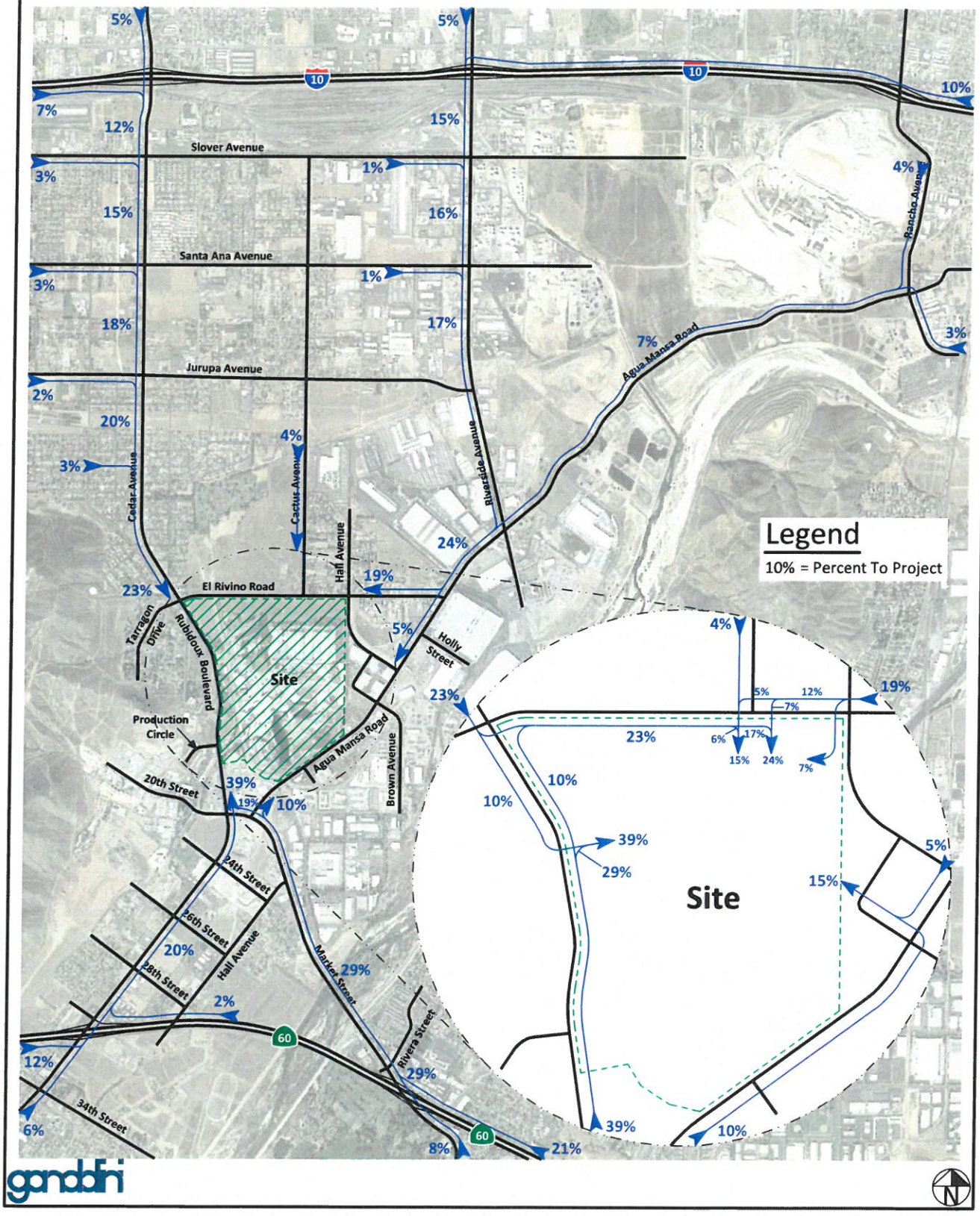
JN 6491e

Figure 3
Project Outbound Trip Distribution - Building 1 (Cars)



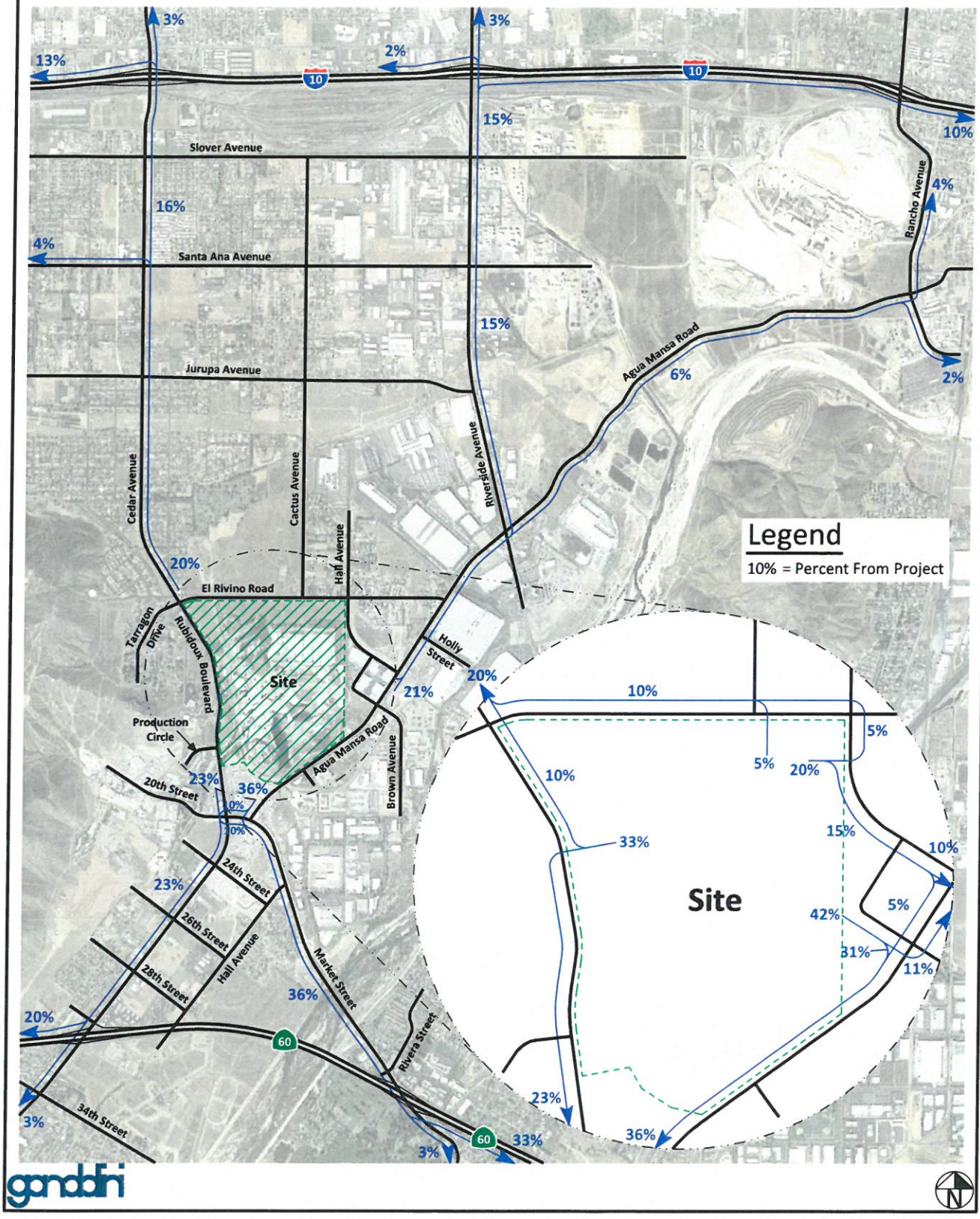
JN 6491e

Figure 4
Project Inbound Trip Distribution - Building 1 (Cars)



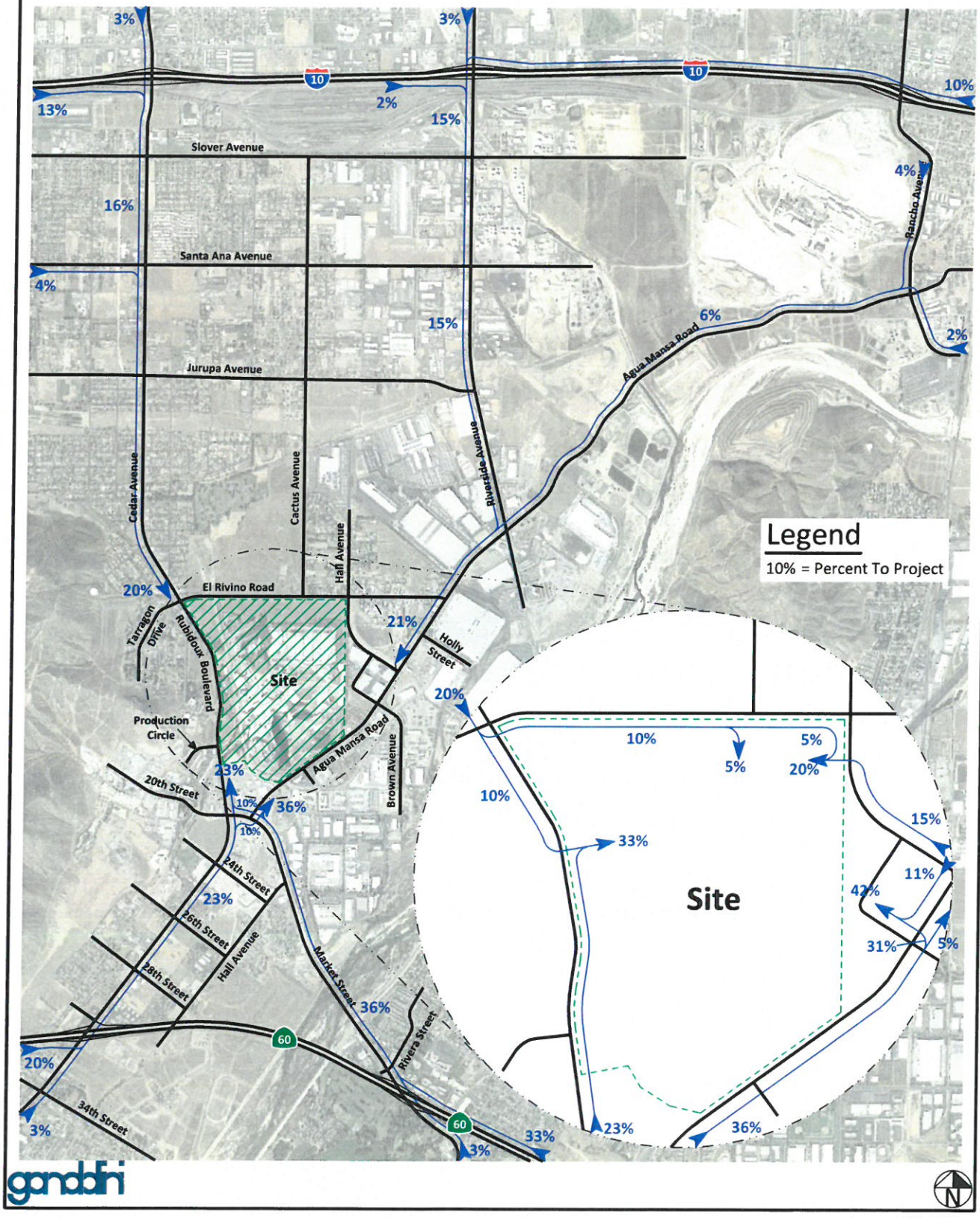
JN 6491e

Figure 5
Project Outbound Trip Distribution - Building 1 (Trucks)



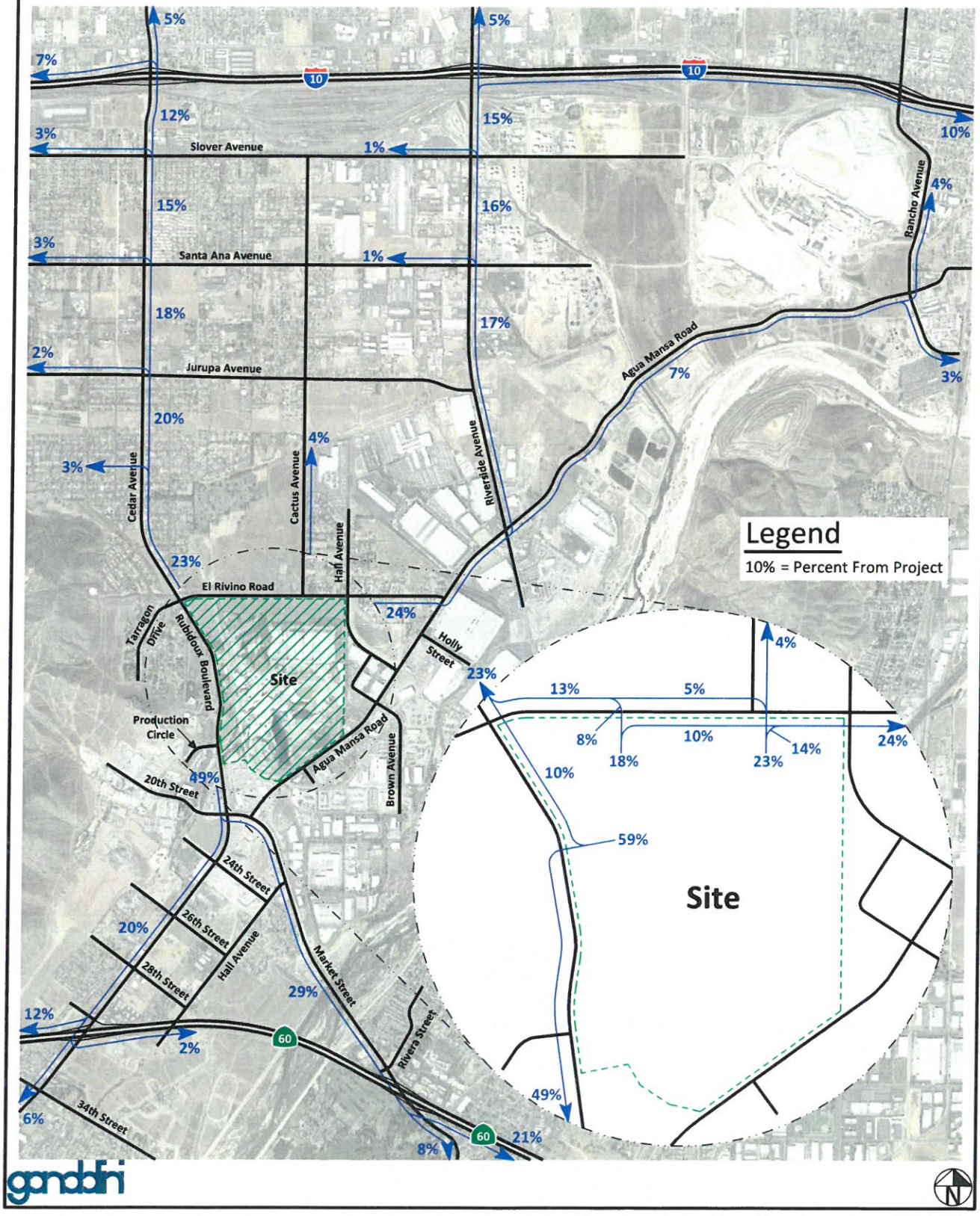
JN 6491e

Figure 6
Project Inbound Trip Distribution - Building 1 (Trucks)



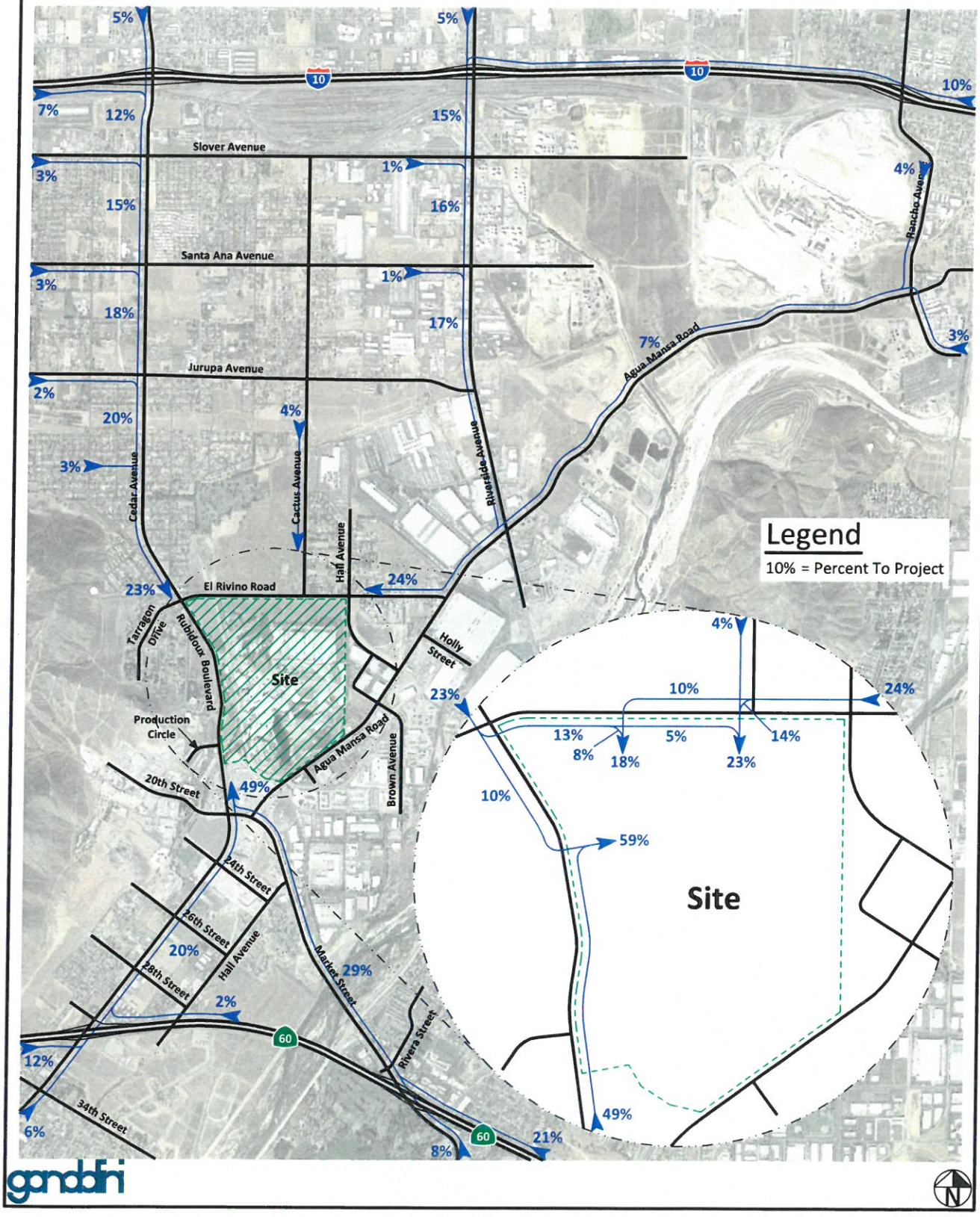
JN 6491e

Figure 7
Project Outbound Trip Distribution - Building 2 (Cars)



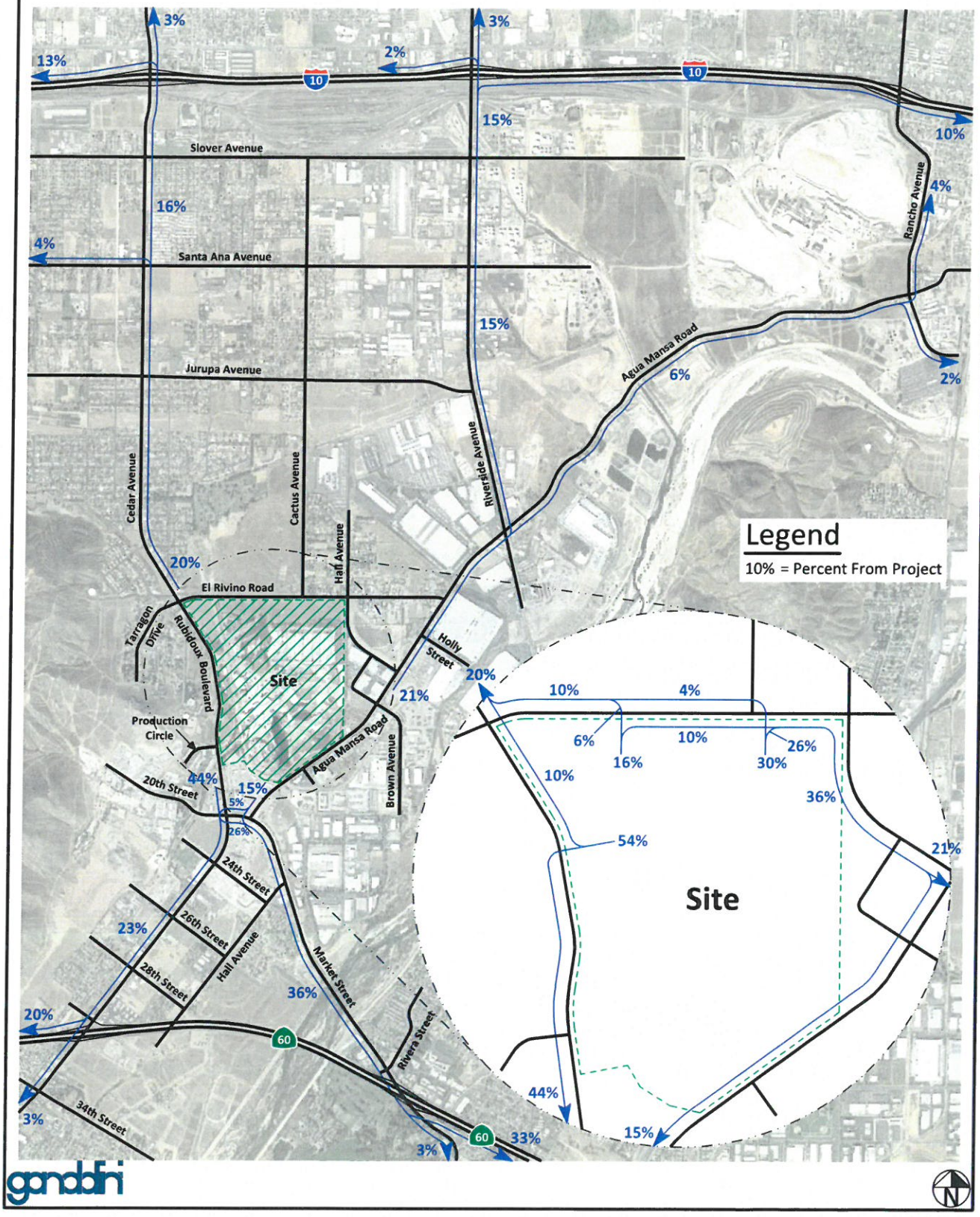
JN 6491e

Figure 8
Project Inbound Trip Distribution - Building 2 (Cars)



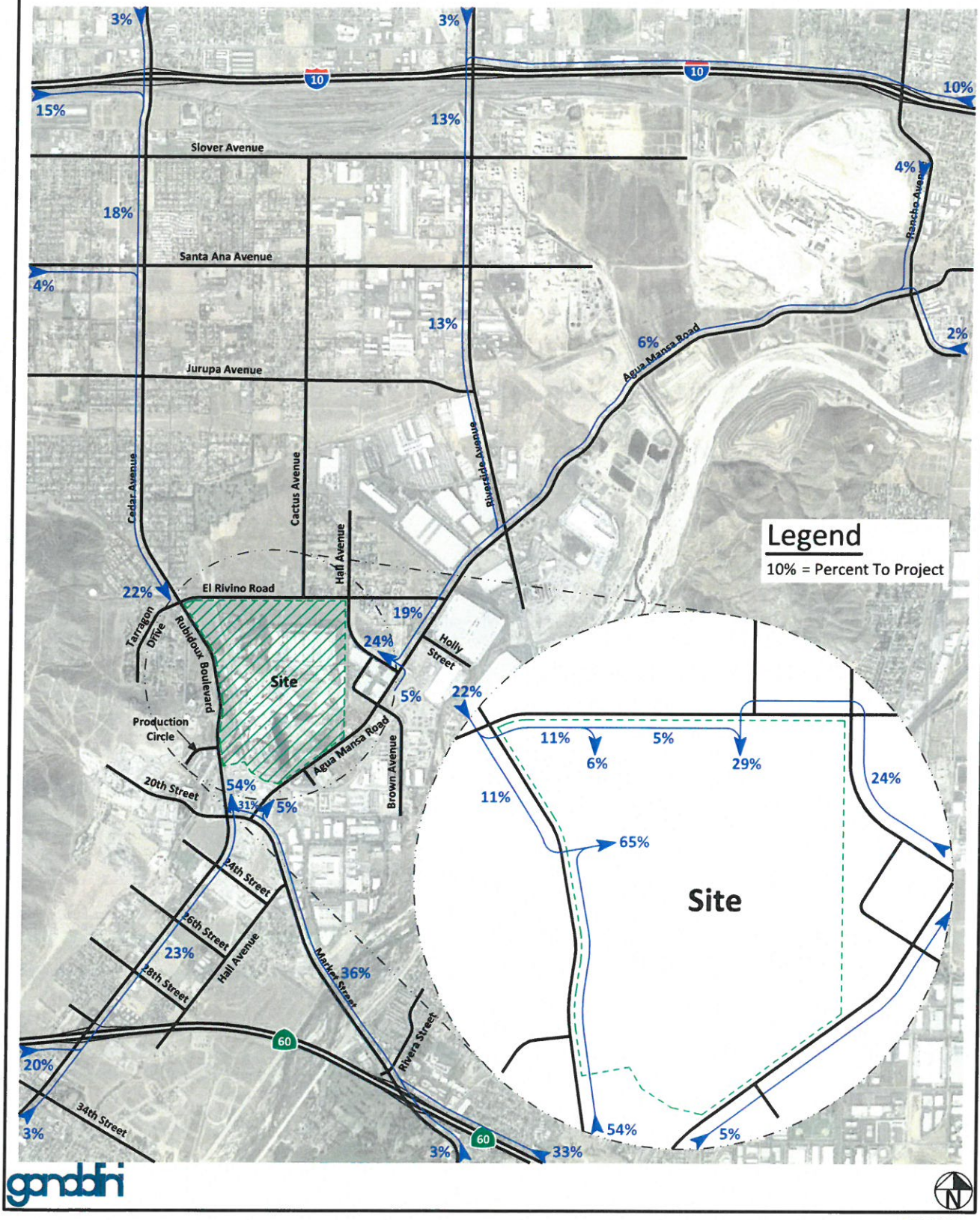
JN 6491e

Figure 9
Project Outbound Trip Distribution - Building 2 (Trucks)



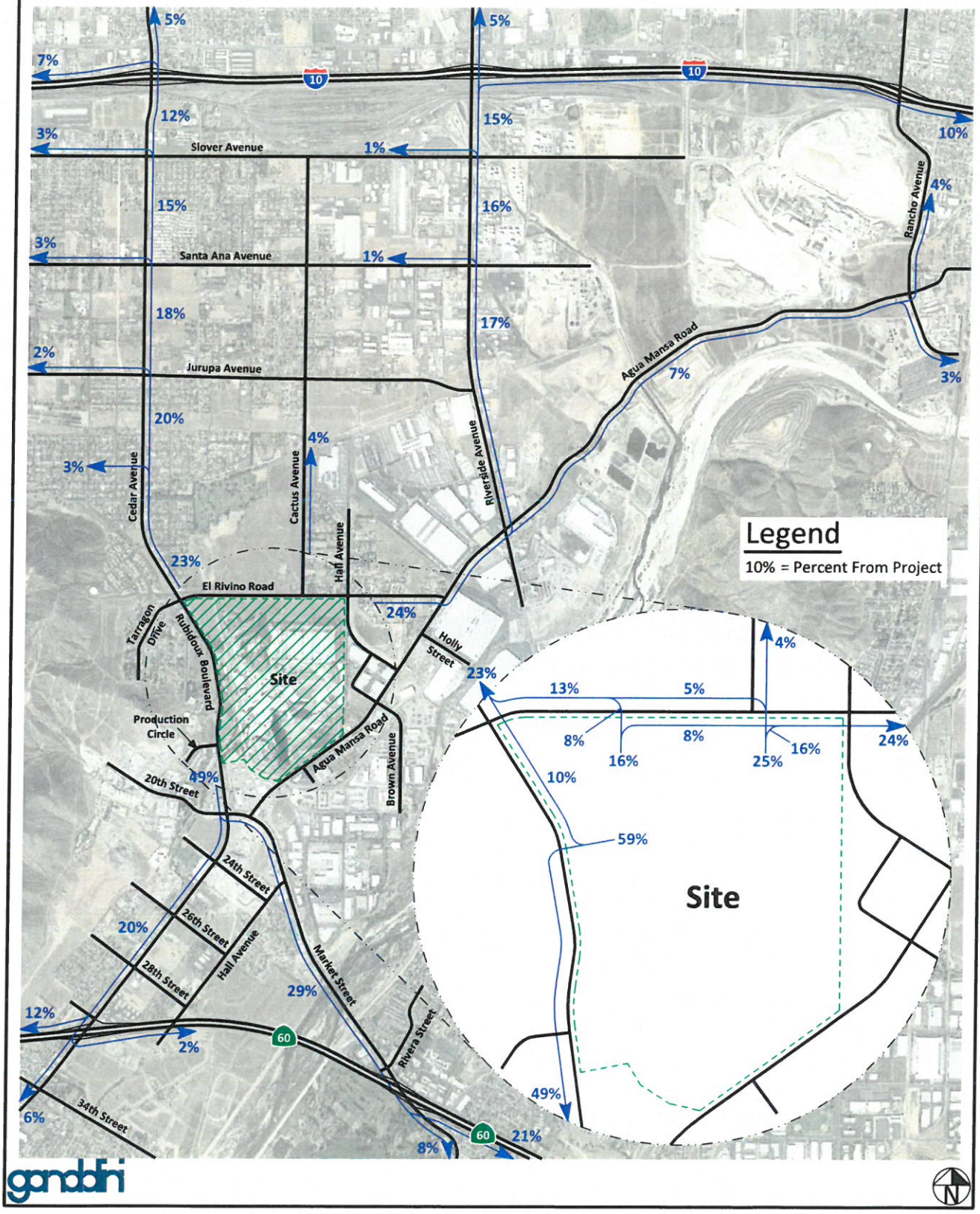
JN 6491e

Figure 10
Project Inbound Trip Distribution - Building 2 (Trucks)



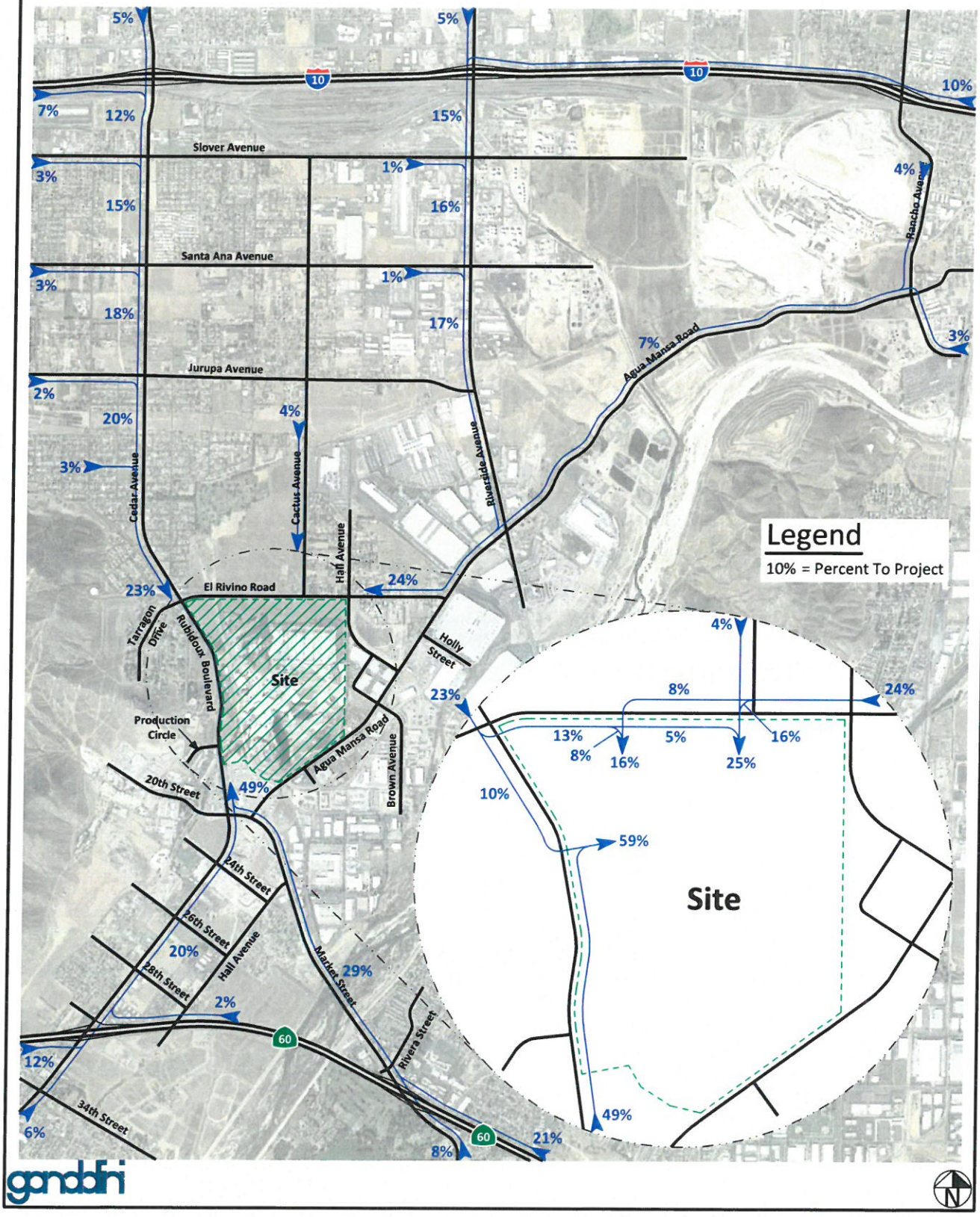
JN 6491e

Figure 11
Project Outbound Trip Distribution - Buildings 3, 4, and 5 (Cars)



JN 6491e

Figure 12
Project Inbound Trip Distribution - Buildings 3, 4, and 5 (Cars)



JN 6491e

Figure 13
Project Outbound Trip Distribution - Buildings 3, 4, and 5 (Trucks)

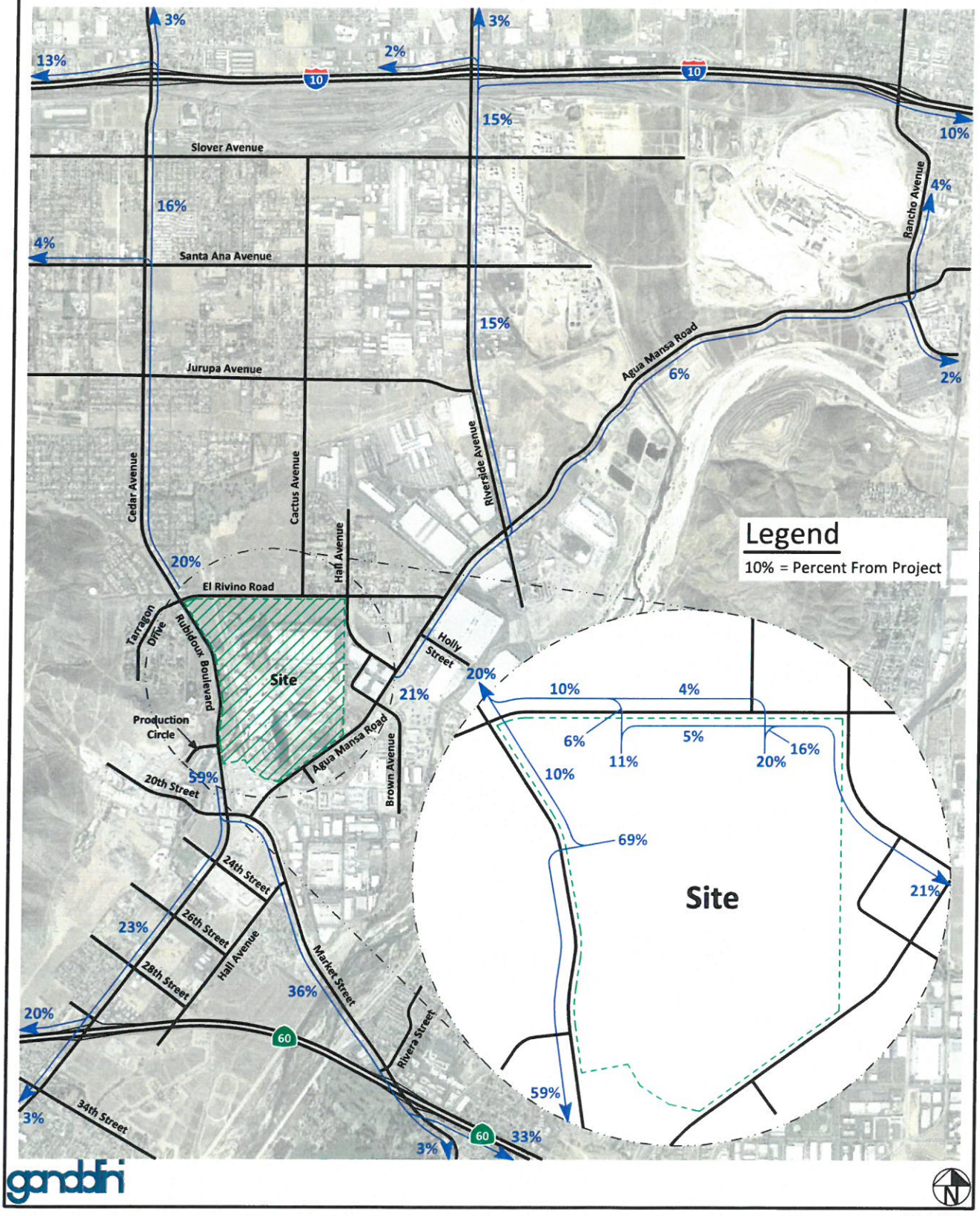
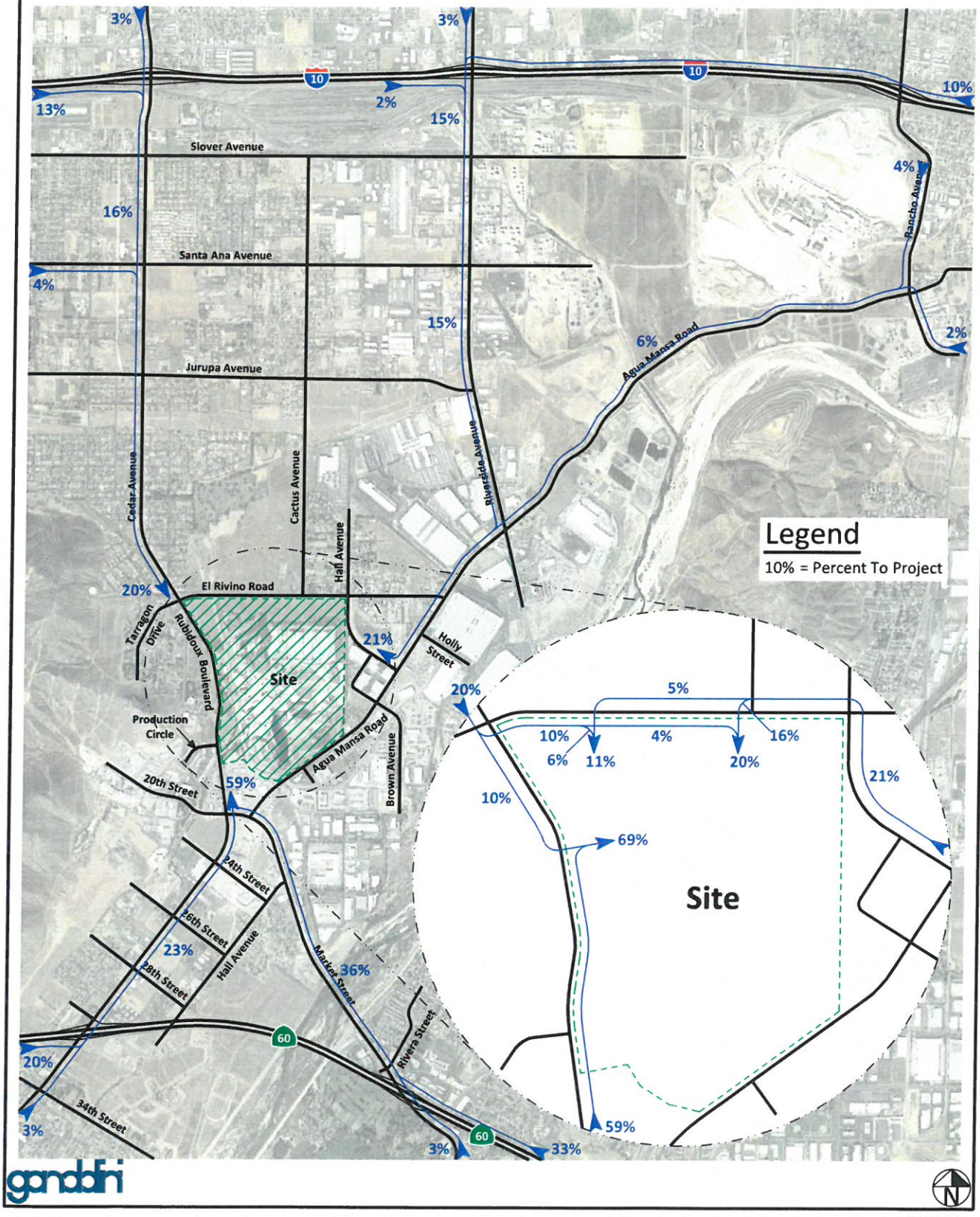
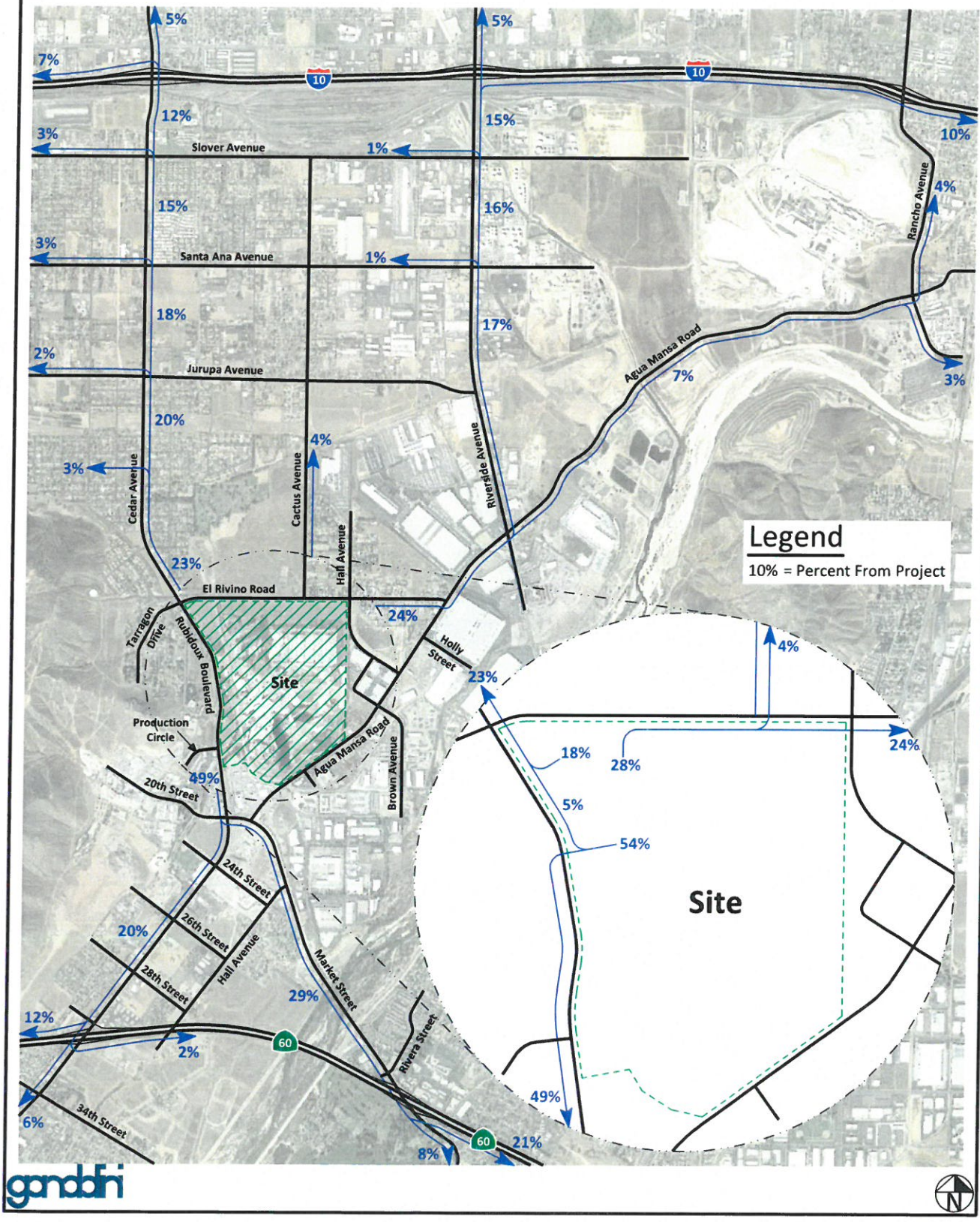


Figure 14
Project Inbound Trip Distribution - Building 3, 4, and 5 (Trucks)



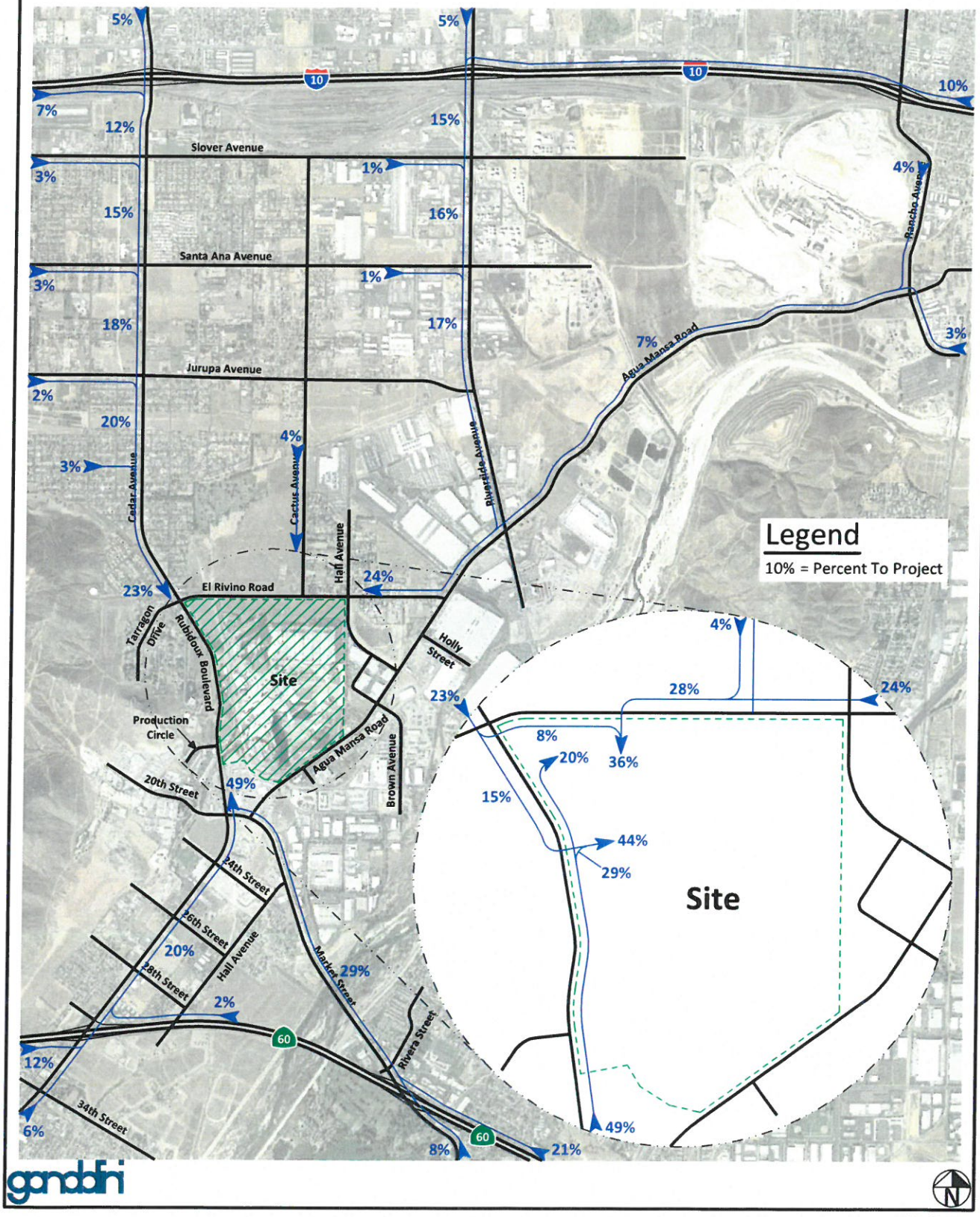
JN 6491e

Figure 15
Project Outbound Trip Distribution - Building 6 (Cars) - Alternative 1



JN 6491e

Figure 16
Project Inbound Trip Distribution - Building 6 (Cars) - Alternative 1



JN 6491e

Figure 17
Project Outbound Trip Distribution - Building 6 (Trucks) - Alternative 1

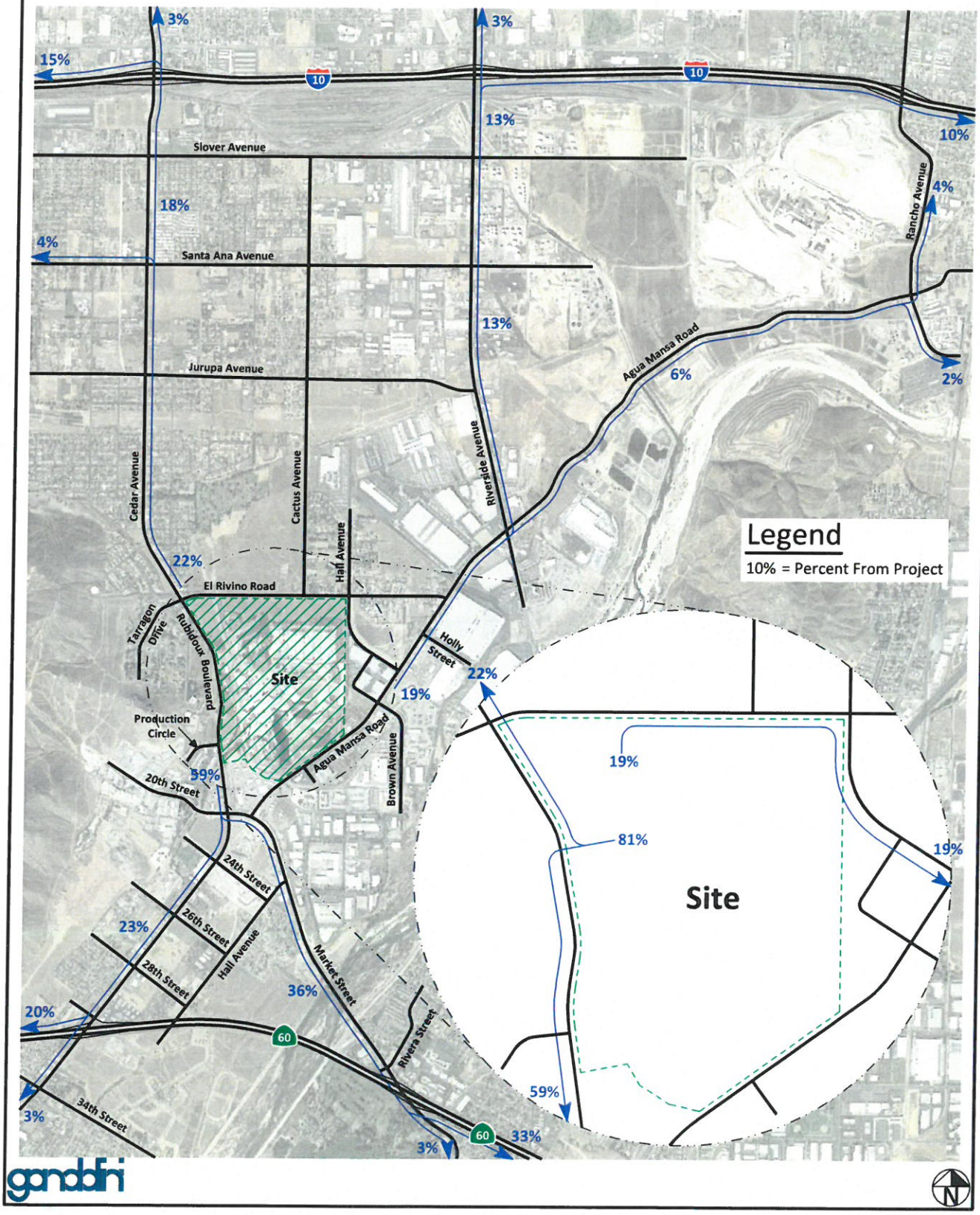


Figure 18
Project Inbound Trip Distribution - Building 6 (Trucks) - Alternative 1

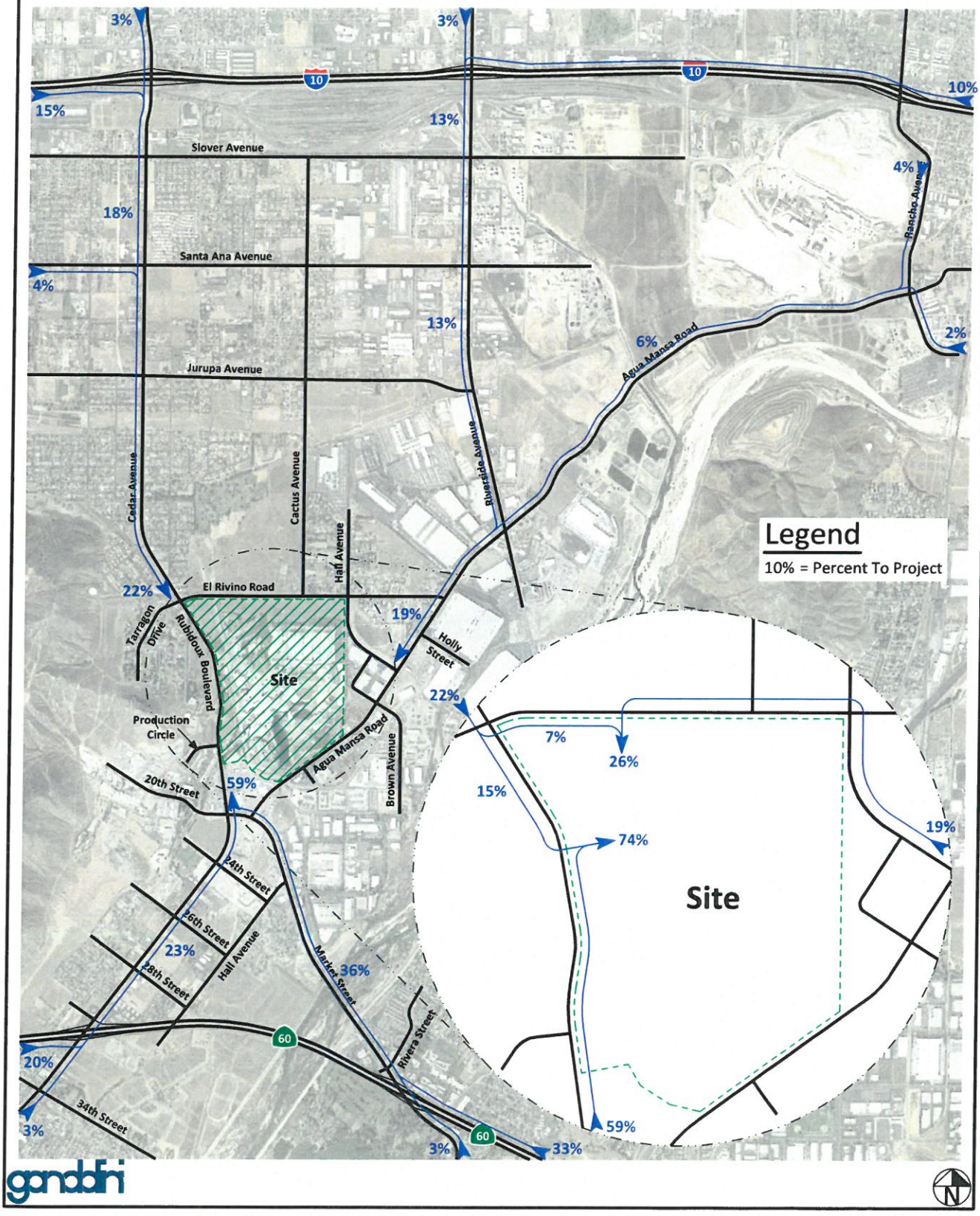


Figure 19
Project Outbound Trip Distribution - Business Park - Alternative 2

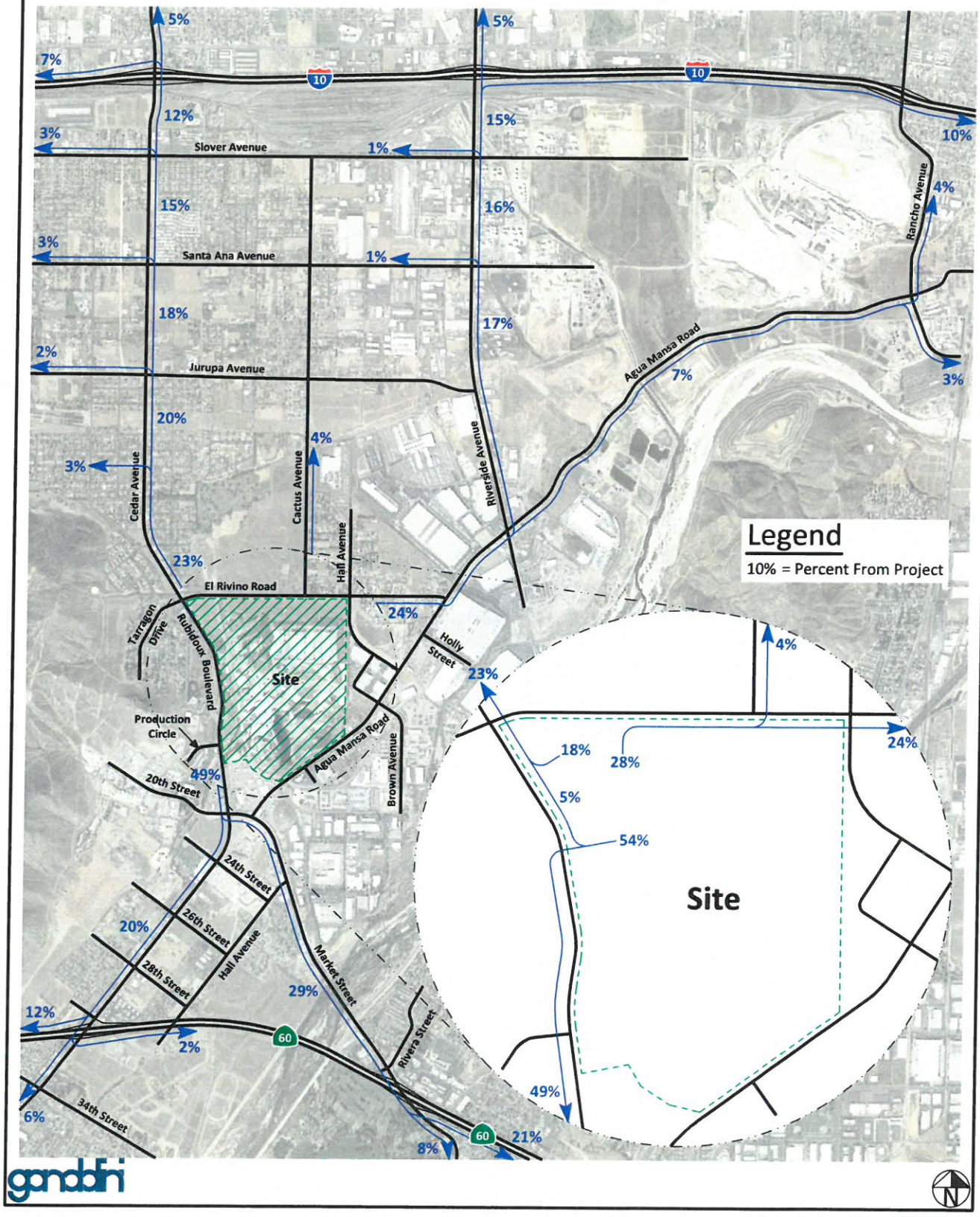
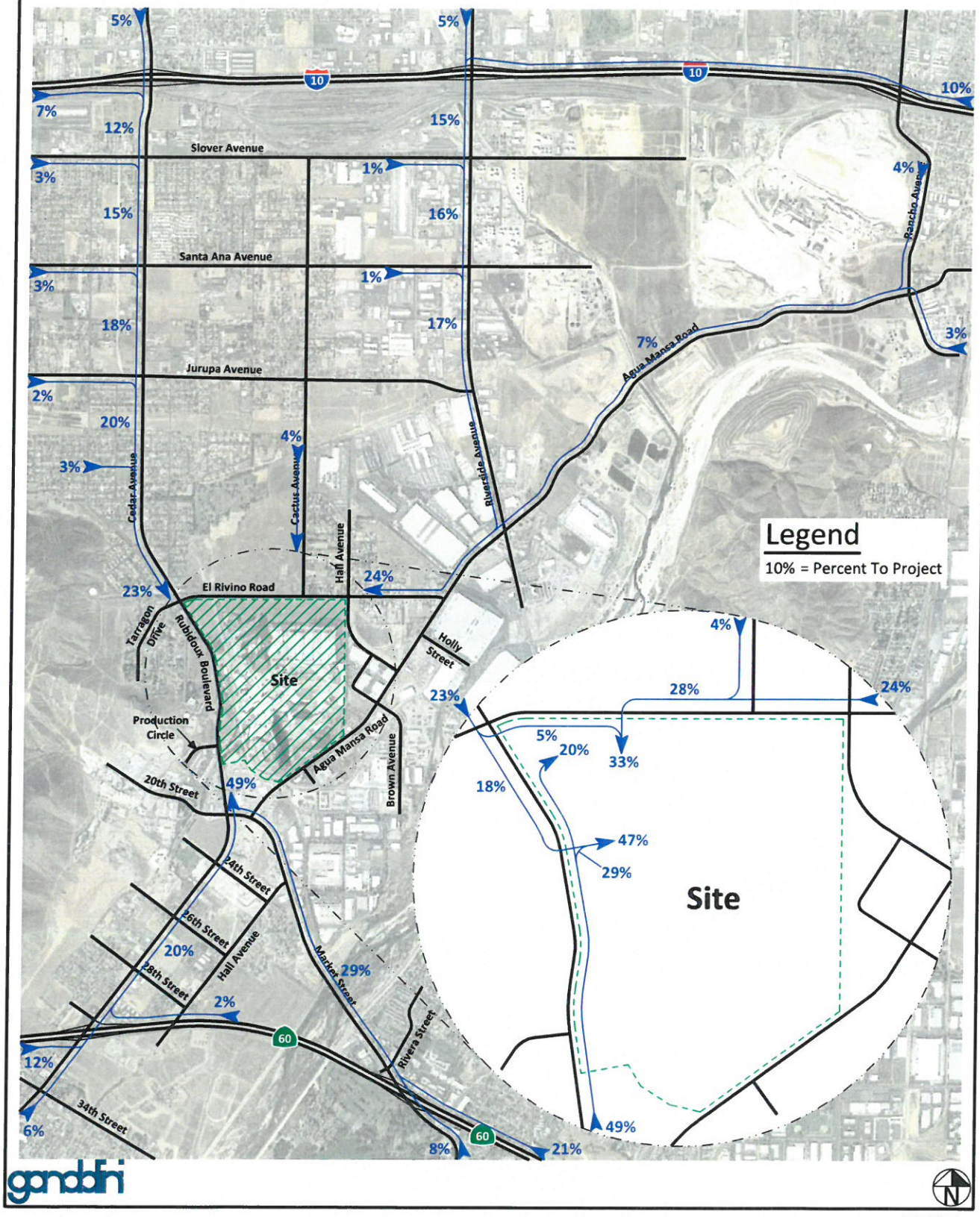
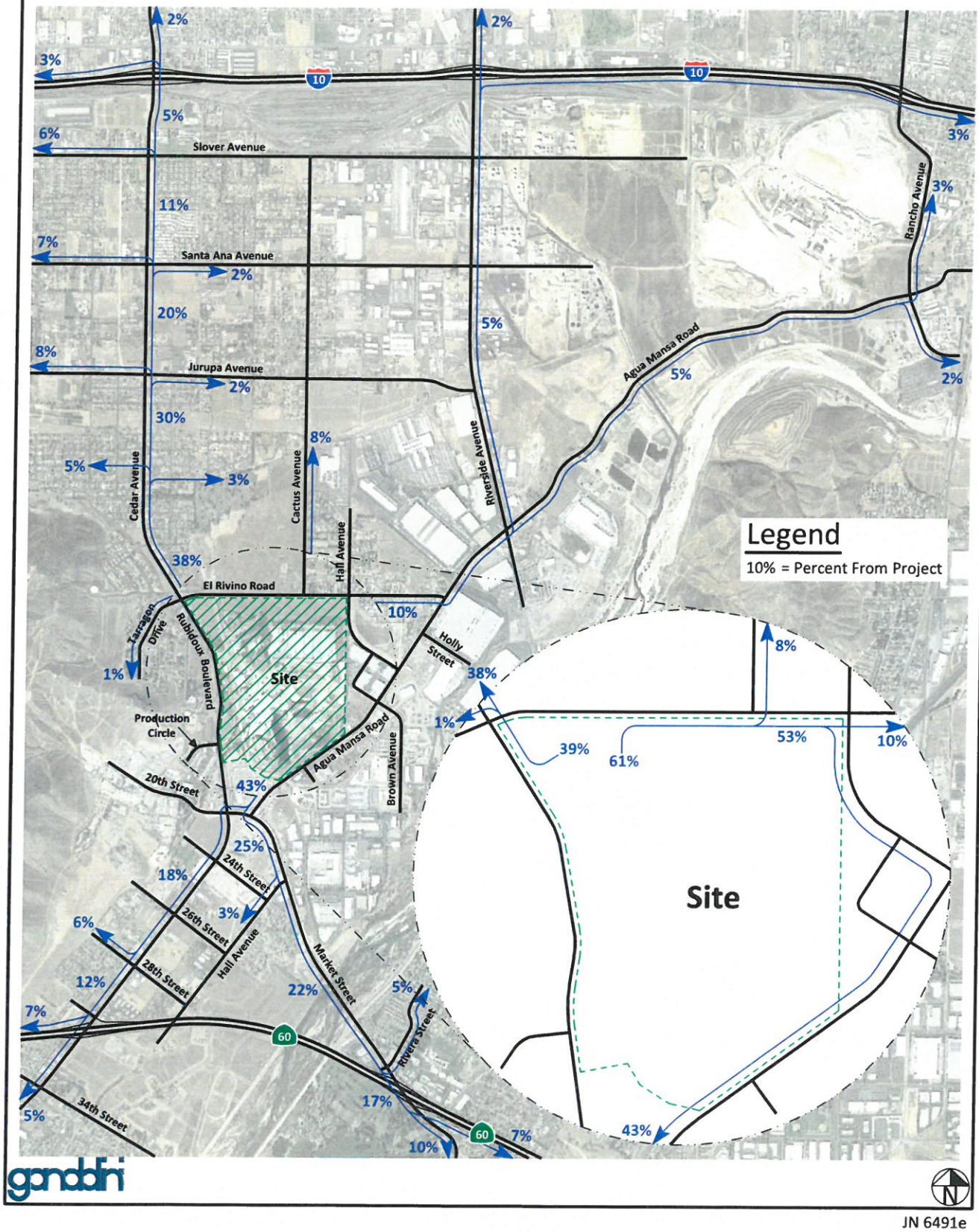


Figure 20
Project Inbound Trip Distribution - Business Park - Alternative 2



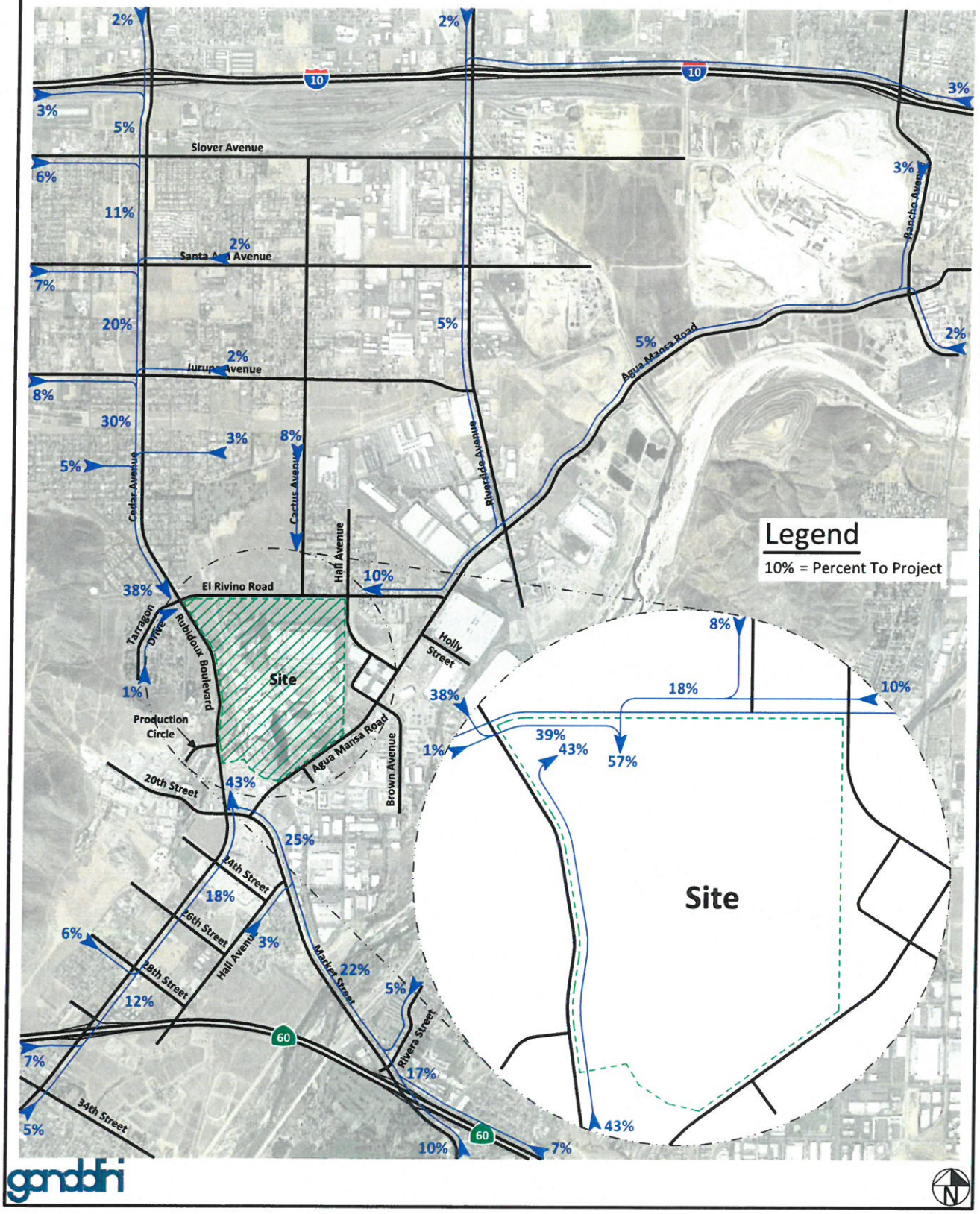
JN 6491e

Figure 21
Project Outbound Trip Distribution - Commercial Retail - Alternative 2



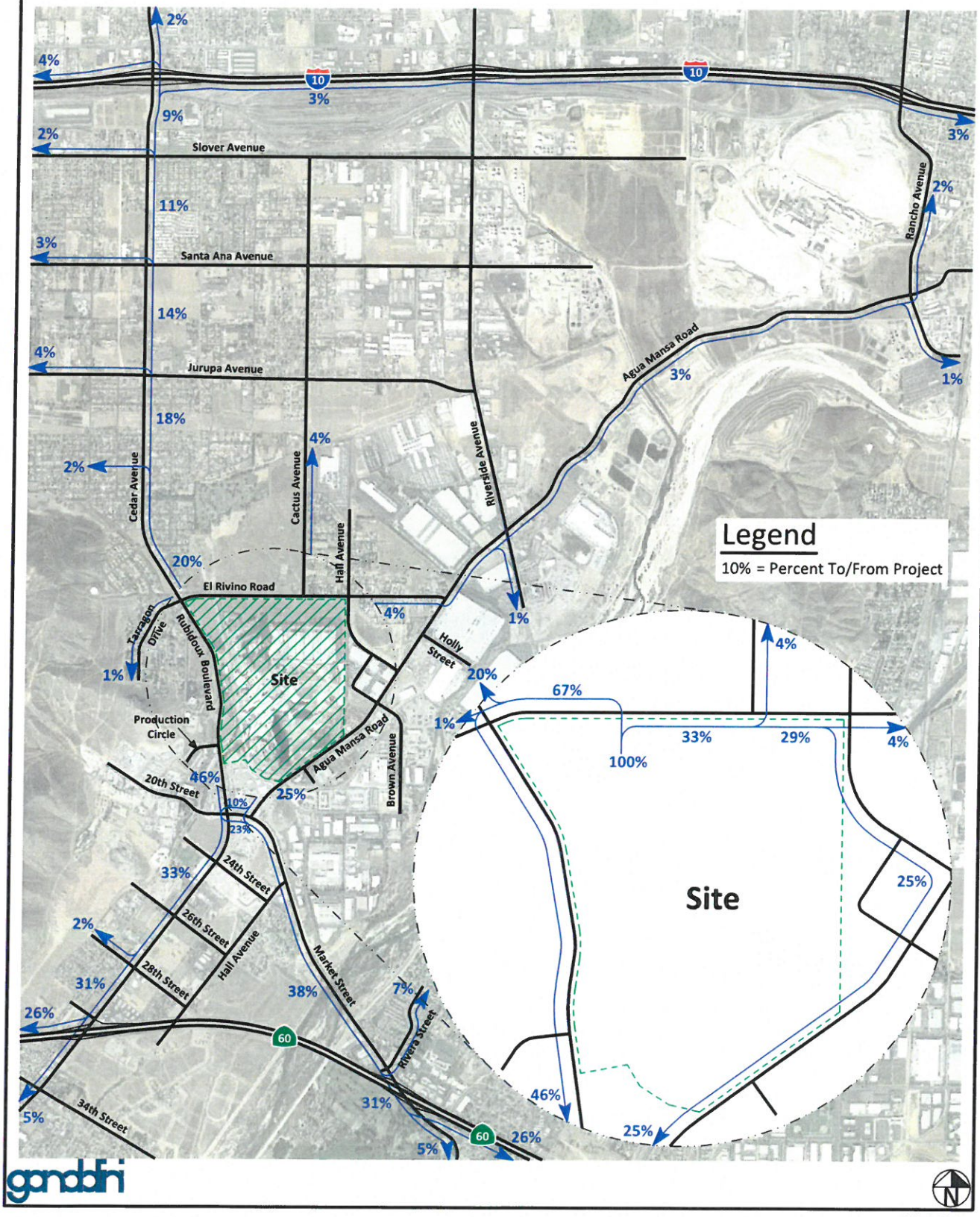
JN 6491e

Figure 22
Project Inbound Trip Distribution - Commercial Retail - Alternative 2



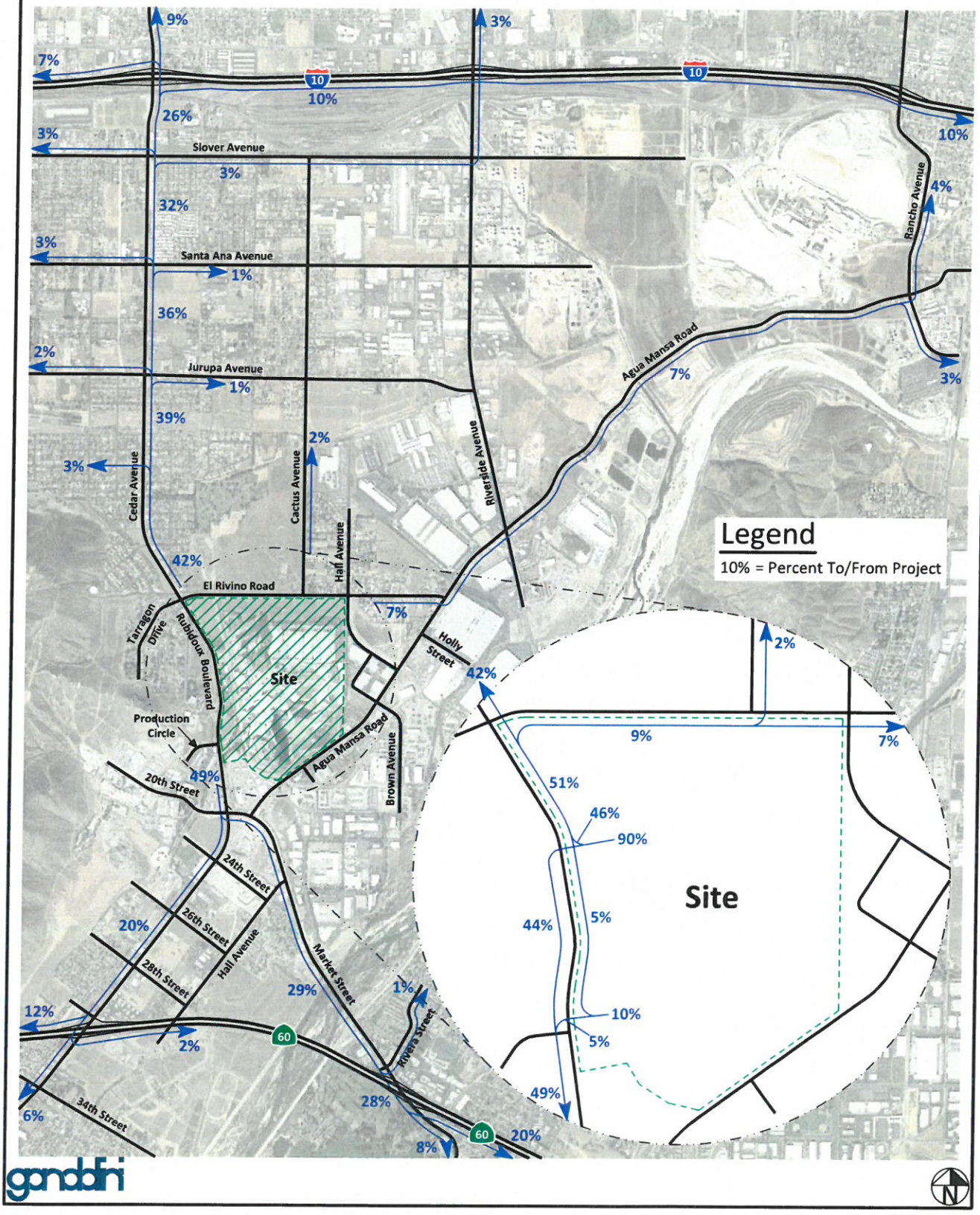
JN 6491e

Figure 23
Project Trip Distribution - Regional Park



JN 6491e

Figure 24
Project Trip Distribution - Research & Development



JN 6491e

APPENDIX C

VOLUME COUNT WORKSHEETS

Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT1 Cedar north of Slover. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	46		34					12:00	209		186				
0:15	33		32					12:15	220		205				
0:30	33		29					12:30	212		203				
0:45	44	156	27	122			278	12:45	229	870	191	785			1655
1:00	27		22					13:00	235		221				
1:15	30		20					13:15	213		187				
1:30	25		17					13:30	247		224				
1:45	19	101	21	80			181	13:45	231	926	208	840			1766
2:00	33		35					14:00	228		213				
2:15	29		23					14:15	220		220				
2:30	43		45					14:30	265		220				
2:45	37	142	47	150			292	14:45	246	959	200	853			1812
3:00	33		46					15:00	276		204				
3:15	50		53					15:15	267		201				
3:30	59		53					15:30	246		202				
3:45	56	198	62	214			412	15:45	278	1067	213	820			1887
4:00	67		66					16:00	267		210				
4:15	83		80					16:15	278		203				
4:30	101		123					16:30	280		200				
4:45	91	342	109	378			720	16:45	276	1101	241	854			1955
5:00	91		99					17:00	268		208				
5:15	112		110					17:15	289		219				
5:30	162		156					17:30	297		187				
5:45	151	516	147	512			1028	17:45	235	1089	192	806			1895
6:00	150		132					18:00	213		209				
6:15	156		161					18:15	224		208				
6:30	183		185					18:30	222		183				
6:45	237	726	235	713			1439	18:45	215	874	171	771			1645
7:00	221		228					19:00	185		166				
7:15	218		256					19:15	135		151				
7:30	268		258					19:30	184		145				
7:45	242	949	227	969			1918	19:45	132	636	133	595			1231
8:00	195		201					20:00	151		130				
8:15	225		174					20:15	166		142				
8:30	245		195					20:30	149		114				
8:45	186	851	174	744			1595	20:45	145	611	123	509			1120
9:00	223		193					21:00	127		96				
9:15	214		171					21:15	121		117				
9:30	211		172					21:30	123		134				
9:45	220	868	162	698			1566	21:45	107	478	88	435			913
10:00	169		167					22:00	98		70				
10:15	197		160					22:15	82		73				
10:30	185		161					22:30	71		71				
10:45	196	747	167	655			1402	22:45	63	314	67	281			595
11:00	170		188					23:00	78		59				
11:15	183		198					23:15	55		56				
11:30	225		170					23:30	50		42				
11:45	195	773	189	745			1518	23:45	37	220	36	193			413
Total Vol.		6369		5980			**12349**			9145		7742			**16887**

Daily Totals

NB	SB	EB	WB	**Combined**
15514	13722			**29236**

	AM			**PM**		
Split %	51.6%	48.4%	**42.2%**	54.2%	45.8%	**57.8%**
Peak Hour	7:00	6:45	**6:45**	16:45	16:30	**16:45**
Volume	949	977	**1921**	1130	868	**1985**
P.H.F.	0.89	0.95	**0.91**	0.97	0.90	**0.96**

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Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT2 Cedar north of Santa Ana. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	31		33					12:00	164		158				
0:15	31		32					12:15	158		159				
0:30	29		18					12:30	196		161				
0:45	26	117	26	109			226	12:45	211	729	142	620			1349
1:00	27		15					13:00	156		172				
1:15	20		26					13:15	157		191				
1:30	15		18					13:30	226		171				
1:45	13	75	16	75			150	13:45	176	715	217	751			1466
2:00	24		12					14:00	170		184				
2:15	18		14					14:15	176		185				
2:30	29		24					14:30	188		232				
2:45	37	108	28	78			186	14:45	198	732	201	802			1534
3:00	22		26					15:00	237		201				
3:15	39		47					15:15	213		206				
3:30	42		42					15:30	213		205				
3:45	36	139	44	159			298	15:45	230	893	199	811			1704
4:00	47		56					16:00	229		216				
4:15	58		86					16:15	213		231				
4:30	76		108					16:30	208		205				
4:45	70	251	118	368			619	16:45	193	843	203	855			1698
5:00	73		89					17:00	241		206				
5:15	77		100					17:15	225		202				
5:30	126		174					17:30	197		169				
5:45	111	387	137	500			887	17:45	188	851	199	776			1627
6:00	117		106					18:00	183		173				
6:15	140		146					18:15	185		155				
6:30	158		176					18:30	181		164				
6:45	183	598	195	623			1221	18:45	160	709	165	657			1366
7:00	177		214					19:00	133		131				
7:15	201		286					19:15	118		148				
7:30	287		270					19:30	142		141				
7:45	188	853	202	972			1825	19:45	100	493	130	550			1043
8:00	175		188					20:00	120		122				
8:15	173		178					20:15	120		148				
8:30	168		159					20:30	118		100				
8:45	156	672	127	652			1324	20:45	107	465	98	468			933
9:00	141		158					21:00	115		125				
9:15	171		138					21:15	103		93				
9:30	170		143					21:30	100		92				
9:45	148	630	151	590			1220	21:45	86	404	113	423			827
10:00	135		127					22:00	72		74				
10:15	145		127					22:15	66		70				
10:30	122		167					22:30	55		59				
10:45	148	550	125	546			1096	22:45	44	237	64	267			504
11:00	137		142					23:00	61		61				
11:15	142		116					23:15	35		40				
11:30	162		179					23:30	47		38				
11:45	143	584	129	566			1150	23:45	26	169	47	186			355
Total Vol.	4964		5238				**10202**		7240		7166				**14406**

Daily Totals

NB	SB	EB	WB	**Combined**
12204	12404			**24608**

	AM			**PM**		
Split %	48.7%	51.3%	**41.5%**	50.3%	49.7%	**58.5%**
Peak Hour	7:00	7:00	**7:00**	15:00	16:00	**15:30**
Volume	853	972	**1825**	893	855	**1736**
P.H.F.	0.74	0.85	**0.82**	0.92	0.93	**0.98**

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Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT3 Cedar north of Jurupa. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	42		24					12:00	183		156				
0:15	29		38					12:15	156		166				
0:30	15		23					12:30	168		166				
0:45	31	117	27	112			229	12:45	154	661	136	624			1285
1:00	26		12					13:00	155		170				
1:15	19		22					13:15	156		193				
1:30	21		18					13:30	167		163				
1:45	16	82	15	67			149	13:45	178	656	194	720			1376
2:00	22		13					14:00	243		188				
2:15	25		18					14:15	189		183				
2:30	17		27					14:30	220		211				
2:45	24	88	29	87			175	14:45	220	872	209	791			1663
3:00	28		24					15:00	198		222				
3:15	30		41					15:15	215		224				
3:30	43		50					15:30	196		181				
3:45	30	131	47	162			293	15:45	229	838	228	855			1693
4:00	39		53					16:00	223		218				
4:15	65		84					16:15	230		248				
4:30	90		115					16:30	189		213				
4:45	78	272	99	351			623	16:45	238	880	217	896			1776
5:00	68		86					17:00	250		224				
5:15	88		104					17:15	228		192				
5:30	123		163					17:30	246		182				
5:45	103	382	126	479			861	17:45	229	953	193	791			1744
6:00	119		101					18:00	192		169				
6:15	180		137					18:15	207		172				
6:30	174		165					18:30	176		159				
6:45	187	660	182	585			1245	18:45	166	741	172	672			1413
7:00	198		179					19:00	150		130				
7:15	226		256					19:15	123		159				
7:30	243		262					19:30	167		137				
7:45	159	826	185	882			1708	19:45	137	577	129	555			1132
8:00	148		209					20:00	144		112				
8:15	176		163					20:15	115		149				
8:30	136		169					20:30	116		110				
8:45	160	620	132	673			1293	20:45	119	494	92	463			957
9:00	152		135					21:00	78		112				
9:15	134		148					21:15	115		116				
9:30	164		136					21:30	93		81				
9:45	144	594	136	555			1149	21:45	80	366	114	423			789
10:00	142		135					22:00	84		67				
10:15	169		139					22:15	82		66				
10:30	129		165					22:30	61		67				
10:45	145	585	147	586			1171	22:45	53	280	66	266			546
11:00	157		138					23:00	63		56				
11:15	133		122					23:15	47		46				
11:30	163		167					23:30	62		32				
11:45	147	600	147	574			1174	23:45	32	204	40	174			378
Total Vol.	4957		5113				**10070**		7522		7230				**14752**

Daily Totals

NB	SB	EB	WB	**Combined**
12479	12343			**24822**

	AM			**PM**		
Split %	49.2%	50.8%	**40.6%**	51.0%	49.0%	**59.4%**
Peak Hour	6:45	7:15	**6:45**	16:45	15:45	**16:15**
Volume	854	912	**1733**	962	907	**1809**
P.H.F.	0.88	0.87	**0.86**	0.94	0.91	**0.95**

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Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT4 Cedar south of Jurupa. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	44		19					12:00	141		131				
0:15	28		28					12:15	129		134				
0:30	20		22					12:30	161		116				
0:45	29	121	21	90			211	12:45	161	592	135	516			1108
1:00	31		14					13:00	140		131				
1:15	17		18					13:15	151		151				
1:30	22		16					13:30	157		138				
1:45	11	81	13	61			142	13:45	154	602	156	576			1178
2:00	21		7					14:00	158		153				
2:15	21		17					14:15	160		147				
2:30	15		23					14:30	184		168				
2:45	23	80	28	75			155	14:45	191	693	183	651			1344
3:00	19		20					15:00	189		202				
3:15	27		40					15:15	205		199				
3:30	28		39					15:30	200		152				
3:45	30	104	42	141			245	15:45	210	804	178	731			1535
4:00	41		49					16:00	208		203				
4:15	51		80					16:15	209		217				
4:30	78		129					16:30	189		195				
4:45	60	230	100	358			588	16:45	255	861	165	780			1641
5:00	58		91					17:00	220		166				
5:15	78		108					17:15	215		187				
5:30	96		160					17:30	251		139				
5:45	84	316	145	504			820	17:45	197	883	162	654			1537
6:00	105		106					18:00	190		173				
6:15	161		118					18:15	175		144				
6:30	165		169					18:30	174		127				
6:45	152	583	175	568			1151	18:45	143	682	123	567			1249
7:00	159		176					19:00	135		119				
7:15	174		237					19:15	133		105				
7:30	166		268					19:30	142		117				
7:45	143	642	181	862			1504	19:45	129	539	102	443			982
8:00	145		188					20:00	128		89				
8:15	133		160					20:15	122		120				
8:30	123		153					20:30	90		84				
8:45	127	528	122	623			1151	20:45	96	436	74	367			803
9:00	143		111					21:00	74		90				
9:15	103		128					21:15	95		86				
9:30	131		111					21:30	71		67				
9:45	120	497	135	485			982	21:45	75	315	70	313			628
10:00	138		107					22:00	76		68				
10:15	132		134					22:15	81		60				
10:30	146		132					22:30	55		53				
10:45	111	527	116	489			1016	22:45	50	262	65	246			508
11:00	156		119					23:00	55		45				
11:15	135		118					23:15	42		36				
11:30	135		132					23:30	56		28				
11:45	148	574	126	495			1069	23:45	32	185	31	140			325
Total Vol.	4283		4751				**9034**		6854		5984				**12838**

Daily Totals

NB	SB	EB	WB	Combined
11137	10735			**21872**

	AM			PM		
Split %	47.4%	52.6%	**41.3%**	53.4%	46.6%	**58.7%**
Peak Hour	6:45	7:15	**6:45**	16:45	15:45	**16:00**
Volume	651	874	**1507**	941	793	**1641**
P.H.F.	0.94	0.82	**0.87**	0.89	0.91	**0.96**

cs@aimtd.com Tell. 714 253 7888

Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT5 Rubidoux north of Production. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	29		18					12:00	138		117				
0:15	34		19					12:15	129		142				
0:30	21		28					12:30	169		148				
0:45	17	101	12	77			178	12:45	159	595	139	546			1141
1:00	27		21					13:00	131		143				
1:15	23		14					13:15	140		138				
1:30	8		14					13:30	166		181				
1:45	19	77	14	63			140	13:45	171	608	153	615			1223
2:00	19		15					14:00	149		164				
2:15	24		16					14:15	167		143				
2:30	16		34					14:30	161		166				
2:45	30	89	29	94			183	14:45	178	655	200	673			1328
3:00	22		20					15:00	189		191				
3:15	29		37					15:15	227		180				
3:30	39		44					15:30	223		190				
3:45	24	114	48	149			263	15:45	256	895	197	758			1653
4:00	40		54					16:00	245		197				
4:15	30		85					16:15	230		215				
4:30	52		116					16:30	248		232				
4:45	63	185	108	363			548	16:45	253	976	205	849			1825
5:00	53		95					17:00	248		209				
5:15	78		118					17:15	246		220				
5:30	89		166					17:30	223		228				
5:45	116	336	149	528			864	17:45	227	944	191	848			1792
6:00	107		112					18:00	203		142				
6:15	111		138					18:15	187		155				
6:30	140		163					18:30	163		125				
6:45	167	525	190	603			1128	18:45	147	700	109	531			1231
7:00	170		216					19:00	120		124				
7:15	144		264					19:15	98		104				
7:30	158		283					19:30	97		88				
7:45	184	656	249	1012			1668	19:45	87	402	90	406			808
8:00	123		175					20:00	89		85				
8:15	158		148					20:15	114		76				
8:30	128		168					20:30	89		92				
8:45	135	544	138	629			1173	20:45	100	392	68	321			713
9:00	124		121					21:00	99		65				
9:15	111		135					21:15	87		68				
9:30	116		125					21:30	89		66				
9:45	108	459	136	517			976	21:45	57	332	50	249			581
10:00	129		106					22:00	65		53				
10:15	116		127					22:15	59		43				
10:30	94		107					22:30	37		37				
10:45	136	475	123	463			938	22:45	41	202	46	179			381
11:00	124		137					23:00	37		35				
11:15	111		159					23:15	36		33				
11:30	140		145					23:30	32		30				
11:45	152	527	140	581			1108	23:45	37	142	26	124			266
Total Vol.		4088		5079			**9167**			6843		6099			**12942**

Daily Totals

NB	SB	EB	WB	**Combined**
10931	11178			**22109**

	AM			**PM**		
Split %	44.6%	55.4%	**41.5%**	52.9%	47.1%	**58.5%**
Peak Hour	7:00	7:00	**7:00**	16:30	16:30	**16:30**
Volume	656	1012	**1668**	995	866	**1861**
P.H.F.	0.89	0.89	**0.95**	0.99	0.93	**0.97**

cs@aimtd.com Tell. 714 253 7888

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT1 Rubidoux south of Castellano. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	25		17					12:00	97		136				
0:15	25		16					12:15	118		101				
0:30	30		27					12:30	130		110				
0:45	17	97	23	83			180	12:45	127	472	124	471			943
1:00	28		13					13:00	91		133				
1:15	12		18					13:15	119		122				
1:30	25		12					13:30	119		133				
1:45	23	88	9	52			140	13:45	134	463	112	500			963
2:00	27		19					14:00	157		124				
2:15	14		16					14:15	167		137				
2:30	18		24					14:30	208		152				
2:45	28	87	26	85			172	14:45	182	714	172	585			1299
3:00	21		23					15:00	168		157				
3:15	27		39					15:15	192		197				
3:30	29		49					15:30	213		188				
3:45	42	119	55	166			285	15:45	192	765	191	733			1498
4:00	44		70					16:00	186		222				
4:15	46		74					16:15	207		192				
4:30	55		126					16:30	175		216				
4:45	76	221	137	407			628	16:45	191	759	235	865			1624
5:00	63		91					17:00	222		227				
5:15	68		133					17:15	209		242				
5:30	97		140					17:30	205		198				
5:45	84	312	170	534			846	17:45	187	823	209	876			1699
6:00	107		115					18:00	156		156				
6:15	126		134					18:15	177		164				
6:30	140		177					18:30	127		140				
6:45	140	513	208	634			1147	18:45	145	605	134	594			1199
7:00	160		193					19:00	144		132				
7:15	140		243					19:15	136		125				
7:30	165		232					19:30	120		122				
7:45	155	620	247	915			1535	19:45	122	522	104	483			1005
8:00	159		198					20:00	107		94				
8:15	141		176					20:15	119		83				
8:30	133		165					20:30	109		73				
8:45	125	558	157	696			1254	20:45	81	416	84	334			750
9:00	117		149					21:00	88		71				
9:15	99		126					21:15	101		53				
9:30	104		116					21:30	67		56				
9:45	140	460	117	508			968	21:45	70	326	62	242			568
10:00	107		139					22:00	53		56				
10:15	126		104					22:15	62		43				
10:30	139		127					22:30	56		42				
10:45	132	504	96	466			970	22:45	54	225	36	177			402
11:00	128		123					23:00	37		28				
11:15	121		118					23:15	40		37				
11:30	114		116					23:30	52		31				
11:45	105	468	140	497			965	23:45	30	159	21	117			276
Total Vol.		4047		5043			**9090**			6249		5977			**12226**

Daily Totals

NB	SB	EB	WB	Combined
10296	11020			**21316**

	AM			PM		
Split %	44.5%	55.5%	**42.6%**	51.1%	48.9%	**57.4%**
Peak Hour	7:00	7:15	**7:15**	16:45	16:30	**16:45**
Volume	620	920	**1539**	827	920	**1729**
P.H.F.	0.94	0.93	**0.96**	0.94	0.95	**0.96**

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Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT6 Rubidoux south of Avalon. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	30		22					12:00	133		132				
0:15	26		25					12:15	137		133				
0:30	25		25					12:30	139		128				
0:45	20	101	18	90			191	12:45	162	571	139	532			1103
1:00	24		8					13:00	131		132				
1:15	17		12					13:15	124		130				
1:30	10		22					13:30	159		154				
1:45	14	65	15	57			122	13:45	142	556	132	548			1104
2:00	20		25					14:00	132		153				
2:15	16		23					14:15	166		180				
2:30	11		17					14:30	175		161				
2:45	21	68	14	79			147	14:45	215	688	160	654			1342
3:00	28		19					15:00	182		182				
3:15	33		24					15:15	187		188				
3:30	22		57					15:30	207		236				
3:45	30	113	45	145			258	15:45	236	812	255	861			1673
4:00	29		59					16:00	248		251				
4:15	32		77					16:15	228		290				
4:30	61		74					16:30	223		248				
4:45	58	180	117	327			507	16:45	220	919	222	1011			1930
5:00	50		94					17:00	260		244				
5:15	78		119					17:15	203		252				
5:30	81		151					17:30	243		189				
5:45	117	326	153	517			843	17:45	166	872	169	854			1726
6:00	91		128					18:00	165		182				
6:15	134		137					18:15	165		152				
6:30	142		163					18:30	136		132				
6:45	147	514	158	586			1100	18:45	141	607	128	594			1201
7:00	162		202					19:00	139		102				
7:15	146		266					19:15	106		112				
7:30	169		264					19:30	121		103				
7:45	135	612	238	970			1582	19:45	95	461	122	439			900
8:00	132		189					20:00	110		75				
8:15	145		144					20:15	108		94				
8:30	113		185					20:30	93		68				
8:45	132	522	164	682			1204	20:45	72	383	46	283			666
9:00	138		140					21:00	64		68				
9:15	119		123					21:15	79		55				
9:30	97		113					21:30	61		61				
9:45	128	482	127	503			985	21:45	65	269	67	251			520
10:00	114		119					22:00	65		46				
10:15	108		131					22:15	58		36				
10:30	109		142					22:30	53		46				
10:45	122	453	107	499			952	22:45	51	227	40	168			395
11:00	115		152					23:00	45		31				
11:15	130		114					23:15	32		38				
11:30	125		109					23:30	44		30				
11:45	155	525	127	502			1027	23:45	37	158	33	132			290
Total Vol.		3961		4957			**8918**			6523		6327			**12850**

Daily Totals

NB	SB	EB	WB	**Combined**
10484	11284			**21768**

	AM			**PM**		
Split %	44.4%	55.6%	**41.0%**	50.8%	49.2%	**59.0%**
Peak Hour	6:45	7:00	**7:00**	15:45	15:45	**15:45**
Volume	624	970	**1582**	935	1044	**1979**
P.H.F.	0.92	0.91	**0.91**	0.95	0.90	**0.96**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT2 Rubidoux south of Production. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	21		16					12:00	100		137				
0:15	25		17					12:15	123		111				
0:30	29		26					12:30	126		114				
0:45	18	93	22	81			174	12:45	130	479	128	490			969
1:00	22		14					13:00	96		133				
1:15	11		18					13:15	116		123				
1:30	26		11					13:30	118		138				
1:45	26	85	9	52			137	13:45	140	470	118	512			982
2:00	21		20					14:00	157		129				
2:15	14		16					14:15	173		141				
2:30	20		24					14:30	192		157				
2:45	28	83	28	88			171	14:45	173	695	165	592			1287
3:00	23		21					15:00	168		178				
3:15	33		35					15:15	180		205				
3:30	32		46					15:30	201		193				
3:45	42	130	59	161			291	15:45	208	757	190	766			1523
4:00	47		67					16:00	166		234				
4:15	45		70					16:15	207		207				
4:30	55		115					16:30	180		202				
4:45	84	231	126	378			609	16:45	188	741	268	911			1652
5:00	62		83					17:00	219		215				
5:15	68		134					17:15	252		217				
5:30	95		141					17:30	229		207				
5:45	89	314	168	526			840	17:45	188	888	206	845			1733
6:00	114		117					18:00	160		165				
6:15	122		122					18:15	172		159				
6:30	143		185					18:30	152		155				
6:45	145	524	193	617			1141	18:45	125	609	139	618			1227
7:00	157		188					19:00	156		118				
7:15	136		239					19:15	123		119				
7:30	165		235					19:30	121		101				
7:45	170	628	264	926			1554	19:45	104	504	91	429			933
8:00	155		188					20:00	115		103				
8:15	139		190					20:15	114		86				
8:30	135		187					20:30	95		87				
8:45	130	559	152	717			1276	20:45	102	426	78	354			780
9:00	120		164					21:00	90		76				
9:15	95		127					21:15	86		57				
9:30	107		117					21:30	87		60				
9:45	129	451	122	530			981	21:45	64	327	72	265			592
10:00	107		132					22:00	44		61				
10:15	132		113					22:15	64		51				
10:30	143		123					22:30	44		29				
10:45	126	508	109	477			985	22:45	48	200	33	174			374
11:00	130		128					23:00	39		46				
11:15	123		115					23:15	41		43				
11:30	115		118					23:30	35		27				
11:45	108	476	142	503			979	23:45	26	141	18	134			275
Total Vol.		4082		5056			**9138**			6237		6090			**12327**

Daily Totals

NB	SB	EB	WB	**Combined**
10319	11146			**21465**

	AM			**PM**		
Split %	44.7%	55.3%	**42.6%**	50.6%	49.4%	**57.4%**
Peak Hour	7:30	7:00	**7:00**	16:45	16:00	**16:45**
Volume	629	926	**1554**	888	911	**1795**
P.H.F.	0.93	0.88	**0.90**	0.90	0.85	**0.96**

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Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT7 Rubidoux south of 20th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	36		23					12:00	120		111				
0:15	32		33					12:15	129		108				
0:30	38		26					12:30	108		111				
0:45	17	123	27	109			232	12:45	112	469	117	447			916
1:00	21		19					13:00	109		130				
1:15	29		21					13:15	116		115				
1:30	24		27					13:30	115		109				
1:45	29	103	21	88			191	13:45	133	473	104	458			931
2:00	19		22					14:00	113		153				
2:15	28		33					14:15	134		133				
2:30	28		22					14:30	140		147				
2:45	25	100	29	106			206	14:45	181	568	136	569			1137
3:00	34		32					15:00	182		146				
3:15	33		33					15:15	171		165				
3:30	30		36					15:30	166		193				
3:45	37	134	48	149			283	15:45	178	697	218	722			1419
4:00	31		66					16:00	212		211				
4:15	39		68					16:15	175		222				
4:30	52		76					16:30	175		204				
4:45	55	177	92	302			479	16:45	163	725	199	836			1561
5:00	54		92					17:00	181		201				
5:15	78		86					17:15	177		205				
5:30	78		111					17:30	195		142				
5:45	105	315	121	410			725	17:45	172	725	132	680			1405
6:00	80		95					18:00	161		165				
6:15	94		103					18:15	148		105				
6:30	121		153					18:30	134		120				
6:45	120	415	118	469			884	18:45	116	559	101	491			1050
7:00	126		153					19:00	95		79				
7:15	119		178					19:15	79		90				
7:30	141		220					19:30	106		84				
7:45	123	509	185	736			1245	19:45	88	368	93	346			714
8:00	119		150					20:00	101		63				
8:15	99		119					20:15	92		90				
8:30	112		134					20:30	60		66				
8:45	103	433	138	541			974	20:45	56	309	49	268			577
9:00	126		97					21:00	53		56				
9:15	83		127					21:15	57		58				
9:30	108		108					21:30	52		62				
9:45	110	427	100	432			859	21:45	62	224	59	235			459
10:00	109		118					22:00	54		40				
10:15	80		99					22:15	56		43				
10:30	101		104					22:30	35		53				
10:45	92	382	95	416			798	22:45	42	187	58	194			381
11:00	88		128					23:00	41		33				
11:15	94		98					23:15	36		48				
11:30	100		117					23:30	50		38				
11:45	136	418	105	448			866	23:45	37	164	34	153			317
Total Vol.	3536		4206				**7742**		5468		5399				**10867**

Daily Totals

NB	SB	EB	WB	Combined
9004	9605			**18609**

	AM			PM		
Split %	45.7%	54.3%	**41.6%**	50.3%	49.7%	**58.4%**
Peak Hour	7:00	7:00	**7:00**	15:45	15:45	**15:45**
Volume	509	736	**1245**	740	855	**1595**
P.H.F.	0.90	0.84	**0.86**	0.87	0.96	**0.94**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT3 Rubidoux south of 20th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	35		33					12:00	102		93				
0:15	22		28					12:15	88		96				
0:30	31		28					12:30	105		87				
0:45	23	111	21	110			221	12:45	80	375	85	361			736
1:00	31		15					13:00	101		99				
1:15	22		18					13:15	103		93				
1:30	29		35					13:30	103		108				
1:45	28	110	13	81			191	13:45	113	420	85	385			805
2:00	26		29					14:00	99		98				
2:15	7		16					14:15	87		114				
2:30	28		34					14:30	66		123				
2:45	31	92	43	122			214	14:45	64	316	136	471			787
3:00	33		18					15:00	62		144				
3:15	49		22					15:15	79		182				
3:30	41		48					15:30	122		172				
3:45	49	172	58	146			318	15:45	189	452	191	689			1141
4:00	39		64					16:00	198		181				
4:15	43		89					16:15	198		158				
4:30	52		62					16:30	160		158				
4:45	91	225	107	322			547	16:45	182	738	200	697			1435
5:00	60		78					17:00	204		174				
5:15	84		121					17:15	202		162				
5:30	116		121					17:30	207		147				
5:45	134	394	135	455			849	17:45	185	798	168	651			1449
6:00	108		115					18:00	178		125				
6:15	120		105					18:15	153		130				
6:30	139		146					18:30	146		124				
6:45	127	494	177	543			1037	18:45	109	586	104	483			1069
7:00	107		139					19:00	122		101				
7:15	112		194					19:15	107		98				
7:30	119		178					19:30	121		83				
7:45	131	469	206	717			1186	19:45	76	426	66	348			774
8:00	106		155					20:00	68		71				
8:15	104		169					20:15	95		64				
8:30	95		125					20:30	82		85				
8:45	109	414	103	552			966	20:45	75	320	66	286			606
9:00	100		157					21:00	70		64				
9:15	107		111					21:15	70		36				
9:30	110		114					21:30	81		48				
9:45	102	419	95	477			896	21:45	49	270	50	198			468
10:00	84		110					22:00	42		56				
10:15	123		120					22:15	55		46				
10:30	104		100					22:30	34		35				
10:45	122	433	115	445			878	22:45	46	177	53	190			367
11:00	118		92					23:00	56		47				
11:15	88		113					23:15	38		37				
11:30	125		92					23:30	38		31				
11:45	115	446	104	401			847	23:45	36	168	22	137			305
Total Vol.		3779		4371			**8150**			5046		4896			**9942**

Daily Totals

NB	SB	EB	WB	**Combined**
8825	9267			**18092**

	AM			**PM**		
Split %	46.4%	53.6%	**45.0%**	50.8%	49.2%	**55.0%**
Peak Hour	5:45	7:15	**7:15**	17:00	15:15	**16:45**
Volume	501	733	**1201**	798	726	**1478**
P.H.F.	0.90	0.89	**0.89**	0.99	0.95	**0.97**

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Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT8 Rubidoux south of 24th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	38		25					12:00	136		124				
0:15	32		37					12:15	135		112				
0:30	38		25					12:30	132		119				
0:45	18	126	29	116			242	12:45	124	527	131	486			1013
1:00	23		21					13:00	128		139				
1:15	29		22					13:15	121		109				
1:30	24		30					13:30	140		134				
1:45	30	106	21	94			200	13:45	140	529	103	485			1014
2:00	25		20					14:00	123		148				
2:15	29		37					14:15	145		136				
2:30	27		27					14:30	146		158				
2:45	27	108	33	117			225	14:45	197	611	142	584			1195
3:00	33		31					15:00	194		164				
3:15	36		33					15:15	189		166				
3:30	30		39					15:30	215		181				
3:45	43	142	43	146			288	15:45	192	790	216	727			1517
4:00	36		63					16:00	203		192				
4:15	45		61					16:15	196		184				
4:30	64		76					16:30	201		186				
4:45	64	209	94	294			503	16:45	194	794	171	733			1527
5:00	59		88					17:00	199		203				
5:15	76		89					17:15	191		192				
5:30	91		107					17:30	215		146				
5:45	122	348	128	412			760	17:45	188	793	133	674			1467
6:00	87		100					18:00	172		159				
6:15	110		110					18:15	174		105				
6:30	127		152					18:30	144		114				
6:45	133	457	116	478			935	18:45	120	610	109	487			1097
7:00	134		135					19:00	97		80				
7:15	126		166					19:15	76		89				
7:30	148		185					19:30	109		92				
7:45	139	547	192	678			1225	19:45	89	371	96	357			728
8:00	128		142					20:00	97		65				
8:15	112		136					20:15	94		78				
8:30	124		134					20:30	66		75				
8:45	119	483	141	553			1036	20:45	58	315	51	269			584
9:00	131		106					21:00	54		57				
9:15	95		131					21:15	66		64				
9:30	115		106					21:30	53		59				
9:45	113	454	106	449			903	21:45	60	233	57	237			470
10:00	120		125					22:00	53		38				
10:15	94		113					22:15	54		46				
10:30	108		90					22:30	39		52				
10:45	101	423	104	432			855	22:45	43	189	56	192			381
11:00	101		134					23:00	44		36				
11:15	107		102					23:15	38		45				
11:30	108		123					23:30	47		38				
11:45	135	451	113	472			923	23:45	42	171	35	154			325
Total Vol.		3854		4241			**8095**			5933		5385			**11318**

Daily Totals

NB	SB	EB	WB	**Combined**
9787	9626			**19413**

	AM			**PM**		
Split %	47.6%	52.4%	**41.7%**	52.4%	47.6%	**58.3%**
Peak Hour	7:00	7:15	**7:15**	15:30	15:45	**15:30**
Volume	547	685	**1226**	806	778	**1579**
P.H.F.	0.92	0.89	**0.92**	0.95	0.90	**0.97**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT4 Rubidoux south of 24th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	34		33					12:00	107		95				
0:15	23		29					12:15	102		98				
0:30	31		27					12:30	116		85				
0:45	22	110	21	110			220	12:45	85	410	88	366			776
1:00	33		14					13:00	108		100				
1:15	25		18					13:15	109		98				
1:30	27		34					13:30	107		109				
1:45	31	116	14	80			196	13:45	122	446	89	396			842
2:00	25		28					14:00	136		106				
2:15	10		16					14:15	143		117				
2:30	27		35					14:30	152		131				
2:45	29	91	44	123			214	14:45	168	599	155	509			1108
3:00	29		17					15:00	174		152				
3:15	53		24					15:15	170		170				
3:30	49		47					15:30	198		172				
3:45	54	185	52	140			325	15:45	209	751	173	667			1418
4:00	44		57					16:00	203		176				
4:15	53		91					16:15	197		156				
4:30	55		60					16:30	192		140				
4:45	96	248	99	307			555	16:45	179	771	169	641			1412
5:00	63		90					17:00	217		159				
5:15	88		113					17:15	225		151				
5:30	129		124					17:30	203		165				
5:45	158	438	138	465			903	17:45	207	852	135	610			1462
6:00	139		120					18:00	190		132				
6:15	142		107					18:15	164		130				
6:30	141		149					18:30	134		113				
6:45	140	562	167	543			1105	18:45	144	632	109	484			1116
7:00	106		144					19:00	119		113				
7:15	117		181					19:15	97		104				
7:30	126		168					19:30	114		95				
7:45	130	479	209	702			1181	19:45	103	433	94	406			839
8:00	116		152					20:00	76		91				
8:15	117		167					20:15	77		69				
8:30	101		129					20:30	85		58				
8:45	120	454	102	550			1004	20:45	66	304	59	277			581
9:00	111		154					21:00	74		71				
9:15	107		115					21:15	89		42				
9:30	113		117					21:30	70		53				
9:45	112	443	100	486			929	21:45	76	309	72	238			547
10:00	97		117					22:00	55		55				
10:15	134		136					22:15	80		57				
10:30	108		104					22:30	35		50				
10:45	116	455	116	473			928	22:45	55	225	58	220			445
11:00	128		105					23:00	43		55				
11:15	99		121					23:15	49		39				
11:30	108		100					23:30	38		35				
11:45	111	446	107	433			879	23:45	40	170	34	163			333
Total Vol.		4027		4412			**8439**			5902		4977			**10879**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	9929	9389			**19318**

	AM			**PM**		
Split %	47.7%	52.3%	**43.7%**	54.3%	45.7%	**56.3%**
Peak Hour	5:45	7:15	**7:15**	17:00	15:15	**15:30**
Volume	580	710	**1199**	852	691	**1484**
P.H.F.	0.92	0.85	**0.88**	0.94	0.98	**0.97**

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Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT9 Rubidoux south of 26th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	39		27					12:00	143		130				
0:15	30		37					12:15	137		118				
0:30	39		29					12:30	126		125				
0:45	16	124	30	123			247	12:45	137	543	133	506			1049
1:00	24		21					13:00	127		144				
1:15	33		22					13:15	118		111				
1:30	27		27					13:30	157		128				
1:45	29	113	20	90			203	13:45	143	545	112	495			1040
2:00	26		19					14:00	132		138				
2:15	26		33					14:15	142		160				
2:30	23		26					14:30	163		163				
2:45	32	107	34	112			219	14:45	197	634	148	609			1243
3:00	30		32					15:00	197		178				
3:15	34		32					15:15	199		161				
3:30	36		40					15:30	200		188				
3:45	41	141	38	142			283	15:45	206	802	215	742			1544
4:00	36		66					16:00	215		194				
4:15	48		60					16:15	194		190				
4:30	73		86					16:30	194		199				
4:45	79	236	103	315			551	16:45	210	813	165	748			1561
5:00	64		99					17:00	182		215				
5:15	84		102					17:15	189		198				
5:30	107		112					17:30	213		144				
5:45	123	378	125	438			816	17:45	187	771	141	698			1469
6:00	99		120					18:00	180		159				
6:15	108		109					18:15	167		112				
6:30	130		152					18:30	152		122				
6:45	137	474	112	493			967	18:45	116	615	106	499			1114
7:00	148		137					19:00	101		79				
7:15	129		175					19:15	75		96				
7:30	142		190					19:30	117		85				
7:45	149	568	176	678			1246	19:45	85	378	101	361			739
8:00	134		148					20:00	105		74				
8:15	115		139					20:15	94		77				
8:30	134		134					20:30	60		81				
8:45	110	493	138	559			1052	20:45	59	318	55	287			605
9:00	142		113					21:00	55		61				
9:15	102		139					21:15	63		62				
9:30	113		122					21:30	48		64				
9:45	123	480	107	481			961	21:45	64	230	53	240			470
10:00	123		137					22:00	50		42				
10:15	107		114					22:15	55		46				
10:30	127		104					22:30	34		48				
10:45	104	461	109	464			925	22:45	53	192	64	200			392
11:00	105		143					23:00	39		36				
11:15	117		107					23:15	41		45				
11:30	105		125					23:30	47		39				
11:45	145	472	116	491			963	23:45	40	167	34	154			321
Total Vol.		4047		4386			**8433**			6008		5539			**11547**

Daily Totals

NB	SB	EB	WB	**Combined**
10055	9925			**19980**

	AM			**PM**		
Split %	48.0%	52.0%	**42.2%**	52.0%	48.0%	**57.8%**
Peak Hour	7:00	7:15	**7:00**	15:15	15:45	**15:45**
Volume	568	689	**1246**	820	798	**1607**
P.H.F.	0.95	0.91	**0.94**	0.98	0.93	**0.95**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT5 Rubidoux south of 26th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	37		36					12:00	110		106				
0:15	23		30					12:15	109		97				
0:30	31		20					12:30	117		100				
0:45	23	114	25	111			225	12:45	91	427	85	388			815
1:00	34		15					13:00	110		104				
1:15	24		19					13:15	111		98				
1:30	27		34					13:30	101		107				
1:45	29	114	11	79			193	13:45	127	449	92	401			850
2:00	25		31					14:00	119		111				
2:15	11		14					14:15	124		114				
2:30	26		33					14:30	134		118				
2:45	33	95	44	122			217	14:45	154	531	127	470			1001
3:00	32		19					15:00	177		151				
3:15	54		30					15:15	161		167				
3:30	56		45					15:30	179		179				
3:45	52	194	51	145			339	15:45	210	727	170	667			1394
4:00	44		68					16:00	187		182				
4:15	59		90					16:15	196		167				
4:30	61		62					16:30	203		148				
4:45	94	258	98	318			576	16:45	183	769	179	676			1445
5:00	81		102					17:00	211		160				
5:15	90		114					17:15	238		161				
5:30	152		126					17:30	209		172				
5:45	160	483	148	490			973	17:45	215	873	142	635			1508
6:00	151		122					18:00	190		132				
6:15	146		118					18:15	175		129				
6:30	144		140					18:30	122		128				
6:45	148	589	182	562			1151	18:45	145	632	107	496			1128
7:00	110		152					19:00	115		107				
7:15	135		186					19:15	97		115				
7:30	122		158					19:30	122		90				
7:45	137	504	219	715			1219	19:45	101	435	97	409			844
8:00	125		159					20:00	79		92				
8:15	118		159					20:15	79		74				
8:30	102		144					20:30	74		61				
8:45	133	478	103	565			1043	20:45	69	301	59	286			587
9:00	114		161					21:00	76		78				
9:15	122		118					21:15	96		41				
9:30	118		117					21:30	67		56				
9:45	124	478	107	503			981	21:45	81	320	71	246			566
10:00	94		114					22:00	55		60				
10:15	121		140					22:15	83		54				
10:30	115		109					22:30	37		49				
10:45	115	445	121	484			929	22:45	58	233	66	229			462
11:00	133		96					23:00	45		55				
11:15	101		133					23:15	47		41				
11:30	122		109					23:30	42		36				
11:45	106	462	102	440			902	23:45	39	173	38	170			343
Total Vol.		4214		4534			**8748**			5870		5073			**10943**

Daily Totals

NB	SB	EB	WB	**Combined**
10084	9607			**19691**

	AM			**PM**		
Split %	48.2%	51.8%	**44.4%**	53.6%	46.4%	**55.6%**
Peak Hour	5:30	7:15	**7:15**	17:00	15:15	**16:45**
Volume	609	722	**1241**	873	698	**1513**
P.H.F.	0.95	0.82	**0.87**	0.91	0.96	**0.95**

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Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT10 Rubidoux north of 29th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	43		29					12:00	149		145				
0:15	33		36					12:15	148		135				
0:30	41		37					12:30	145		146				
0:45	17	134	29	131			265	12:45	146	588	154	580			1168
1:00	25		23					13:00	139		157				
1:15	36		23					13:15	132		125				
1:30	28		30					13:30	181		146				
1:45	28	117	20	96			213	13:45	152	604	122	550			1154
2:00	25		21					14:00	148		162				
2:15	29		35					14:15	169		181				
2:30	27		27					14:30	178		196				
2:45	37	118	35	118			236	14:45	203	698	162	701			1399
3:00	33		37					15:00	214		178				
3:15	33		36					15:15	216		176				
3:30	39		43					15:30	217		197				
3:45	43	148	49	165			313	15:45	221	868	225	776			1644
4:00	41		73					16:00	215		221				
4:15	48		62					16:15	206		195				
4:30	82		87					16:30	197		208				
4:45	87	258	112	334			592	16:45	205	823	177	801			1624
5:00	74		121					17:00	190		220				
5:15	91		111					17:15	185		226				
5:30	122		130					17:30	221		153				
5:45	129	416	125	487			903	17:45	182	778	150	749			1527
6:00	110		135					18:00	198		165				
6:15	113		126					18:15	171		117				
6:30	132		167					18:30	161		126				
6:45	137	492	125	553			1045	18:45	132	662	120	528			1190
7:00	156		141					19:00	113		93				
7:15	130		183					19:15	86		109				
7:30	139		216					19:30	121		96				
7:45	158	583	184	724			1307	19:45	98	418	112	410			828
8:00	149		153					20:00	109		87				
8:15	128		147					20:15	95		79				
8:30	135		139					20:30	64		95				
8:45	115	527	147	586			1113	20:45	72	340	57	318			658
9:00	154		125					21:00	59		69				
9:15	118		154					21:15	73		70				
9:30	129		123					21:30	54		69				
9:45	137	538	116	518			1056	21:45	68	254	53	261			515
10:00	133		149					22:00	58		50				
10:15	115		128					22:15	60		51				
10:30	135		119					22:30	39		50				
10:45	111	494	114	510			1004	22:45	66	223	67	218			441
11:00	116		163					23:00	39		41				
11:15	121		119					23:15	43		49				
11:30	128		133					23:30	49		41				
11:45	163	528	126	541			1069	23:45	41	172	36	167			339
Total Vol.		4353		4763			**9116**			6428		6059			**12487**

Daily Totals

NB	SB	EB	WB	Combined
10781	10822			**21603**

	AM			PM		
Split %	47.8%	52.2%	**42.2%**	51.5%	48.5%	**57.8%**
Peak Hour	11:45	7:15	**7:15**	15:15	15:45	**15:30**
Volume	605	736	**1312**	869	849	**1697**
P.H.F.	0.93	0.85	**0.92**	0.99	0.94	**0.95**

cs@aimtd.com Tell. 714 253 7888

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT6 Rubidoux south of 28th. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	38		36					12:00	115		116				
0:15	26		34					12:15	119		114				
0:30	31		29					12:30	122		111				
0:45	30	125	23	122			247	12:45	97	453	107	448			901
1:00	41		17					13:00	118		116				
1:15	25		20					13:15	120		109				
1:30	29		39					13:30	112		120				
1:45	29	124	15	91			215	13:45	125	475	98	443			918
2:00	26		32					14:00	132		109				
2:15	14		22					14:15	146		128				
2:30	27		35					14:30	155		153				
2:45	30	97	46	135			232	14:45	171	604	171	561			1165
3:00	38		24					15:00	178		181				
3:15	55		33					15:15	182		166				
3:30	60		47					15:30	197		190				
3:45	53	206	57	161			367	15:45	216	773	180	717			1490
4:00	42		66					16:00	210		205				
4:15	70		106					16:15	206		181				
4:30	62		66					16:30	202		166				
4:45	96	270	114	352			622	16:45	201	819	194	746			1565
5:00	93		118					17:00	200		176				
5:15	97		122					17:15	236		181				
5:30	144		144					17:30	228		180				
5:45	168	502	156	540			1042	17:45	215	879	149	686			1565
6:00	151		141					18:00	191		134				
6:15	168		133					18:15	190		140				
6:30	154		157					18:30	130		136				
6:45	144	617	202	633			1250	18:45	162	673	111	521			1194
7:00	120		162					19:00	116		113				
7:15	137		186					19:15	113		134				
7:30	122		168					19:30	126		110				
7:45	154	533	252	768			1301	19:45	118	473	101	458			931
8:00	131		158					20:00	93		102				
8:15	132		163					20:15	94		85				
8:30	110		163					20:30	93		78				
8:45	136	509	112	596			1105	20:45	89	369	77	342			711
9:00	133		164					21:00	77		88				
9:15	131		123					21:15	101		46				
9:30	129		137					21:30	79		67				
9:45	115	508	111	535			1043	21:45	85	342	79	280			622
10:00	98		126					22:00	64		66				
10:15	140		130					22:15	82		58				
10:30	115		97					22:30	47		63				
10:45	112	465	98	451			916	22:45	61	254	67	254			508
11:00	115		107					23:00	49		58				
11:15	101		123					23:15	51		42				
11:30	110		114					23:30	49		40				
11:45	120	446	100	444			890	23:45	41	190	40	180			370
Total Vol.		4402		4828			**9230**			6304		5636			**11940**

Daily Totals

NB	SB	EB	WB	**Combined**
10706	10464			**21170**

	AM			**PM**		
Split %	47.7%	52.3%	**43.6%**	52.8%	47.2%	**56.4%**
Peak Hour	5:45	7:00	**7:15**	17:00	15:30	**16:45**
Volume	641	768	**1308**	879	756	**1596**
P.H.F.	0.95	0.76	**0.81**	0.94	0.92	**0.96**

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Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT11 Rivino west of Cactus. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			3		7			12:00			32		24		
0:15			5		7			12:15			16		10		
0:30			0		9			12:30			20		29		
0:45			0	8	7	30	38	12:45			15	83	17	80	163
1:00			2		7			13:00			17		19		
1:15			2		9			13:15			25		25		
1:30			2		4			13:30			34		22		
1:45			0	6	5	25	31	13:45			30	106	27	93	199
2:00			2		6			14:00			18		28		
2:15			3		3			14:15			25		15		
2:30			7		8			14:30			24		50		
2:45			8	20	5	22	42	14:45			45	112	30	123	235
3:00			3		3			15:00			55		39		
3:15			12		9			15:15			57		46		
3:30			15		11			15:30			59		44		
3:45			10	40	3	26	66	15:45			63	234	46	175	409
4:00			7		9			16:00			77		51		
4:15			9		16			16:15			79		58		
4:30			11		23			16:30			87		59		
4:45			23	50	10	58	108	16:45			79	322	44	212	534
5:00			13		12			17:00			68		48		
5:15			20		11			17:15			73		52		
5:30			28		17			17:30			71		48		
5:45			24	85	20	60	145	17:45			65	277	37	185	462
6:00			14		23			18:00			53		45		
6:15			24		12			18:15			33		35		
6:30			37		28			18:30			28		28		
6:45			31	106	25	88	194	18:45			34	148	25	133	281
7:00			26		31			19:00			19		22		
7:15			26		17			19:15			20		19		
7:30			30		25			19:30			21		28		
7:45			37	119	29	102	221	19:45			28	88	16	85	173
8:00			28		18			20:00			12		20		
8:15			19		21			20:15			13		13		
8:30			28		16			20:30			6		15		
8:45			27	102	36	91	193	20:45			12	43	13	61	104
9:00			16		27			21:00			8		12		
9:15			23		17			21:15			4		14		
9:30			27		18			21:30			9		8		
9:45			15	81	21	83	164	21:45			7	28	9	43	71
10:00			19		13			22:00			5		13		
10:15			12		17			22:15			8		15		
10:30			12		22			22:30			6		14		
10:45			16	59	21	73	132	22:45			0	19	13	55	74
11:00			16		25			23:00			6		9		
11:15			17		23			23:15			5		14		
11:30			16		21			23:30			4		19		
11:45			24	73	18	87	160	23:45			4	19	7	49	68
Total Vol.				749		745	**1494**					1479		1294	**2773**

Daily Totals

NB	SB	EB	WB	Combined
		2228	2039	**4267**

			AM				PM		
Split %			50.1%	49.9%	**35.0%**		53.3%	46.7%	**65.0%**
Peak Hour	0:30	0:30	7:15	7:00	**6:30**		16:00	15:45	**16:00**
Volume			121	102	**221**		322	214	**534**
P.H.F.			0.82	0.82	**0.85**		0.93	0.91	**0.91**

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT7 El Rivino east of Rubidoux. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			3		8			12:00			19		22		
0:15			3		7			12:15			29		13		
0:30			4		6			12:30			30		30		
0:45			4	14	7	28	42	12:45			32	110	18	83	193
1:00			0		3			13:00			15		24		
1:15			2		2			13:15			24		21		
1:30			2		2			13:30			28		23		
1:45			5	9	4	11	20	13:45			26	93	28	96	189
2:00			5		9			14:00			24		31		
2:15			9		3			14:15			43		37		
2:30			3		3			14:30			28		43		
2:45			5	22	5	20	42	14:45			33	128	23	134	262
3:00			6		4			15:00			46		29		
3:15			11		6			15:15			28		31		
3:30			20		9			15:30			40		46		
3:45			15	52	4	23	75	15:45			45	159	39	145	304
4:00			12		15			16:00			31		55		
4:15			6		7			16:15			37		45		
4:30			15		10			16:30			37		38		
4:45			25	58	20	52	110	16:45			31	136	49	187	323
5:00			7		13			17:00			44		30		
5:15			16		21			17:15			44		49		
5:30			20		10			17:30			45		37		
5:45			33	76	19	63	139	17:45			41	174	29	145	319
6:00			15		10			18:00			34		30		
6:15			15		14			18:15			31		31		
6:30			34		19			18:30			34		25		
6:45			57	121	37	80	201	18:45			23	122	30	116	238
7:00			30		27			19:00			32		19		
7:15			35		27			19:15			25		23		
7:30			38		30			19:30			12		22		
7:45			37	140	26	110	250	19:45			29	98	24	88	186
8:00			23		19			20:00			18		13		
8:15			21		20			20:15			15		13		
8:30			22		26			20:30			10		11		
8:45			21	87	32	97	184	20:45			17	60	14	51	111
9:00			20		39			21:00			9		18		
9:15			22		22			21:15			9		9		
9:30			16		12			21:30			9		14		
9:45			21	79	21	94	173	21:45			10	37	19	60	97
10:00			19		27			22:00			5		10		
10:15			14		20			22:15			5		7		
10:30			24		19			22:30			5		14		
10:45			21	78	19	85	163	22:45			4	19	21	52	71
11:00			24		22			23:00			3		15		
11:15			13		20			23:15			6		8		
11:30			20		21			23:30			5		6		
11:45			25	82	25	88	170	23:45			0	14	11	40	54
Total Vol.				818		751	**1569**					1150		1197	**2347**

Daily Totals

NB	SB	EB	WB	Combined
		1968	1948	**3916**

			AM				PM		
Split %			52.1%	47.9%	**40.1%**		49.0%	51.0%	**59.9%**
Peak Hour	0:30	0:30	6:45	6:45	**6:45**		17:00	16:00	**15:30**
Volume			160	121	**281**		174	187	**338**
P.H.F.			0.70	0.82	**0.75**		0.97	0.85	**0.98**

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Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT12 Rivino west of Hall. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			8		5			12:00			29		21		
0:15			2		2			12:15			15		16		
0:30			3		3			12:30			24		21		
0:45			6	19	7	17	36	12:45			16	84	14	72	156
1:00			2		3			13:00			15		16		
1:15			3		0			13:15			27		26		
1:30			2		5			13:30			37		32		
1:45			0	7	6	14	21	13:45			28	107	17	91	198
2:00			0		4			14:00			18		20		
2:15			3		2			14:15			18		34		
2:30			11		3			14:30			23		48		
2:45			7	21	2	11	32	14:45			34	93	38	140	233
3:00			2		4			15:00			36		45		
3:15			6		7			15:15			36		21		
3:30			7		13			15:30			46		52		
3:45			12	27	5	29	56	15:45			56	174	72	190	364
4:00			4		6			16:00			68		67		
4:15			11		4			16:15			71		59		
4:30			12		6			16:30			66		50		
4:45			18	45	5	21	66	16:45			78	283	47	223	506
5:00			13		0			17:00			65		44		
5:15			14		10			17:15			59		47		
5:30			32		8			17:30			53		49		
5:45			24	83	14	32	115	17:45			51	228	45	185	413
6:00			19		14			18:00			46		38		
6:15			28		14			18:15			35		30		
6:30			36		32			18:30			38		28		
6:45			43	126	32	92	218	18:45			19	138	29	125	263
7:00			17		30			19:00			18		28		
7:15			26		33			19:15			10		12		
7:30			42		22			19:30			12		20		
7:45			28	113	36	121	234	19:45			26	66	16	76	142
8:00			22		29			20:00			8		13		
8:15			20		23			20:15			14		14		
8:30			21		17			20:30			7		15		
8:45			37	100	13	82	182	20:45			12	41	8	50	91
9:00			30		16			21:00			9		9		
9:15			22		16			21:15			8		11		
9:30			23		23			21:30			10		12		
9:45			19	94	12	67	161	21:45			6	33	11	43	76
10:00			16		21			22:00			8		10		
10:15			11		19			22:15			10		13		
10:30			15		12			22:30			9		8		
10:45			15	57	21	73	130	22:45			6	33	8	39	72
11:00			13		24			23:00			11		8		
11:15			16		19			23:15			10		10		
11:30			17		21			23:30			4		9		
11:45			18	64	19	83	147	23:45			3	28	3	30	58
Total Vol.				756		642	**1398**					1308		1264	**2572**

Daily Totals

NB	SB	EB	WB	Combined
		2064	1906	**3970**

			AM				PM		
Split %			54.1%	45.9%	**35.2%**		50.9%	49.1%	**64.8%**
Peak Hour	0:30	0:30	6:45	6:30	**6:30**		16:00	15:30	**15:45**
Volume			128	127	**249**		283	250	**509**
P.H.F.			0.74	0.96	**0.83**		0.91	0.87	**0.94**

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT8 El Rivino east of Cactus. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			8		6			12:00			20		28		
0:15			3		7			12:15			23		17		
0:30			2		4			12:30			29		30		
0:45			6	19	2	19	38	12:45			35	107	15	90	197
1:00			2		0			13:00			11		21		
1:15			0		0			13:15			20		24		
1:30			4		2			13:30			24		17		
1:45			3	9	5	7	16	13:45			25	80	22	84	164
2:00			3		4			14:00			20		25		
2:15			7		4			14:15			34		34		
2:30			4		2			14:30			16		36		
2:45			2	16	4	14	30	14:45			34	104	28	123	227
3:00			2		3			15:00			35		37		
3:15			8		2			15:15			23		28		
3:30			15		9			15:30			41		38		
3:45			19	44	3	17	61	15:45			40	139	37	140	279
4:00			9		8			16:00			28		60		
4:15			6		2			16:15			28		55		
4:30			15		3			16:30			32		39		
4:45			23	53	9	22	75	16:45			35	123	49	203	326
5:00			5		11			17:00			45		41		
5:15			17		7			17:15			37		42		
5:30			17		7			17:30			31		35		
5:45			35	74	19	44	118	17:45			29	142	26	144	286
6:00			16		11			18:00			27		26		
6:15			15		14			18:15			43		29		
6:30			29		17			18:30			27		22		
6:45			60	120	40	82	202	18:45			16	113	35	112	225
7:00			25		31			19:00			22		27		
7:15			34		36			19:15			18		19		
7:30			30		40			19:30			9		21		
7:45			23	112	34	141	253	19:45			10	59	23	90	149
8:00			23		26			20:00			13		15		
8:15			28		16			20:15			18		10		
8:30			19		10			20:30			9		11		
8:45			25	95	32	84	179	20:45			15	55	13	49	104
9:00			19		26			21:00			12		13		
9:15			20		17			21:15			8		10		
9:30			24		8			21:30			9		14		
9:45			21	84	22	73	157	21:45			13	42	9	46	88
10:00			19		19			22:00			8		8		
10:15			14		12			22:15			5		4		
10:30			23		16			22:30			4		7		
10:45			14	70	18	65	135	22:45			5	22	7	26	48
11:00			20		24			23:00			7		10		
11:15			11		13			23:15			9		8		
11:30			15		15			23:30			0		8		
11:45			27	73	23	75	148	23:45			8	24	3	29	53
Total Vol.				769		643	**1412**					1010		1136	**2146**

Daily Totals

NB	SB	EB	WB	Combined
		1779	1779	**3558**

			AM			PM		
Split %			54.5%	45.5%	**39.7%**	47.1%	52.9%	**60.3%**
Peak Hour	0:30	0:30	6:45	6:45	**6:45**	16:30	16:00	**15:30**
Volume			149	147	**296**	149	203	**327**
P.H.F.			0.62	0.92	**0.74**	0.83	0.85	**0.93**

Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT13 Rivino east of Hall. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			7		6			12:00			20		16		
0:15			2		2			12:15			9		16		
0:30			0		3			12:30			18		12		
0:45			5	14	2	13	27	12:45			7	54	10	54	108
1:00			3		2			13:00			10		12		
1:15			3		2			13:15			20		16		
1:30			3		2			13:30			27		24		
1:45			0	9	3	9	18	13:45			21	78	13	65	143
2:00			0		2			14:00			18		32		
2:15			2		0			14:15			15		29		
2:30			2		2			14:30			17		32		
2:45			3	7	0	4	11	14:45			24	74	24	117	191
3:00			0		4			15:00			25		28		
3:15			4		3			15:15			28		22		
3:30			3		5			15:30			35		33		
3:45			8	15	2	14	29	15:45			49	137	34	117	254
4:00			4		6			16:00			57		42		
4:15			6		0			16:15			54		34		
4:30			5		5			16:30			59		39		
4:45			15	30	0	11	41	16:45			50	220	35	150	370
5:00			3		2			17:00			55		39		
5:15			10		3			17:15			59		32		
5:30			24		5			17:30			62		34		
5:45			14	51	12	22	73	17:45			58	234	35	140	374
6:00			14		8			18:00			45		28		
6:15			11		9			18:15			37		22		
6:30			28		23			18:30			29		22		
6:45			25	78	25	65	143	18:45			19	130	28	100	230
7:00			12		26			19:00			17		14		
7:15			17		22			19:15			7		9		
7:30			32		20			19:30			15		19		
7:45			29	90	19	87	177	19:45			22	61	13	55	116
8:00			20		22			20:00			17		11		
8:15			13		19			20:15			12		17		
8:30			13		11			20:30			6		11		
8:45			28	74	9	61	135	20:45			7	42	11	50	92
9:00			31		13			21:00			6		10		
9:15			16		12			21:15			11		12		
9:30			16		12			21:30			10		8		
9:45			17	80	13	50	130	21:45			6	33	15	45	78
10:00			14		8			22:00			6		7		
10:15			8		17			22:15			7		10		
10:30			13		9			22:30			7		6		
10:45			16	51	19	53	104	22:45			7	27	9	32	59
11:00			13		16			23:00			9		7		
11:15			9		10			23:15			6		13		
11:30			14		9			23:30			3		6		
11:45			10	46	13	48	94	23:45			2	20	4	30	50
Total Vol.				545		437	**982**					1110		955	**2065**

Daily Totals

NB	SB	EB	WB	Combined
		1655	1392	**3047**

			AM				PM		
Split %			55.5%	44.5%	**32.2%**		53.8%	46.2%	**67.8%**
Peak Hour	0:30	0:30	7:15	6:30	**7:15**		17:00	16:00	**17:00**
Volume			98	96	**181**		234	150	**374**
P.H.F.			0.77	0.92	**0.87**		0.94	0.89	**0.97**

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT9 El Rivino east of Hall. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			6		6			12:00			12		19		
0:15			3		6			12:15			15		14		
0:30			2		4			12:30			23		16		
0:45			4	15	2	18	33	12:45			22	72	18	67	139
1:00			0		0			13:00			9		13		
1:15			0		0			13:15			16		19		
1:30			4		0			13:30			20		20		
1:45			4	8	6	6	14	13:45			16	61	22	74	135
2:00			3		2			14:00			17		28		
2:15			3		4			14:15			23		31		
2:30			0		0			14:30			15		20		
2:45			2	8	4	10	18	14:45			28	83	20	99	182
3:00			0		2			15:00			22		21		
3:15			5		2			15:15			21		22		
3:30			8		3			15:30			29		34		
3:45			7	20	0	7	27	15:45			37	109	28	105	214
4:00			8		7			16:00			22		49		
4:15			2		0			16:15			15		40		
4:30			8		2			16:30			25		25		
4:45			18	36	6	15	51	16:45			22	84	30	144	228
5:00			6		11			17:00			35		31		
5:15			8		6			17:15			31		34		
5:30			12		4			17:30			31		30		
5:45			15	41	12	33	74	17:45			31	128	25	120	248
6:00			16		9			18:00			22		20		
6:15			12		10			18:15			35		26		
6:30			21		11			18:30			22		21		
6:45			42	91	22	52	143	18:45			16	95	32	99	194
7:00			22		27			19:00			13		21		
7:15			22		32			19:15			14		15		
7:30			24		35			19:30			10		18		
7:45			24	92	22	116	208	19:45			15	52	12	66	118
8:00			13		14			20:00			13		18		
8:15			20		13			20:15			11		12		
8:30			19		9			20:30			8		11		
8:45			22	74	25	61	135	20:45			11	43	11	52	95
9:00			15		17			21:00			7		9		
9:15			19		20			21:15			10		9		
9:30			16		4			21:30			5		5		
9:45			15	65	18	59	124	21:45			11	33	6	29	62
10:00			16		12			22:00			5		5		
10:15			11		8			22:15			7		5		
10:30			12		15			22:30			2		6		
10:45			10	49	12	47	96	22:45			5	19	5	21	40
11:00			13		19			23:00			9		6		
11:15			11		10			23:15			9		8		
11:30			14		12			23:30			0		5		
11:45			19	57	19	60	117	23:45			7	25	6	25	50
Total Vol.				556		484	**1040**					804		901	**1705**

Daily Totals

NB	SB	EB	WB	**Combined**
		1360	1385	**2745**

			AM				**PM**		
Split %			53.5%	46.5%	**37.9%**		47.2%	52.8%	**62.1%**
Peak Hour	0:30	0:30	6:45	6:45	**6:45**		17:00	15:30	**15:30**
Volume			110	116	**226**		128	151	**254**
P.H.F.			0.65	0.83	**0.88**		0.91	0.77	**0.89**

Thursday, May 11, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT14 Hall north of Agua Mansa. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	0		0					12:00	6		5				
0:15	0		2					12:15	6		0				
0:30	3		0					12:30	16		2				
0:45	5	8	0	2			10	12:45	3	31	8	15			46
1:00	2		0					13:00	8		3				
1:15	0		0					13:15	9		10				
1:30	0		0					13:30	14		11				
1:45	4	6	0	0			6	13:45	6	37	7	31			68
2:00	0		0					14:00	6		5				
2:15	0		0					14:15	7		3				
2:30	0		4					14:30	19		2				
2:45	0	0	8	12			12	14:45	12	44	7	17			61
3:00	0		0					15:00	18		5				
3:15	3		2					15:15	10		10				
3:30	8		3					15:30	25		13				
3:45	0	11	6	11			22	15:45	21	74	12	40			114
4:00	0		3					16:00	21		12				
4:15	0		3					16:15	19		16				
4:30	0		4					16:30	17		12				
4:45	2	2	7	17			19	16:45	15	72	11	51			123
5:00	0		8					17:00	19		10				
5:15	3		7					17:15	18		11				
5:30	2		10					17:30	15		12				
5:45	0	5	11	36			41	17:45	16	68	11	44			112
6:00	3		6					18:00	16		8				
6:15	5		13					18:15	12		9				
6:30	8		9					18:30	11		5				
6:45	7	23	15	43			66	18:45	6	45	3	25			70
7:00	6		7					19:00	10		3				
7:15	7		10					19:15	6		2				
7:30	0		13					19:30	2		2				
7:45	11	24	5	35			59	19:45	3	21	0	7			28
8:00	4		6					20:00	2		3				
8:15	0		6					20:15	3		3				
8:30	2		9					20:30	3		2				
8:45	4	10	7	28			38	20:45	0	8	4	12			20
9:00	6		4					21:00	3		3				
9:15	5		6					21:15	3		0				
9:30	10		7					21:30	2		2				
9:45	2	23	6	23			46	21:45	2	10	0	5			15
10:00	11		4					22:00	3		0				
10:15	4		4					22:15	0		0				
10:30	5		2					22:30	4		0				
10:45	0	20	2	12			32	22:45	0	7	0	0			7
11:00	7		3					23:00	0		0				
11:15	7		2					23:15	0		2				
11:30	8		0					23:30	5		0				
11:45	5	27	9	14			41	23:45	0	5	0	2			7
Total Vol.		159		233			**392**			422		249			**671**

Daily Totals

NB	SB	EB	WB	**Combined**
581	482			**1063**

	AM			PM		
Split %	40.6%	59.4%	**36.9%**	62.9%	37.1%	**63.1%**
Peak Hour	11:45	6:45	**6:15**	15:30	15:30	**15:30**
Volume	33	45	**70**	86	53	**139**
P.H.F.	0.52	0.75	**0.80**	0.88	0.83	**0.91**

cs@aimtd.com Tell. 714 253 7888

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT10 Hall south of El Rivino. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	0		0					12:00	10		12				
0:15	2		0					12:15	6		11				
0:30	0		0					12:30	17		14				
0:45	0	2	3	3			5	12:45	8	41	13	50			91
1:00	0		0					13:00	8		2				
1:15	0		0					13:15	7		7				
1:30	0		0					13:30	4		4				
1:45	2	2	0	0			2	13:45	3	22	7	20			42
2:00	0		0					14:00	7		5				
2:15	0		3					14:15	9		17				
2:30	0		2					14:30	11		6				
2:45	0	0	0	5			5	14:45	10	37	7	35			72
3:00	0		0					15:00	18		4				
3:15	2		3					15:15	12		4				
3:30	5		6					15:30	5		10				
3:45	0	7	13	22			29	15:45	9	44	5	23			67
4:00	0		4					16:00	19		12				
4:15	0		3					16:15	17		6				
4:30	0		9					16:30	14		6				
4:45	0	0	5	21			21	16:45	13	63	7	31			94
5:00	0		3					17:00	14		4				
5:15	0		10					17:15	8		6				
5:30	0		9					17:30	10		6				
5:45	10	10	21	43			53	17:45	10	42	4	20			62
6:00	4		5					18:00	6		4				
6:15	8		5					18:15	8		4				
6:30	4		13					18:30	7		6				
6:45	14	30	15	38			68	18:45	7	28	2	16			44
7:00	6		11					19:00	5		2				
7:15	6		19					19:15	6		3				
7:30	7		13					19:30	2		3				
7:45	6	25	8	51			76	19:45	5	18	0	8			26
8:00	12		9					20:00	4		3				
8:15	8		12					20:15	2		3				
8:30	5		10					20:30	2		0				
8:45	9	34	3	34			68	20:45	8	16	4	10			26
9:00	10		10					21:00	7		3				
9:15	2		4					21:15	3		5				
9:30	7		5					21:30	8		3				
9:45	3	22	8	27			49	21:45	3	21	0	11			32
10:00	5		4					22:00	3		2				
10:15	4		0					22:15	2		0				
10:30	2		8					22:30	3		0				
10:45	5	16	7	19			35	22:45	5	13	2	4			17
11:00	5		4					23:00	3		3				
11:15	7		0					23:15	0		0				
11:30	6		3					23:30	3		0				
11:45	14	32	7	14			46	23:45	2	8	0	3			11
Total Vol.		180		277			**457**			353		231			**584**

Daily Totals

NB	SB	EB	WB	Combined
533	508			**1041**

	AM			PM		
Split %	39.4%	60.6%	**43.9%**	60.4%	39.6%	**56.1%**
Peak Hour	11:45	6:30	**6:45**	16:00	12:00	**16:00**
Volume	47	58	**91**	63	50	**94**
P.H.F.	0.69	0.76	**0.78**	0.84	0.89	**0.76**

cs@aimtd.com Tell. 714 253 7888

Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT15 Market east of Rubidoux. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			44		29			12:00			136		139		
0:15			31		40			12:15			143		132		
0:30			35		23			12:30			143		137		
0:45			16	126	30	122	248	12:45			138	560	165	573	1133
1:00			14		28			13:00			118		139		
1:15			30		32			13:15			138		131		
1:30			21		21			13:30			141		146		
1:45			43	108	29	110	218	13:45			166	563	133	549	1112
2:00			38		28			14:00			141		156		
2:15			43		37			14:15			174		166		
2:30			53		32			14:30			161		179		
2:45			36	170	38	135	305	14:45			164	640	176	677	1317
3:00			30		46			15:00			178		162		
3:15			34		36			15:15			198		176		
3:30			66		27			15:30			184		197		
3:45			51	181	60	169	350	15:45			220	780	230	765	1545
4:00			60		61			16:00			200		219		
4:15			71		71			16:15			219		198		
4:30			74		107			16:30			217		210		
4:45			104	309	98	337	646	16:45			220	856	225	852	1708
5:00			84		87			17:00			225		234		
5:15			122		108			17:15			199		212		
5:30			158		118			17:30			205		207		
5:45			156	520	136	449	969	17:45			190	819	155	808	1627
6:00			131		117			18:00			179		152		
6:15			145		136			18:15			157		122		
6:30			173		156			18:30			153		133		
6:45			155	604	160	569	1173	18:45			120	609	117	524	1133
7:00			166		175			19:00			78		104		
7:15			215		161			19:15			84		89		
7:30			191		188			19:30			88		107		
7:45			214	786	145	669	1455	19:45			110	360	74	374	734
8:00			162		150			20:00			75		82		
8:15			175		187			20:15			87		105		
8:30			168		109			20:30			64		89		
8:45			148	653	150	596	1249	20:45			61	287	73	349	636
9:00			138		135			21:00			70		69		
9:15			145		140			21:15			51		82		
9:30			110		127			21:30			67		73		
9:45			147	540	118	520	1060	21:45			75	263	72	296	559
10:00			121		115			22:00			49		51		
10:15			113		110			22:15			47		69		
10:30			127		138			22:30			47		63		
10:45			130	491	136	499	990	22:45			40	183	61	244	427
11:00			123		121			23:00			43		41		
11:15			124		132			23:15			37		45		
11:30			110		138			23:30			55		54		
11:45			140	497	137	528	1025	23:45			35	170	35	175	345
Total Vol.				4985		4703	**9688**					6090		6186	**12276**

Daily Totals

NB	SB	EB	WB	**Combined**
		11075	10889	**21964**

			AM				**PM**		
Split %			51.5%	48.5%	**44.1%**		49.6%	50.4%	**55.9%**
Peak Hour	0:30	0:30	7:00	6:45	**7:00**		16:15	16:30	**16:15**
Volume			786	684	**1455**		881	881	**1748**
P.H.F.			0.91	0.91	**0.96**		0.98	0.94	**0.95**

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT11 Market east of Rubidoux. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:30			34		33			12:00			126		91		
0:15			26		37			12:15			96		122		
0:30			29		31			12:30			115		94		
0:45			25	114	16	117	231	12:45			92	429	101	408	837
1:00			30		24			13:00			102		103		
1:15			31		23			13:15			119		98		
1:30			29		49			13:30			106		115		
1:45			18	108	17	113	221	13:45			146	473	103	419	892
2:00			27		37			14:00			138		115		
2:15			7		16			14:15			147		136		
2:30			36		42			14:30			164		149		
2:45			37	107	46	141	248	14:45			196	645	168	568	1213
3:00			43		22			15:00			179		154		
3:15			59		34			15:15			163		172		
3:30			55		49			15:30			184		182		
3:45			64	221	74	179	400	15:45			199	725	177	685	1410
4:00			50		58			16:00			204		196		
4:15			62		91			16:15			203		180		
4:30			97		78			16:30			173		181		
4:45			122	331	110	337	668	16:45			249	829	180	737	1566
5:00			70		84			17:00			228		178		
5:15			105		109			17:15			215		156		
5:30			144		112			17:30			231		180		
5:45			163	482	98	403	885	17:45			207	881	161	675	1556
6:00			125		131			18:00			177		134		
6:15			146		125			18:15			141		132		
6:30			181		152			18:30			146		121		
6:45			168	620	153	561	1181	18:45			128	592	103	490	1082
7:00			154		182			19:00			109		116		
7:15			169		150			19:15			90		127		
7:30			156		187			19:30			124		101		
7:45			181	660	169	688	1348	19:45			87	410	80	424	834
8:00			134		177			20:00			65		88		
8:15			135		146			20:15			73		87		
8:30			142		140			20:30			62		76		
8:45			136	547	133	596	1143	20:45			71	271	71	322	593
9:00			118		118			21:00			72		79		
9:15			124		109			21:15			72		76		
9:30			117		129			21:30			73		66		
9:45			121	480	124	480	960	21:45			69	286	89	310	596
10:00			110		118			22:00			62		54		
10:15			112		118			22:15			76		69		
10:30			99		147			22:30			45		68		
10:45			116	437	138	521	958	22:45			47	230	60	251	481
11:00			127		122			23:00			41		63		
11:15			92		112			23:15			55		44		
11:30			122		123			23:30			36		62		
11:45			138	479	108	465	944	23:45			48	180	34	203	383
Total Vol.				4586		4601	**9187**					5951		5492	**11443**

			Daily Totals		
NB	SB	EB	WB	**Combined**
		10537	10093	**20630**

			AM				**PM**		
Split %			49.9%	50.1%	**44.5%**		52.0%	48.0%	**55.5%**
Peak Hour	0:30	0:30	6:30	7:00	**7:00**		16:45	16:00	**16:45**
Volume			672	688	**1348**		923	737	**1617**
P.H.F.			0.93	0.92	**0.96**		0.93	0.94	**0.94**

Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT16 Market north of Hall. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	23		14					12:00	115		95				
0:15	16		12					12:15	142		108				
0:30	25		11					12:30	130		95				
0:45	13	77	11	48			125	12:45	144	531	111	409			940
1:00	16		10					13:00	137		93				
1:15	18		12					13:15	118		92				
1:30	13		15					13:30	121		151				
1:45	12	59	16	53			112	13:45	113	489	130	466			955
2:00	24		19					14:00	134		106				
2:15	21		19					14:15	120		120				
2:30	17		27					14:30	143		120				
2:45	31	93	23	88			181	14:45	177	574	129	475			1049
3:00	36		13					15:00	118		141				
3:15	33		24					15:15	163		127				
3:30	26		41					15:30	147		158				
3:45	53	148	33	111			259	15:45	164	592	157	583			1175
4:00	41		44					16:00	140		164				
4:15	63		47					16:15	160		150				
4:30	93		59					16:30	135		155				
4:45	85	282	69	219			501	16:45	174	609	152	621			1230
5:00	65		68					17:00	158		169				
5:15	93		96					17:15	145		142				
5:30	96		123					17:30	161		162				
5:45	117	371	124	411			782	17:45	106	570	107	580			1150
6:00	111		94					18:00	100		94				
6:15	108		102					18:15	102		103				
6:30	120		132					18:30	93		78				
6:45	165	504	107	435			939	18:45	91	386	92	367			753
7:00	175		125					19:00	88		55				
7:15	141		152					19:15	63		63				
7:30	134		158					19:30	88		50				
7:45	114	564	169	604			1168	19:45	58	297	73	241			538
8:00	131		125					20:00	61		33				
8:15	136		125					20:15	72		53				
8:30	97		112					20:30	69		42				
8:45	123	487	142	504			991	20:45	59	261	35	163			424
9:00	104		123					21:00	48		50				
9:15	122		118					21:15	61		37				
9:30	117		89					21:30	42		47				
9:45	117	460	117	447			907	21:45	50	201	41	175			376
10:00	115		87					22:00	43		28				
10:15	100		91					22:15	48		24				
10:30	107		105					22:30	47		27				
10:45	151	473	112	395			868	22:45	32	170	31	110			280
11:00	119		99					23:00	26		24				
11:15	143		109					23:15	24		30				
11:30	120		97					23:30	30		24				
11:45	136	518	107	412			930	23:45	28	108	16	94			202
Total Vol.		4036		3727			**7763**			4788		4284			**9072**

Daily Totals

NB	SB	EB	WB	**Combined**
8824	8011			**16835**

	AM			**PM**		
Split %	52.0%	48.0%	**46.1%**	52.8%	47.2%	**53.9%**
Peak Hour	6:45	7:00	**7:00**	16:45	15:30	**16:45**
Volume	615	604	**1168**	638	629	**1263**
P.H.F.	0.88	0.89	**0.97**	0.89	0.96	**0.97**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT12 Market south of Agua Mansa. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	26		21					12:00	101		100				
0:15	24		18					12:15	88		75				
0:30	20		14					12:30	95		99				
0:45	17	87	10	63			150	12:45	92	376	71	345			721
1:00	16		14					13:00	75		70				
1:15	18		9					13:15	88		95				
1:30	28		13					13:30	97		96				
1:45	18	80	4	40			120	13:45	101	361	93	354			715
2:00	29		8					14:00	116		86				
2:15	14		10					14:15	130		102				
2:30	17		13					14:30	142		132				
2:45	27	87	17	48			135	14:45	151	539	133	453			992
3:00	18		20					15:00	119		115				
3:15	40		24					15:15	144		134				
3:30	39		22					15:30	164		140				
3:45	71	168	36	102			270	15:45	157	584	108	497			1081
4:00	60		30					16:00	54		268				
4:15	61		33					16:15	48		247				
4:30	78		56					16:30	72		218				
4:45	102	301	71	190			491	16:45	68	242	243	976			1218
5:00	90		54					17:00	76		230				
5:15	87		81					17:15	87		231				
5:30	93		100					17:30	51		246				
5:45	102	372	103	338			710	17:45	70	284	198	905			1189
6:00	102		95					18:00	33		183				
6:15	124		124					18:15	44		167				
6:30	123		134					18:30	37		136				
6:45	142	491	113	466			957	18:45	47	161	134	620			781
7:00	158		132					19:00	54		107				
7:15	126		126					19:15	38		91				
7:30	157		126					19:30	37		91				
7:45	138	579	156	540			1119	19:45	28	157	81	370			527
8:00	138		112					20:00	49		86				
8:15	117		114					20:15	39		70				
8:30	113		118					20:30	21		75				
8:45	123	491	101	445			936	20:45	33	142	75	306			448
9:00	100		78					21:00	26		78				
9:15	96		69					21:15	32		70				
9:30	105		100					21:30	33		76				
9:45	112	413	84	331			744	21:45	32	123	67	291			414
10:00	100		98					22:00	22		54				
10:15	81		71					22:15	17		59				
10:30	123		92					22:30	22		41				
10:45	90	394	82	343			737	22:45	27	88	22	176			264
11:00	113		97					23:00	21		31				
11:15	99		82					23:15	29		55				
11:30	120		105					23:30	17		27				
11:45	96	428	99	383			811	23:45	17	84	22	135			219
Total Vol.		3891		3289			**7180**			3141		5428			**8569**

Daily Totals

NB	SB	EB	WB	Combined
7032	8717			**15749**

	AM			PM		
Split %	54.2%	45.8%	**45.6%**	36.7%	63.3%	**54.4%**
Peak Hour	6:45	7:00	**7:00**	15:00	16:00	**16:45**
Volume	583	540	**1119**	584	976	**1232**
P.H.F.	0.92	0.87	**0.95**	0.90	0.91	**0.97**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT17 Market south of Via Cerro. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	20		37					12:00	161		162				
0:15	19		27					12:15	124		185				
0:30	26		22					12:30	184		178				
0:45	24	89	29	115			204	12:45	184	653	172	697			1350
1:00	30		16					13:00	159		168				
1:15	33		27					13:15	157		170				
1:30	21		28					13:30	175		234				
1:45	27	111	39	110			221	13:45	187	678	199	771			1449
2:00	29		38					14:00	161		180				
2:15	29		36					14:15	157		234				
2:30	46		51					14:30	184		229				
2:45	30	134	38	163			297	14:45	177	679	234	877			1556
3:00	42		62					15:00	190		228				
3:15	43		46					15:15	184		222				
3:30	58		58					15:30	192		245				
3:45	100	243	69	235			478	15:45	192	758	213	908			1666
4:00	56		51					16:00	173		271				
4:15	77		70					16:15	164		212				
4:30	105		92					16:30	162		234				
4:45	144	382	100	313			695	16:45	175	674	223	940			1614
5:00	84		80					17:00	155		214				
5:15	111		126					17:15	192		222				
5:30	159		168					17:30	174		215				
5:45	216	570	172	546			1116	17:45	139	660	192	843			1503
6:00	133		148					18:00	121		161				
6:15	162		141					18:15	114		115				
6:30	157		158					18:30	142		128				
6:45	187	639	160	607			1246	18:45	117	494	102	506			1000
7:00	190		184					19:00	111		119				
7:15	178		170					19:15	83		98				
7:30	187		187					19:30	89		109				
7:45	156	711	191	732			1443	19:45	76	359	89	415			774
8:00	178		158					20:00	65		74				
8:15	172		148					20:15	83		86				
8:30	145		137					20:30	70		91				
8:45	124	619	120	563			1182	20:45	107	325	90	341			666
9:00	134		135					21:00	95		87				
9:15	124		135					21:15	76		69				
9:30	143		145					21:30	64		66				
9:45	156	557	167	582			1139	21:45	42	277	45	267			544
10:00	172		128					22:00	49		53				
10:15	125		158					22:15	56		44				
10:30	122		145					22:30	35		56				
10:45	157	576	163	594			1170	22:45	41	181	63	216			397
11:00	150		193					23:00	37		41				
11:15	134		183					23:15	35		39				
11:30	180		180					23:30	33		55				
11:45	155	619	205	761			1380	23:45	32	137	30	165			302
Total Vol.	5250		5321				**10571**		5875		6946				**12821**

Daily Totals

NB	SB	EB	WB	**Combined**
11125	12267			**23392**

	AM			**PM**		
Split %	49.7%	50.3%	**45.2%**	45.8%	54.2%	**54.8%**
Peak Hour	6:45	11:00	**6:45**	15:00	15:15	**15:15**
Volume	742	761	**1443**	758	951	**1692**
P.H.F.	0.98	0.93	**0.96**	0.99	0.88	**0.95**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT13 Market south of Hall. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	28		26					12:00	104		101				
0:15	22		27					12:15	91		74				
0:30	25		24					12:30	95		100				
0:45	16	91	21	98			189	12:45	93	383	73	348			731
1:00	17		32					13:00	74		73				
1:15	25		16					13:15	86		90				
1:30	19		24					13:30	100		92				
1:45	17	78	21	93			171	13:45	113	373	93	348			721
2:00	33		18					14:00	109		107				
2:15	24		13					14:15	123		145				
2:30	22		20					14:30	133		179				
2:45	29	108	14	65			173	14:45	145	510	155	586			1096
3:00	17		34					15:00	158		201				
3:15	45		30					15:15	171		176				
3:30	52		28					15:30	190		217				
3:45	100	214	33	125			339	15:45	165	684	194	788			1472
4:00	69		44					16:00	158		232				
4:15	68		42					16:15	164		202				
4:30	100		72					16:30	156		245				
4:45	149	386	72	230			616	16:45	155	633	229	908			1541
5:00	124		71					17:00	161		189				
5:15	94		91					17:15	163		183				
5:30	123		114					17:30	143		204				
5:45	172	513	119	395			908	17:45	154	621	183	759			1380
6:00	167		145					18:00	111		138				
6:15	153		142					18:15	110		122				
6:30	169		157					18:30	107		124				
6:45	230	719	142	586			1305	18:45	107	435	106	490			925
7:00	192		160					19:00	118		109				
7:15	174		155					19:15	110		108				
7:30	227		158					19:30	96		93				
7:45	182	775	171	644			1419	19:45	88	412	76	386			798
8:00	170		142					20:00	82		63				
8:15	166		141					20:15	92		70				
8:30	155		142					20:30	59		58				
8:45	158	649	113	538			1187	20:45	59	292	74	265			557
9:00	160		127					21:00	78		63				
9:15	153		93					21:15	72		55				
9:30	158		139					21:30	51		62				
9:45	133	604	110	469			1073	21:45	72	273	41	221			494
10:00	141		121					22:00	36		42				
10:15	115		116					22:15	53		58				
10:30	160		109					22:30	62		34				
10:45	100	516	113	459			975	22:45	45	196	36	170			366
11:00	114		115					23:00	35		24				
11:15	111		109					23:15	35		34				
11:30	108		104					23:30	32		49				
11:45	109	442	102	430			872	23:45	26	128	29	136			264
Total Vol.		5095		4132			**9227**			4940		5405			**10345**

Daily Totals

NB	SB	EB	WB	Combined
10035	9537			**19572**

	AM			PM		
Split %	55.2%	44.8%	**47.1%**	47.8%	52.2%	**52.9%**
Peak Hour	6:45	7:00	**6:45**	15:00	16:00	**16:00**
Volume	823	644	**1438**	684	908	**1541**
P.H.F.	0.89	0.94	**0.93**	0.93	0.93	**0.96**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT18 Market south of Rivera. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	38		43					12:00	210		199				
0:15	27		34					12:15	206		210				
0:30	35		28					12:30	236		200				
0:45	43	143	24	129			272	12:45	257	909	191	800			1709
1:00	44		18					13:00	222		171				
1:15	44		18					13:15	238		172				
1:30	30		31					13:30	213		227				
1:45	46	164	32	99			263	13:45	273	946	198	768			1714
2:00	35		28					14:00	218		205				
2:15	32		37					14:15	219		241				
2:30	53		45					14:30	229		233				
2:45	35	155	36	146			301	14:45	226	892	223	902			1794
3:00	54		48					15:00	272		235				
3:15	47		40					15:15	266		212				
3:30	70		48					15:30	285		269				
3:45	111	282	49	185			467	15:45	258	1081	265	981			2062
4:00	68		75					16:00	228		279				
4:15	93		83					16:15	208		253				
4:30	118		97					16:30	212		297				
4:45	159	438	86	341			779	16:45	210	858	253	1082			1940
5:00	103		87					17:00	210		275				
5:15	120		124					17:15	238		256				
5:30	211		172					17:30	215		271				
5:45	264	698	148	531			1229	17:45	181	844	240	1042			1886
6:00	168		160					18:00	183		188				
6:15	180		147					18:15	181		154				
6:30	198		196					18:30	203		148				
6:45	218	764	164	667			1431	18:45	165	732	137	627			1359
7:00	225		183					19:00	145		128				
7:15	218		204					19:15	128		95				
7:30	228		245					19:30	116		104				
7:45	201	872	235	867			1739	19:45	110	499	101	428			927
8:00	232		213					20:00	93		80				
8:15	210		211					20:15	111		81				
8:30	187		170					20:30	93		90				
8:45	178	807	145	739			1546	20:45	137	434	81	332			766
9:00	167		153					21:00	125		90				
9:15	167		147					21:15	108		76				
9:30	171		178					21:30	100		64				
9:45	215	720	147	625			1345	21:45	80	413	55	285			698
10:00	214		146					22:00	65		53				
10:15	168		176					22:15	76		47				
10:30	161		148					22:30	54		63				
10:45	215	758	169	639			1397	22:45	62	257	61	224			481
11:00	189		178					23:00	58		44				
11:15	207		207					23:15	53		49				
11:30	218		177					23:30	50		60				
11:45	202	816	186	748			1564	23:45	49	210	29	182			392
Total Vol.	6617		5716				**12333**		8075		7653				**15728**

Daily Totals

NB	SB	EB	WB	Combined
14692	13369			**28061**

	AM			PM		
Split %	53.7%	46.3%	**44.0%**	51.3%	48.7%	**56.0%**
Peak Hour	6:45	7:30	**7:15**	15:00	15:45	**15:00**
Volume	889	904	**1776**	1081	1094	**2062**
P.H.F.	0.97	0.92	**0.94**	0.97	0.92	**0.93**

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Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT19 Agua Mansa south of Brown **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	27		14					12:00	68		50				
0:15	21		17					12:15	70		43				
0:30	26		7					12:30	59		72				
0:45	11	85	20	58			143	12:45	64	261	59	224			485
1:00	10		14					13:00	75		62				
1:15	33		20					13:15	73		67				
1:30	12		13					13:30	63		100				
1:45	30	85	20	67			152	13:45	86	297	79	308			605
2:00	21		18					14:00	65		67				
2:15	23		20					14:15	68		75				
2:30	30		14					14:30	64		98				
2:45	29	103	20	72			175	14:45	74	271	70	310			581
3:00	20		16					15:00	85		86				
3:15	20		19					15:15	71		84				
3:30	29		6					15:30	78		94				
3:45	35	104	27	68			172	15:45	84	318	92	356			674
4:00	24		28					16:00	101		99				
4:15	35		32					16:15	98		103				
4:30	40		32					16:30	95		101				
4:45	51	150	46	138			288	16:45	97	391	95	398			789
5:00	36		44					17:00	106		91				
5:15	61		46					17:15	111		74				
5:30	71		54					17:30	105		75				
5:45	76	244	65	209			453	17:45	97	419	51	291			710
6:00	72		52					18:00	110		51				
6:15	73		50					18:15	90		48				
6:30	71		67					18:30	58		63				
6:45	75	291	72	241			532	18:45	49	307	40	202			509
7:00	73		68					19:00	53		33				
7:15	72		82					19:15	42		39				
7:30	89		92					19:30	51		34				
7:45	68	302	70	312			614	19:45	54	200	23	129			329
8:00	66		78					20:00	65		37				
8:15	58		82					20:15	30		37				
8:30	71		56					20:30	31		39				
8:45	64	259	75	291			550	20:45	32	158	32	145			303
9:00	60		64					21:00	44		25				
9:15	44		64					21:15	42		42				
9:30	68		48					21:30	33		40				
9:45	71	243	53	229			472	21:45	29	148	29	136			284
10:00	76		42					22:00	36		15				
10:15	61		47					22:15	49		19				
10:30	80		55					22:30	53		32				
10:45	66	283	52	196			479	22:45	39	177	34	100			277
11:00	73		46					23:00	35		17				
11:15	63		43					23:15	41		24				
11:30	67		70					23:30	42		19				
11:45	73	276	55	214			490	23:45	21	139	17	77			216
Total Vol.		2425		2095			**4520**			3086		2676			**5762**

Daily Totals

NB	SB	EB	WB	Combined
5511	4771			**10282**

	AM			PM		
Split %	53.7%	46.3%	**44.0%**	53.6%	46.4%	**56.0%**
Peak Hour	6:45	7:15	**6:45**	17:15	16:00	**16:00**
Volume	309	322	**623**	423	398	**789**
P.H.F.	0.87	0.88	**0.86**	0.92	0.97	**0.98**

cs@aimtd.com Tell. 714 253 7888

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT14 Agua Mansa south of Brown. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	27		21					12:00	58		47				
0:15	20		24					12:15	71		57				
0:30	21		14					12:30	74		47				
0:45	17	85	9	68			153	12:45	53	256	48	199			455
1:00	17		10					13:00	57		54				
1:15	18		12					13:15	67		58				
1:30	30		26					13:30	63		62				
1:45	19	84	5	53			137	13:45	86	273	47	221			494
2:00	20		15					14:00	92		56				
2:15	3		10					14:15	98		69				
2:30	21		28					14:30	93		81				
2:45	30	74	21	74			148	14:45	123	406	89	295			701
3:00	30		7					15:00	119		88				
3:15	35		8					15:15	130		94				
3:30	40		28					15:30	160		85				
3:45	50	155	51	94			249	15:45	136	545	90	357			902
4:00	30		27					16:00	125		97				
4:15	36		50					16:15	124		83				
4:30	58		31					16:30	123		93				
4:45	92	216	61	169			385	16:45	147	519	60	333			852
5:00	51		43					17:00	160		89				
5:15	65		42					17:15	123		51				
5:30	91		62					17:30	157		77				
5:45	119	326	67	214			540	17:45	138	578	61	278			856
6:00	91		52					18:00	119		56				
6:15	88		48					18:15	102		54				
6:30	76		78					18:30	70		59				
6:45	107	362	72	250			612	18:45	99	390	28	197			587
7:00	72		88					19:00	64		38				
7:15	93		87					19:15	38		50				
7:30	78		93					19:30	54		43				
7:45	82	325	99	367			692	19:45	58	214	31	162			376
8:00	91		71					20:00	31		35				
8:15	69		90					20:15	38		23				
8:30	58		46					20:30	38		29				
8:45	78	296	53	260			556	20:45	32	139	27	114			253
9:00	67		58					21:00	34		32				
9:15	77		50					21:15	42		27				
9:30	68		56					21:30	40		39				
9:45	70	282	52	216			498	21:45	45	161	40	138			299
10:00	72		48					22:00	40		31				
10:15	60		50					22:15	51		37				
10:30	56		43					22:30	41		43				
10:45	52	240	62	203			443	22:45	38	170	22	133			303
11:00	68		50					23:00	27		43				
11:15	58		48					23:15	33		23				
11:30	69		50					23:30	26		24				
11:45	62	257	55	203			460	23:45	39	125	21	111			236
Total Vol.		2702		2171			**4873**			3776		2538			**6314**

Daily Totals

NB	SB	EB	WB	**Combined**
6478	4709			**11187**

	AM			PM		
Split %	55.4%	44.6%	**43.6%**	59.8%	40.2%	**56.4%**
Peak Hour	5:30	7:00	**7:15**	16:45	15:15	**15:15**
Volume	389	367	**694**	587	366	**917**
P.H.F.	0.82	0.93	**0.96**	0.86	0.94	**0.94**

cs@aimtd.com Tell. 714 253 7888

Tuesday, May 16, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT20 Agua Mansa north of Brown **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:00			41		14			12:00			74		62		
0:15			25		13			12:15			86		64		
0:30			22		10			12:30			64		87		
0:45			16	104	22	59	163	12:45			74	298	77	290	588
1:00			9		14			13:00			83		88		
1:15			36		25			13:15			85		73		
1:30			15		17			13:30			71		110		
1:45			36	96	20	76	172	13:45			94	333	78	349	682
2:00			26		15			14:00			73		82		
2:15			28		27			14:15			71		87		
2:30			41		18			14:30			64		102		
2:45			28	123	22	82	205	14:45			75	283	85	356	639
3:00			25		18			15:00			81		79		
3:15			29		26			15:15			74		77		
3:30			32		18			15:30			107		80		
3:45			39	125	35	97	222	15:45			116	378	84	320	698
4:00			30		28			16:00			126		87		
4:15			37		44			16:15			104		95		
4:30			52		48			16:30			99		82		
4:45			41	160	68	188	348	16:45			115	444	89	353	797
5:00			46		51			17:00			109		90		
5:15			57		54			17:15			114		82		
5:30			79		72			17:30			108		84		
5:45			72	254	102	279	533	17:45			103	434	70	326	760
6:00			78		68			18:00			110		62		
6:15			86		59			18:15			97		60		
6:30			70		75			18:30			71		60		
6:45			72	306	94	296	602	18:45			49	327	33	215	542
7:00			69		87			19:00			67		41		
7:15			73		87			19:15			47		37		
7:30			69		138			19:30			61		40		
7:45			63	274	87	399	673	19:45			59	234	21	139	373
8:00			66		86			20:00			77		41		
8:15			52		91			20:15			33		38		
8:30			86		63			20:30			36		44		
8:45			78	282	75	315	597	20:45			36	182	38	161	343
9:00			71		77			21:00			34		26		
9:15			64		68			21:15			45		49		
9:30			84		59			21:30			44		35		
9:45			91	310	51	255	565	21:45			34	157	32	142	299
10:00			91		53			22:00			39		12		
10:15			74		56			22:15			48		22		
10:30			73		51			22:30			56		33		
10:45			75	313	57	217	530	22:45			39	182	41	108	290
11:00			74		62			23:00			39		17		
11:15			68		58			23:15			38		18		
11:30			74		80			23:30			54		28		
11:45			83	299	63	263	562	23:45			17	148	16	79	227
Total Vol.				2646		2526	**5172**					3400		2838	**6238**

Daily Totals

NB	SB	EB	WB	Combined
		6046	5364	**11410**

	AM			PM		
Split %	51.2%	48.8%	**45.3%**	54.5%	45.5%	**54.7%**
Peak Hour	9:30	6:45	**6:45**	15:30	13:30	**15:30**
Volume	340	406	**689**	453	357	**799**
P.H.F.	0.93	0.74	**0.83**	0.90	0.81	**0.94**

cs@aimtd.com Tell. 714 253 7888

Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT15 Agua Mansa south of Hall. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	30		25					12:00	59		42				
0:15	21		27					12:15	74		53				
0:30	21		16					12:30	64		51				
0:45	19	91	11	79			170	12:45	51	248	44	190			438
1:00	25		11					13:00	74		53				
1:15	20		16					13:15	69		67				
1:30	37		25					13:30	77		67				
1:45	19	101	6	58			159	13:45	92	312	55	242			554
2:00	23		17					14:00	97		67				
2:15	7		15					14:15	114		82				
2:30	16		29					14:30	132		98				
2:45	36	82	21	82			164	14:45	146	489	106	353			842
3:00	34		12					15:00	157		92				
3:15	36		20					15:15	142		101				
3:30	45		31					15:30	192		95				
3:45	36	151	46	109			260	15:45	157	648	96	384			1032
4:00	36		28					16:00	166		97				
4:15	37		55					16:15	150		84				
4:30	60		41					16:30	148		96				
4:45	88	221	62	186			407	16:45	173	637	64	341			978
5:00	50		57					17:00	178		82				
5:15	61		58					17:15	137		63				
5:30	107		74					17:30	170		78				
5:45	109	327	98	287			614	17:45	147	632	72	295			927
6:00	94		68					18:00	129		57				
6:15	94		56					18:15	107		56				
6:30	95		95					18:30	79		69				
6:45	116	399	83	302			701	18:45	102	417	33	215			632
7:00	81		92					19:00	77		40				
7:15	90		100					19:15	39		48				
7:30	83		106					19:30	60		39				
7:45	84	338	95	393			731	19:45	61	237	35	162			399
8:00	82		80					20:00	32		34				
8:15	75		93					20:15	38		26				
8:30	66		47					20:30	45		30				
8:45	74	297	63	283			580	20:45	35	150	33	123			273
9:00	68		55					21:00	44		37				
9:15	76		55					21:15	50		30				
9:30	71		53					21:30	47		44				
9:45	73	288	58	221			509	21:45	48	189	43	154			343
10:00	73		56					22:00	44		27				
10:15	75		51					22:15	46		38				
10:30	61		48					22:30	45		45				
10:45	51	260	55	210			470	22:45	43	178	25	135			313
11:00	57		51					23:00	30		43				
11:15	63		49					23:15	36		23				
11:30	69		55					23:30	39		25				
11:45	64	253	52	207			460	23:45	39	144	21	112			256
Total Vol.		2808		2417			**5225**			4281		2706			**6987**

Daily Totals

NB	SB	EB	WB	Combined
7089	5123			**12212**

	AM			PM		
Split %	53.7%	46.3%	**42.8%**	61.3%	38.7%	**57.2%**
Peak Hour	5:30	7:00	**6:30**	15:30	14:30	**15:15**
Volume	404	393	**752**	665	397	**1046**
P.H.F.	0.93	0.93	**0.94**	0.89	0.94	**0.91**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT21 Agua Mansa north of Holly. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	53		24					12:00	95		84				
0:15	22		15					12:15	109		102				
0:30	24		16					12:30	107		94				
0:45	12	111	18	73			184	12:45	77	388	82	362			750
1:00	34		24					13:00	113		70				
1:15	37		24					13:15	92		97				
1:30	21		14					13:30	113		73				
1:45	23	115	16	78			193	13:45	111	429	90	330			759
2:00	20		17					14:00	128		95				
2:15	45		15					14:15	131		100				
2:30	18		30					14:30	177		98				
2:45	20	103	35	97			200	14:45	123	559	94	387			946
3:00	15		17					15:00	156		92				
3:15	18		43					15:15	158		94				
3:30	21		30					15:30	140		95				
3:45	58	112	48	138			250	15:45	134	588	87	368			956
4:00	35		49					16:00	159		96				
4:15	24		47					16:15	147		96				
4:30	34		56					16:30	136		81				
4:45	35	128	89	241			369	16:45	123	565	73	346			911
5:00	52		49					17:00	140		88				
5:15	32		72					17:15	136		85				
5:30	51		97					17:30	117		86				
5:45	51	186	121	339			525	17:45	101	494	74	333			827
6:00	56		62					18:00	102		58				
6:15	75		75					18:15	94		51				
6:30	64		115					18:30	80		49				
6:45	81	276	104	356			632	18:45	66	342	29	187			529
7:00	79		92					19:00	57		20				
7:15	60		111					19:15	73		30				
7:30	100		120					19:30	62		35				
7:45	96	335	108	431			766	19:45	41	233	22	107			340
8:00	80		98					20:00	33		23				
8:15	64		79					20:15	56		34				
8:30	87		53					20:30	39		27				
8:45	62	293	58	288			581	20:45	30	158	32	116			274
9:00	64		42					21:00	30		68				
9:15	65		57					21:15	68		23				
9:30	84		89					21:30	77		39				
9:45	77	290	65	253			543	21:45	36	211	17	147			358
10:00	104		48					22:00	19		19				
10:15	60		59					22:15	40		29				
10:30	81		67					22:30	29		24				
10:45	84	329	73	247			576	22:45	52	140	33	105			245
11:00	106		66					23:00	51		18				
11:15	88		61					23:15	36		25				
11:30	95		90					23:30	53		31				
11:45	92	381	80	297			678	23:45	34	174	17	91			265
Total Vol.		2659		2838			**5497**			4281		2879			**7160**

Daily Totals

NB	SB	EB	WB	Combined
6940	5717			**12657**

	AM			PM		
Split %	48.4%	51.6%	**43.4%**	59.8%	40.2%	**56.6%**
Peak Hour	11:45	7:15	**7:15**	14:30	14:00	**14:30**
Volume	403	437	**773**	614	387	**992**
P.H.F.	0.92	0.91	**0.88**	0.86	0.97	**0.90**

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Wednesday, August 23, 2017 Location: Jurupa Valley PROJECT: SC1439

ADT16 Agua Mansa south of El Rivino. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	50		15					12:00	93		50				
0:15	28		24					12:15	112		84				
0:30	22		16					12:30	122		64				
0:45	21	121	11	66			187	12:45	76	403	77	275			678
1:00	23		13					13:00	113		62				
1:15	29		16					13:15	90		88				
1:30	37		27					13:30	108		104				
1:45	22	111	8	64			175	13:45	137	448	81	335			783
2:00	24		18					14:00	137		79				
2:15	3		17					14:15	138		96				
2:30	19		28					14:30	210		93				
2:45	33	79	23	86			165	14:45	162	647	121	389			1036
3:00	34		19					15:00	150		97				
3:15	35		27					15:15	157		99				
3:30	37		43					15:30	187		72				
3:45	32	138	62	151			289	15:45	168	662	80	348			1010
4:00	38		32					16:00	184		61				
4:15	34		60					16:15	162		75				
4:30	54		56					16:30	153		75				
4:45	83	209	102	250			459	16:45	119	618	78	289			907
5:00	50		67					17:00	190		55				
5:15	54		72					17:15	142		75				
5:30	99		104					17:30	147		72				
5:45	78	281	142	385			666	17:45	138	617	49	251			868
6:00	72		92					18:00	112		56				
6:15	69		62					18:15	82		46				
6:30	65		90					18:30	85		70				
6:45	69	275	108	352			627	18:45	104	383	25	197			580
7:00	49		104					19:00	83		47				
7:15	59		110					19:15	46		50				
7:30	57		104					19:30	66		39				
7:45	65	230	85	403			633	19:45	55	250	31	167			417
8:00	58		66					20:00	34		35				
8:15	54		80					20:15	41		28				
8:30	56		45					20:30	51		29				
8:45	54	222	51	242			464	20:45	43	169	33	125			294
9:00	42		54					21:00	43		40				
9:15	54		51					21:15	46		36				
9:30	67		67					21:30	62		33				
9:45	75	238	73	245			483	21:45	58	209	40	149			358
10:00	79		66					22:00	47		32				
10:15	60		67					22:15	39		36				
10:30	74		56					22:30	43		39				
10:45	61	274	61	250			524	22:45	42	171	17	124			295
11:00	102		58					23:00	28		44				
11:15	74		65					23:15	45		25				
11:30	116		71					23:30	47		22				
11:45	77	369	76	270			639	23:45	41	161	30	121			282
Total Vol.		2547		2764			**5311**			4738		2770			**7508**

Daily Totals

NB	SB	EB	WB	Combined
7285	5534			**12819**

	AM			PM		
Split %	48.0%	52.0%	**41.4%**	63.1%	36.9%	**58.6%**
Peak Hour	11:45	6:45	**5:30**	15:30	14:30	**14:30**
Volume	404	426	**718**	701	410	**1089**
P.H.F.	0.83	0.97	**0.82**	0.97	0.85	**0.90**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT22 Agua Mansa south of Riverside. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	52		23					12:00	109		97				
0:15	29		19					12:15	121		107				
0:30	31		19					12:30	112		112				
0:45	11	123	15	76			199	12:45	90	432	99	415			847
1:00	36		25					13:00	120		89				
1:15	34		25					13:15	103		116				
1:30	22		17					13:30	119		81				
1:45	28	120	20	87			207	13:45	131	473	112	398			871
2:00	20		15					14:00	137		103				
2:15	42		17					14:15	143		122				
2:30	22		31					14:30	174		111				
2:45	25	109	36	99			208	14:45	140	594	122	458			1052
3:00	17		21					15:00	167		107				
3:15	19		44					15:15	175		109				
3:30	22		31					15:30	206		122				
3:45	61	119	46	142			261	15:45	165	713	121	459			1172
4:00	35		52					16:00	249		122				
4:15	35		49					16:15	226		114				
4:30	39		59					16:30	180		98				
4:45	42	151	89	249			400	16:45	201	856	99	433			1289
5:00	59		50					17:00	210		115				
5:15	39		72					17:15	184		114				
5:30	59		98					17:30	181		108				
5:45	65	222	131	351			573	17:45	119	694	96	433			1127
6:00	67		77					18:00	147		71				
6:15	84		86					18:15	130		63				
6:30	71		138					18:30	105		67				
6:45	106	328	132	433			761	18:45	79	461	48	249			710
7:00	89		111					19:00	62		32				
7:15	80		117					19:15	77		41				
7:30	120		137					19:30	76		39				
7:45	127	416	125	490			906	19:45	50	265	35	147			412
8:00	90		118					20:00	43		33				
8:15	77		100					20:15	59		46				
8:30	98		68					20:30	43		32				
8:45	77	342	69	355			697	20:45	34	179	39	150			329
9:00	77		53					21:00	34		78				
9:15	72		66					21:15	73		39				
9:30	101		102					21:30	87		46				
9:45	95	345	74	295			640	21:45	40	234	22	185			419
10:00	105		61					22:00	23		27				
10:15	73		67					22:15	43		35				
10:30	91		79					22:30	33		26				
10:45	91	360	89	296			656	22:45	54	153	36	124			277
11:00	110		80					23:00	56		17				
11:15	99		81					23:15	40		30				
11:30	102		94					23:30	55		34				
11:45	110	421	99	354			775	23:45	43	194	20	101			295
Total Vol.		3056		3227			**6283**			5248		3552			**8800**

Daily Totals

NB	SB	EB	WB	Combined
8304	6779			**15083**

	AM			PM		
Split %	48.6%	51.4%	**41.7%**	59.6%	40.4%	**58.3%**
Peak Hour	11:45	6:30	**7:15**	16:00	15:30	**15:30**
Volume	452	498	**914**	856	479	**1325**
P.H.F.	0.93	0.90	**0.89**	0.84	0.98	**0.89**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT23 Agua Mansa north of Dunn Ranch. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	15		6					12:00	46		28				
0:15	8		5					12:15	58		43				
0:30	14		4					12:30	54		40				
0:45	16	53	5	20			73	12:45	36	194	25	136			330
1:00	9		10					13:00	47		37				
1:15	5		11					13:15	35		57				
1:30	12		6					13:30	73		55				
1:45	13	39	17	44			83	13:45	74	229	64	213			442
2:00	7		9					14:00	72		41				
2:15	5		11					14:15	62		54				
2:30	9		21					14:30	122		57				
2:45	9	30	18	59			89	14:45	93	349	50	202			551
3:00	3		17					15:00	94		55				
3:15	11		24					15:15	92		52				
3:30	9		24					15:30	143		73				
3:45	9	32	34	99			131	15:45	130	459	59	239			698
4:00	15		25					16:00	172		49				
4:15	19		35					16:15	133		40				
4:30	12		41					16:30	111		47				
4:45	21	67	47	148			215	16:45	143	559	39	175			734
5:00	16		40					17:00	152		64				
5:15	24		57					17:15	140		48				
5:30	18		73					17:30	135		62				
5:45	26	84	93	263			347	17:45	109	536	47	221			757
6:00	31		60					18:00	85		41				
6:15	27		69					18:15	41		25				
6:30	53		110					18:30	55		32				
6:45	52	163	95	334			497	18:45	43	224	21	119			343
7:00	50		62					19:00	29		16				
7:15	38		92					19:15	24		9				
7:30	70		108					19:30	29		9				
7:45	66	224	84	346			570	19:45	22	104	10	44			148
8:00	46		88					20:00	22		5				
8:15	43		42					20:15	18		22				
8:30	48		34					20:30	12		13				
8:45	41	178	49	213			391	20:45	13	65	18	58			123
9:00	39		40					21:00	12		12				
9:15	38		48					21:15	9		14				
9:30	43		29					21:30	17		8				
9:45	41	161	25	142			303	21:45	12	50	10	44			94
10:00	31		21					22:00	7		12				
10:15	38		36					22:15	10		14				
10:30	44		29					22:30	20		13				
10:45	36	149	29	115			264	22:45	10	47	20	59			106
11:00	33		36					23:00	12		14				
11:15	39		33					23:15	15		8				
11:30	38		39					23:30	18		14				
11:45	44	154	34	142			296	23:45	16	61	9	45			106
Total Vol.		1334		1925			**3259**			2877		1555			**4432**

Daily Totals

NB	SB	EB	WB	**Combined**
4211	3480			**7691**

	AM			**PM**		
Split %	40.9%	59.1%	**42.4%**	64.9%	35.1%	**57.6%**
Peak Hour	7:30	7:15	**7:15**	15:30	15:00	**15:30**
Volume	225	372	**592**	578	239	**799**
P.H.F.	0.80	0.86	**0.83**	0.90	0.82	**0.90**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT24 Riverside north of Cameron. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	109		102					12:00	268		308				
0:15	76		108					12:15	261		302				
0:30	125		101					12:30	258		316				
0:45	100	410	101	412			822	12:45	213	1000	335	1261			2261
1:00	79		104					13:00	271		339				
1:15	85		85					13:15	237		334				
1:30	86		65					13:30	277		338				
1:45	90	340	91	345			685	13:45	249	1034	366	1377			2411
2:00	89		97					14:00	330		366				
2:15	64		87					14:15	278		348				
2:30	110		121					14:30	302		383				
2:45	74	337	125	430			767	14:45	257	1167	403	1500			2667
3:00	102		112					15:00	299		290				
3:15	108		141					15:15	270		363				
3:30	93		197					15:30	308		368				
3:45	91	394	184	634			1028	15:45	157	1034	339	1360			2394
4:00	161		139					16:00	122		313				
4:15	114		169					16:15	85		301				
4:30	159		203					16:30	258		335				
4:45	151	585	222	733			1318	16:45	197	662	291	1240			1902
5:00	139		219					17:00	64		326				
5:15	157		271					17:15	37		301				
5:30	161		372					17:30	79		321				
5:45	139	596	400	1262			1858	17:45	187	367	301	1249			1616
6:00	145		278					18:00	251		247				
6:15	182		345					18:15	253		251				
6:30	169		394					18:30	207		293				
6:45	222	718	388	1405			2123	18:45	207	918	232	1023			1941
7:00	249		390					19:00	172		186				
7:15	234		409					19:15	151		217				
7:30	285		440					19:30	156		176				
7:45	270	1038	416	1655			2693	19:45	153	632	181	760			1392
8:00	224		363					20:00	136		183				
8:15	214		329					20:15	145		176				
8:30	276		275					20:30	147		137				
8:45	275	989	299	1266			2255	20:45	117	545	174	670			1215
9:00	256		236					21:00	137		195				
9:15	266		228					21:15	111		193				
9:30	221		238					21:30	129		153				
9:45	243	986	265	967			1953	21:45	110	487	145	686			1173
10:00	266		249					22:00	161		170				
10:15	246		232					22:15	113		120				
10:30	251		244					22:30	114		116				
10:45	247	1010	272	997			2007	22:45	122	510	130	536			1046
11:00	294		288					23:00	107		145				
11:15	228		260					23:15	103		129				
11:30	271		277					23:30	114		102				
11:45	234	1027	278	1103			2130	23:45	119	443	104	480			923
Total Vol.		8430		11209			**19639**			8799		12142			**20941**

Daily Totals

NB	SB	EB	WB	**Combined**
17229	23351			**40580**

	AM			**PM**		
Split %	42.9%	57.1%	**48.4%**	42.0%	58.0%	**51.6%**
Peak Hour	8:30	7:00	**7:00**	14:00	14:00	**14:00**
Volume	1073	1655	**2693**	1167	1500	**2667**
P.H.F.	0.97	0.94	**0.93**	0.92	0.93	**0.96**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT25 Riverside south of Slover. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	119		70					12:00	263		259				
0:15	94		73					12:15	263		241				
0:30	101		62					12:30	226		237				
0:45	94	408	73	278			686	12:45	231	983	257	994			1977
1:00	82		82					13:00	257		240				
1:15	72		76					13:15	260		260				
1:30	92		36					13:30	274		239				
1:45	86	332	59	253			585	13:45	263	1054	255	994			2048
2:00	95		72					14:00	277		316				
2:15	70		61					14:15	266		276				
2:30	96		84					14:30	396		284				
2:45	99	360	106	323			683	14:45	341	1280	299	1175			2455
3:00	106		75					15:00	311		264				
3:15	109		91					15:15	291		321				
3:30	91		149					15:30	362		289				
3:45	117	423	144	459			882	15:45	355	1319	284	1158			2477
4:00	144		133					16:00	311		298				
4:15	140		134					16:15	314		259				
4:30	158		157					16:30	337		312				
4:45	158	600	168	592			1192	16:45	359	1321	236	1105			2426
5:00	142		152					17:00	347		285				
5:15	166		198					17:15	340		221				
5:30	165		248					17:30	332		294				
5:45	186	659	309	907			1566	17:45	237	1256	264	1064			2320
6:00	157		202					18:00	241		214				
6:15	158		247					18:15	213		212				
6:30	220		307					18:30	242		229				
6:45	239	774	286	1042			1816	18:45	212	908	193	848			1756
7:00	239		262					19:00	170		162				
7:15	223		320					19:15	174		149				
7:30	266		343					19:30	173		123				
7:45	285	1013	314	1239			2252	19:45	157	674	157	591			1265
8:00	242		277					20:00	120		119				
8:15	231		252					20:15	164		125				
8:30	275		221					20:30	142		103				
8:45	266	1014	223	973			1987	20:45	122	548	144	491			1039
9:00	278		166					21:00	141		154				
9:15	235		184					21:15	166		139				
9:30	243		182					21:30	144		113				
9:45	239	995	232	764			1759	21:45	119	570	110	516			1086
10:00	266		203					22:00	134		134				
10:15	259		189					22:15	118		95				
10:30	249		187					22:30	128		84				
10:45	264	1038	203	782			1820	22:45	126	506	96	409			915
11:00	290		200					23:00	98		135				
11:15	254		226					23:15	127		97				
11:30	247		230					23:30	136		93				
11:45	225	1016	213	869			1885	23:45	118	479	92	417			896
Total Vol.		8632		8481			**17113**			10898		9762			**20660**

Daily Totals

NB	SB	EB	WB	**Combined**
19530	18243			**37773**

	AM			**PM**		
Split %	50.4%	49.6%	**45.3%**	52.7%	47.3%	**54.7%**
Peak Hour	10:15	7:15	**7:15**	16:30	15:15	**15:15**
Volume	1062	1254	**2270**	1383	1192	**2511**
P.H.F.	0.92	0.91	**0.93**	0.97	0.93	**0.96**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT26 Riverside north of Industrial **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	59		78					12:00	244		260				
0:15	33		71					12:15	206		245				
0:30	43		56					12:30	257		222				
0:45	33	168	77	282			450	12:45	219	926	232	959			1885
1:00	38		75					13:00	201		216				
1:15	46		78					13:15	210		217				
1:30	44		34					13:30	209		244				
1:45	40	168	57	244			412	13:45	253	873	236	913			1786
2:00	47		62					14:00	210		287				
2:15	42		49					14:15	246		275				
2:30	46		86					14:30	333		309				
2:45	43	178	87	284			462	14:45	286	1075	258	1129			2204
3:00	49		80					15:00	276		277				
3:15	49		92					15:15	278		298				
3:30	34		133					15:30	243		279				
3:45	55	187	123	428			615	15:45	269	1066	272	1126			2192
4:00	69		116					16:00	257		272				
4:15	55		125					16:15	234		278				
4:30	70		142					16:30	225		285				
4:45	74	268	137	520			788	16:45	195	911	260	1095			2006
5:00	74		135					17:00	170		277				
5:15	87		180					17:15	140		233				
5:30	84		242					17:30	134		265				
5:45	90	335	270	827			1162	17:45	103	547	306	1081			1628
6:00	83		193					18:00	108		216				
6:15	87		209					18:15	99		218				
6:30	101		278					18:30	93		219				
6:45	97	368	248	928			1296	18:45	86	386	200	853			1239
7:00	105		245					19:00	72		152				
7:15	126		295					19:15	87		153				
7:30	123		318					19:30	69		114				
7:45	130	484	276	1134			1618	19:45	67	295	141	560			855
8:00	118		247					20:00	78		108				
8:15	103		258					20:15	76		105				
8:30	111		189					20:30	76		110				
8:45	132	464	176	870			1334	20:45	82	312	132	455			767
9:00	157		147					21:00	62		141				
9:15	149		165					21:15	80		149				
9:30	175		191					21:30	53		109				
9:45	187	668	201	704			1372	21:45	70	265	114	513			778
10:00	195		178					22:00	54		137				
10:15	184		176					22:15	36		114				
10:30	192		186					22:30	52		80				
10:45	209	780	180	720			1500	22:45	50	192	95	426			618
11:00	190		185					23:00	49		137				
11:15	214		195					23:15	65		98				
11:30	239		203					23:30	73		84				
11:45	241	884	171	754			1638	23:45	73	260	70	389			649
Total Vol.	4952		7695				**12647**		7108		9499				**16607**

Daily Totals

NB	SB	EB	WB	**Combined**
12060	17194			**29254**

	AM			**PM**		
Split %	39.2%	60.8%	**43.2%**	42.8%	57.2%	**56.8%**
Peak Hour	11:45	7:15	**11:45**	14:30	14:30	**14:30**
Volume	948	1136	**1846**	1173	1142	**2315**
P.H.F.	0.92	0.89	**0.92**	0.88	0.92	**0.90**

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Wednesday, May 17, 2017 Location: Jurupa Valley PROJECT: SC1321

ADT27 Riverside north of Resource. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	104		74					12:00	197		247				
0:15	55		64					12:15	231		236				
0:30	81		62					12:30	213		234				
0:45	54	294	74	274			568	12:45	208	849	216	933			1782
1:00	52		83					13:00	259		233				
1:15	51		83					13:15	231		204				
1:30	73		31					13:30	242		244				
1:45	60	236	54	251			487	13:45	222	954	229	910			1864
2:00	88		69					14:00	227		301				
2:15	63		49					14:15	236		277				
2:30	83		80					14:30	322		323				
2:45	82	316	96	294			610	14:45	279	1064	281	1182			2246
3:00	85		71					15:00	235		279				
3:15	66		79					15:15	252		311				
3:30	78		133					15:30	310		285				
3:45	100	329	140	423			752	15:45	288	1085	285	1160			2245
4:00	118		121					16:00	276		291				
4:15	93		143					16:15	296		278				
4:30	112		157					16:30	302		296				
4:45	149	472	130	551			1023	16:45	307	1181	281	1146			2327
5:00	131		155					17:00	281		315				
5:15	150		181					17:15	318		261				
5:30	153		229					17:30	274		273				
5:45	171	605	277	842			1447	17:45	238	1111	309	1158			2269
6:00	132		201					18:00	172		224				
6:15	179		212					18:15	209		225				
6:30	227		281					18:30	215		213				
6:45	206	744	233	927			1671	18:45	187	783	187	849			1632
7:00	217		243					19:00	166		138				
7:15	215		305					19:15	134		148				
7:30	244		323					19:30	163		124				
7:45	234	910	271	1142			2052	19:45	93	556	140	550			1106
8:00	239		249					20:00	110		130				
8:15	199		242					20:15	123		107				
8:30	223		220					20:30	114		119				
8:45	229	890	161	872			1762	20:45	106	453	133	489			942
9:00	233		167					21:00	130		136				
9:15	187		156					21:15	148		148				
9:30	170		209					21:30	122		111				
9:45	228	818	197	729			1547	21:45	105	505	113	508			1013
10:00	237		207					22:00	127		124				
10:15	244		182					22:15	101		120				
10:30	184		180					22:30	104		83				
10:45	238	903	175	744			1647	22:45	99	431	100	427			858
11:00	224		193					23:00	95		127				
11:15	207		193					23:15	120		108				
11:30	209		188					23:30	123		84				
11:45	200	840	195	769			1609	23:45	101	439	73	392			831
Total Vol.		7357		7818			**15175**			9411		9704			**19115**

Daily Totals

NB	SB	EB	WB	Combined
16768	17522			**34290**

	AM			PM		
Split %	48.5%	51.5%	**44.3%**	49.2%	50.8%	**55.7%**
Peak Hour	7:15	7:15	**7:15**	16:30	14:30	**16:30**
Volume	932	1148	**2080**	1208	1194	**2361**
P.H.F.	0.95	0.89	**0.92**	0.95	0.92	**0.99**

cs@aimtd.com Tell. 714 253 7888

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cedar
EAST & WEST: I-10 WB Ramps

PROJECT #: SC1321
LOCATION #: 19
CONTROL: SIGNAL

NOTES: AM SR queue, PM NB queue

AM / PM / MD / OTHER / OTHER

N / W / E / S

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps			
	LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL
AM	7:00 AM	70	253	0	0	243	200	0	0	0	93	0	94	953
	7:15 AM	58	296	0	0	244	164	0	0	0	118	0	126	1,006
	7:30 AM	51	288	0	0	217	158	0	0	0	98	0	112	924
	7:45 AM	56	277	0	0	263	170	0	0	0	97	0	143	1,006
	8:00 AM	49	203	0	0	202	193	0	0	0	89	0	125	861
	8:15 AM	48	220	0	0	182	196	0	0	0	96	0	102	844
	8:30 AM	44	208	0	0	143	177	0	0	0	45	0	80	697
	8:45 AM	60	187	0	0	169	144	0	0	0	45	0	92	697
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	436	1,932	0	0	1,663	1,402	0	0	0	681	0	874	6,988
	APPROACH %	18%	82%	0%	0%	54%	46%	0%	0%	0%	44%	0%	56%	
	APP/DEPART	2,368	/	2,806	3,065	/	2,345	0	/	0	1,555	/	1,837	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	235	1,114	0	0	967	692	0	0	0	406	0	475	3,889
	APPROACH %	17%	83%	0%	0%	58%	42%	0%	0%	0%	46%	0%	54%	
	PEAK HR FACTOR		0.953			0.936			0.000			0.903		0.966
	APP/DEPART	1,349	/	1,589	1,659	/	1,374	0	/	0	881	/	926	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	68	312	0	0	258	130	0	0	0	69	0	124	961
	4:15 PM	42	309	0	0	207	135	0	0	0	58	1	123	875
	4:30 PM	61	312	0	0	234	117	0	0	0	55	1	107	887
	4:45 PM	57	320	0	0	257	126	0	0	0	57	0	132	949
	5:00 PM	56	296	0	0	228	143	0	0	0	65	0	119	907
	5:15 PM	57	335	0	0	240	163	0	0	0	67	2	136	1,000
	5:30 PM	72	328	0	0	270	143	0	0	0	65	0	121	999
	5:45 PM	75	347	0	0	214	137	0	0	0	55	1	126	955
	VOLUMES	488	2,559	0	0	1,908	1,094	0	0	0	491	5	988	7,533
	APPROACH %	16%	84%	0%	0%	64%	36%	0%	0%	0%	33%	0%	67%	
	APP/DEPART	3,047	/	3,547	3,002	/	2,399	0	/	0	1,484	/	1,587	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	260	1,306	0	0	952	586	0	0	0	252	3	502	3,861
	APPROACH %	17%	83%	0%	0%	62%	38%	0%	0%	0%	33%	0%	66%	
	PEAK HR FACTOR		0.928			0.931			0.000			0.923		0.965
	APP/DEPART	1,566	/	1,808	1,538	/	1,204	0	/	0	757	/	849	0

U-TURNS

	NB	SB	EB	WB	TTL
	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	1	0	0	0	1
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

Cedar

NORTH SIDE

I-10 WB Ramps WEST SIDE EAST SIDE **I-10 WB Ramps**

SOUTH SIDE

Cedar

ALL PED AND BIKE

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

PEDESTRIAN CROSSINGS

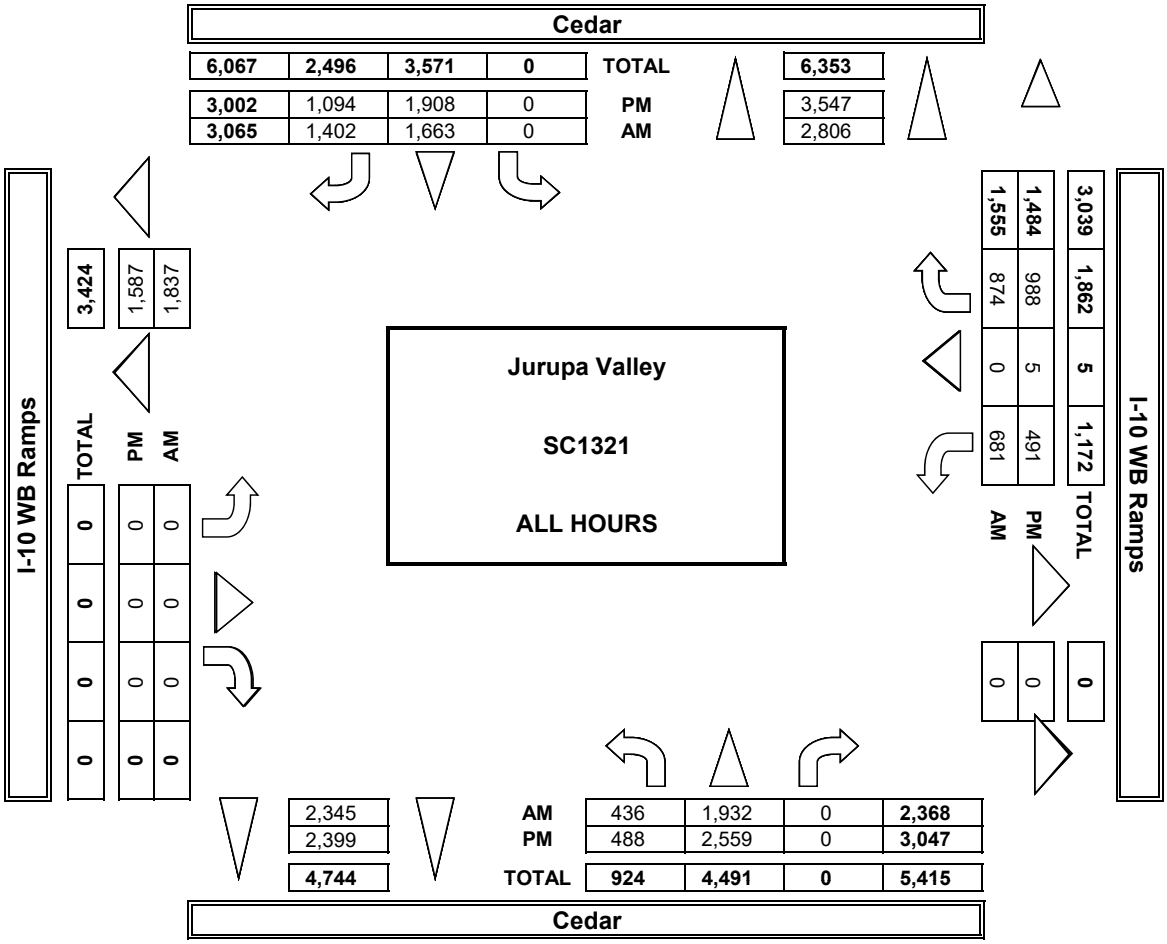
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

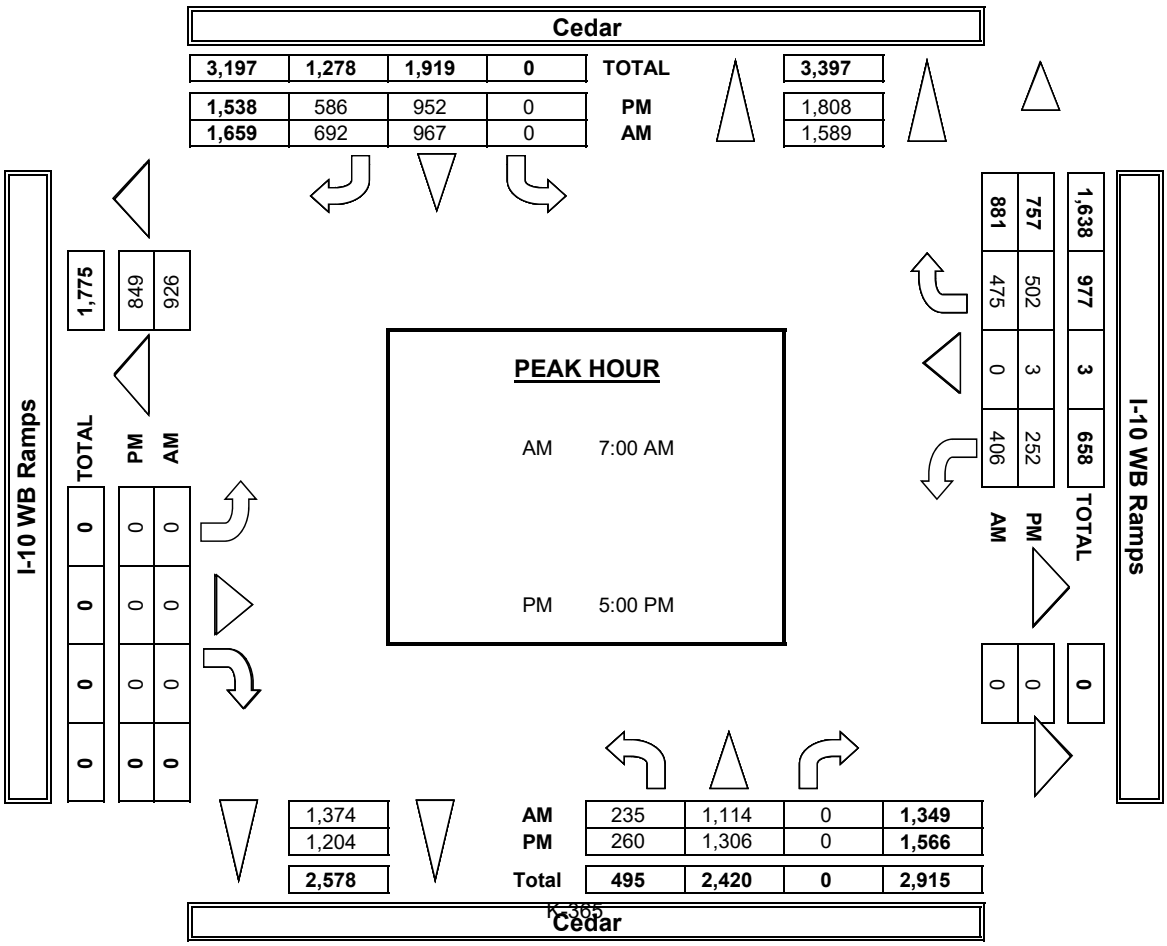
BICYCLE CROSSINGS

	NS	SS	ES	WS	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





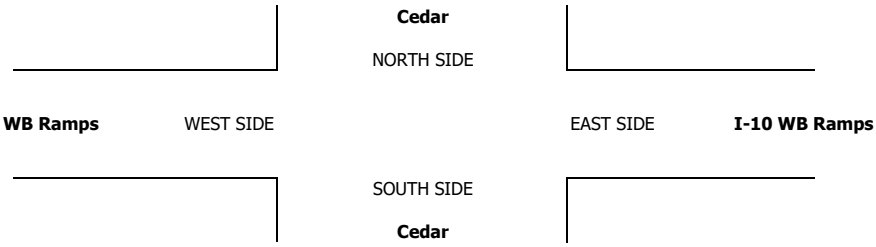
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps			
	LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL
AM	7:00 AM	93	279	0	0	260	212	0	0	0	110	0	99	1,050
	7:15 AM	74	319	0	0	267	171	0	0	0	128	0	137	1,094
	7:30 AM	73	322	0	0	237	174	0	0	0	106	0	121	1,032
	7:45 AM	66	298	0	0	295	188	0	0	0	106	0	155	1,106
	8:00 AM	70	230	0	0	236	214	0	0	0	100	0	137	985
	8:15 AM	63	255	0	0	214	214	0	0	0	104	0	118	966
	8:30 AM	61	230	0	0	171	198	0	0	0	49	0	84	791
	8:45 AM	88	213	0	0	192	164	0	0	0	59	0	102	817
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	586	2,143	0	0	1,869	1,532	0	0	0	759	0	950	7,839
	APPROACH %	21%	79%	0%	0%	55%	45%	0%	0%	0%	44%	0%	56%	
	APP/DEPART	2,729	/	3,093	3,401	/	2,628	0	/	0	1,709	/	2,118	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	305	1,217	0	0	1,058	744	0	0	0	448	0	510	4,281
	APPROACH %	20%	80%	0%	0%	59%	41%	0%	0%	0%	47%	0%	53%	
	PEAK HR FACTOR		0.964			0.934			0.000			0.907		0.968
	APP/DEPART	1,522	/	1,727	1,801	/	1,506	0	/	0	958	/	1,049	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	85	335	0	0	272	145	0	0	0	80	0	140	1,056
	4:15 PM	45	330	0	0	224	146	0	0	0	68	1	134	946
	4:30 PM	66	334	0	0	246	126	0	0	0	65	1	115	951
	4:45 PM	62	337	0	0	276	135	0	0	0	70	0	136	1,015
	5:00 PM	64	315	0	0	247	149	0	0	0	77	0	129	979
	5:15 PM	62	356	0	0	249	176	0	0	0	72	3	141	1,058
	5:30 PM	90	349	0	0	284	150	0	0	0	68	0	125	1,066
	5:45 PM	80	362	0	0	222	144	0	0	0	61	1	129	998
	VOLUMES	552	2,716	0	0	2,020	1,170	0	0	0	559	6	1,047	8,068
	APPROACH %	17%	83%	0%	0%	63%	37%	0%	0%	0%	35%	0%	65%	
	APP/DEPART	3,268	/	3,763	3,189	/	2,579	0	/	0	1,612	/	1,727	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	277	1,356	0	0	1,056	610	0	0	0	287	3	531	4,118
	APPROACH %	17%	83%	0%	0%	63%	37%	0%	0%	0%	35%	0%	65%	
	PEAK HR FACTOR		0.930			0.959			0.000			0.951		0.966
	APP/DEPART	1,633	/	1,886	1,666	/	1,343	0	/	0	820	/	889	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

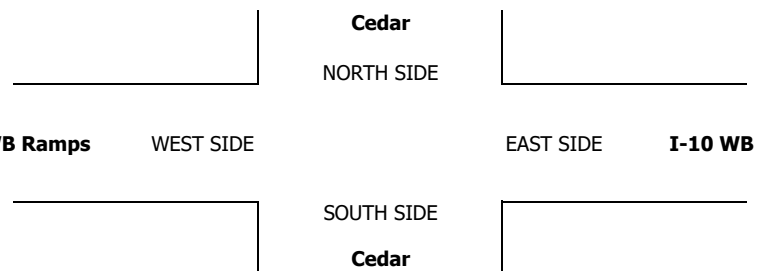
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	53	233	0	0	227	188	0	0	0	81	0	89	871	0	0	0	0	0
7:15 AM	46	279	0	0	225	157	0	0	0	109	0	116	932	1	0	0	0	1
7:30 AM	35	262	0	0	195	145	0	0	0	90	0	104	831	0	0	0	0	0
7:45 AM	49	257	0	0	239	157	0	0	0	91	0	134	927	0	0	0	0	0
8:00 AM	30	182	0	0	168	179	0	0	0	81	0	115	755	0	0	0	0	0
8:15 AM	33	193	0	0	152	175	0	0	0	87	0	90	730	0	0	0	0	0
8:30 AM	30	185	0	0	111	159	0	0	0	41	0	76	602	0	0	0	0	0
8:45 AM	38	161	0	0	145	127	0	0	0	34	0	84	589	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	314	1,752	0	0	1,462	1,287	0	0	0	614	0	808	6,237	1	0	0	0	1
APPROACH %	15%	85%	0%	0%	53%	47%	0%	0%	0%	43%	0%	57%						
APP/DEPART	2,066	/	2,560	2,749	/	2,077	0	/	0	1,422	/	1,600	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	182	1,031	0	0	886	647	0	0	0	371	0	443	3,561					
APPROACH %	15%	85%	0%	0%	58%	42%	0%	0%	0%	46%	0%	54%						
PEAK HR FACTOR		0.934			0.923			0.000			0.904		0.955					
APP/DEPART	1,214	/	1,474	1,533	/	1,258	0	/	0	814	/	829	0					
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	57	290	0	0	237	118	0	0	0	60	0	109	871	0	0	0	0	0
4:15 PM	40	285	0	0	191	125	0	0	0	53	1	112	807	0	0	0	0	0
4:30 PM	55	287	0	0	216	111	0	0	0	49	1	101	820	0	0	0	0	0
4:45 PM	52	303	0	0	229	119	0	0	0	46	0	128	877	0	0	0	0	0
5:00 PM	50	279	0	0	208	135	0	0	0	58	0	112	842	0	0	0	0	0
5:15 PM	53	314	0	0	229	153	0	0	0	62	1	132	944	0	0	0	0	0
5:30 PM	58	310	0	0	249	138	0	0	0	63	0	119	937	0	0	0	0	0
5:45 PM	68	331	0	0	201	133	0	0	0	50	1	124	908	0	0	0	0	0
VOLUMES	433	2,399	0	0	1,760	1,032	0	0	0	441	4	937	7,006	0	0	0	0	0
APPROACH %	15%	85%	0%	0%	63%	37%	0%	0%	0%	32%	0%	68%						
APP/DEPART	2,832	/	3,336	2,792	/	2,201	0	/	0	1,382	/	1,469	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	229	1,234	0	0	887	559	0	0	0	233	2	487	3,631					
APPROACH %	16%	84%	0%	0%	61%	39%	0%	0%	0%	32%	0%	67%						
PEAK HR FACTOR		0.917			0.934			0.000			0.926		0.962					
APP/DEPART	1,463	/	1,721	1,446	/	1,120	0	/	0	722	/	790	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

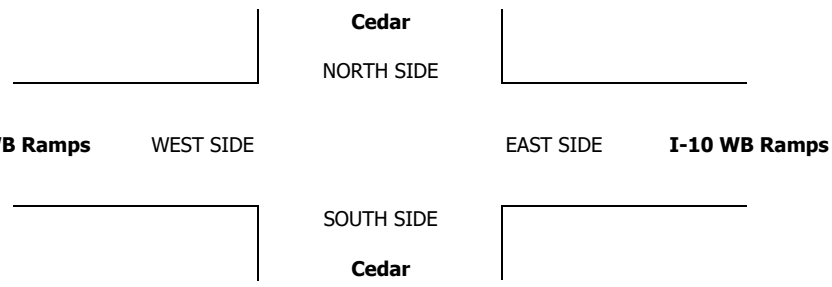
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	7	7	0	0	7	7	0	0	0	3	0	1	32	0	0	0	0	0
7:15 AM	5	4	0	0	9	5	0	0	0	5	0	5	33	0	0	0	0	0
7:30 AM	4	9	0	0	14	6	0	0	0	5	0	3	41	0	0	0	0	0
7:45 AM	2	11	0	0	9	5	0	0	0	1	0	3	31	0	0	0	0	0
8:00 AM	9	9	0	0	21	5	0	0	0	2	0	4	50	0	0	0	0	0
8:15 AM	8	11	0	0	17	13	0	0	0	7	0	5	61	0	0	0	0	0
8:30 AM	4	15	0	0	21	9	0	0	0	3	0	3	55	0	0	0	0	0
8:45 AM	9	15	0	0	14	6	0	0	0	2	0	4	50	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	48	81	0	0	112	56	0	0	0	28	0	28	353	0	0	0	0	0
APPROACH %	37%	63%	0%	0%	67%	33%	0%	0%	0%	50%	0%	50%						
APP/DEPART	129	/	109	168	/	140	0	/	0	56	/	104	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	30	50	0	0	73	33	0	0	0	14	0	16	216					
APPROACH %	38%	63%	0%	0%	69%	31%	0%	0%	0%	47%	0%	53%						
PEAK HR FACTOR		0.833			0.883			0.000			0.625		0.885					
APP/DEPART	80	/	66	106	/	87	0	/	0	30	/	63	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	12	0	0	16	5	0	0	0	3	0	8	45	0	0	0	0	0
4:15 PM	0	17	0	0	7	5	0	0	0	0	0	7	36	0	0	0	0	0
4:30 PM	5	17	0	0	12	0	0	0	0	1	0	3	38	0	0	0	0	0
4:45 PM	3	11	0	0	22	2	0	0	0	4	0	2	44	0	0	0	0	0
5:00 PM	2	7	0	0	10	5	0	0	0	1	0	1	26	0	0	0	0	0
5:15 PM	1	13	0	0	8	2	0	0	0	2	1	2	29	0	0	0	0	0
5:30 PM	6	8	0	0	16	2	0	0	0	0	0	0	32	0	0	0	0	0
5:45 PM	4	10	0	0	10	0	0	0	0	3	0	1	28	0	0	0	0	0
VOLUMES	22	95	0	0	101	21	0	0	0	14	1	24	278	0	0	0	0	0
APPROACH %	19%	81%	0%	0%	83%	17%	0%	0%	0%	36%	3%	62%						
APP/DEPART	117	/	119	122	/	115	0	/	0	39	/	44	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	9	57	0	0	57	12	0	0	0	8	0	20	163					
APPROACH %	14%	86%	0%	0%	83%	17%	0%	0%	0%	29%	0%	71%						
PEAK HR FACTOR		0.750			0.719			0.000			0.636		0.906					
APP/DEPART	66	/	77	69	/	65	0	/	0	28	/	21	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

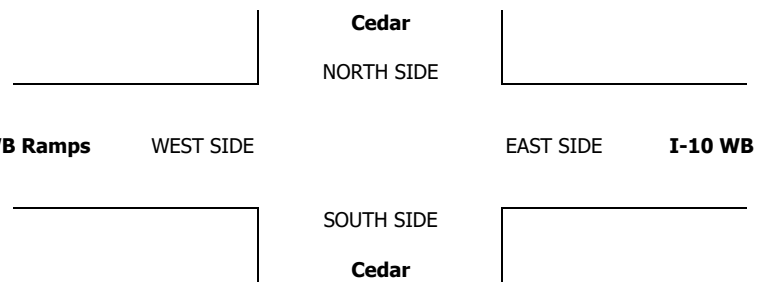
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	1	2	0	0	4	2	0	0	0	1	0	0	10	0	0	0	0	0
7:15 AM	1	4	0	0	2	0	0	0	0	1	0	1	9	0	0	0	0	0
7:30 AM	4	4	0	0	2	1	0	0	0	0	0	1	12	0	0	0	0	0
7:45 AM	1	1	0	0	3	1	0	0	0	1	0	1	8	0	0	0	0	0
8:00 AM	4	1	0	0	3	0	0	0	0	1	0	2	11	0	0	0	0	0
8:15 AM	3	1	0	0	1	1	0	0	0	0	0	1	7	0	0	0	0	0
8:30 AM	5	2	0	0	5	2	0	0	0	0	0	0	14	0	0	0	0	0
8:45 AM	3	3	0	0	4	3	0	0	0	2	0	0	15	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	22	18	0	0	24	10	0	0	0	6	0	6	86	0	0	0	0	0
APPROACH %	55%	45%	0%	0%	71%	29%	0%	0%	0%	50%	0%	50%						
APP/DEPART	40	/	24	34	/	30	0	/	0	12	/	32	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	15	7	0	0	13	6	0	0	0	3	0	3	47					
APPROACH %	68%	32%	0%	0%	68%	32%	0%	0%	0%	50%	0%	50%						
PEAK HR FACTOR		0.786			0.679			0.000			0.500		0.783					
APP/DEPART	22	/	10	19	/	16	0	/	0	6	/	21	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4	2	0	0	4	2	0	0	0	3	0	2	17	0	0	0	0	0
4:15 PM	1	1	0	0	4	2	0	0	0	0	0	1	9	0	0	0	0	0
4:30 PM	0	3	0	0	6	3	0	0	0	1	0	0	13	0	0	0	0	0
4:45 PM	1	1	0	0	3	1	0	0	0	3	0	1	10	0	0	0	0	0
5:00 PM	1	4	0	0	5	2	0	0	0	0	0	3	15	0	0	0	0	0
5:15 PM	2	1	0	0	0	4	0	0	0	1	0	0	8	0	0	0	0	0
5:30 PM	1	2	0	0	3	0	0	0	0	1	0	0	7	0	0	0	0	0
5:45 PM	3	2	0	0	2	1	0	0	0	0	0	0	8	0	0	0	0	0
VOLUMES	13	16	0	0	27	15	0	0	0	9	0	7	87	0	0	0	0	0
APPROACH %	45%	55%	0%	0%	64%	36%	0%	0%	0%	56%	0%	44%						
APP/DEPART	29	/	23	42	/	36	0	/	0	16	/	28	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	6	7	0	0	17	8	0	0	0	7	0	4	49					
APPROACH %	46%	54%	0%	0%	68%	32%	0%	0%	0%	64%	0%	36%						
PEAK HR FACTOR		0.542			0.694			0.000			0.550		0.721					
APP/DEPART	13	/	11	25	/	24	0	/	0	11	/	14	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

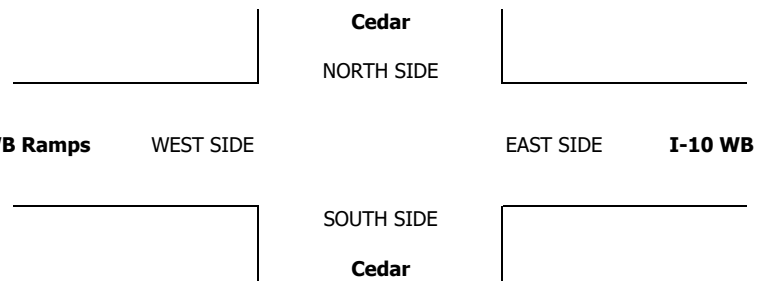
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	9	9	0	0	4	3	0	0	0	6	0	0	31	0	0	0	0	0
7:15 AM	6	8	0	0	8	2	0	0	0	3	0	3	30	0	0	0	0	0
7:30 AM	8	12	0	0	5	6	0	0	0	2	0	2	35	0	0	0	0	0
7:45 AM	4	6	0	0	12	7	0	0	0	3	0	4	36	0	0	0	0	0
8:00 AM	6	10	0	0	10	9	0	0	0	4	0	4	43	0	0	0	0	0
8:15 AM	4	13	0	0	10	3	0	0	0	2	0	6	38	0	0	0	0	0
8:30 AM	5	6	0	0	6	7	0	0	0	1	0	1	26	0	0	0	0	0
8:45 AM	10	7	0	0	6	6	0	0	0	4	0	4	37	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	52	71	0	0	61	43	0	0	0	25	0	24	276	0	0	0	0	0
APPROACH %	42%	58%	0%	0%	59%	41%	0%	0%	0%	51%	0%	49%						
APP/DEPART	123	/	95	104	/	86	0	/	0	49	/	95	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	22	41	0	0	37	25	0	0	0	11	0	16	152					
APPROACH %	35%	65%	0%	0%	60%	40%	0%	0%	0%	41%	0%	59%						
PEAK HR FACTOR		0.788			0.816			0.000			0.844		0.884					
APP/DEPART	63	/	57	62	/	48	0	/	0	27	/	47	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	6	7	0	0	1	5	0	0	0	3	0	5	27	0	0	0	0	0
4:15 PM	1	5	0	0	4	3	0	0	0	5	0	3	21	0	0	0	0	0
4:30 PM	1	5	0	0	0	3	0	0	0	4	0	3	16	0	0	0	0	0
4:45 PM	1	5	0	0	2	3	0	0	0	4	0	1	16	0	0	0	0	0
5:00 PM	3	5	0	0	4	0	0	0	0	5	0	3	20	0	0	0	0	0
5:15 PM	1	6	0	0	2	4	0	0	0	1	0	2	16	0	0	0	0	0
5:30 PM	7	7	0	0	1	3	0	0	0	1	0	2	21	0	0	0	0	0
5:45 PM	0	4	0	0	0	3	0	0	0	2	0	1	10	0	0	0	0	0
VOLUMES	20	44	0	0	14	24	0	0	0	25	0	20	147	0	0	0	0	0
APPROACH %	31%	69%	0%	0%	37%	63%	0%	0%	0%	56%	0%	44%						
APP/DEPART	64	/	64	38	/	39	0	/	0	45	/	44	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	9	22	0	0	7	14	0	0	0	16	0	12	80					
APPROACH %	29%	71%	0%	0%	33%	67%	0%	0%	0%	57%	0%	43%						
PEAK HR FACTOR		0.596			0.750			0.000			0.875		0.741					
APP/DEPART	31	/	34	21	/	23	0	/	0	28	/	23	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

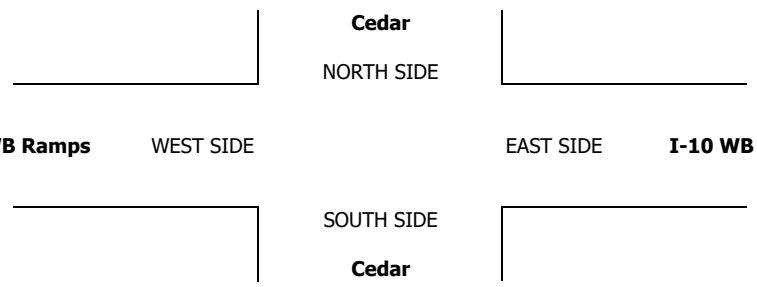
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:00 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

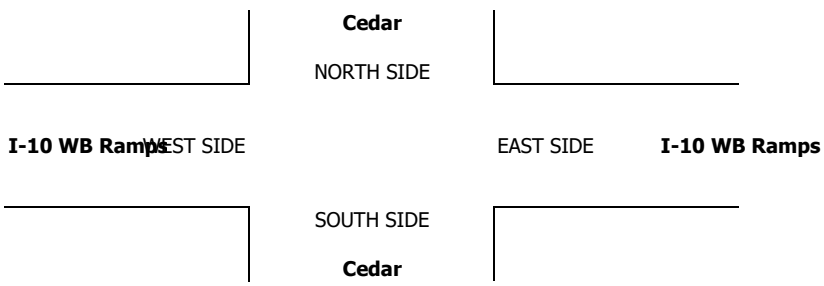
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0,3	WT 0,3	WR 1,3	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	2	0	0	1	0	0	0	0	2	0	4	9	0	0	0	0	0
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
	7:30 AM	0	1	0	0	1	0	0	0	0	1	0	2	5	0	0	0	0	0
	7:45 AM	0	2	0	0	0	0	0	0	0	1	0	1	4	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0
	8:15 AM	0	2	0	0	2	4	0	0	0	0	0	0	8	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	0	2	0	0	0	3	0	0	6	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	10	0	0	4	6	0	0	0	8	0	8	36	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	40%	60%	0%	0%	0%	50%	0%	50%						
	APP/DEPART	10	/	18	10	/	12	0	/	0	16	/	6	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	6	0	0	2	0	0	0	0	4	0	8	20					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	33%	0%	67%						
	PEAK HR FACTOR		0.750			0.500			0.000			0.500		0.556					
	APP/DEPART	6	/	14	2	/	6	0	/	0	12	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0
	5:00 PM	0	1	0	0	1	1	0	0	0	1	0	0	4	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	0	0	0	1	0	0	3	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	5	0	0	6	2	0	0	0	2	0	0	15	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	75%	25%	0%	0%	0%	100%	0%	0%						
	APP/DEPART	5	/	5	8	/	8	0	/	0	2	/	2	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	3	0	0	4	2	0	0	0	2	0	0	11					
	APPROACH %	0%	100%	0%	0%	67%	33%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.750			0.750			0.000			0.500		0.688					
	APP/DEPART	3	/	3	6	/	6	0	/	0	2	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cedar
EAST & WEST: I-10 EB Ramps

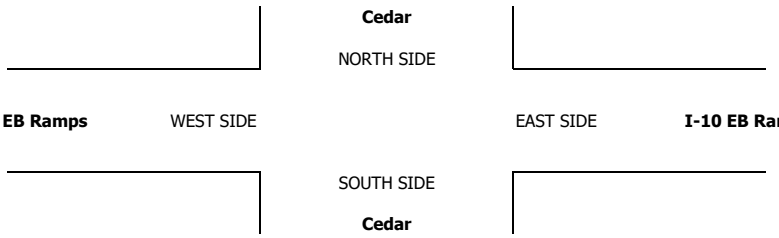
PROJECT #: SC1321
LOCATION #: 20
CONTROL: SIGNAL

NOTES:
AM/PM NB/SB queue

AM PM MD OTHER OTHER

▲ N
◄ W E ►
S ▼

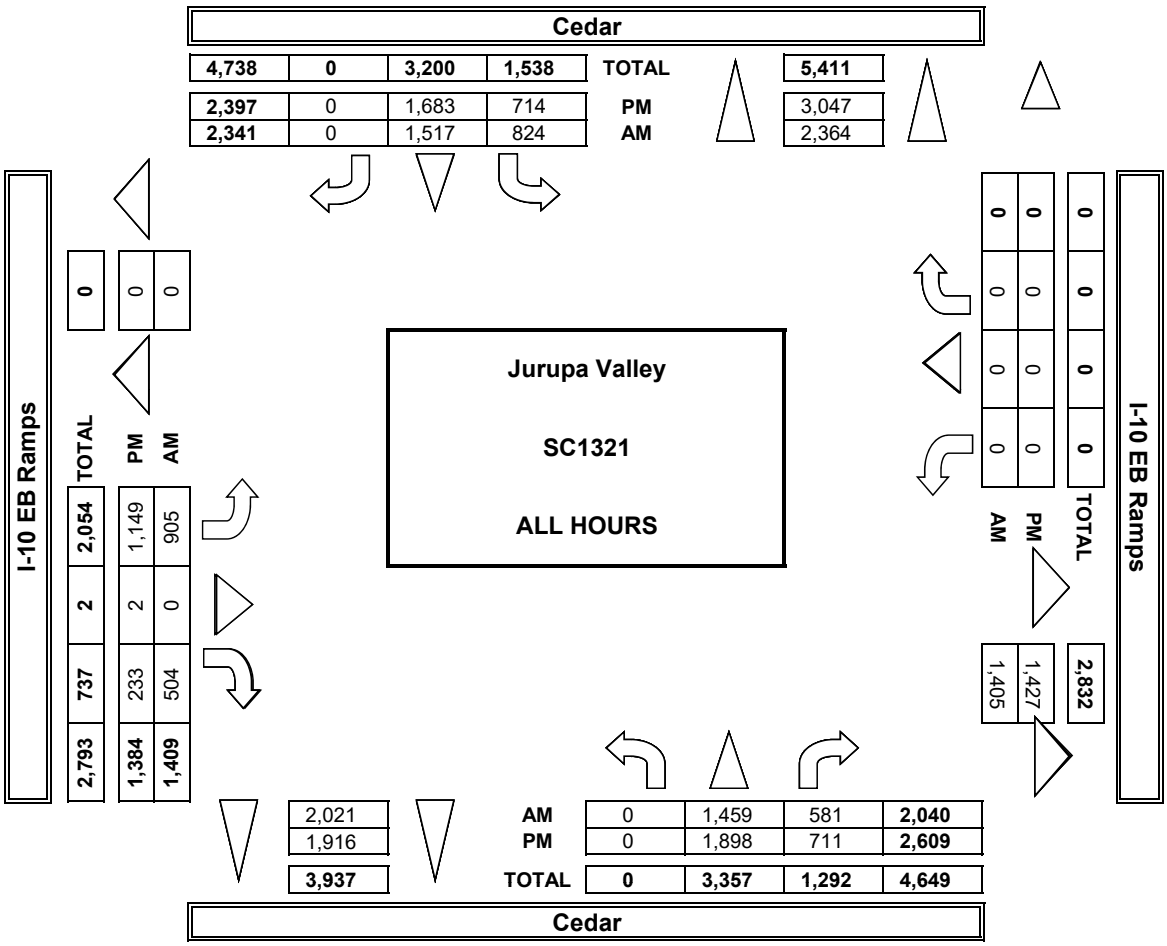
		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
	LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	224	82	103	238	0	109	0	76	0	0	0	832	0	0	0	0	0
	7:15 AM	0	227	91	109	256	0	123	0	74	0	0	0	880	0	0	0	0	0
	7:30 AM	0	203	109	90	203	0	128	0	74	0	0	0	807	0	0	0	0	0
	7:45 AM	0	199	81	117	235	0	124	0	73	0	0	0	829	0	0	0	0	0
	8:00 AM	0	136	60	107	196	0	106	0	40	0	0	0	645	0	0	0	0	0
	8:15 AM	0	158	50	97	186	0	117	0	58	0	0	0	666	0	0	0	0	0
	8:30 AM	0	160	54	93	107	0	99	0	61	0	0	0	574	0	0	0	0	0
	8:45 AM	0	152	54	108	96	0	99	0	48	0	0	0	557	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1,459	581	824	1,517	0	905	0	504	0	0	0	5,790	0	0	0	0	0
	APPROACH %	0%	72%	28%	35%	65%	0%	64%	0%	36%	0%	0%	0%						
	APP/DEPART	2,040	/	2,364	2,341	/	2,021	1,409	/	1,405	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	853	363	419	932	0	484	0	297	0	0	0	3,348					
	APPROACH %	0%	70%	30%	31%	69%	0%	62%	0%	38%	0%	0%	0%						
	PEAK HR FACTOR		0.956			0.925			0.967			0.000		0.951					
	APP/DEPART	1,216	/	1,337	1,351	/	1,229	781	/	782	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	230	90	102	224	0	144	0	44	0	0	0	834	0	0	0	0	0
	4:15 PM	0	226	100	86	191	0	129	0	29	0	0	0	761	0	0	0	0	0
	4:30 PM	0	235	84	65	215	0	123	0	14	0	0	0	736	0	0	0	0	0
	4:45 PM	0	216	87	97	210	0	145	0	31	0	0	0	786	0	0	0	0	0
	5:00 PM	0	237	101	91	192	0	141	1	30	0	0	0	793	0	0	0	0	0
	5:15 PM	0	247	83	90	219	0	153	0	29	0	0	0	821	0	0	0	0	0
	5:30 PM	0	253	96	94	245	0	140	0	32	0	0	0	860	0	0	0	0	0
	5:45 PM	0	254	70	89	187	0	174	1	24	0	0	0	799	0	0	0	0	0
	VOLUMES	0	1,898	711	714	1,683	0	1,149	2	233	0	0	0	6,390	0	0	0	0	0
	APPROACH %	0%	73%	27%	30%	70%	0%	83%	0%	17%	0%	0%	0%						
	APP/DEPART	2,609	/	3,047	2,397	/	1,916	1,384	/	1,427	0	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	991	350	364	843	0	608	2	115	0	0	0	3,273					
	APPROACH %	0%	74%	26%	30%	70%	0%	84%	0%	16%	0%	0%	0%						
	PEAK HR FACTOR		0.961			0.890			0.911			0.000		0.951					
	APP/DEPART	1,341	/	1,599	1,207	/	958	725	/	716	0	/	0	0					

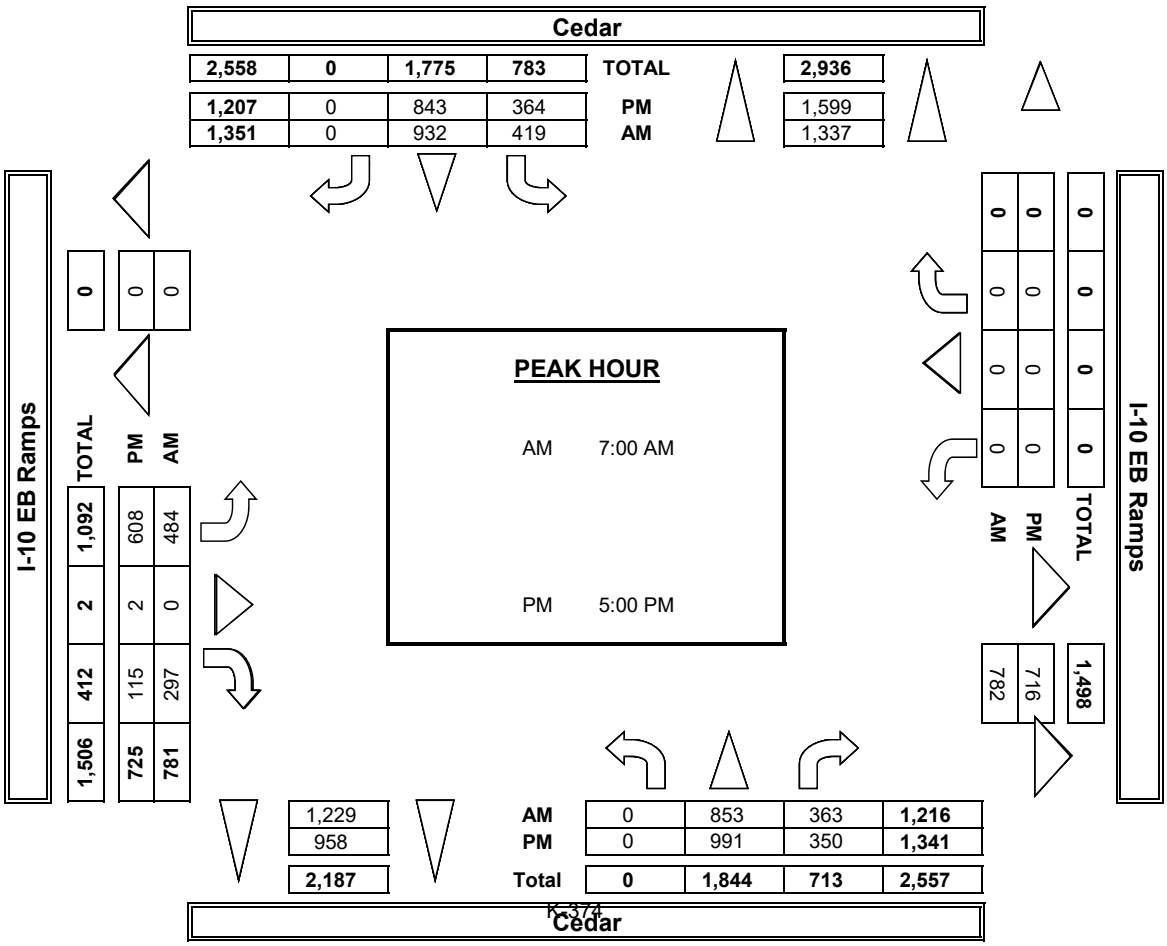


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

	NOTES:												
PCE	Class	1	2	3	4	5	6			AM		▲ N	
Adjusted	Factor	1	1.5	2	3	2	2			PM			
										MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps			
	LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	250	95	113	262	0	126	0	94	0	0	0	939
	7:15 AM	0	255	105	119	289	0	135	0	86	0	0	0	987
	7:30 AM	0	242	121	99	212	0	148	0	92	0	0	0	913
	7:45 AM	0	220	90	141	256	0	140	0	86	0	0	0	932
	8:00 AM	0	165	71	123	226	0	127	0	53	0	0	0	763
	8:15 AM	0	182	58	105	218	0	138	0	76	0	0	0	776
	8:30 AM	0	183	60	105	122	0	112	0	84	0	0	0	664
	8:45 AM	0	191	68	120	119	0	116	0	65	0	0	0	678
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1,685	665	924	1,703	0	1,040	0	635	0	0	0	6,650
	APPROACH %	0%	72%	28%	35%	65%	0%	62%	0%	38%	0%	0%	0%	
	APP/DEPART	2,350	/	2,725	2,626	/	2,337	1,674	/	1,589	0	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	966	409	472	1,019	0	548	0	358	0	0	0	3,770
	APPROACH %	0%	70%	30%	32%	68%	0%	61%	0%	39%	0%	0%	0%	
	PEAK HR FACTOR		0.948			0.914			0.943			0.000		0.955
	APP/DEPART	1,375	/	1,514	1,490	/	1,376	906	/	881	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	259	102	106	245	0	155	0	56	0	0	0	922
	4:15 PM	0	239	110	96	205	0	138	0	48	0	0	0	836
	4:30 PM	0	256	96	68	240	0	130	0	18	0	0	0	807
	4:45 PM	0	232	100	104	227	0	151	0	42	0	0	0	856
	5:00 PM	0	251	106	98	212	0	154	1	45	0	0	0	866
	5:15 PM	0	259	85	92	236	0	167	0	41	0	0	0	879
	5:30 PM	0	277	104	98	254	0	153	0	51	0	0	0	936
	5:45 PM	0	264	77	97	199	0	185	1	35	0	0	0	856
	VOLUMES	0	2,035	778	759	1,818	0	1,231	2	335	0	0	0	6,957
	APPROACH %	0%	72%	28%	29%	71%	0%	79%	0%	21%	0%	0%	0%	
	APP/DEPART	2,813	/	3,266	2,577	/	2,152	1,568	/	1,539	0	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	1,049	371	385	901	0	658	2	171	0	0	0	3,537
	APPROACH %	0%	74%	26%	30%	70%	0%	79%	0%	21%	0%	0%	0%	
	PEAK HR FACTOR		0.933			0.913			0.944			0.000		0.945
	APP/DEPART	1,420	/	1,707	1,286	/	1,072	831	/	758	0	/	0	0

Cedar

NORTH SIDE

I-10 EB Ramps WEST SIDE EAST SIDE **I-10 EB Ramps**

SOUTH SIDE

Cedar

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

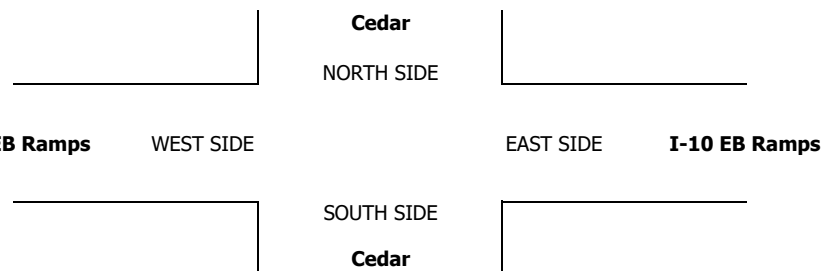
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	204	68	91	218	0	96	0	61	0	0	0	738	0	0	0	0	0
7:15 AM	0	206	79	98	229	0	114	0	65	0	0	0	791	0	0	0	0	0
7:30 AM	0	177	98	78	192	0	113	0	62	0	0	0	720	0	0	0	0	0
7:45 AM	0	177	73	101	216	0	110	0	58	0	0	0	735	0	0	0	0	0
8:00 AM	0	110	52	85	170	0	89	0	30	0	0	0	536	0	0	0	0	0
8:15 AM	0	138	40	90	157	0	99	0	45	0	0	0	569	0	0	0	0	0
8:30 AM	0	143	48	79	91	0	86	0	43	0	0	0	490	0	0	0	0	0
8:45 AM	0	122	44	95	81	0	78	0	35	0	0	0	455	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1,277	502	717	1,354	0	785	0	399	0	0	0	5,034	0	0	0	0	0
APPROACH %	0%	72%	28%	35%	65%	0%	66%	0%	34%	0%	0%	0%						
APP/DEPART	1,779	/	2,062	2,071	/	1,753	1,184	/	1,219	0	/	0	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	764	318	368	855	0	433	0	246	0	0	0	2,984					
APPROACH %	0%	71%	29%	30%	70%	0%	64%	0%	36%	0%	0%	0%						
PEAK HR FACTOR		0.949			0.935			0.948			0.000		0.943					
APP/DEPART	1,082	/	1,197	1,223	/	1,101	679	/	686	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	207	82	96	204	0	135	0	34	0	0	0	758	0	0	0	0	0
4:15 PM	0	212	91	75	178	0	117	0	16	0	0	0	689	0	0	0	0	0
4:30 PM	0	210	72	60	190	0	114	0	10	0	0	0	656	0	0	0	0	0
4:45 PM	0	199	79	86	188	0	137	0	23	0	0	0	712	0	0	0	0	0
5:00 PM	0	224	94	84	175	0	129	1	19	0	0	0	726	0	0	0	0	0
5:15 PM	0	238	81	86	204	0	136	0	20	0	0	0	765	0	0	0	0	0
5:30 PM	0	237	88	87	231	0	132	0	19	0	0	0	794	0	0	0	0	0
5:45 PM	0	245	64	82	173	0	163	1	14	0	0	0	742	0	0	0	0	0
VOLUMES	0	1,772	651	656	1,543	0	1,063	2	155	0	0	0	5,842	0	0	0	0	0
APPROACH %	0%	73%	27%	30%	70%	0%	87%	0%	13%	0%	0%	0%						
APP/DEPART	2,423	/	2,835	2,199	/	1,698	1,220	/	1,309	0	/	0	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	0	944	327	339	783	0	560	2	72	0	0	0	3,027					
APPROACH %	0%	74%	26%	30%	70%	0%	88%	0%	11%	0%	0%	0%						
PEAK HR FACTOR		0.978			0.882			0.890			0.000		0.953					
APP/DEPART	1,271	/	1,504	1,122	/	855	634	/	668	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

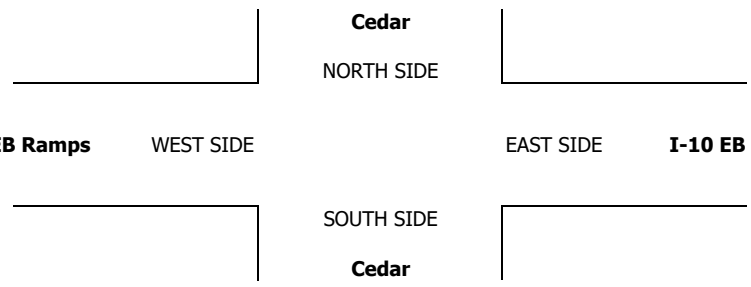
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	7	9	8	8	0	4	0	8	0	0	0	44	0	0	0	0	0
7:15 AM	0	7	5	7	10	0	3	0	3	0	0	0	35	0	0	0	0	0
7:30 AM	0	6	7	10	7	0	4	0	2	0	0	0	36	0	0	0	0	0
7:45 AM	0	15	5	4	8	0	5	0	10	0	0	0	47	0	0	0	0	0
8:00 AM	0	13	3	18	11	0	8	0	5	0	0	0	58	0	0	0	0	0
8:15 AM	0	7	6	4	16	0	9	0	3	0	0	0	45	0	0	0	0	0
8:30 AM	0	4	1	11	9	0	9	0	6	0	0	0	40	0	0	0	0	0
8:45 AM	0	11	2	9	2	0	17	0	6	0	0	0	47	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	70	38	71	71	0	59	0	43	0	0	0	352	0	0	0	0	0
APPROACH %	0%	65%	35%	50%	50%	0%	58%	0%	42%	0%	0%	0%						
APP/DEPART	108	/	129	142	/	114	102	/	109	0	/	0	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	0	35	12	42	38	0	43	0	20	0	0	0	190					
APPROACH %	0%	74%	26%	53%	48%	0%	68%	0%	32%	0%	0%	0%						
PEAK HR FACTOR		0.588			0.690			0.685			0.000		0.819					
APP/DEPART	47	/	78	80	/	58	63	/	54	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	8	1	4	10	0	5	0	3	0	0	0	31	0	0	0	0	0
4:15 PM	0	8	4	6	6	0	10	0	2	0	0	0	36	0	0	0	0	0
4:30 PM	0	19	7	4	12	0	6	0	0	0	0	0	48	0	0	0	0	0
4:45 PM	0	10	2	10	14	0	7	0	2	0	0	0	45	0	0	0	0	0
5:00 PM	0	7	5	4	6	0	6	0	2	0	0	0	30	0	0	0	0	0
5:15 PM	0	3	1	4	6	0	12	0	3	0	0	0	29	0	0	0	0	0
5:30 PM	0	3	4	6	12	0	1	0	4	0	0	0	30	0	0	0	0	0
5:45 PM	0	3	2	2	9	0	7	0	5	0	0	0	28	0	0	0	0	0
VOLUMES	0	61	26	40	75	0	54	0	21	0	0	0	277	0	0	0	0	0
APPROACH %	0%	70%	30%	35%	65%	0%	72%	0%	28%	0%	0%	0%						
APP/DEPART	87	/	115	115	/	96	75	/	66	0	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	45	14	24	42	0	28	0	7	0	0	0	160					
APPROACH %	0%	76%	24%	36%	64%	0%	80%	0%	20%	0%	0%	0%						
PEAK HR FACTOR		0.567			0.688			0.729			0.000		0.833					
APP/DEPART	59	/	73	66	/	49	35	/	38	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

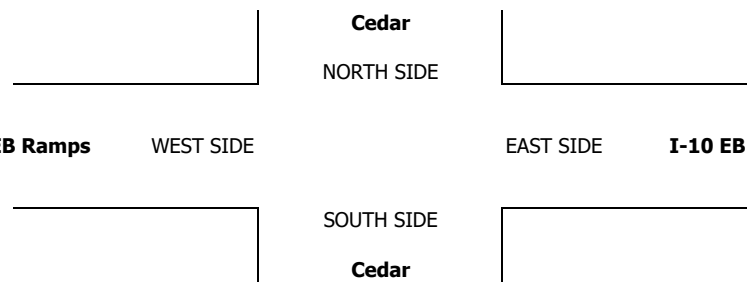
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	2	1	1	3	0	2	0	0	0	0	0	9	0	0	0	0	0
7:15 AM	0	3	3	2	6	0	2	0	2	0	0	0	18	0	0	0	0	0
7:30 AM	0	3	0	0	1	0	4	0	3	0	0	0	11	0	0	0	0	0
7:45 AM	0	1	0	1	2	0	3	0	2	0	0	0	9	0	0	0	0	0
8:00 AM	0	4	0	1	4	0	1	0	0	0	0	0	10	0	0	0	0	0
8:15 AM	0	5	0	0	0	0	1	0	4	0	0	0	10	0	0	0	0	0
8:30 AM	0	5	4	0	4	0	0	0	4	0	0	0	17	0	0	0	0	0
8:45 AM	0	4	2	1	4	0	0	0	0	0	0	0	11	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	27	10	6	24	0	13	0	15	0	0	0	95	0	0	0	0	0
APPROACH %	0%	73%	27%	20%	80%	0%	46%	0%	54%	0%	0%	0%						
APP/DEPART	37	/	40	30	/	39	28	/	16	0	/	0	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	18	6	2	12	0	2	0	8	0	0	0	48					
APPROACH %	0%	75%	25%	14%	86%	0%	20%	0%	80%	0%	0%	0%						
PEAK HR FACTOR		0.667			0.438			0.357			0.000		0.667					
APP/DEPART	24	/	20	14	/	20	10	/	8	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	4	2	2	4	0	0	0	4	0	0	0	16	0	0	0	0	0
4:15 PM	0	2	0	1	2	0	0	0	4	0	0	0	9	0	0	0	0	0
4:30 PM	0	1	1	1	6	0	2	0	4	0	0	0	15	0	0	0	0	0
4:45 PM	0	3	0	0	5	0	0	0	2	0	0	0	10	0	0	0	0	0
5:00 PM	0	2	2	1	4	0	2	0	4	0	0	0	15	0	0	0	0	0
5:15 PM	0	1	0	0	3	0	2	0	2	0	0	0	8	0	0	0	0	0
5:30 PM	0	4	1	1	1	0	1	0	1	0	0	0	9	0	0	0	0	0
5:45 PM	0	3	2	2	3	0	1	0	2	0	0	0	13	0	0	0	0	0
VOLUMES	0	20	8	8	28	0	8	0	23	0	0	0	95	0	0	0	0	0
APPROACH %	0%	71%	29%	22%	78%	0%	26%	0%	74%	0%	0%	0%						
APP/DEPART	28	/	28	36	/	51	31	/	16	0	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	10	3	4	17	0	2	0	14	0	0	0	50					
APPROACH %	0%	77%	23%	19%	81%	0%	13%	0%	88%	0%	0%	0%						
PEAK HR FACTOR		0.542			0.750			0.667			0.000		0.781					
APP/DEPART	13	/	12	21	/	31	16	/	7	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

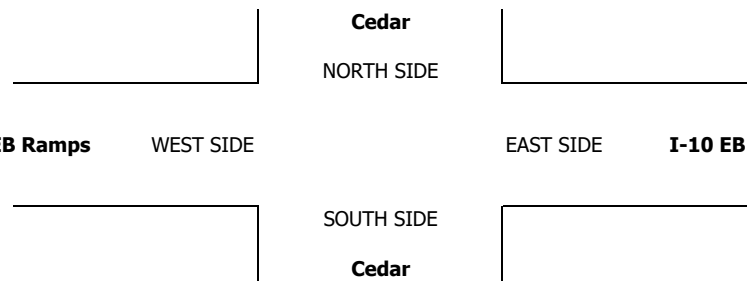
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	9	3	2	8	0	6	0	7	0	0	0	35	0	0	0	0	0
7:15 AM	0	10	4	2	11	0	4	0	4	0	0	0	35	0	0	0	0	0
7:30 AM	0	16	4	2	1	0	7	0	7	0	0	0	37	0	0	0	0	0
7:45 AM	0	6	3	10	6	0	4	0	3	0	0	0	32	0	0	0	0	0
8:00 AM	0	9	4	3	9	0	8	0	5	0	0	0	38	0	0	0	0	0
8:15 AM	0	7	1	3	11	0	7	0	6	0	0	0	35	0	0	0	0	0
8:30 AM	0	8	0	3	3	0	4	0	8	0	0	0	26	0	0	0	0	0
8:45 AM	0	14	5	3	9	0	4	0	7	0	0	0	42	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	79	24	28	58	0	44	0	47	0	0	0	280	0	0	0	0	0
APPROACH %	0%	77%	23%	33%	67%	0%	48%	0%	52%	0%	0%	0%						
APP/DEPART	103	/	123	86	/	105	91	/	52	0	/	0	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	38	12	18	27	0	26	0	21	0	0	0	142					
APPROACH %	0%	76%	24%	40%	60%	0%	55%	0%	45%	0%	0%	0%						
PEAK HR FACTOR		0.625			0.703			0.839			0.000		0.934					
APP/DEPART	50	/	64	45	/	48	47	/	30	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	10	4	0	6	0	4	0	3	0	0	0	27	0	0	0	0	0
4:15 PM	0	3	3	2	4	0	2	0	7	0	0	0	21	0	0	0	0	0
4:30 PM	0	5	3	0	6	0	1	0	0	0	0	0	15	0	0	0	0	0
4:45 PM	0	4	6	1	2	0	1	0	4	0	0	0	18	0	0	0	0	0
5:00 PM	0	4	0	2	6	0	4	0	5	0	0	0	21	0	0	0	0	0
5:15 PM	0	4	0	0	5	0	3	0	4	0	0	0	16	0	0	0	0	0
5:30 PM	0	9	2	0	1	0	5	0	8	0	0	0	25	0	0	0	0	0
5:45 PM	0	2	2	2	2	0	3	0	3	0	0	0	14	0	0	0	0	0
VOLUMES	0	41	20	7	32	0	23	0	34	0	0	0	157	0	0	0	0	0
APPROACH %	0%	67%	33%	18%	82%	0%	40%	0%	60%	0%	0%	0%						
APP/DEPART	61	/	64	39	/	66	57	/	27	0	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	22	16	3	18	0	8	0	14	0	0	0	81					
APPROACH %	0%	58%	42%	14%	86%	0%	36%	0%	64%	0%	0%	0%						
PEAK HR FACTOR		0.679			0.875			0.611			0.000		0.750					
APP/DEPART	38	/	30	21	/	32	22	/	19	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

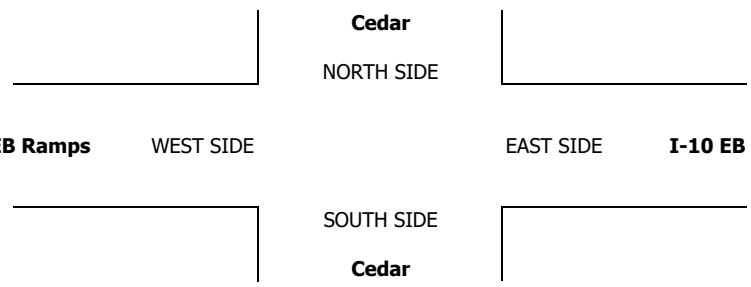
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
	LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



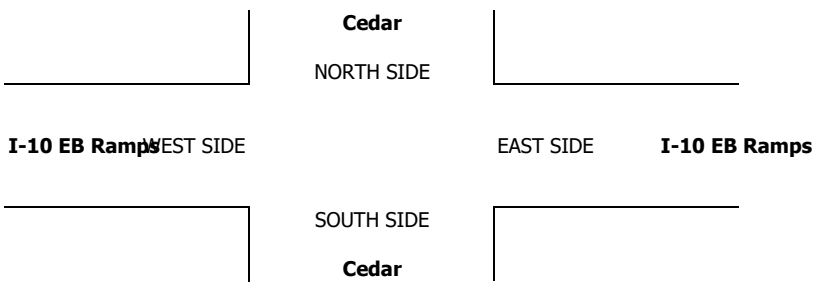
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1,3	ET 0,3	ER 0,3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	2	1	1	1	0	1	0	0	0	0	0	6	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
7:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
7:45 AM	0	0	0	1	3	0	2	0	0	0	0	0	6	0	0	0	0	0
8:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
8:15 AM	0	1	3	0	2	0	1	0	0	0	0	0	7	0	0	0	0	0
8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	6	7	2	10	0	4	0	0	0	0	0	29	0	0	0	0	0
APPROACH %	0%	46%	54%	17%	83%	0%	100%	0%	0%	0%	0%	0%						
APP/DEPART	13	/	10	12	/	10	4	/	9	0	/	0	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	0	2	4	1	9	0	3	0	0	0	0	0	19					
APPROACH %	0%	33%	67%	10%	90%	0%	100%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.375			0.625			0.375			0.000		0.679					
APP/DEPART	6	/	5	10	/	9	3	/	5	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
4:15 PM	0	1	2	2	1	0	0	0	0	0	0	0	6	0	0	0	0	0
4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
5:15 PM	0	1	1	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
VOLUMES	0	4	6	3	5	0	1	0	0	0	0	0	19	0	0	0	0	0
APPROACH %	0%	40%	60%	38%	63%	0%	100%	0%	0%	0%	0%	0%						
APP/DEPART	10	/	5	8	/	5	1	/	9	0	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	2	4	2	3	0	0	0	0	0	0	0	11					
APPROACH %	0%	33%	67%	40%	60%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.500			0.417			0.000			0.000		0.458					
APP/DEPART	6	/	2	5	/	3	0	/	6	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cedar
EAST & WEST: Slover

PROJECT #: SC1321
LOCATION #: 21
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

N
W
E
S



		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	29	185	6	16	190	26	41	23	14	0	43	16	589	0	0	1	0	1
	7:15 AM	32	169	2	14	174	21	54	36	16	7	50	15	590	0	0	0	0	0
	7:30 AM	19	193	2	12	216	2	28	32	18	4	43	20	589	0	0	0	0	0
	7:45 AM	31	163	2	11	186	28	34	21	11	4	40	18	549	0	0	0	0	0
	8:00 AM	12	134	5	9	170	14	25	22	13	5	18	20	447	0	0	1	0	1
	8:15 AM	18	136	4	16	184	18	29	19	6	1	24	22	477	0	1	0	0	1
	8:30 AM	9	124	3	14	141	8	33	12	13	1	23	17	398	0	0	0	0	0
	8:45 AM	14	126	5	23	127	12	19	16	3	4	10	25	384	1	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	164	1,230	29	115	1,388	129	263	181	94	26	251	153	4,023	1	1	2	0	4
	APPROACH %	12%	86%	2%	7%	85%	8%	49%	34%	17%	6%	58%	36%						
	APP/DEPART	1,423	/	1,645	1,632	/	1,509	538	/	324	430	/	545	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	111	710	12	53	766	77	157	112	59	15	176	69	2,317					
	APPROACH %	13%	85%	1%	6%	85%	9%	48%	34%	18%	6%	68%	27%						
	PEAK HR FACTOR		0.947			0.966			0.774			0.903		0.982					
	APP/DEPART	833	/	935	896	/	840	328	/	177	260	/	365	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	26	212	8	9	203	12	47	66	23	8	21	28	663	0	0	0	0	0
	4:15 PM	16	197	5	10	149	11	57	62	23	6	32	22	590	0	0	0	0	0
	4:30 PM	15	182	10	16	139	16	50	62	27	7	25	18	567	0	0	1	0	1
	4:45 PM	9	195	6	19	170	15	53	68	30	7	27	11	610	0	1	0	0	1
	5:00 PM	9	188	11	14	145	19	58	100	28	5	23	20	620	0	0	2	0	2
	5:15 PM	17	218	10	20	154	16	55	79	28	4	28	20	649	0	0	0	0	0
	5:30 PM	20	217	5	16	179	18	45	69	25	4	29	19	646	0	0	0	0	0
	5:45 PM	11	159	3	16	143	18	55	71	29	5	26	19	555	0	0	0	0	0
	VOLUMES	123	1,568	58	120	1,282	125	420	577	213	46	211	157	4,900	0	1	3	0	4
	APPROACH %	7%	90%	3%	8%	84%	8%	35%	48%	18%	11%	51%	38%						
	APP/DEPART	1,749	/	2,143	1,527	/	1,541	1,210	/	754	414	/	462	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	55	818	32	69	648	68	211	316	111	20	107	70	2,525					
	APPROACH %	6%	90%	4%	9%	83%	9%	33%	50%	17%	10%	54%	36%						
	PEAK HR FACTOR		0.923			0.921			0.858			0.947		0.973					
	APP/DEPART	905	/	1,098	785	/	779	638	/	416	197	/	232	0					

Cedar

NORTH SIDE

Slover WEST SIDE EAST SIDE **Slover**

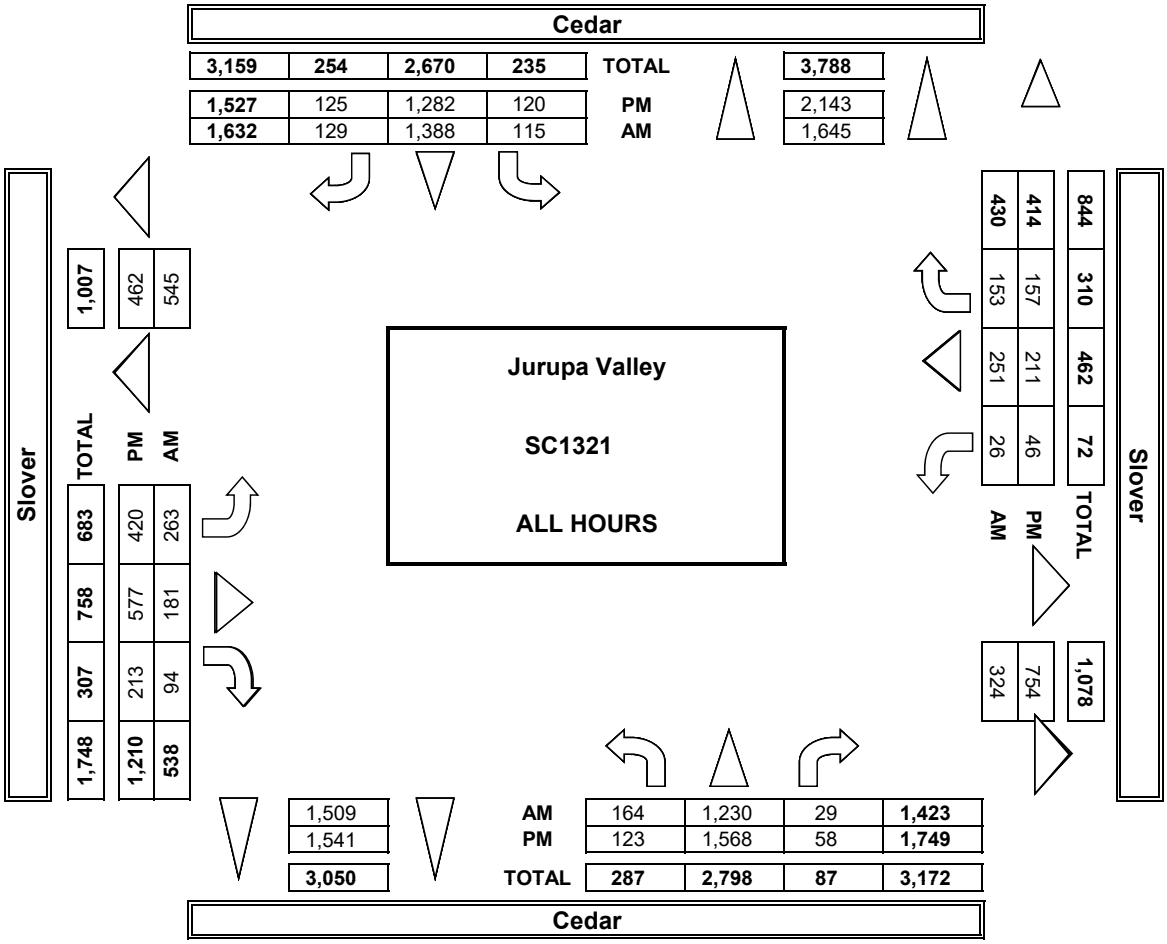
SOUTH SIDE

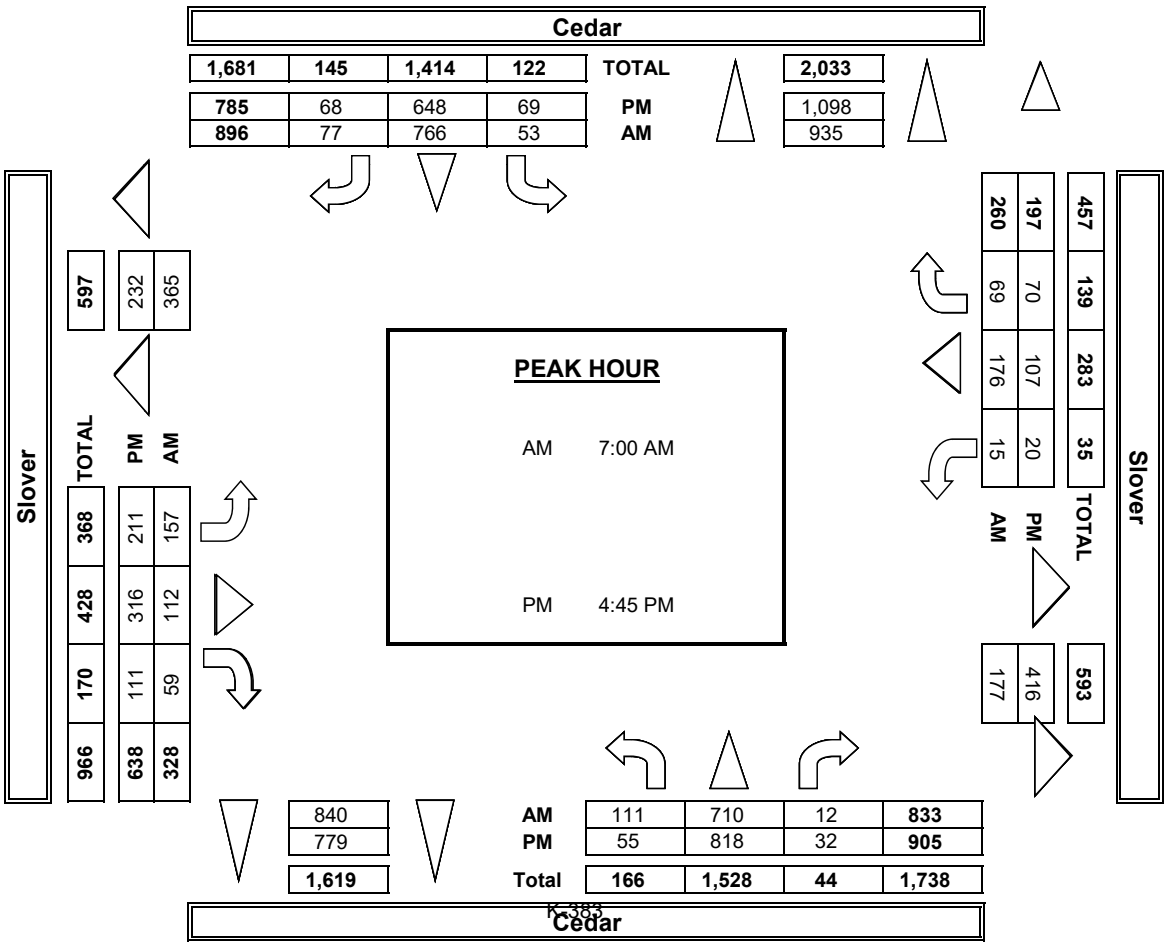
Cedar

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
5/4/17	LOCATION:	Jurupa Valley	PROJECT #:	SC1321	
THURSDAY	NORTH & SOUTH:	Cedar	LOCATION #:	21	
	EAST & WEST:	Slover	CONTROL:	SIGNAL	

	NOTES:											
PCE	Class	1	2	3	4	5	6			AM		▲ N
Adjusted	Factor	1	1.5	2	3	2	2			PM		
										MD	◄ W	E ►
										OTHER		S
										OTHER		▼

		NORTHBOUND (Cedar)			SOUTHBOUND (Cedar)			EASTBOUND (Slover)			WESTBOUND (Slover)				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	30	213	10	27	219	30	45	23	17	0	44	25	681					0
	7:15 AM	36	187	2	17	200	25	58	36	17	8	57	29	670					0
	7:30 AM	25	225	2	24	233	2	28	34	19	4	51	38	684					0
	7:45 AM	38	178	2	14	203	35	37	24	14	4	44	25	615					0
	8:00 AM	15	152	10	12	191	21	30	26	15	5	18	28	521					0
	8:15 AM	18	156	4	24	214	21	32	21	10	2	36	28	564					0
	8:30 AM	10	143	3	25	158	8	38	14	17	1	27	21	464					0
	8:45 AM	15	148	5	32	149	15	23	22	5	5	14	38	470					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	187	1,401	38	174	1,565	156	289	199	112	28	289	231	4,666	0	0	0	0	0
	APPROACH %	11%	86%	2%	9%	83%	8%	48%	33%	19%	5%	53%	42%						
	APP/DEPART	1,625	/	1,920	1,895	/	1,705	600	/	411	547	/	631	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	129	803	16	82	854	91	167	116	66	16	195	116	2,648					
	APPROACH %	14%	85%	2%	8%	83%	9%	48%	33%	19%	5%	60%	36%						
	PEAK HR FACTOR		0.939			0.931			0.791			0.878		0.969					
	APP/DEPART	947	/	1,085	1,027	/	935	348	/	214	327	/	415	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	32	239	8	12	225	16	54	79	29	10	24	39	764					0
	4:15 PM	19	216	9	20	161	11	58	75	25	7	34	28	659					0
	4:30 PM	21	192	14	20	152	19	54	68	30	7	32	21	628					0
	4:45 PM	12	205	8	20	192	21	58	74	31	7	28	14	668					0
	5:00 PM	10	209	14	24	163	24	59	117	29	5	26	23	702					0
	5:15 PM	20	229	12	27	170	17	61	87	29	4	32	26	712					0
	5:30 PM	23	234	5	25	197	20	46	79	25	5	30	28	715					0
	5:45 PM	12	163	3	23	146	19	57	86	31	5	29	24	597					0
	VOLUMES	146	1,685	73	169	1,404	147	446	664	228	50	234	202	5,443	0	0	0	0	0
	APPROACH %	8%	89%	4%	10%	82%	9%	33%	50%	17%	10%	48%	42%						
	APP/DEPART	1,903	/	2,332	1,720	/	1,681	1,337	/	905	485	/	526	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	63	876	39	95	721	82	224	357	114	21	116	91	2,796					
	APPROACH %	6%	90%	4%	11%	80%	9%	32%	51%	16%	9%	51%	40%						
	PEAK HR FACTOR		0.936			0.929			0.846			0.903		0.978					
	APP/DEPART	977	/	1,190	898	/	856	694	/	490	228	/	260	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

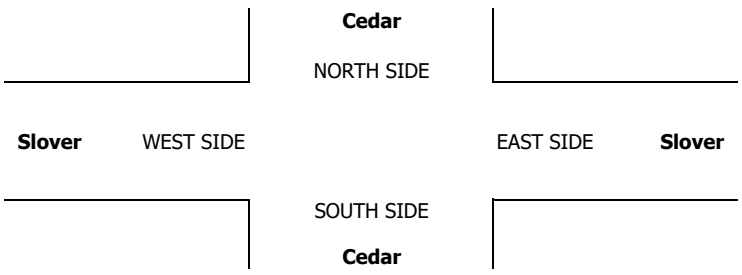
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	28	161	4	6	169	22	38	23	12	0	42	10	515	0	0	1	0	1
7:15 AM	28	153	2	11	158	18	51	36	15	6	43	5	526	0	0	0	0	0
7:30 AM	16	171	2	5	199	2	28	29	17	4	36	10	519	0	0	0	0	0
7:45 AM	25	149	2	8	169	23	32	19	8	4	37	11	487	0	0	0	0	0
8:00 AM	9	113	2	6	154	10	21	18	12	5	18	12	380	0	0	1	0	1
8:15 AM	18	120	4	10	160	15	26	18	3	0	17	16	407	0	1	0	0	1
8:30 AM	8	109	3	6	124	8	28	8	11	1	19	12	337	0	0	0	0	0
8:45 AM	13	109	5	17	109	10	16	13	2	3	6	11	314	1	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	145	1,085	24	69	1,242	108	240	164	80	23	218	87	3,485	1	1	2	0	4
APPROACH %	12%	87%	2%	5%	88%	8%	50%	34%	17%	7%	66%	27%						
APP/DEPART	1,254	/	1,411	1,419	/	1,346	484	/	256	328	/	472	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	97	634	10	30	695	65	148	107	52	14	158	36	2,047					
APPROACH %	13%	86%	1%	4%	88%	8%	48%	35%	17%	7%	76%	17%						
PEAK HR FACTOR		0.960			0.959			0.755			0.963		0.973					
APP/DEPART	741	/	818	790	/	761	308	/	147	208	/	321	0					
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	22	194	8	7	186	10	42	57	19	7	19	21	592	0	0	0	0	0
4:15 PM	14	181	3	5	139	11	56	52	21	5	30	18	535	0	0	0	0	0
4:30 PM	12	173	8	12	126	14	45	59	25	7	21	15	517	0	0	1	0	1
4:45 PM	7	188	5	18	150	10	49	62	29	7	26	9	560	0	1	0	0	1
5:00 PM	8	169	9	8	127	16	56	85	27	5	21	18	549	0	0	2	0	2
5:15 PM	15	205	9	14	138	15	49	70	26	4	24	16	585	0	0	0	0	0
5:30 PM	18	202	5	10	158	17	43	60	25	3	27	12	580	0	0	0	0	0
5:45 PM	10	155	3	10	138	17	53	62	26	5	23	15	517	0	0	0	0	0
VOLUMES	106	1,467	50	84	1,162	110	393	507	198	43	191	124	4,435	0	1	3	0	4
APPROACH %	7%	90%	3%	6%	86%	8%	36%	46%	18%	12%	53%	35%						
APP/DEPART	1,623	/	1,982	1,356	/	1,403	1,098	/	640	358	/	410	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	48	764	28	49	573	58	195	277	107	19	98	55	2,274					
APPROACH %	6%	91%	3%	7%	84%	9%	34%	48%	18%	11%	57%	32%						
PEAK HR FACTOR		0.917			0.920			0.865			0.977		0.972					
APP/DEPART	840	/	1,015	681	/	699	581	/	354	172	/	206	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

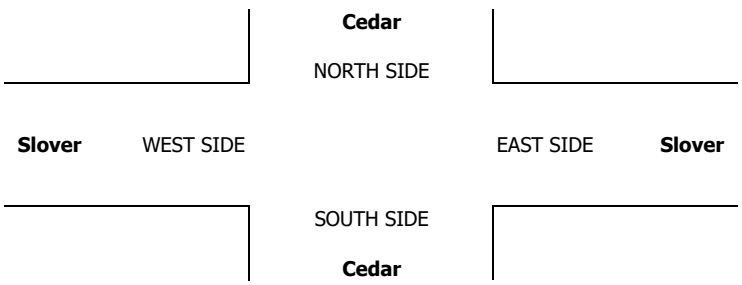
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	1	13	0	6	7	2	1	0	1	0	0	2	33	0	0	0	0	0
7:15 AM	2	8	0	2	2	1	1	0	1	1	5	2	25	0	0	0	0	0
7:30 AM	0	4	0	0	10	0	0	3	1	0	2	1	21	0	0	0	0	0
7:45 AM	2	8	0	1	7	1	1	1	0	0	1	5	27	0	0	0	0	0
8:00 AM	2	15	1	2	5	1	2	2	0	0	0	4	34	0	0	0	0	0
8:15 AM	0	4	0	2	9	2	1	0	1	1	1	2	23	0	0	0	0	0
8:30 AM	0	4	0	3	10	0	2	4	0	0	3	3	29	0	0	0	0	0
8:45 AM	0	7	0	2	6	0	0	0	0	1	2	8	26	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	7	63	1	18	56	7	8	10	4	3	14	27	218	0	0	0	0	0
APPROACH %	10%	89%	1%	22%	69%	9%	36%	45%	18%	7%	32%	61%						
APP/DEPART	71	/	98	81	/	63	22	/	29	44	/	28	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	4	31	1	8	31	4	6	7	1	1	5	14	113					
APPROACH %	11%	86%	3%	19%	72%	9%	43%	50%	7%	5%	25%	70%						
PEAK HR FACTOR		0.500			0.827			0.583			0.833		0.831					
APP/DEPART	36	/	51	43	/	33	14	/	16	20	/	13	0					
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	3	0	0	3	0	2	3	1	0	0	1	14	0	0	0	0	0
4:15 PM	1	8	0	0	3	0	1	3	1	1	1	1	20	0	0	0	0	0
4:30 PM	0	5	0	1	4	0	3	0	1	0	1	2	17	0	0	0	0	0
4:45 PM	1	2	0	1	9	1	2	4	0	0	1	0	21	0	0	0	0	0
5:00 PM	1	9	1	0	8	0	2	8	0	0	0	0	29	0	0	0	0	0
5:15 PM	1	9	0	2	9	0	3	6	2	0	2	0	34	0	0	0	0	0
5:30 PM	1	7	0	1	16	0	2	5	0	0	2	2	36	0	0	0	0	0
5:45 PM	1	2	0	3	4	0	0	2	2	0	2	1	17	0	0	0	0	0
VOLUMES	7	45	1	8	56	1	15	31	7	1	9	7	188	0	0	0	0	0
APPROACH %	13%	85%	2%	12%	86%	2%	28%	58%	13%	6%	53%	41%						
APP/DEPART	53	/	67	65	/	64	53	/	40	17	/	17	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	4	27	1	4	42	1	9	23	2	0	5	2	120					
APPROACH %	13%	84%	3%	9%	89%	2%	26%	68%	6%	0%	71%	29%						
PEAK HR FACTOR		0.727			0.691			0.773			0.438		0.833					
APP/DEPART	32	/	38	47	/	44	34	/	28	7	/	10	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

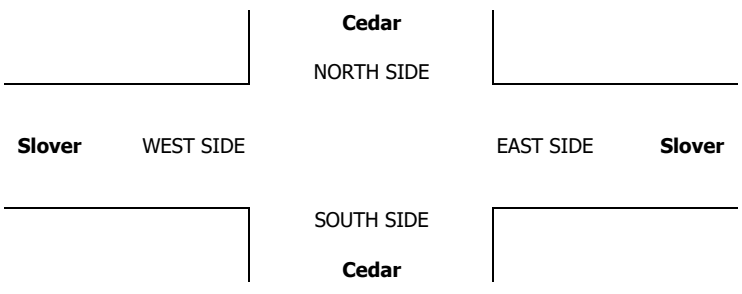
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	1	0	0	3	0	1	0	0	0	1	0	6	0	0	0	0	0
	7:15 AM	0	2	0	0	3	1	1	0	0	0	0	2	9	0	0	0	0	0
	7:30 AM	0	4	0	1	2	0	0	0	0	0	2	1	10	0	0	0	0	0
	7:45 AM	2	0	0	2	5	1	0	0	2	0	1	0	13	0	0	0	0	0
	8:00 AM	0	1	0	0	3	0	0	0	0	0	0	2	6	0	0	0	0	0
	8:15 AM	0	4	0	1	3	0	1	0	1	0	1	2	13	0	0	0	0	0
	8:30 AM	1	5	0	1	2	0	1	0	0	0	0	2	12	0	0	0	0	0
	8:45 AM	1	2	0	0	4	0	1	0	0	0	1	1	10	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	4	19	0	5	25	2	5	0	3	0	6	10	79	0	0	0	0	0
	APPROACH %	17%	83%	0%	16%	78%	6%	63%	0%	38%	0%	38%	63%						
	APP/DEPART	23	/	34	32	/	28	8	/	5	16	/	12	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	3	10	0	4	13	1	2	0	3	0	2	6	44					
	APPROACH %	23%	77%	0%	22%	72%	6%	40%	0%	60%	0%	25%	75%						
	PEAK HR FACTOR		0.542			0.563			0.625			0.667		0.846					
	APP/DEPART	13	/	18	18	/	16	5	/	4	8	/	6	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	4	0	1	8	0	0	1	1	0	1	1	18	0	0	0	0	0
	4:15 PM	0	1	0	0	4	0	0	3	1	0	1	0	10	0	0	0	0	0
	4:30 PM	0	0	0	2	7	1	2	0	0	0	0	0	12	0	0	0	0	0
	4:45 PM	0	1	0	0	5	2	0	0	1	0	0	1	10	0	0	0	0	0
	5:00 PM	0	4	0	2	5	1	0	1	1	0	1	1	16	0	0	0	0	0
	5:15 PM	0	2	0	2	3	0	1	1	0	0	1	1	11	0	0	0	0	0
	5:30 PM	0	2	0	2	0	0	0	1	0	1	0	2	8	0	0	0	0	0
	5:45 PM	0	1	0	1	1	0	1	0	1	0	0	2	7	0	0	0	0	0
	VOLUMES	1	15	0	10	33	4	4	7	5	1	4	8	92	0	0	0	0	0
	APPROACH %	6%	94%	0%	21%	70%	9%	25%	44%	31%	8%	31%	62%						
	APP/DEPART	16	/	27	47	/	39	16	/	17	13	/	9	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	1	6	0	3	24	3	2	4	3	0	2	2	50					
	APPROACH %	14%	86%	0%	10%	80%	10%	22%	44%	33%	0%	50%	50%						
	PEAK HR FACTOR		0.350			0.750			0.563			0.500		0.694					
	APP/DEPART	7	/	10	30	/	27	9	/	7	4	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

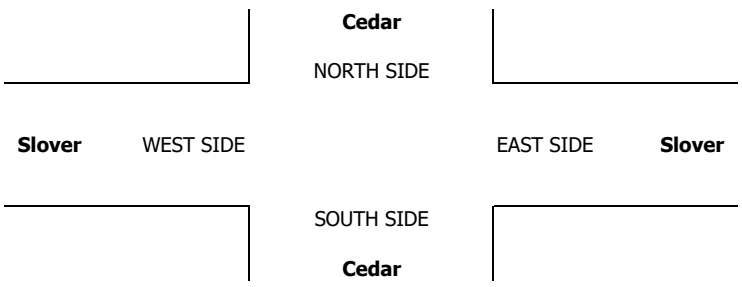
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	0	10	2	4	11	1	1	0	1	0	0	4	34	0	0	0	0	0
7:15 AM	1	6	0	1	11	1	1	0	0	0	2	5	28	0	0	0	0	0
7:30 AM	3	12	0	5	5	0	0	0	0	0	2	8	35	0	0	0	0	0
7:45 AM	2	5	0	0	3	2	1	1	0	0	1	2	17	0	0	0	0	0
8:00 AM	1	4	2	1	7	3	2	1	1	0	0	2	24	0	0	0	0	0
8:15 AM	0	6	0	3	10	1	0	1	1	0	5	1	28	0	0	0	0	0
8:30 AM	0	6	0	4	5	0	1	0	2	0	1	0	19	0	0	0	0	0
8:45 AM	0	8	0	4	7	1	1	3	1	0	1	3	29	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	7	57	4	22	59	9	7	6	6	0	12	25	214	0	0	0	0	0
APPROACH %	10%	84%	6%	24%	66%	10%	37%	32%	32%	0%	32%	68%						
APP/DEPART	68	/	89	90	/	65	19	/	32	37	/	28	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	6	33	2	10	30	4	3	1	1	0	5	19	114					
APPROACH %	15%	80%	5%	23%	68%	9%	60%	20%	20%	0%	21%	79%						
PEAK HR FACTOR		0.683			0.688			0.625			0.600		0.814					
APP/DEPART	41	/	55	44	/	31	5	/	13	24	/	15	0					
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	10	0	1	6	2	3	5	2	1	1	4	37	0	0	0	0	0
4:15 PM	1	7	2	5	3	0	0	4	0	0	0	2	24	0	0	0	0	0
4:30 PM	3	3	2	0	2	1	0	3	1	0	3	1	19	0	0	0	0	0
4:45 PM	1	4	1	0	6	1	2	2	0	0	0	1	18	0	0	0	0	0
5:00 PM	0	6	1	4	4	2	0	6	0	0	1	1	25	0	0	0	0	0
5:15 PM	1	2	1	2	4	0	1	2	0	0	1	2	16	0	0	0	0	0
5:30 PM	1	5	0	3	5	1	0	3	0	0	0	3	21	0	0	0	0	0
5:45 PM	0	1	0	2	0	0	0	7	0	0	1	1	12	0	0	0	0	0
VOLUMES	9	38	7	17	30	7	6	32	3	1	7	15	172	0	0	0	0	0
APPROACH %	17%	70%	13%	31%	56%	13%	15%	78%	7%	4%	30%	65%						
APP/DEPART	54	/	59	54	/	34	41	/	56	23	/	23	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	7	24	5	6	17	4	5	14	3	1	4	8	98					
APPROACH %	19%	67%	14%	22%	63%	15%	23%	64%	14%	8%	31%	62%						
PEAK HR FACTOR		0.750			0.750			0.550			0.542		0.662					
APP/DEPART	36	/	37	27	/	21	22	/	25	13	/	15	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

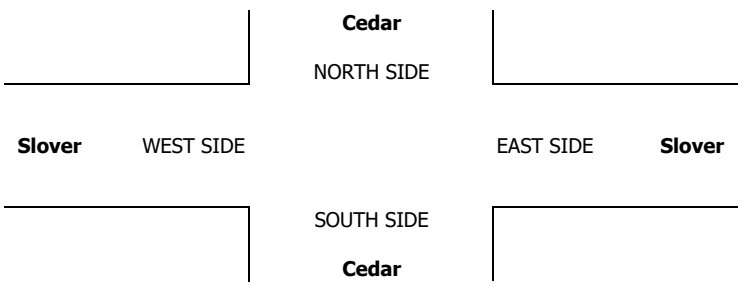
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

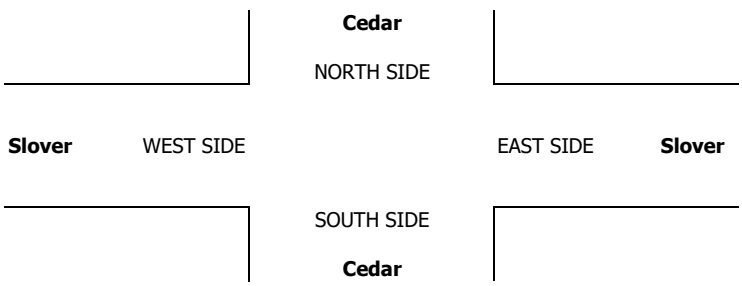
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	7:15 AM	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
	7:30 AM	0	2	0	1	0	0	0	0	0	0	1	0	4	0	0	0	0	0
	7:45 AM	0	1	0	0	2	1	0	0	1	0	0	0	5	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	1	0	0	0	0	3	0	0	0	0	0
	8:15 AM	0	2	0	0	2	0	1	0	0	0	0	1	6	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	1	1	1	0	0	0	0	2	5	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	6	0	1	6	3	3	1	1	0	1	4	27	0	0	0	0	0
	APPROACH %	14%	86%	0%	10%	60%	30%	60%	20%	20%	0%	20%	80%						
	APP/DEPART	7	/	13	10	/	7	5	/	2	5	/	5	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	6	0	1	5	1	1	1	1	0	1	1	18					
	APPROACH %	0%	100%	0%	14%	71%	14%	33%	33%	33%	0%	50%	50%						
	PEAK HR FACTOR		0.750			0.583			0.750			0.500		0.750					
	APP/DEPART	6	/	8	7	/	6	3	/	2	2	/	2	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	4:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	1	1	0	0	0	0	1	3	0	0	0	0	0
	5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0
	VOLUMES	0	3	0	1	1	3	2	0	0	0	0	3	13	0	0	0	0	0
	APPROACH %	0%	100%	0%	20%	20%	60%	100%	0%	0%	0%	0%	100%						
	APP/DEPART	3	/	8	5	/	1	2	/	1	3	/	3	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	1	0	0	1	2	2	0	0	0	0	1	7					
	APPROACH %	0%	100%	0%	0%	33%	67%	100%	0%	0%	0%	0%	100%						
	PEAK HR FACTOR		0.250			0.750			0.500			0.250		0.583					
	APP/DEPART	1	/	4	3	/	1	2	/	0	1	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cedar
EAST & WEST: Santa Ana

PROJECT #: SC1321
LOCATION #: 22
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER



		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	37	189	4	11	164	17	12	16	10	13	34	6	513	0	0	0	0	0
	7:15 AM	20	177	8	21	182	11	22	25	19	9	18	12	524	0	1	0	0	1
	7:30 AM	16	198	14	10	203	11	15	29	24	13	20	9	562	0	0	0	0	0
	7:45 AM	12	172	5	9	166	16	5	15	19	12	26	6	463	0	0	0	0	0
	8:00 AM	13	126	7	4	177	9	11	19	14	4	17	8	409	0	0	0	0	0
	8:15 AM	16	125	8	6	148	11	8	21	9	5	17	7	381	1	0	0	0	1
	8:30 AM	7	135	4	7	136	6	9	13	12	7	11	5	352	1	1	0	0	2
	8:45 AM	11	111	2	7	113	8	9	4	9	6	11	4	295	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	132	1,233	52	75	1,289	89	91	142	116	69	154	57	3,499	2	2	0	0	4
	APPROACH %	9%	87%	4%	5%	89%	6%	26%	41%	33%	25%	55%	20%						
	APP/DEPART	1,417	/	1,383	1,453	/	1,476	349	/	267	280	/	373	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	85	736	31	51	715	55	54	85	72	47	98	33	2,062					
	APPROACH %	10%	86%	4%	6%	87%	7%	26%	40%	34%	26%	55%	19%						
	PEAK HR FACTOR		0.926			0.916			0.776			0.840		0.917					
	APP/DEPART	852	/	824	821	/	834	211	/	166	178	/	238	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	28	224	10	8	198	13	12	38	20	7	21	4	583	6	0	0	0	6
	4:15 PM	27	176	15	9	150	9	13	41	17	6	25	8	496	4	0	0	0	4
	4:30 PM	18	181	11	10	166	12	14	23	23	5	16	3	482	2	2	0	0	4
	4:45 PM	23	183	13	11	170	11	15	34	21	5	20	4	510	3	0	0	0	3
	5:00 PM	20	210	11	8	147	8	14	28	25	10	22	3	506	2	0	0	0	2
	5:15 PM	23	225	11	10	172	17	13	36	29	5	26	8	575	3	0	0	0	3
	5:30 PM	24	189	9	12	164	15	17	40	24	7	23	8	532	5	2	0	0	7
	5:45 PM	25	153	5	11	145	10	11	33	24	5	23	11	456	1	1	0	0	2
	VOLUMES	188	1,541	85	79	1,312	95	109	273	183	50	176	49	4,140	26	5	0	0	31
	APPROACH %	10%	85%	5%	5%	88%	6%	19%	48%	32%	18%	64%	18%						
	APP/DEPART	1,814	/	1,704	1,486	/	1,571	565	/	432	275	/	433	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	90	807	44	41	653	51	59	138	99	27	91	23	2,123					
	APPROACH %	10%	86%	5%	6%	88%	7%	20%	47%	33%	19%	65%	16%						
	PEAK HR FACTOR		0.908			0.936			0.914			0.904		0.923					
	APP/DEPART	941	/	891	745	/	792	296	/	221	141	/	219	0					

Cedar

NORTH SIDE

Santa Ana WEST SIDE EAST SIDE **Santa Ana**

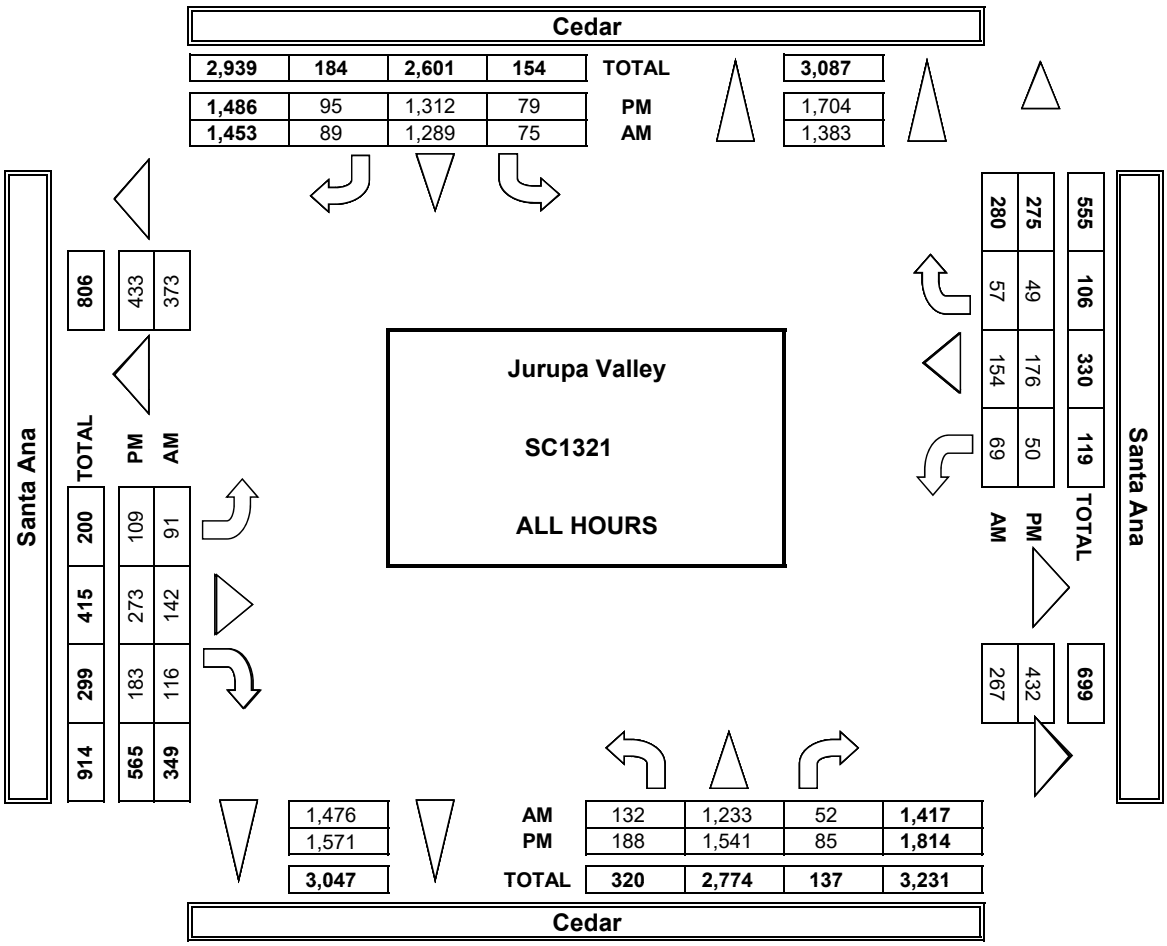
SOUTH SIDE

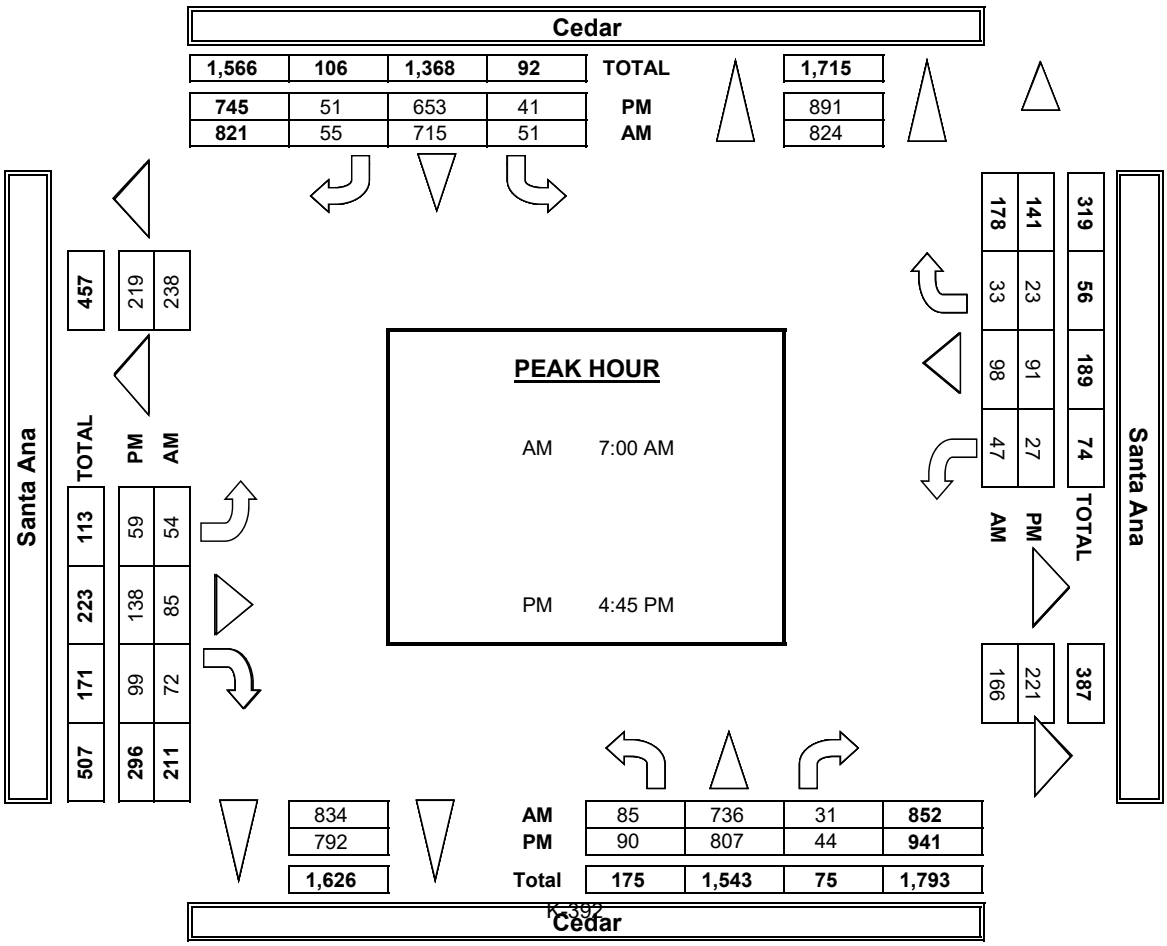
Cedar

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	37	213	4	14	185	20	14	17	10	17	35	8	571
	7:15 AM	21	199	10	24	211	11	24	27	20	20	20	16	600
	7:30 AM	16	229	15	14	219	12	16	32	26	18	25	13	632
	7:45 AM	13	191	5	11	177	17	6	18	19	17	29	8	509
	8:00 AM	14	144	10	7	195	10	12	23	14	6	18	11	461
	8:15 AM	18	134	8	7	183	14	8	22	11	5	19	12	439
	8:30 AM	7	155	7	9	152	6	12	14	12	11	14	7	403
	8:45 AM	12	130	2	10	133	8	16	4	12	12	12	6	355
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	136	1,392	60	94	1,453	97	107	155	124	105	170	79	3,969
	APPROACH %	9%	88%	4%	6%	88%	6%	28%	40%	32%	30%	48%	22%	
	APP/DEPART	1,588	/	1,577	1,643	/	1,682	385	/	309	353	/	402	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	86	831	34	62	791	59	60	93	75	71	108	44	2,312
	APPROACH %	9%	87%	4%	7%	87%	6%	26%	41%	33%	32%	49%	20%	
	PEAK HR FACTOR		0.917			0.930			0.774			0.943		0.914
	APP/DEPART	951	/	934	911	/	937	228	/	188	223	/	253	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	29	248	14	9	229	15	14	40	22	7	22	5	653
	4:15 PM	27	198	20	11	159	9	14	48	19	9	31	8	550
	4:30 PM	21	200	19	12	180	14	14	25	24	9	17	3	536
	4:45 PM	26	200	15	16	184	12	15	36	22	7	21	4	556
	5:00 PM	22	230	16	13	158	8	14	31	26	13	29	3	561
	5:15 PM	24	240	11	11	184	17	13	36	30	5	26	14	610
	5:30 PM	25	198	12	19	176	15	19	41	24	10	25	11	572
	5:45 PM	28	159	8	14	149	11	11	35	25	5	25	13	481
	VOLUMES	201	1,670	114	104	1,417	100	113	291	190	65	194	61	4,518
	APPROACH %	10%	84%	6%	6%	87%	6%	19%	49%	32%	20%	61%	19%	
	APP/DEPART	1,985	/	1,844	1,620	/	1,671	594	/	508	320	/	495	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	97	867	54	58	701	52	61	144	102	35	100	32	2,299
	APPROACH %	9%	85%	5%	7%	86%	6%	20%	47%	33%	21%	60%	19%	
	PEAK HR FACTOR		0.926			0.957			0.915			0.915		0.942
	APP/DEPART	1,017	/	959	810	/	837	306	/	255	167	/	248	0

Cedar

NORTH SIDE

Santa Ana WEST SIDE EAST SIDE **Santa Ana**

SOUTH SIDE

Cedar

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

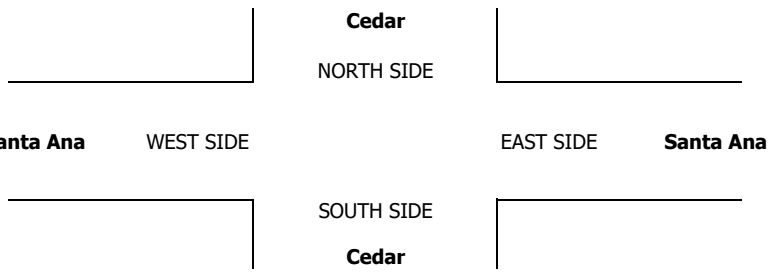
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM 7:00 AM	37	167	4	9	148	14	11	15	10	10	33	5	463	0	0	0	0	0
7:15 AM	19	157	6	19	160	11	20	24	18	1	17	9	461	0	1	0	0	1
7:30 AM	16	179	13	7	189	10	14	26	23	10	16	6	509	0	0	0	0	0
7:45 AM	11	157	5	8	157	15	4	11	19	9	22	4	422	0	0	0	0	0
8:00 AM	12	110	5	2	163	8	10	16	14	3	16	6	365	0	0	0	0	0
8:15 AM	13	117	8	5	124	9	8	20	6	5	15	3	333	1	0	0	0	1
8:30 AM	7	121	2	6	121	6	7	12	12	5	9	3	311	1	1	0	0	2
8:45 AM	10	97	2	5	100	8	5	4	7	2	10	3	253	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	125	1,105	45	61	1,162	81	79	128	109	45	138	39	3,117	2	2	0	0	4
APPROACH %	10%	87%	4%	5%	89%	6%	25%	41%	34%	20%	62%	18%						
APP/DEPART	1,275	/	1,225	1,304	/	1,318	316	/	232	222	/	342	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	83	660	28	42	654	50	49	76	70	30	88	24	1,855					
APPROACH %	11%	86%	4%	6%	88%	7%	25%	39%	36%	21%	62%	17%						
PEAK HR FACTOR		0.927			0.907			0.774			0.740		0.911					
APP/DEPART	771	/	734	747	/	754	195	/	146	142	/	221	0					
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	26	207	7	7	173	12	11	37	19	7	20	3	529	6	0	0	0	6
4:15 PM	27	160	12	7	139	9	12	36	15	4	21	8	450	4	0	0	0	4
4:30 PM	16	168	7	9	153	11	14	21	22	3	15	3	442	2	2	0	0	4
4:45 PM	20	172	11	7	155	10	15	31	19	4	19	4	467	3	0	0	0	3
5:00 PM	19	194	8	5	135	8	14	24	24	8	15	3	457	2	0	0	0	2
5:15 PM	21	213	11	9	165	17	13	36	27	5	26	5	548	3	0	0	0	3
5:30 PM	23	181	7	8	151	15	15	39	24	5	21	6	495	5	2	0	0	7
5:45 PM	23	148	3	9	140	9	11	31	23	5	22	10	434	1	1	0	0	2
VOLUMES	175	1,443	66	61	1,211	91	105	255	173	41	159	42	3,822	26	5	0	0	31
APPROACH %	10%	86%	4%	4%	89%	7%	20%	48%	32%	17%	66%	17%						
APP/DEPART	1,684	/	1,595	1,363	/	1,451	533	/	377	242	/	399	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	70	760	37	27	606	50	57	130	94	22	81	18	1,967					
APPROACH %	8%	86%	4%	4%	88%	7%	20%	46%	33%	18%	67%	15%						
PEAK HR FACTOR		0.898			0.897			0.901			0.840		0.897					
APP/DEPART	880	/	837	685	/	735	281	/	194	121	/	201	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

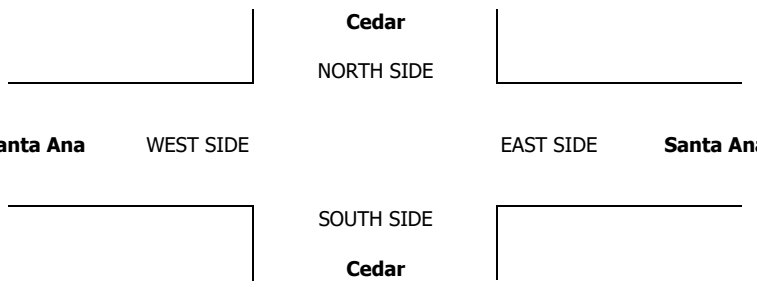
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	12	0	1	7	1	0	1	0	1	1	0	24	0	0	0	0	0
	7:15 AM	1	11	0	1	9	0	0	0	0	1	0	1	24	0	0	0	0	0
	7:30 AM	0	3	1	1	6	0	0	1	0	0	1	1	14	0	0	0	0	0
	7:45 AM	1	4	0	0	1	1	1	2	0	0	2	1	13	0	0	0	0	0
	8:00 AM	1	9	0	0	5	1	0	1	0	0	0	1	18	0	0	0	0	0
	8:15 AM	3	3	0	0	6	0	0	1	2	0	1	1	17	0	0	0	0	0
	8:30 AM	0	5	1	0	7	0	1	1	0	0	1	0	16	0	0	0	0	0
	8:45 AM	0	5	0	1	0	0	1	0	0	0	1	0	8	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	6	52	2	4	41	3	3	7	2	2	7	5	134	0	0	0	0	0
	APPROACH %	10%	87%	3%	8%	85%	6%	25%	58%	17%	14%	50%	36%						
	APP/DEPART	60	/	60	48	/	45	12	/	13	14	/	16	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	2	30	1	3	23	2	1	4	0	2	4	3	75					
	APPROACH %	6%	91%	3%	11%	82%	7%	20%	80%	0%	22%	44%	33%						
	PEAK HR FACTOR		0.688			0.700			0.417			0.750		0.781					
	APP/DEPART	33	/	34	28	/	25	5	/	8	9	/	8	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	5	0	1	7	0	0	0	0	0	0	0	15	0	0	0	0	0
	4:15 PM	0	5	1	0	6	0	1	1	1	0	1	0	16	0	0	0	0	0
	4:30 PM	0	3	0	0	2	0	0	1	1	0	1	0	8	0	0	0	0	0
	4:45 PM	2	3	0	2	7	1	0	2	2	0	1	0	20	0	0	0	0	0
	5:00 PM	0	6	0	0	7	0	0	3	1	0	3	0	20	0	0	0	0	0
	5:15 PM	2	5	0	1	0	0	0	0	2	0	0	0	10	0	0	0	0	0
	5:30 PM	1	5	1	1	7	0	1	0	0	1	0	0	17	0	0	0	0	0
	5:45 PM	1	2	1	0	3	1	0	0	1	0	0	0	9	0	0	0	0	0
	VOLUMES	8	34	3	5	39	2	2	7	8	1	6	0	115	0	0	0	0	0
	APPROACH %	18%	76%	7%	11%	85%	4%	12%	41%	47%	14%	86%	0%						
	APP/DEPART	45	/	36	46	/	48	17	/	15	7	/	16	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	5	19	1	4	21	1	1	5	5	1	4	0	67					
	APPROACH %	20%	76%	4%	15%	81%	4%	9%	45%	45%	20%	80%	0%						
	PEAK HR FACTOR		0.893			0.650			0.688			0.417		0.838					
	APP/DEPART	25	/	20	26	/	27	11	/	10	5	/	10	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

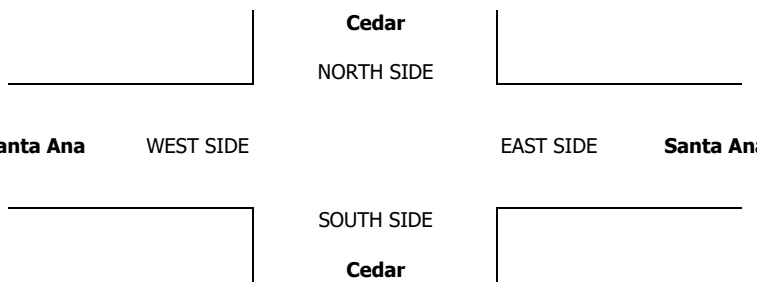
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	2	0	0	1	2	0	0	0	1	0	0	6	0	0	0	0	0
	7:15 AM	0	2	0	0	2	0	1	0	1	3	0	1	10	0	0	0	0	0
	7:30 AM	0	2	0	1	2	0	0	1	0	1	2	1	10	0	0	0	0	0
	7:45 AM	0	3	0	0	4	0	0	2	0	1	1	0	11	0	0	0	0	0
	8:00 AM	0	1	0	1	3	0	0	0	0	0	1	0	6	0	0	0	0	0
	8:15 AM	0	3	0	1	3	0	0	0	1	0	0	2	10	0	0	0	0	0
	8:30 AM	0	1	0	0	4	0	0	0	0	0	0	2	7	0	0	0	0	0
	8:45 AM	1	2	0	0	5	0	0	0	1	2	0	0	11	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	16	0	3	24	2	1	3	3	8	4	6	71	0	0	0	0	0
	APPROACH %	6%	94%	0%	10%	83%	7%	14%	43%	43%	44%	22%	33%						
	APP/DEPART	17	/	23	29	/	35	7	/	6	18	/	7	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	9	0	3	12	0	0	3	1	2	4	3	37					
	APPROACH %	0%	100%	0%	20%	80%	0%	0%	75%	25%	22%	44%	33%						
	PEAK HR FACTOR		0.750			0.938			0.500			0.563		0.841					
	APP/DEPART	9	/	12	15	/	15	4	/	6	9	/	4	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	3	1	0	9	0	0	0	0	0	1	0	14	0	0	0	0	0
	4:15 PM	0	2	0	1	4	0	0	2	0	1	1	0	11	0	0	0	0	0
	4:30 PM	0	3	0	0	9	0	0	1	0	0	0	0	13	0	0	0	0	0
	4:45 PM	0	1	2	0	6	0	0	0	0	0	0	0	9	0	0	0	0	0
	5:00 PM	0	3	0	1	3	0	0	1	0	1	3	0	12	0	0	0	0	0
	5:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	5:30 PM	0	0	0	0	4	0	1	0	0	0	1	0	6	0	0	0	0	0
	5:45 PM	0	1	0	1	2	0	0	2	0	0	0	0	6	0	0	0	0	0
	VOLUMES	0	15	3	3	39	0	1	6	0	2	6	0	75	0	0	0	0	0
	APPROACH %	0%	83%	17%	7%	93%	0%	14%	86%	0%	25%	75%	0%						
	APP/DEPART	18	/	16	42	/	41	7	/	12	8	/	6	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	9	3	1	28	0	0	3	0	1	2	0	47					
	APPROACH %	0%	75%	25%	3%	97%	0%	0%	100%	0%	33%	67%	0%						
	PEAK HR FACTOR		0.750			0.806			0.375			0.375		0.839					
	APP/DEPART	12	/	9	29	/	29	3	/	7	3	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

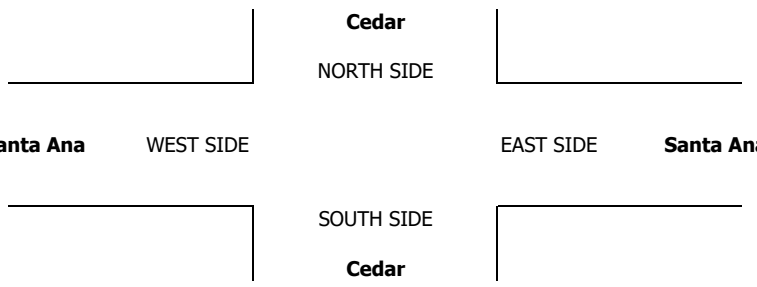
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	8	0	1	8	0	1	0	0	1	0	1	20	0	0	0	0	0
7:15 AM	0	7	0	1	11	0	0	1	0	3	1	1	25	0	0	0	0	0
7:30 AM	0	13	0	1	5	0	0	0	1	2	1	1	24	0	0	0	0	0
7:45 AM	0	6	0	1	2	0	0	0	0	2	0	0	11	0	0	0	0	0
8:00 AM	0	6	1	1	6	0	0	1	0	1	0	1	17	0	0	0	0	0
8:15 AM	0	2	0	0	14	1	0	0	0	0	0	1	18	0	0	0	0	0
8:30 AM	0	8	1	1	4	0	1	0	0	2	1	0	18	0	0	0	0	0
8:45 AM	0	7	0	1	7	0	3	0	1	2	0	1	22	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	57	2	7	57	1	5	2	2	13	3	6	155	0	0	0	0	0
APPROACH %	0%	97%	3%	11%	88%	2%	56%	22%	22%	59%	14%	27%						
APP/DEPART	59	/	68	65	/	72	9	/	11	22	/	4	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	34	0	4	26	0	1	1	1	8	2	3	80					
APPROACH %	0%	100%	0%	13%	87%	0%	33%	33%	33%	62%	15%	23%						
PEAK HR FACTOR		0.654			0.625			0.750			0.650		0.800					
APP/DEPART	34	/	38	30	/	35	3	/	5	13	/	2	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	9	1	0	9	1	1	1	1	0	0	0	23	0	0	0	0	0
4:15 PM	0	8	2	0	1	0	0	2	0	1	2	0	16	0	0	0	0	0
4:30 PM	1	7	4	1	2	1	0	0	0	2	0	0	18	0	0	0	0	0
4:45 PM	1	7	0	2	2	0	0	0	0	1	0	0	13	0	0	0	0	0
5:00 PM	1	7	2	2	2	0	0	0	0	1	1	0	16	0	0	0	0	0
5:15 PM	0	5	0	0	5	0	0	0	0	0	0	3	13	0	0	0	0	0
5:30 PM	0	3	1	3	2	0	0	0	0	1	0	1	11	0	0	0	0	0
5:45 PM	1	2	1	1	0	0	0	0	0	0	1	1	7	0	0	0	0	0
VOLUMES	4	48	11	9	23	2	1	3	1	6	4	5	117	0	0	0	0	0
APPROACH %	6%	76%	17%	26%	68%	6%	20%	60%	20%	40%	27%	33%						
APP/DEPART	63	/	54	34	/	30	5	/	23	15	/	10	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	2	31	7	3	14	2	1	3	1	4	2	0	70					
APPROACH %	5%	78%	18%	16%	74%	11%	20%	60%	20%	67%	33%	0%						
PEAK HR FACTOR		0.833			0.475			0.417			0.500		0.761					
APP/DEPART	40	/	32	19	/	19	5	/	13	6	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

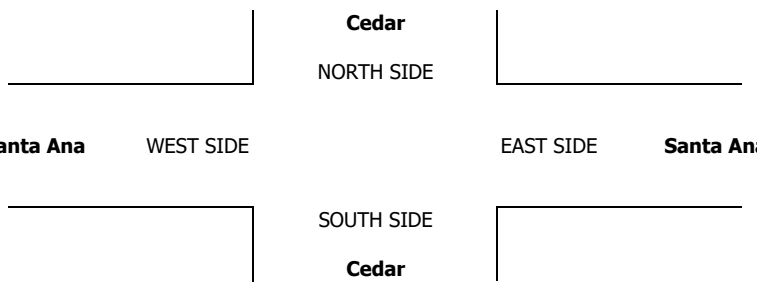
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

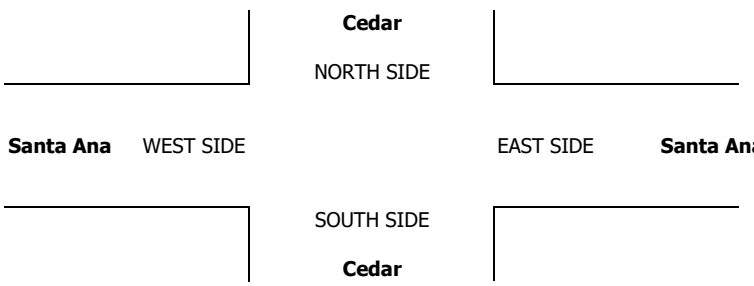
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	22
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	2	0	0	0	1	0	0	1	0	0	4	0	0	0	0	0
7:30 AM	0	1	0	0	1	1	1	1	0	0	0	0	5	0	0	0	0	0
7:45 AM	0	2	0	0	2	0	0	0	0	0	1	1	6	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	1	1	0	0	0	0	3	0	0	0	0	0
8:15 AM	0	0	0	0	1	1	0	0	0	0	1	0	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	3	3	0	5	2	3	2	0	1	2	1	22	0	0	0	0	0
APPROACH %	0%	50%	50%	0%	71%	29%	60%	40%	0%	25%	50%	25%						
APP/DEPART	6	/	7	7	/	6	5	/	5	4	/	4	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	3	3	0	3	1	3	2	0	1	1	1	18					
APPROACH %	0%	50%	50%	0%	75%	25%	60%	40%	0%	33%	33%	33%						
PEAK HR FACTOR		0.750			0.500			0.625			0.375		0.750					
APP/DEPART	6	/	7	4	/	4	5	/	5	3	/	2	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
4:15 PM	0	1	0	1	0	0	0	0	1	0	0	0	3	0	0	0	0	0
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	1	2	1	0	0	0	2	1	0	1	2	11	0	0	0	0	0
APPROACH %	25%	25%	50%	100%	0%	0%	0%	67%	33%	0%	33%	67%						
APP/DEPART	4	/	3	1	/	1	3	/	5	3	/	2	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	1	1	1	1	0	0	0	1	1	0	0	1	7					
APPROACH %	33%	33%	33%	100%	0%	0%	0%	50%	50%	0%	0%	100%						
PEAK HR FACTOR		0.750			0.250			0.500			0.250		0.583					
APP/DEPART	3	/	2	1	/	1	2	/	3	1	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cedar
EAST & WEST: Jurupa

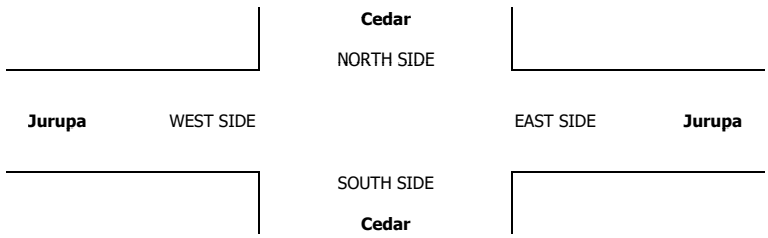
PROJECT #: SC1321
LOCATION #: 23
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

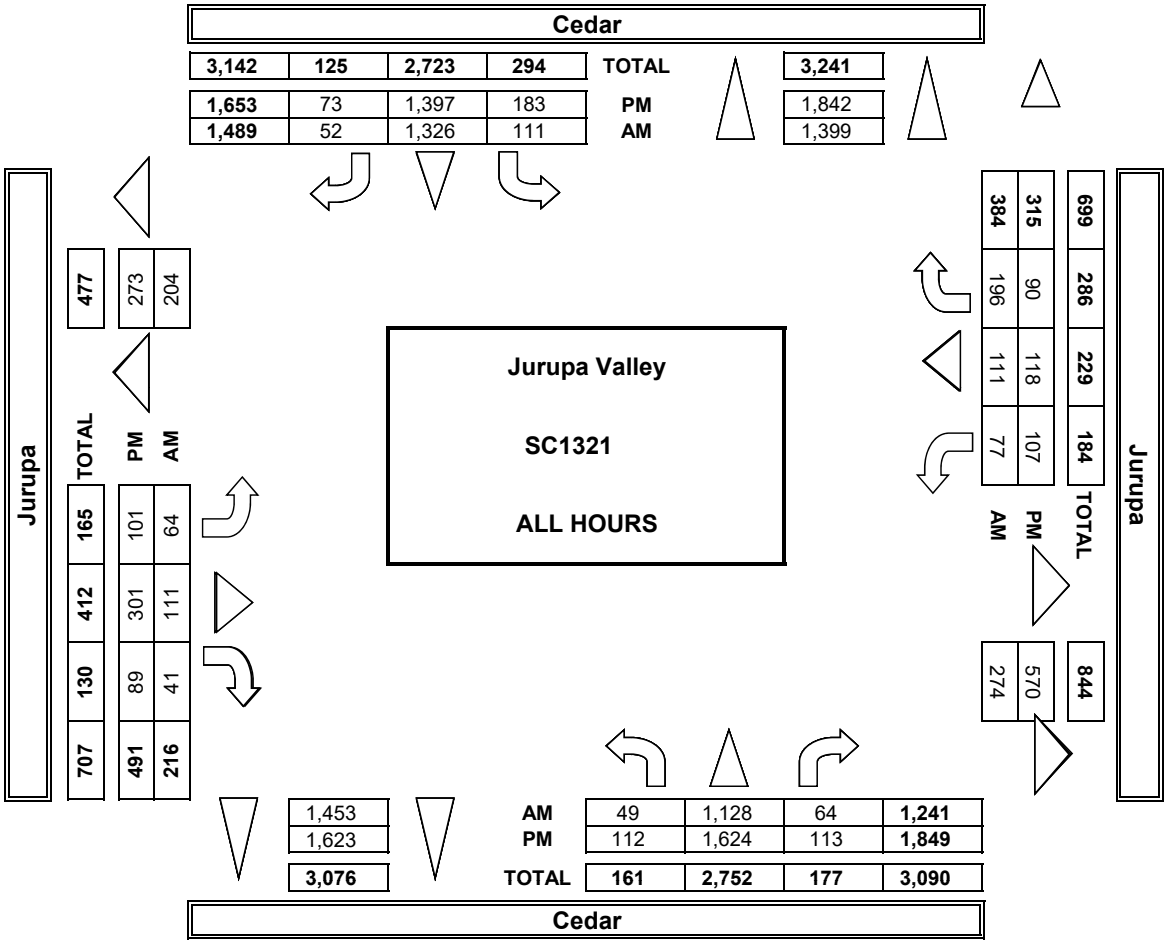
N ▲ S ▼ W ◄ E ►

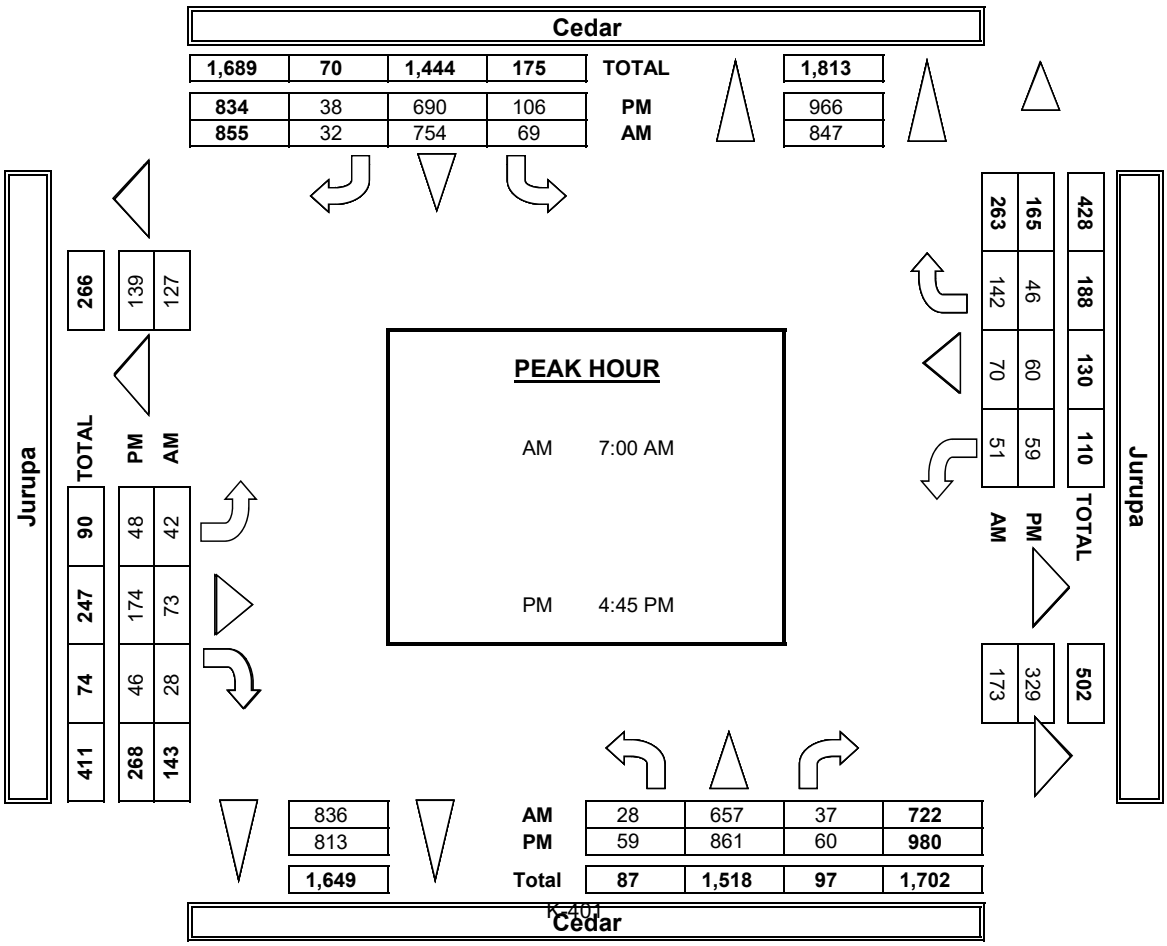
		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	9	159	6	16	171	8	13	19	5	7	27	36	476	0	2	0	0	2
	7:15 AM	8	169	11	15	192	7	12	30	12	15	13	42	526	1	0	0	0	1
	7:30 AM	5	156	16	21	223	9	12	19	7	22	14	54	558	0	0	0	0	0
	7:45 AM	6	173	4	17	168	8	5	5	4	7	16	10	423	2	4	0	0	6
	8:00 AM	5	129	8	11	155	6	7	6	5	7	14	15	368	0	1	0	0	1
	8:15 AM	7	119	6	12	160	5	4	17	5	11	6	14	366	3	2	0	0	5
	8:30 AM	5	124	8	5	143	5	4	9	2	3	12	13	333	1	1	0	0	2
	8:45 AM	4	99	5	14	114	4	7	6	1	5	9	12	280	2	2	1	0	5
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	49	1,128	64	111	1,326	52	64	111	41	77	111	196	3,330	9	12	1	0	22
	APPROACH %	4%	91%	5%	7%	89%	3%	30%	51%	19%	20%	29%	51%						
	APP/DEPART	1,241	/	1,399	1,489	/	1,453	216	/	274	384	/	204	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	28	657	37	69	754	32	42	73	28	51	70	142	1,983					
	APPROACH %	4%	91%	5%	8%	88%	4%	29%	51%	20%	19%	27%	54%						
	PEAK HR FACTOR		0.960			0.845			0.662			0.731		0.888					
	APP/DEPART	722	/	847	855	/	836	143	/	173	263	/	127	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	10	220	14	16	205	7	18	32	6	11	13	13	565	2	5	0	0	7
	4:15 PM	11	200	17	18	176	6	17	35	14	13	15	8	530	3	4	0	0	7
	4:30 PM	18	179	14	25	171	11	12	29	9	13	9	12	502	5	2	0	0	7
	4:45 PM	12	207	12	22	183	8	14	42	15	17	14	16	562	3	0	0	0	3
	5:00 PM	16	223	22	29	165	6	13	49	10	17	13	12	575	8	6	0	0	14
	5:15 PM	18	227	9	30	170	12	12	41	12	13	13	8	565	6	3	0	0	9
	5:30 PM	13	204	17	25	172	12	9	42	9	12	20	10	545	1	2	0	0	3
	5:45 PM	14	164	8	18	155	11	6	31	14	11	21	11	464	2	5	0	0	7
	VOLUMES	112	1,624	113	183	1,397	73	101	301	89	107	118	90	4,308	30	27	0	0	57
	APPROACH %	6%	88%	6%	11%	85%	4%	21%	61%	18%	34%	37%	29%						
	APP/DEPART	1,849	/	1,842	1,653	/	1,623	491	/	570	315	/	273	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	59	861	60	106	690	38	48	174	46	59	60	46	2,247					
	APPROACH %	6%	88%	6%	13%	83%	5%	18%	65%	17%	36%	36%	28%						
	PEAK HR FACTOR		0.939			0.979			0.931			0.878		0.977					
	APP/DEPART	980	/	966	834	/	813	268	/	329	165	/	139	0					



		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM			
										MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	9	182	7	16	187	9	17	20	5	7	29	37	523
	7:15 AM	11	191	11	17	235	7	12	31	13	18	15	43	603
	7:30 AM	5	185	16	22	247	9	12	19	7	23	15	56	614
	7:45 AM	9	192	4	17	186	9	5	5	4	8	16	12	466
	8:00 AM	5	148	10	12	173	6	8	6	5	8	15	15	409
	8:15 AM	7	138	6	14	187	5	4	18	6	14	7	14	418
	8:30 AM	7	142	8	5	156	7	4	9	2	4	13	13	370
	8:45 AM	5	116	6	15	142	4	7	7	1	6	13	14	332
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	58	1,293	67	117	1,512	56	68	114	43	85	121	202	3,734
	APPROACH %	4%	91%	5%	7%	90%	3%	30%	51%	19%	21%	30%	50%	
	APP/DEPART	1,418	/	1,563	1,685	/	1,639	224	/	297	408	/	235	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	34	750	38	72	855	34	46	75	29	55	74	147	2,205
	APPROACH %	4%	91%	5%	7%	89%	4%	31%	50%	19%	20%	27%	53%	
	PEAK HR FACTOR		0.964			0.865			0.675			0.743		0.899
	APP/DEPART	821	/	942	961	/	938	149	/	184	275	/	142	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	11	248	16	18	233	10	20	34	6	11	13	15	634
	4:15 PM	11	225	20	19	194	6	18	38	16	13	16	8	582
	4:30 PM	18	205	16	25	188	13	17	31	10	15	9	15	559
	4:45 PM	13	227	13	24	196	9	16	44	16	21	14	18	607
	5:00 PM	16	251	24	29	178	6	17	53	11	20	14	14	632
	5:15 PM	18	237	9	30	181	13	14	44	13	14	14	9	593
	5:30 PM	14	210	18	26	183	12	9	45	9	13	20	10	567
	5:45 PM	14	170	9	20	158	11	7	32	14	11	21	11	475
	VOLUMES	114	1,771	124	190	1,508	79	117	318	94	117	120	100	4,648
	APPROACH %	6%	88%	6%	11%	85%	4%	22%	60%	18%	35%	36%	30%	
	APP/DEPART	2,008	/	1,987	1,776	/	1,718	529	/	631	336	/	312	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	60	924	64	109	737	40	56	185	48	67	61	51	2,399
	APPROACH %	6%	88%	6%	12%	83%	4%	19%	64%	16%	38%	34%	28%	
	PEAK HR FACTOR		0.900			0.972			0.900			0.850		0.950
	APP/DEPART	1,048	/	1,031	885	/	851	288	/	357	179	/	161	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	9	139	5	16	158	7	10	18	5	7	24	35	433	0	2	0	0	2
7:15 AM	6	151	11	14	165	7	12	29	11	13	11	41	471	1	0	0	0	1
7:30 AM	5	139	16	20	203	9	12	19	7	21	13	52	516	0	0	0	0	0
7:45 AM	3	156	4	17	156	7	5	5	4	6	16	8	387	2	4	0	0	6
8:00 AM	5	113	6	10	142	6	6	6	5	6	13	15	333	0	1	0	0	1
8:15 AM	7	101	6	10	142	5	4	16	4	8	5	14	322	3	2	0	0	5
8:30 AM	4	111	8	5	131	4	4	9	2	2	11	13	304	1	1	0	0	2
8:45 AM	3	85	4	13	94	4	7	5	1	4	6	9	235	2	2	1	0	5
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	42	995	60	105	1,191	49	60	107	39	67	99	187	3,001	9	12	1	0	22
APPROACH %	4%	91%	5%	8%	89%	4%	29%	52%	19%	19%	28%	53%						
APP/DEPART	1,097	/	1,253	1,345	/	1,306	206	/	260	353	/	182	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	20	585	36	61	682	30	39	71	27	47	64	136	1,807					
APPROACH %	3%	91%	6%	8%	88%	4%	28%	52%	20%	19%	26%	55%						
PEAK HR FACTOR		0.958			0.839			0.659			0.718		0.875					
APP/DEPART	644	/	766	779	/	759	137	/	168	247	/	114	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	9	197	13	15	182	4	17	30	6	11	13	12	509	2	4	0	0	6
4:15 PM	11	183	15	17	158	6	16	32	12	13	14	8	485	3	4	0	0	7
4:30 PM	18	157	12	25	157	9	9	27	8	11	9	10	452	5	2	0	0	7
4:45 PM	11	192	11	20	170	7	13	39	14	14	14	15	520	2	0	0	0	2
5:00 PM	16	202	21	29	153	6	11	46	9	15	12	11	531	8	6	0	0	14
5:15 PM	18	218	9	30	162	11	11	37	11	12	12	7	538	6	3	0	0	9
5:30 PM	12	195	16	23	162	12	9	36	9	11	20	10	515	1	2	0	0	3
5:45 PM	14	158	7	16	151	11	5	30	14	11	21	11	449	2	4	0	0	6
VOLUMES	109	1,502	104	175	1,295	66	91	277	83	98	115	84	3,999	29	25	0	0	54
APPROACH %	6%	88%	6%	11%	84%	4%	20%	61%	18%	33%	39%	28%						
APP/DEPART	1,715	/	1,702	1,536	/	1,505	451	/	531	297	/	261	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	40	807	57	91	647	36	44	158	43	52	58	43	2,104					
APPROACH %	4%	88%	6%	12%	82%	5%	18%	64%	18%	34%	38%	28%						
PEAK HR FACTOR		0.940			0.967			0.928			0.890		0.978					
APP/DEPART	921	/	905	785	/	759	245	/	306	153	/	134	0					

Cedar

NORTH SIDE

Jurupa WEST SIDE EAST SIDE **Jurupa**

SOUTH SIDE

Cedar

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

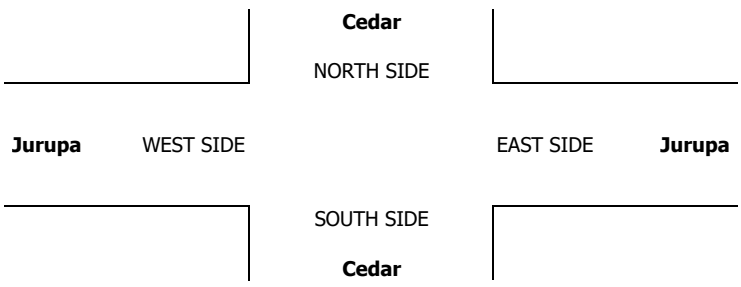
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	10	1	0	6	0	1	0	0	0	3	1	22	0	0	0	0	0
7:15 AM	0	6	0	0	4	0	0	1	1	1	0	0	13	0	0	0	0	0
7:30 AM	0	3	0	1	6	0	0	0	0	1	1	1	13	0	0	0	0	0
7:45 AM	2	8	0	0	2	0	0	0	0	1	0	1	14	0	0	0	0	0
8:00 AM	0	7	0	0	3	0	1	0	0	1	0	0	12	0	0	0	0	0
8:15 AM	0	10	0	1	4	0	0	1	0	1	1	0	18	0	0	0	0	0
8:30 AM	0	4	0	0	4	0	0	0	0	1	0	0	9	0	0	0	0	0
8:45 AM	1	4	1	1	3	0	0	1	0	1	1	3	16	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	3	52	2	3	32	0	2	3	1	7	6	6	117	0	0	0	0	0
APPROACH %	5%	91%	4%	9%	91%	0%	33%	50%	17%	37%	32%	32%						
APP/DEPART	57	/	60	35	/	40	6	/	8	19	/	9	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	2	27	1	1	18	0	1	1	1	3	4	3	62					
APPROACH %	7%	90%	3%	5%	95%	0%	33%	33%	33%	30%	40%	30%						
PEAK HR FACTOR		0.682			0.679			0.375			0.625		0.705					
APP/DEPART	30	/	31	19	/	22	3	/	3	10	/	6	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	10	0	0	5	1	0	0	0	0	0	0	16	0	0	0	0	0
4:15 PM	0	5	0	1	6	0	1	1	0	0	1	0	15	0	0	0	0	0
4:30 PM	0	11	1	0	5	1	0	1	0	1	0	0	20	0	0	0	0	0
4:45 PM	1	5	0	1	5	1	0	3	1	1	0	0	18	1	0	0	0	1
5:00 PM	0	6	0	0	4	0	0	1	1	0	1	0	13	0	0	0	0	0
5:15 PM	0	5	0	0	3	0	0	3	1	0	1	1	14	0	0	0	0	0
5:30 PM	1	8	1	2	5	0	0	6	0	1	0	0	24	0	0	0	0	0
5:45 PM	0	3	1	1	3	0	1	1	0	0	0	0	10	0	0	0	0	0
VOLUMES	2	53	3	5	36	3	2	16	3	3	3	1	130	1	0	0	0	1
APPROACH %	3%	91%	5%	11%	82%	7%	10%	76%	14%	43%	43%	14%						
APP/DEPART	58	/	56	44	/	43	21	/	24	7	/	7	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	1	24	1	3	17	1	0	13	3	2	2	1	69					
APPROACH %	4%	89%	4%	14%	81%	5%	0%	81%	19%	40%	40%	20%						
PEAK HR FACTOR		0.563			0.750			0.667			0.625		0.719					
APP/DEPART	27	/	25	21	/	23	16	/	17	5	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

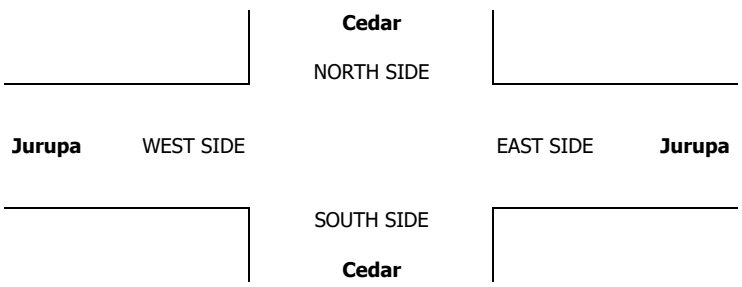
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	1	0	0	1	1	1	1	0	0	0	0	5	0	0	0	0	0
7:15 AM	0	3	0	0	4	0	0	0	0	0	1	0	8	0	0	0	0	0
7:30 AM	0	1	0	0	5	0	0	0	0	0	0	0	6	0	0	0	0	0
7:45 AM	0	3	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
8:00 AM	0	2	1	0	4	0	0	0	0	0	0	0	7	0	0	0	0	0
8:15 AM	0	2	0	1	3	0	0	0	1	1	0	0	8	0	0	0	0	0
8:30 AM	0	2	0	0	5	0	0	0	0	0	0	0	7	0	0	0	0	0
8:45 AM	0	5	0	0	8	0	0	0	0	0	0	0	13	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	19	1	1	32	1	1	1	1	1	1	0	59	0	0	0	0	0
APPROACH %	0%	95%	5%	3%	94%	3%	33%	33%	33%	50%	50%	0%						
APP/DEPART	20	/	20	34	/	34	3	/	3	2	/	2	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	11	1	1	20	0	0	0	1	1	0	0	35					
APPROACH %	0%	92%	8%	5%	95%	0%	0%	0%	100%	100%	0%	0%						
PEAK HR FACTOR		0.600			0.656			0.250			0.250		0.673					
APP/DEPART	12	/	11	21	/	22	1	/	2	1	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	2	0	0	11	2	0	2	0	0	0	0	18	0	0	0	0	0
4:15 PM	0	1	0	0	8	0	0	1	0	0	0	0	10	0	0	0	0	0
4:30 PM	0	2	1	0	4	1	1	1	1	1	0	0	12	0	0	0	0	0
4:45 PM	0	3	1	1	6	0	0	0	0	1	0	0	12	0	0	0	0	0
5:00 PM	0	4	0	0	5	0	0	1	0	1	0	0	11	0	0	0	0	0
5:15 PM	0	1	0	0	1	1	0	1	0	1	0	0	5	0	0	0	0	0
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	2	0	1	1	0	0	0	0	0	0	0	4	0	1	0	0	1
VOLUMES	1	15	2	2	38	4	1	6	1	4	0	0	74	0	1	0	0	1
APPROACH %	6%	83%	11%	5%	86%	9%	13%	75%	13%	100%	0%	0%						
APP/DEPART	18	/	17	44	/	43	8	/	9	4	/	5	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	1	8	2	1	29	3	1	4	1	2	0	0	52					
APPROACH %	9%	73%	18%	3%	88%	9%	17%	67%	17%	100%	0%	0%						
PEAK HR FACTOR		0.688			0.635			0.500			0.500		0.722					
APP/DEPART	11	/	9	33	/	32	6	/	7	2	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

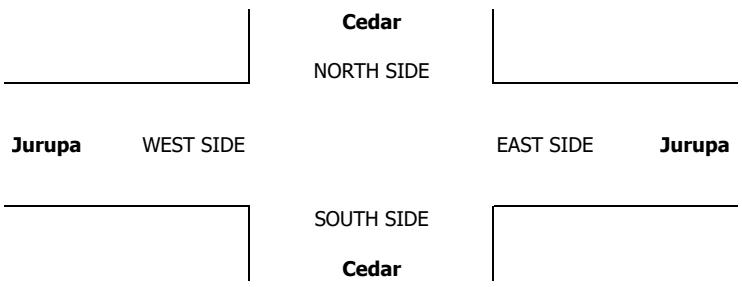
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	8	0	0	6	0	1	0	0	0	0	0	15	0	0	0	0	0
7:15 AM	1	7	0	1	18	0	0	0	0	1	0	0	28	0	0	0	0	0
7:30 AM	0	13	0	0	7	0	0	0	0	0	0	0	20	0	0	0	0	0
7:45 AM	1	6	0	0	7	0	0	0	0	0	0	0	14	0	0	0	0	0
8:00 AM	0	6	0	0	6	0	0	0	0	0	0	0	12	0	0	0	0	0
8:15 AM	0	6	0	0	11	0	0	0	0	0	0	0	17	0	0	0	0	0
8:30 AM	1	7	0	0	3	1	0	0	0	0	0	0	12	0	0	0	0	0
8:45 AM	0	5	0	0	9	0	0	0	0	0	1	0	15	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	3	58	0	1	67	1	1	0	0	1	1	0	133	0	0	0	0	0
APPROACH %	5%	95%	0%	1%	97%	1%	100%	0%	0%	50%	50%	0%						
APP/DEPART	61	/	59	69	/	68	1	/	1	2	/	5	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	2	34	0	1	38	0	1	0	0	1	0	0	77					
APPROACH %	6%	94%	0%	3%	97%	0%	100%	0%	0%	100%	0%	0%						
PEAK HR FACTOR		0.692			0.513			0.250			0.250		0.688					
APP/DEPART	36	/	35	39	/	39	1	/	1	1	/	2	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	10	1	1	7	0	1	0	0	0	0	1	21	0	1	0	0	1
4:15 PM	0	10	1	0	3	0	0	0	0	0	0	0	14	0	0	0	0	0
4:30 PM	0	9	0	0	5	0	2	0	0	0	0	1	17	0	0	0	0	0
4:45 PM	0	7	0	0	2	0	1	0	0	1	0	1	12	0	0	0	0	0
5:00 PM	0	10	1	0	3	0	2	1	0	1	0	1	19	0	0	0	0	0
5:15 PM	0	3	0	0	4	0	1	0	0	0	0	0	8	0	0	0	0	0
5:30 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
VOLUMES	0	51	3	1	27	0	7	1	0	2	0	4	96	0	1	0	0	1
APPROACH %	0%	94%	6%	4%	96%	0%	88%	13%	0%	33%	0%	67%						
APP/DEPART	54	/	63	28	/	29	8	/	4	6	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	36	2	0	17	0	4	0	0	1	0	3	64					
APPROACH %	0%	95%	5%	0%	94%	0%	100%	0%	0%	25%	0%	75%						
PEAK HR FACTOR		0.864			0.563			0.500			0.500		0.762					
APP/DEPART	38	/	44	18	/	18	4	/	2	4	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

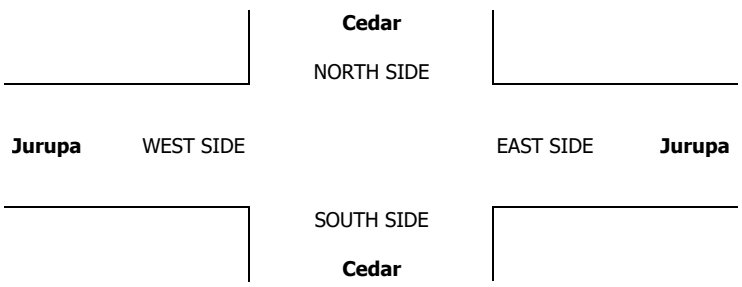
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

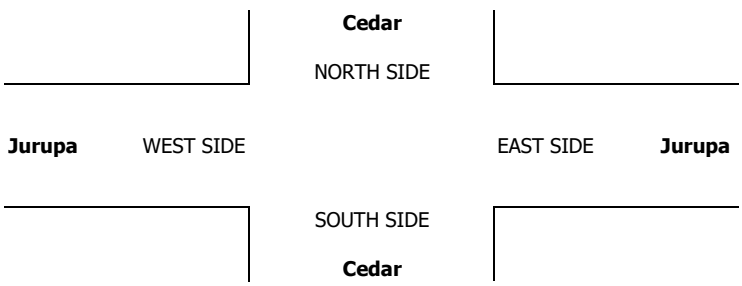
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	23
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	2	0	0	1	0	0	0	0	0	1	1	6	0	0	0	0	0
	7:30 AM	0	0	0	0	2	0	0	0	0	0	0	1	3	0	0	0	0	0
	7:45 AM	0	0	0	0	1	1	0	0	0	0	0	1	3	0	0	0	0	0
	8:00 AM	0	1	1	1	0	0	0	0	0	0	1	0	4	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	3	1	1	4	1	0	0	0	1	4	3	19	0	0	0	0	0
	APPROACH %	20%	60%	20%	17%	67%	17%	0%	0%	0%	13%	50%	38%						
	APP/DEPART	5	/	6	6	/	5	0	/	2	8	/	6	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	1	3	1	1	4	1	0	0	0	0	2	3	16					
	APPROACH %	20%	60%	20%	17%	67%	17%	0%	0%	0%	0%	40%	60%						
	PEAK HR FACTOR		0.417			0.750			0.000			0.625		0.667					
	APP/DEPART	5	/	6	6	/	4	0	/	2	5	/	4	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	1	1	0	1	0	0	1	2	0	0	0	6	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	3	1	0	1	0	0	1	2	0	0	1	9	0	0	0	0	0
	APPROACH %	0%	75%	25%	0%	100%	0%	0%	33%	67%	0%	0%	100%						
	APP/DEPART	4	/	4	1	/	3	3	/	2	1	/	0	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	0	2	1	0	1	0	0	1	2	0	0	1	8					
	APPROACH %	0%	67%	33%	0%	100%	0%	0%	33%	67%	0%	0%	100%						
	PEAK HR FACTOR		0.375			0.250			0.250			0.250		0.333					
	APP/DEPART	3	/	3	1	/	3	3	/	2	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cedar
EAST & WEST: El Rivino

PROJECT #: SC1321
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

N
W
E
S



		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	1	128	8	27	147	0	1	1	0	13	0	11	337	0	0	0	0	0
	6:45 AM	0	122	14	22	163	2	3	1	5	8	1	13	354	0	0	0	0	0
	7:00 AM	1	126	10	14	175	1	2	1	1	10	0	9	350	0	0	0	0	0
	7:15 AM	1	109	10	10	197	1	4	4	3	6	0	9	354	0	0	0	0	0
	7:30 AM	2	125	12	20	265	1	6	1	4	17	2	9	464	1	0	0	0	1
	7:45 AM	2	139	13	20	184	2	6	1	7	14	0	23	411	0	0	0	0	0
	8:00 AM	3	112	9	16	175	3	3	2	2	15	1	10	351	0	0	0	0	0
	8:15 AM	1	102	10	17	150	3	1	0	3	5	0	13	305	0	0	0	0	0
	8:30 AM	0	92	7	13	150	2	3	3	1	7	0	11	289	0	0	0	0	0
	8:45 AM	0	81	13	16	113	1	2	2	2	27	0	7	264	0	0	0	0	0
	9:00 AM	1	105	3	7	114	0	0	0	1	25	1	6	263	0	0	0	0	0
	9:15 AM	2	100	9	10	127	2	3	0	1	10	1	6	271	0	0	0	0	0
	VOLUMES	14	1,341	118	192	1,960	18	34	16	30	157	6	127	4,013	1	0	0	0	1
	APPROACH %	1%	91%	8%	9%	90%	1%	43%	20%	38%	54%	2%	44%						
	APP/DEPART	1,473	/	1,502	2,170	/	2,148	80	/	326	290	/	37	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	8	485	44	66	821	7	19	8	16	52	3	51	1,580					
	APPROACH %	1%	90%	8%	7%	92%	1%	44%	19%	37%	49%	3%	48%						
	PEAK HR FACTOR		0.872			0.781			0.768			0.716		0.851					
	APP/DEPART	537	/	555	894	/	890	43	/	118	106	/	17	0					
PM	03:30 PM	1	235	15	51	181	3	7	1	4	25	2	21	546	0	0	0	0	0
	3:45 PM	4	222	17	56	185	4	7	2	7	23	2	35	564	0	0	0	0	0
	4:00 PM	6	265	14	51	188	2	4	3	2	18	4	22	579	0	0	0	0	0
	4:15 PM	1	260	17	44	206	6	4	1	3	15	2	25	584	0	0	0	0	0
	4:30 PM	4	229	22	52	230	3	4	2	4	11	2	47	610	0	0	0	0	0
	4:45 PM	4	247	14	69	217	3	5	1	2	9	2	28	601	0	0	0	0	0
	5:00 PM	2	249	19	55	191	5	3	0	5	10	4	26	569	0	0	0	0	0
	5:15 PM	2	257	20	55	221	3	7	4	3	20	2	27	621	0	0	0	0	0
	5:30 PM	4	175	6	41	174	5	5	3	4	16	3	38	474	0	0	0	0	0
	5:45 PM	2	149	9	48	207	4	1	3	2	22	5	34	486	0	0	0	0	0
	6:00 PM	4	180	4	63	127	1	1	5	3	8	3	25	424	0	0	0	0	0
	6:15 PM	5	162	7	50	132	6	3	1	2	8	1	28	405	0	0	0	0	0
	VOLUMES	39	2,630	164	635	2,259	45	51	26	41	185	32	356	6,463	0	0	0	0	0
	APPROACH %	1%	93%	6%	22%	77%	2%	43%	22%	35%	32%	6%	62%						
	APP/DEPART	2,833	/	3,037	2,939	/	2,485	118	/	825	573	/	116	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	12	982	75	231	859	14	19	7	14	50	10	128	2,401					
	APPROACH %	1%	92%	7%	21%	78%	1%	48%	18%	35%	27%	5%	68%						
	PEAK HR FACTOR		0.958			0.955			0.714			0.783		0.967					
	APP/DEPART	1,069	/	1,129	1,104	/	923	40	/	313	188	/	36	0					

Cedar

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

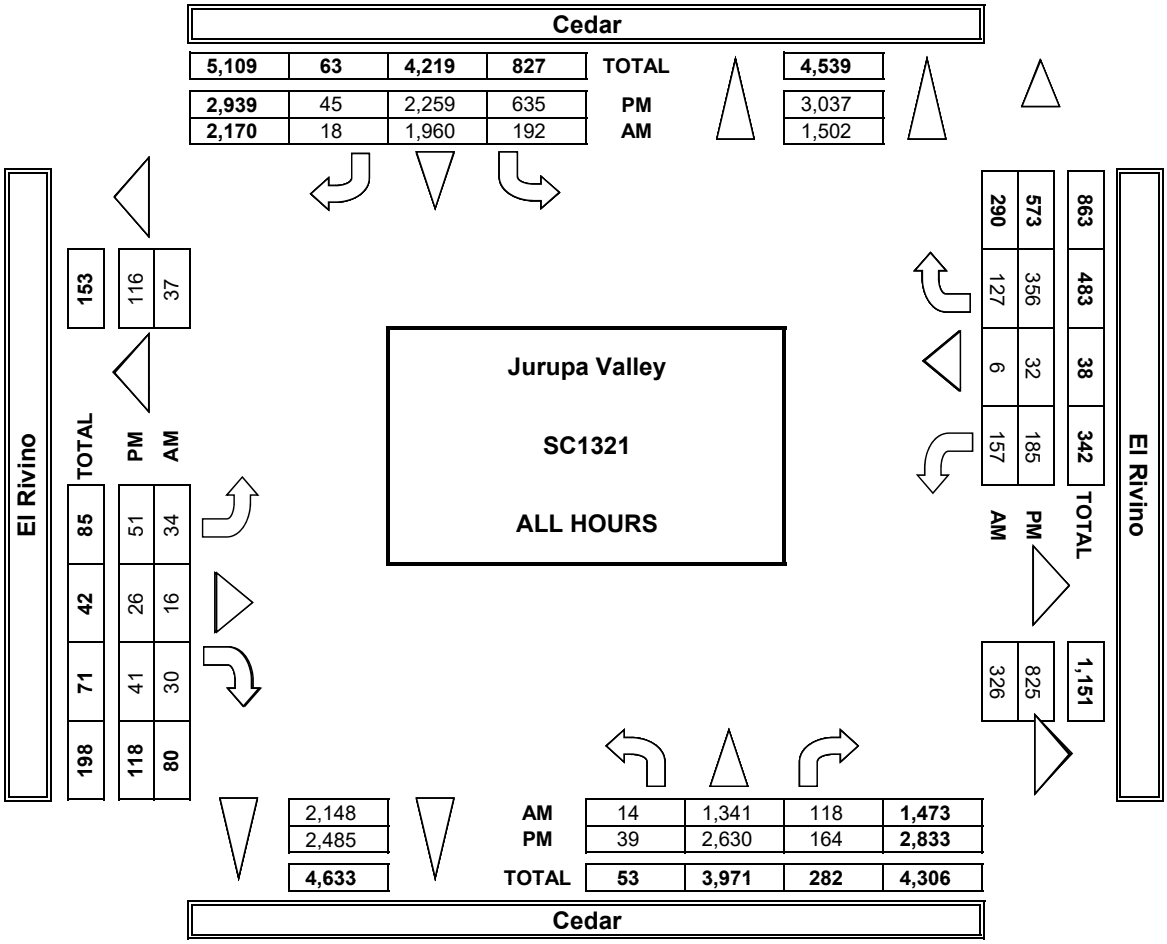
SOUTH SIDE

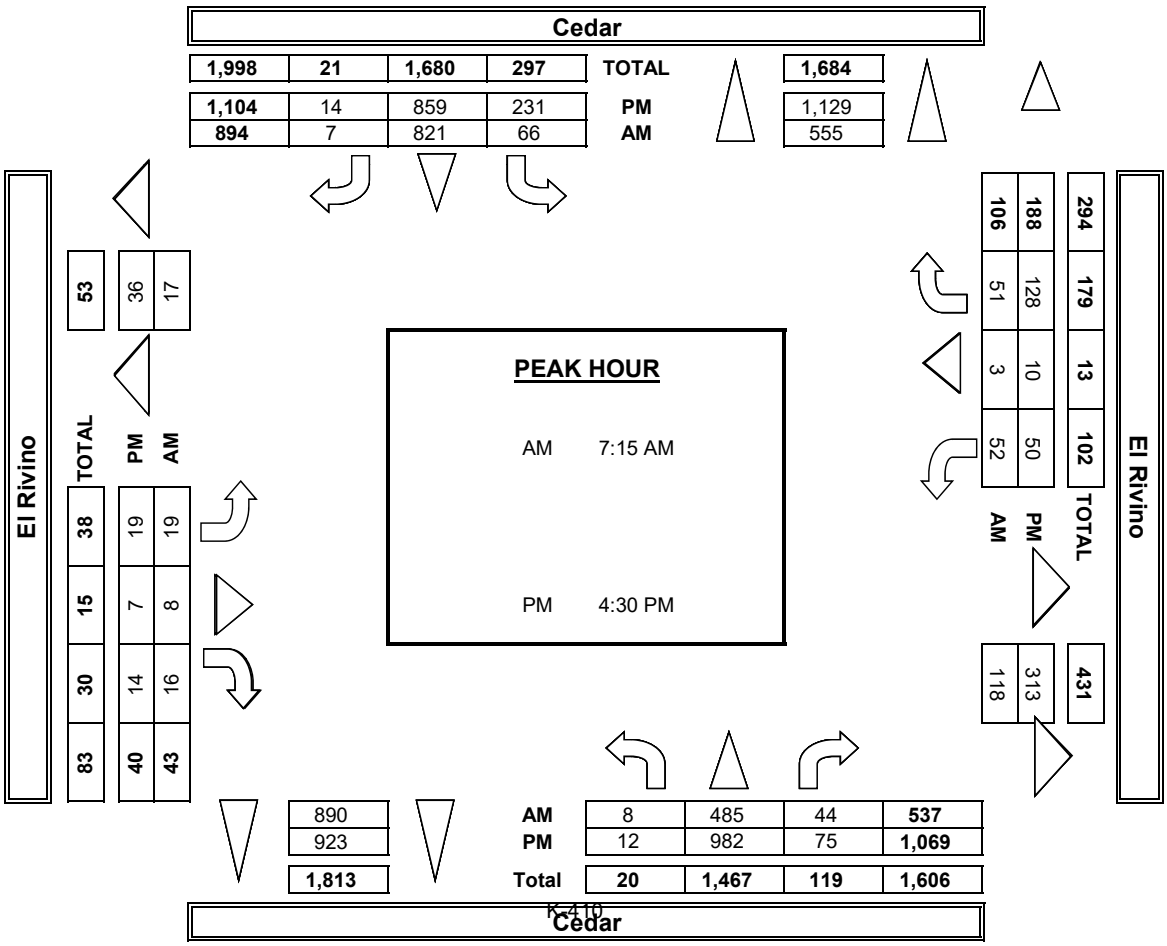
Cedar

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





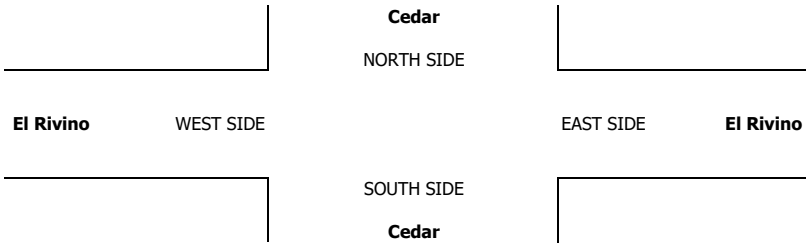
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL
AM	6:30 AM	1	152	8	27	158	0	1	2	0	18	0	13	379
	6:45 AM	0	135	15	23	187	2	3	2	7	11	1	20	405
	7:00 AM	2	144	12	17	196	1	2	1	2	13	0	12	399
	7:15 AM	1	126	11	11	230	1	4	4	3	10	0	14	415
	7:30 AM	2	152	14	22	282	1	7	1	5	22	2	10	518
	7:45 AM	2	156	16	20	206	2	7	1	8	15	0	26	458
	8:00 AM	3	129	10	18	186	3	3	2	2	17	2	11	385
	8:15 AM	1	118	10	21	177	3	1	0	4	5	0	15	354
	8:30 AM	0	111	7	13	170	2	3	3	1	15	0	17	342
	8:45 AM	0	98	15	18	136	1	2	2	2	38	0	11	322
	9:00 AM	1	133	5	9	134	0	0	0	1	31	3	10	327
	9:15 AM	2	121	15	12	154	3	3	0	1	17	2	7	336
	VOLUMES	15	1,573	137	209	2,213	19	35	17	36	210	9	165	4,636
	APPROACH %	1%	91%	8%	9%	91%	1%	40%	19%	41%	55%	2%	43%	
	APP/DEPART	1,725	/	1,773	2,440	/	2,458	88	/	363	384	/	43	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	7	577	52	69	913	5	19	7	18	60	2	62	1,789
	APPROACH %	1%	91%	8%	7%	93%	1%	43%	16%	41%	48%	2%	50%	
	PEAK HR FACTOR		0.916			0.811			0.710			0.750		0.864
	APP/DEPART	636	/	657	986	/	990	44	/	128	123	/	14	0
PM	03:00 PM	1	288	17	71	197	3	7	2	4	25	2	27	643
	3:15 PM	4	264	17	83	203	4	7	2	7	25	2	40	657
	3:30 PM	6	317	16	70	208	2	5	3	2	25	6	27	685
	3:45 PM	1	306	20	59	232	6	4	1	5	19	3	31	685
	4:00 PM	4	273	22	77	255	3	4	3	8	13	3	52	716
	4:15 PM	4	290	15	89	235	3	5	1	3	10	4	35	692
	4:30 PM	2	283	20	72	206	5	3	0	5	16	5	33	648
	4:45 PM	2	289	20	69	244	4	7	4	3	24	2	35	702
	5:00 PM	4	191	7	62	191	5	5	4	8	17	5	43	539
	5:15 PM	2	162	10	74	223	4	2	3	2	26	5	40	551
	5:30 PM	4	203	4	83	138	1	1	5	3	14	3	28	486
	5:45 PM	5	188	10	77	139	6	3	1	2	9	1	32	471
	VOLUMES	39	3,051	176	883	2,468	46	52	29	52	220	40	421	7,474
	APPROACH %	1%	93%	5%	26%	73%	1%	39%	22%	39%	32%	6%	62%	
	APP/DEPART	3,266	/	3,524	3,396	/	2,739	132	/	1,087	681	/	125	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	15	1,185	72	294	929	14	18	8	18	66	16	145	2,778
	APPROACH %	1%	93%	6%	24%	75%	1%	41%	19%	41%	29%	7%	64%	
	PEAK HR FACTOR		0.939			0.925			0.717			0.841		0.970
	APP/DEPART	1,272	/	1,347	1,237	/	1,012	43	/	374	226	/	45	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

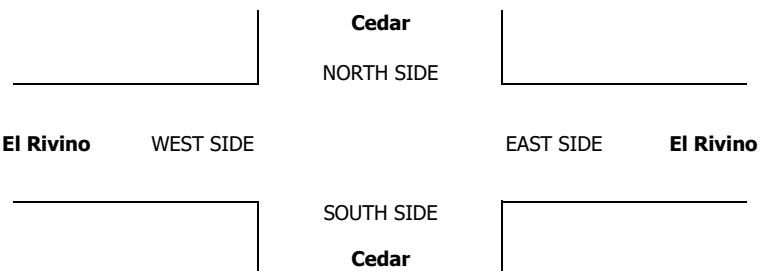
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	1	111	8	27	135	0	1	0	0	10	0	9	302	0	0	0	0	0
6:45 AM	0	110	12	21	143	2	3	0	4	4	1	7	307	0	0	0	0	0
7:00 AM	0	113	8	12	155	1	2	1	0	6	0	7	305	0	0	0	0	0
7:15 AM	1	95	8	9	172	1	4	4	3	2	0	4	303	0	0	0	0	0
7:30 AM	2	109	10	18	248	1	5	1	3	13	2	7	419	1	0	0	0	1
7:45 AM	2	124	10	20	168	2	5	1	6	12	0	21	371	0	0	0	0	0
8:00 AM	3	96	8	15	164	3	3	2	2	12	0	8	316	0	0	0	0	0
8:15 AM	1	88	10	15	127	3	1	0	2	5	0	11	263	0	0	0	0	0
8:30 AM	0	76	7	13	132	2	3	3	1	3	0	8	248	0	0	0	0	0
8:45 AM	0	65	10	14	96	1	2	2	2	9	0	5	206	0	0	0	0	0
9:00 AM	1	86	2	6	99	0	0	0	1	15	0	4	214	0	0	0	0	0
9:15 AM	2	84	4	9	106	1	3	0	1	4	0	4	218	0	0	0	0	0
VOLUMES	13	1,157	97	179	1,745	17	32	14	25	95	3	95	3,472	1	0	0	0	1
APPROACH %	1%	91%	8%	9%	90%	1%	45%	20%	35%	49%	2%	49%						
APP/DEPART	1,267	/	1,284	1,941	/	1,866	71	/	290	193	/	32	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	7	424	36	62	752	7	17	8	14	39	2	40	1,409					
APPROACH %	1%	91%	8%	8%	92%	1%	44%	21%	36%	48%	2%	49%						
PEAK HR FACTOR		0.860			0.769			0.813			0.614		0.841					
APP/DEPART	468	/	481	821	/	806	39	/	106	81	/	16	0					
PM																		
03:30 PM	1	193	13	36	168	3	7	0	4	25	2	17	469	0	0	0	0	0
3:45 PM	4	188	17	35	169	4	7	2	7	21	2	31	487	0	0	0	0	0
4:00 PM	6	222	12	34	171	2	3	3	2	13	3	18	489	0	0	0	0	0
4:15 PM	1	225	15	30	181	6	4	1	1	11	1	21	497	0	0	0	0	0
4:30 PM	4	182	22	33	208	3	4	0	2	8	1	44	511	0	0	0	0	0
4:45 PM	4	211	13	52	201	3	5	1	1	8	1	24	524	0	0	0	0	0
5:00 PM	2	222	17	42	178	5	3	0	5	3	2	21	500	0	0	0	0	0
5:15 PM	2	233	20	43	205	2	7	4	3	16	2	20	557	0	0	0	0	0
5:30 PM	4	156	5	24	163	5	5	2	2	15	0	35	416	0	0	0	0	0
5:45 PM	2	135	8	28	192	4	0	3	2	15	5	30	424	0	0	0	0	0
6:00 PM	4	159	4	44	119	1	1	5	3	3	3	23	369	0	0	0	0	0
6:15 PM	5	140	5	28	127	6	3	1	2	7	1	24	349	0	0	0	0	0
VOLUMES	39	2,266	151	429	2,082	44	49	22	34	145	23	308	5,592	0	0	0	0	0
APPROACH %	2%	92%	6%	17%	81%	2%	47%	21%	32%	30%	5%	65%						
APP/DEPART	2,456	/	2,623	2,555	/	2,261	105	/	602	476	/	106	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	12	848	72	170	792	13	19	5	11	35	6	109	2,092					
APPROACH %	1%	91%	8%	17%	81%	1%	54%	14%	31%	23%	4%	73%						
PEAK HR FACTOR		0.914			0.952			0.625			0.708		0.939					
APP/DEPART	932	/	976	975	/	838	35	/	247	150	/	31	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

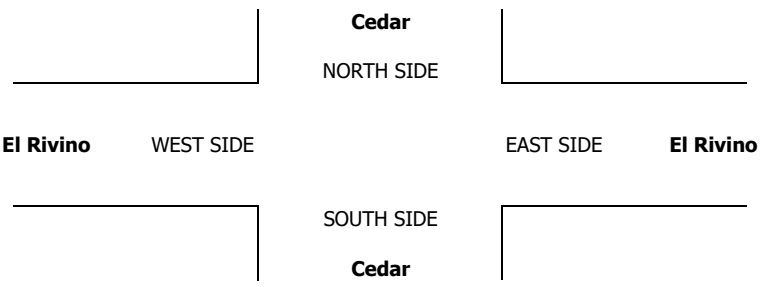
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Cedar)			SOUTHBOUND (Cedar)			EASTBOUND (El Rivino)			WESTBOUND (El Rivino)				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	6	0	0	8	0	0	1	0	1	0	0	16	0	0	0	0	0
	6:45 AM	0	5	2	0	7	0	0	1	0	2	0	2	19	0	0	0	0	0
	7:00 AM	0	5	1	1	11	0	0	0	0	3	0	1	22	0	0	0	0	0
	7:15 AM	0	6	2	1	8	0	0	0	0	2	0	2	21	0	0	0	0	0
	7:30 AM	0	3	1	1	7	0	1	0	0	2	0	2	17	0	0	0	0	0
	7:45 AM	0	7	2	0	3	0	1	0	0	2	0	0	15	0	0	0	0	0
	8:00 AM	0	8	1	0	7	0	0	0	0	2	1	2	21	0	0	0	0	0
	8:15 AM	0	6	0	0	9	0	0	0	1	0	0	1	17	0	0	0	0	0
	8:30 AM	0	8	0	0	8	0	0	0	0	0	0	0	16	0	0	0	0	0
	8:45 AM	0	6	2	1	3	0	0	0	0	15	0	0	27	0	0	0	0	0
	9:00 AM	0	4	0	0	4	0	0	0	0	9	0	0	17	0	0	0	0	0
	9:15 AM	0	6	2	0	8	1	0	0	0	3	1	2	23	0	0	0	0	0
	VOLUMES	0	70	13	4	83	1	2	2	1	41	2	12	231	0	0	0	0	0
	APPROACH %	0%	84%	16%	5%	94%	1%	40%	40%	20%	75%	4%	22%						
	APP/DEPART	83	/	84	88	/	125	5	/	19	55	/	3	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	0	24	4	1	23	1	0	0	0	27	1	2	83					
	APPROACH %	0%	86%	14%	4%	92%	4%	0%	0%	0%	90%	3%	7%						
	PEAK HR FACTOR		0.875			0.694			0.000			0.500		0.769					
	APP/DEPART	28	/	26	25	/	50	0	/	5	30	/	2	0					
PM	03:30 PM	0	14	0	5	3	0	0	0	0	0	0	0	22	0	0	0	0	0
	3:45 PM	0	12	0	7	4	0	0	0	0	1	0	1	25	0	0	0	0	0
	4:00 PM	0	18	1	8	5	0	1	0	0	1	0	0	34	0	0	0	0	0
	4:15 PM	0	11	1	5	8	0	0	0	0	2	1	0	28	0	0	0	0	0
	4:30 PM	0	24	0	7	6	0	0	2	0	3	0	1	43	0	0	0	0	0
	4:45 PM	0	13	0	6	5	0	0	0	1	1	0	0	26	0	0	0	0	0
	5:00 PM	0	9	2	5	3	0	0	0	0	4	2	1	26	0	0	0	0	0
	5:15 PM	0	7	0	4	2	1	0	0	0	2	0	2	18	0	0	0	0	0
	5:30 PM	0	12	1	7	3	0	0	1	0	1	3	0	28	0	0	0	0	0
	5:45 PM	0	9	0	6	7	0	1	0	0	7	0	0	30	0	0	0	0	0
	6:00 PM	0	11	0	8	2	0	0	0	0	3	0	0	24	0	0	0	0	0
	6:15 PM	0	10	1	9	1	0	0	0	0	0	0	3	24	0	0	0	0	0
	VOLUMES	0	150	6	77	49	1	2	3	1	25	6	8	328	0	0	0	0	0
	APPROACH %	0%	96%	4%	61%	39%	1%	33%	50%	17%	64%	15%	21%						
	APP/DEPART	156	/	160	127	/	75	6	/	86	39	/	7	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	66	2	26	24	0	1	2	1	7	1	1	131					
	APPROACH %	0%	97%	3%	52%	48%	0%	25%	50%	25%	78%	11%	11%						
	PEAK HR FACTOR		0.708			0.962			0.500			0.563		0.762					
	APP/DEPART	68	/	68	50	/	32	4	/	30	9	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

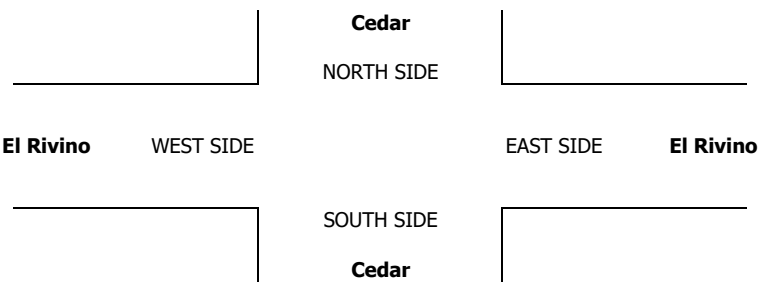
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	6:45 AM	0	4	0	1	4	0	0	0	0	2	0	1	12	0	0	0	0	0
	7:00 AM	0	1	1	0	3	0	0	0	0	1	0	0	6	0	0	0	0	0
	7:15 AM	0	2	0	0	5	0	0	0	0	1	0	1	9	0	0	0	0	0
	7:30 AM	0	1	1	0	7	0	0	0	0	0	0	0	9	0	0	0	0	0
	7:45 AM	0	3	0	0	6	0	0	0	1	0	0	1	11	0	0	0	0	0
	8:00 AM	0	3	0	0	1	0	0	0	0	1	0	0	5	0	0	0	0	0
	8:15 AM	0	3	0	0	6	0	0	0	0	0	0	0	9	0	0	0	0	0
	8:30 AM	0	1	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0
	8:45 AM	0	6	1	0	7	0	0	0	0	3	0	0	17	0	0	0	0	0
	9:00 AM	0	4	0	0	4	0	0	0	0	1	0	0	9	0	0	0	0	0
	9:15 AM	0	2	1	0	2	0	0	0	0	1	0	0	6	0	0	0	0	0
	VOLUMES	0	31	4	1	50	0	0	0	1	10	0	3	100	0	0	0	0	0
	APPROACH %	0%	89%	11%	2%	98%	0%	0%	0%	100%	77%	0%	23%						
	APP/DEPART	35	/	34	51	/	61	1	/	5	13	/	0	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	0	14	1	0	21	0	0	0	0	4	0	0	40					
	APPROACH %	0%	93%	7%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.536			0.750			0.000			0.333		0.588					
	APP/DEPART	15	/	14	21	/	25	0	/	1	4	/	0	0					
PM	03:30 PM	0	9	2	3	5	0	0	0	0	0	0	2	21	0	0	0	0	0
	3:45 PM	0	8	0	5	7	0	0	0	0	1	0	1	22	0	0	0	0	0
	4:00 PM	0	7	1	3	7	0	0	0	0	2	0	3	23	0	0	0	0	0
	4:15 PM	0	8	0	6	12	0	0	0	2	1	0	2	31	0	0	0	0	0
	4:30 PM	0	14	0	2	10	0	0	0	0	0	1	0	27	0	0	0	0	0
	4:45 PM	0	10	1	5	7	0	0	0	0	0	0	1	24	0	0	0	0	0
	5:00 PM	0	7	0	2	7	0	0	0	0	2	0	2	20	0	0	0	0	0
	5:15 PM	0	6	0	4	6	0	0	0	0	1	0	3	20	0	0	0	0	0
	5:30 PM	0	4	0	3	1	0	0	0	0	0	0	1	9	0	0	0	0	0
	5:45 PM	0	2	1	5	4	0	0	0	0	0	0	2	14	0	0	0	0	0
	6:00 PM	0	3	0	6	2	0	0	0	0	0	0	1	12	0	0	0	0	0
	6:15 PM	0	3	0	4	2	0	0	0	0	1	0	0	10	0	0	0	0	0
	VOLUMES	0	81	5	48	70	0	0	0	2	8	1	18	233	0	0	0	0	0
	APPROACH %	0%	94%	6%	41%	59%	0%	0%	0%	100%	30%	4%	67%						
	APP/DEPART	86	/	99	118	/	80	2	/	53	27	/	1	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	39	2	16	36	0	0	0	2	3	1	6	105					
	APPROACH %	0%	95%	5%	31%	69%	0%	0%	0%	100%	30%	10%	60%						
	PEAK HR FACTOR		0.732			0.722			0.250			0.500		0.847					
	APP/DEPART	41	/	45	52	/	41	2	/	18	10	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

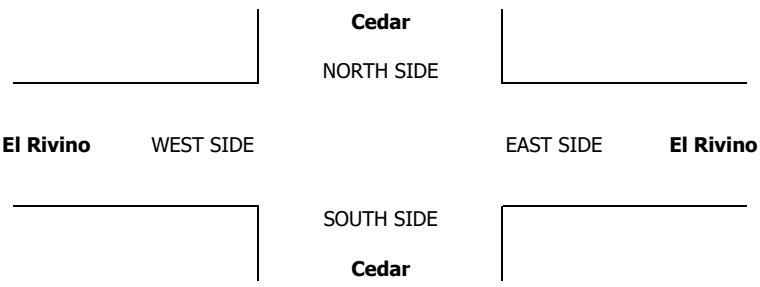
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	10	0	0	3	0	0	0	0	2	0	0	15	0	0	0	0	0
	6:45 AM	0	3	0	0	7	0	0	0	1	0	0	2	13	0	0	0	0	0
	7:00 AM	0	7	0	1	6	0	0	0	0	0	0	1	15	0	0	0	0	0
	7:15 AM	0	6	0	0	12	0	0	0	0	1	0	1	20	0	0	0	0	0
	7:30 AM	0	12	0	0	3	0	0	0	0	2	0	0	17	0	0	0	0	0
	7:45 AM	0	5	1	0	7	0	0	0	0	0	0	1	14	0	0	0	0	0
	8:00 AM	0	5	0	1	3	0	0	0	0	0	0	0	9	0	0	0	0	0
	8:15 AM	0	5	0	2	8	0	0	0	0	0	0	0	15	0	0	0	0	0
	8:30 AM	0	7	0	0	6	0	0	0	0	4	0	3	20	0	0	0	0	0
	8:45 AM	0	4	0	0	7	0	0	0	0	0	0	2	13	0	0	0	0	0
	9:00 AM	0	11	1	1	7	0	0	0	0	0	1	2	23	0	0	0	0	0
	9:15 AM	0	8	2	1	10	0	0	0	0	2	0	0	23	0	0	0	0	0
	VOLUMES	0	83	4	6	79	0	0	0	1	11	1	12	197	0	0	0	0	0
	APPROACH %	0%	95%	5%	7%	93%	0%	0%	0%	100%	46%	4%	50%						
	APP/DEPART	87	/	95	85	/	91	1	/	10	24	/	1	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	0	30	3	2	30	0	0	0	0	6	1	7	79					
	APPROACH %	0%	91%	9%	6%	94%	0%	0%	0%	0%	43%	7%	50%						
	PEAK HR FACTOR		0.688			0.727			0.000			0.500		0.859					
	APP/DEPART	33	/	37	32	/	36	0	/	5	14	/	1	0					
PM	03:30 PM	0	18	0	7	4	0	0	0	0	0	0	2	31	0	0	0	0	0
	3:45 PM	0	14	0	9	4	0	0	0	0	0	0	1	28	0	0	0	0	0
	4:00 PM	0	18	0	6	5	0	0	0	0	2	1	1	33	0	0	0	0	0
	4:15 PM	0	16	1	3	5	0	0	0	0	1	0	2	28	0	0	0	0	0
	4:30 PM	0	9	0	9	6	0	0	0	2	0	0	2	28	0	0	0	0	0
	4:45 PM	0	13	0	6	4	0	0	0	0	0	1	3	27	0	0	0	0	0
	5:00 PM	0	11	0	6	3	0	0	0	0	1	0	2	23	0	0	0	0	0
	5:15 PM	0	11	0	4	8	0	0	0	0	1	0	2	26	0	0	0	0	0
	5:30 PM	0	3	0	7	7	0	0	0	2	0	0	2	21	0	0	0	0	0
	5:45 PM	0	3	0	9	4	0	0	0	0	0	0	2	18	0	0	0	0	0
	6:00 PM	0	7	0	5	4	0	0	0	0	2	0	1	19	0	0	0	0	0
	6:15 PM	0	9	1	9	2	0	0	0	0	0	0	1	22	0	0	0	0	0
	VOLUMES	0	132	2	80	56	0	0	0	4	7	2	21	304	0	0	0	0	0
	APPROACH %	0%	99%	1%	59%	41%	0%	0%	0%	100%	23%	7%	70%						
	APP/DEPART	134	/	153	136	/	67	4	/	82	30	/	2	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	66	1	25	18	0	0	0	0	3	1	6	120					
	APPROACH %	0%	99%	1%	58%	42%	0%	0%	0%	0%	30%	10%	60%						
	PEAK HR FACTOR		0.931			0.827			0.000			0.625		0.909					
	APP/DEPART	67	/	72	43	/	21	0	/	26	10	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

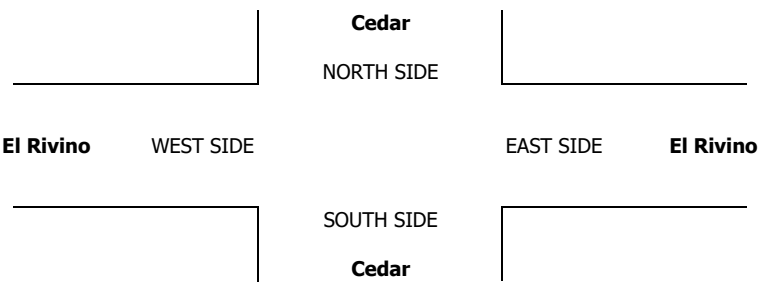
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.500			0.000			0.000		0.500					
	APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

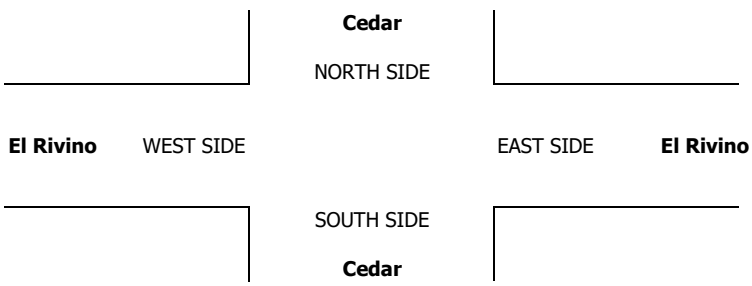
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cedar	LOCATION #:	10
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0
	6:45 AM	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	0	0
	7:00 AM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	7:30 AM	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	1	0	0	2	2	0	0	0	2	0	0	5	12	0	0	0	0	0
	APPROACH %	100%	0%	0%	50%	50%	0%	0%	0%	100%	0%	0%	100%						
	APP/DEPART	1	/	5	4	/	4	2	/	2	5	/	1	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	1	0	0	1	1	0	0	0	2	0	0	2	7					
	APPROACH %	100%	0%	0%	50%	50%	0%	0%	0%	100%	0%	0%	100%						
	PEAK HR FACTOR		0.250			0.500			0.500			0.250		0.875					
	APP/DEPART	1	/	2	2	/	3	2	/	1	2	/	1	0					
PM	03:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	1	0	0	0	1	0	0	0	1	4	0	0	0	0	0
	APPROACH %	0%	100%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%						
	APP/DEPART	1	/	2	1	/	0	1	/	2	1	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	1	0	0	0	0	0	1	0	0	0	1	3					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%						
	PEAK HR FACTOR		0.250			0.000			0.250			0.250		0.375					
	APP/DEPART	1	/	2	0	/	0	1	/	1	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: El Rivino

PROJECT #: SC1439
LOCATION #: 1
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	98	11	5	124	8	0	0	1	4	0	19	270	0	0	0	0	0
	12:15 PM	3	104	13	15	90	3	4	1	3	6	0	7	249	0	0	0	0	0
	12:30 PM	5	103	12	17	91	2	3	0	2	10	2	19	266	0	0	0	0	0
	12:45 PM	1	102	13	17	109	3	4	1	2	11	2	5	270	0	0	0	0	0
	1:00 PM	0	87	8	6	109	1	3	2	2	9	1	18	246	0	0	0	0	0
	1:15 PM	0	105	9	15	109	3	3	0	1	10	0	10	265	0	0	0	0	0
	1:30 PM	1	99	16	12	118	2	1	1	1	12	0	10	273	0	0	0	0	0
	1:45 PM	2	113	11	18	107	2	3	0	1	9	1	18	285	0	0	0	0	0
	VOLUMES	12	811	93	105	857	24	21	5	13	71	6	106	2,124	0	0	0	0	0
	APPROACH %	1%	89%	10%	11%	87%	2%	54%	13%	33%	39%	3%	58%						
	APP/DEPART	916	/	938	986	/	941	39	/	203	183	/	42	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	3	404	44	51	443	8	10	3	5	40	2	56	1,069					
	APPROACH %	1%	90%	10%	10%	88%	2%	56%	17%	28%	41%	2%	57%						
	PEAK HR FACTOR		0.895			0.951			0.643			0.875		0.938					
	APP/DEPART	451	/	470	502	/	488	18	/	98	98	/	13	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

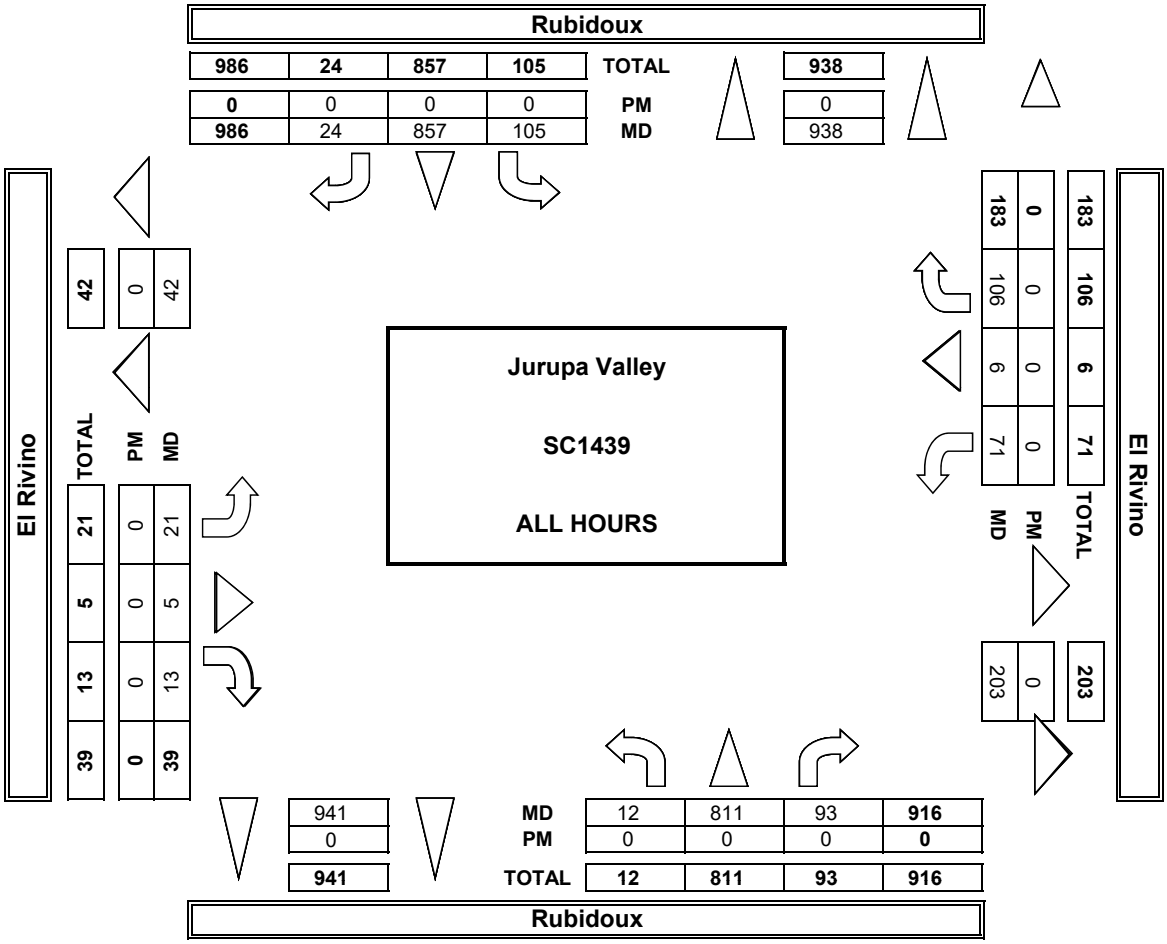
SOUTH SIDE

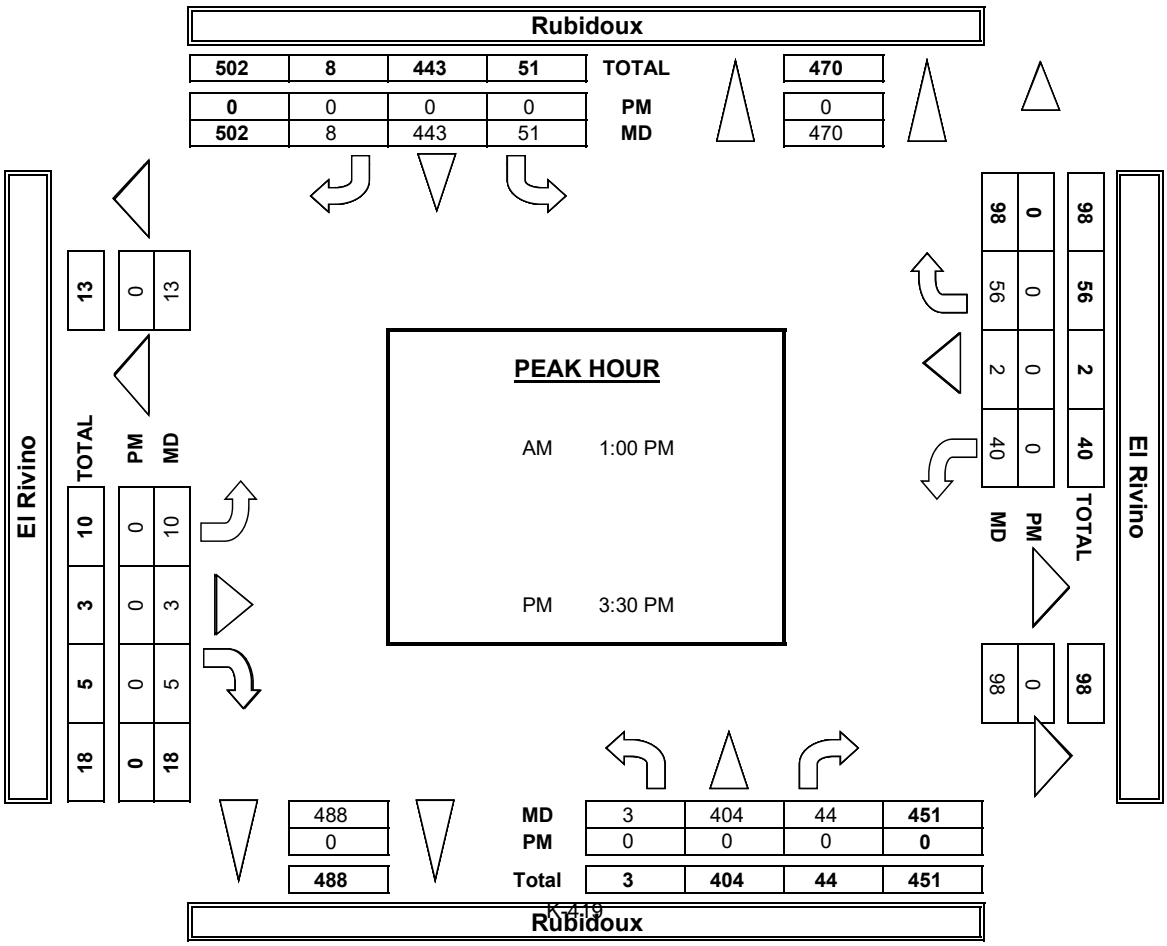
Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	115	16	8	154	8	0	0	2	6	0	22	330
	8:15 AM	6	134	22	16	105	3	6	1	3	12	0	9	316
	8:30 AM	5	129	18	18	107	2	3	0	3	17	3	20	322
	8:45 AM	1	127	20	18	140	3	4	1	2	25	4	8	351
	9:00 AM	0	106	14	6	137	1	3	2	2	17	2	20	309
	9:15 AM	0	120	13	16	124	3	3	0	1	15	0	11	304
	9:30 AM	1	115	26	13	139	4	1	1	2	18	0	12	330
	9:45 AM	4	130	18	22	116	2	3	0	2	22	1	20	338
	VOLUMES	16	974	145	115	1,020	26	23	5	16	131	10	119	2,598
	APPROACH %	1%	86%	13%	10%	88%	2%	53%	11%	36%	50%	4%	46%	
	APP/DEPART	1,135	/	1,116	1,161	/	1,166	44	/	265	259	/	52	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	12	504	76	59	506	16	13	2	9	60	7	58	1,319
	APPROACH %	2%	85%	13%	10%	87%	3%	54%	8%	38%	48%	5%	47%	
	PEAK HR FACTOR		0.915			0.855			0.600			0.792		0.939
	APP/DEPART	591	/	575	580	/	574	24	/	136	124	/	34	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Rubidoux

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	84	8	3	101	8	0	0	0	1	0	15	220	0	0	0	0	0
	12:15 PM	1	84	6	13	79	3	3	1	3	2	0	6	201	0	0	0	0	0
	12:30 PM	5	84	8	16	81	2	3	0	1	6	1	18	225	0	0	0	0	0
	12:45 PM	1	80	8	16	88	3	4	1	2	4	1	3	211	0	0	0	0	0
	1:00 PM	0	70	4	6	91	1	3	2	2	4	0	16	199	0	0	0	0	0
	1:15 PM	0	91	7	14	97	3	3	0	1	6	0	9	231	0	0	0	0	0
	1:30 PM	1	85	10	10	104	1	1	1	0	8	0	8	229	0	0	0	0	0
	1:45 PM	0	98	7	13	98	2	3	0	0	2	1	16	240	0	0	0	0	0
	VOLUMES	8	676	58	91	739	23	20	5	9	33	3	91	1,756	0	0	0	0	0
	APPROACH %	1%	91%	8%	11%	87%	3%	59%	15%	26%	26%	2%	72%						
	APP/DEPART	742	/	787	853	/	781	34	/	154	127	/	34	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	344	28	43	390	7	10	3	3	20	1	49	899					
	APPROACH %	0%	92%	8%	10%	89%	2%	63%	19%	19%	29%	1%	70%						
	PEAK HR FACTOR		0.888			0.957			0.571			0.875		0.936					
	APP/DEPART	373	/	403	440	/	413	16	/	74	70	/	9	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux NORTH SIDE

El Rivino WEST SIDE — EAST SIDE **El Rivino**

SOUTH SIDE **Rubidoux**

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

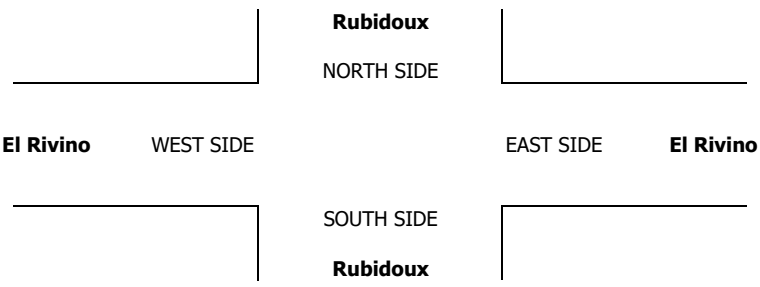
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	6	0	1	6	0	0	0	1	2	0	3	19	0	0	0	0	0
	12:15 PM	1	2	2	2	2	0	0	0	0	1	0	0	10	0	0	0	0	0
	12:30 PM	0	5	0	1	1	0	0	0	1	0	1	1	10	0	0	0	0	0
	12:45 PM	0	11	1	1	2	0	0	0	0	0	0	1	16	0	0	0	0	0
	1:00 PM	0	8	1	0	2	0	0	0	0	1	0	1	13	0	0	0	0	0
	1:15 PM	0	9	0	1	3	0	0	0	0	2	0	1	16	0	0	0	0	0
	1:30 PM	0	7	1	2	3	0	0	0	0	1	0	1	15	0	0	0	0	0
	1:45 PM	1	6	1	2	5	0	0	0	1	0	0	1	17	0	0	0	0	0
	VOLUMES	2	54	6	10	24	0	0	0	3	7	1	9	116	0	0	0	0	0
	APPROACH %	3%	87%	10%	29%	71%	0%	0%	0%	100%	41%	6%	53%						
	APP/DEPART	62	/	63	34	/	34	3	/	16	17	/	3	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	30	3	5	13	0	0	0	1	4	0	4	61					
	APPROACH %	3%	88%	9%	28%	72%	0%	0%	0%	100%	50%	0%	50%						
	PEAK HR FACTOR		0.944			0.643			0.250			0.667		0.897					
	APP/DEPART	34	/	34	18	/	18	1	/	8	8	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

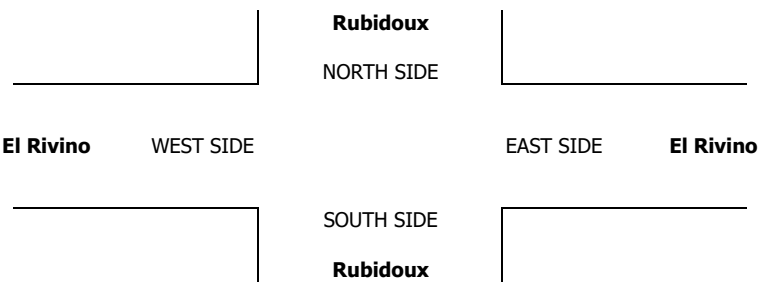
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	2	1	0	7	0	0	0	0	1	0	1	12	0	0	0	0	0
	12:15 PM	0	7	2	0	4	0	0	0	0	1	0	0	14	0	0	0	0	0
	12:30 PM	0	5	2	0	3	0	0	0	0	1	0	0	11	0	0	0	0	0
	12:45 PM	0	3	2	0	8	0	0	0	0	0	0	0	13	0	0	0	0	0
	1:00 PM	0	3	1	0	5	0	0	0	0	1	1	1	12	0	0	0	0	0
	1:15 PM	0	0	0	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0
	1:30 PM	0	2	1	0	3	0	0	0	0	1	0	0	7	0	0	0	0	0
	1:45 PM	0	4	0	1	2	0	0	0	0	1	0	0	8	0	0	0	0	0
	VOLUMES	0	26	9	1	37	0	0	0	0	6	1	2	82	0	0	0	0	0
	APPROACH %	0%	74%	26%	3%	97%	0%	0%	0%	0%	67%	11%	22%						
	APP/DEPART	35	/	28	38	/	43	0	/	10	9	/	1	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	18	7	0	20	0	0	0	0	3	1	1	50					
	APPROACH %	0%	72%	28%	0%	100%	0%	0%	0%	0%	60%	20%	20%						
	PEAK HR FACTOR		0.694			0.625			0.000			0.417		0.893					
	APP/DEPART	25	/	19	20	/	23	0	/	7	5	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

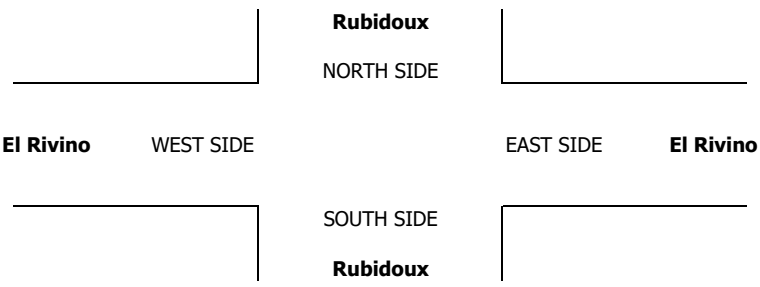
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	6	2	1	10	0	0	0	0	0	0	0	19	0	0	0	0	0
	12:15 PM	1	11	3	0	5	0	1	0	0	2	0	1	24	0	0	0	0	0
	12:30 PM	0	9	2	0	6	0	0	0	0	3	0	0	20	0	0	0	0	0
	12:45 PM	0	8	2	0	11	0	0	0	0	7	1	1	30	0	0	0	0	0
	1:00 PM	0	6	2	0	11	0	0	0	0	3	0	0	22	0	0	0	0	0
	1:15 PM	0	5	2	0	4	0	0	0	0	2	0	0	13	0	0	0	0	0
	1:30 PM	0	5	4	0	8	1	0	0	0	2	0	0	20	0	0	0	0	0
	1:45 PM	0	5	3	0	2	0	0	0	0	6	0	0	16	0	0	0	0	0
	VOLUMES	1	55	20	1	57	1	1	0	0	25	1	2	164	0	0	0	0	0
	APPROACH %	1%	72%	26%	2%	97%	2%	100%	0%	0%	89%	4%	7%						
	APP/DEPART	76	/	58	59	/	82	1	/	21	28	/	3	0					
	BEGIN PEAK HR		12:15 PM																
	VOLUMES	1	34	9	0	33	0	1	0	0	15	1	2	96					
	APPROACH %	2%	77%	20%	0%	100%	0%	100%	0%	0%	83%	6%	11%						
	PEAK HR FACTOR		0.733			0.750			0.250			0.500		0.800					
	APP/DEPART	44	/	37	33	/	48	1	/	9	18	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

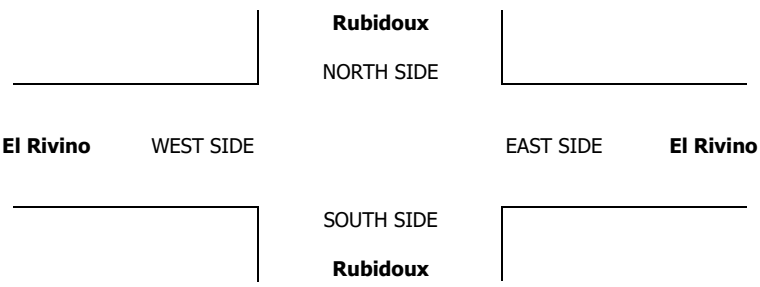
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	1
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0
	1:45 PM	1	0	0	2	0	0	0	0	0	0	0	1	4	0	0	0	0	0
	VOLUMES	1	0	0	2	0	0	0	0	1	0	0	2	6	0	0	0	0	0
	APPROACH %	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%						
	APP/DEPART	1	/	2	2	/	1	1	/	2	2	/	1	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	0	0	2	0	0	0	0	1	0	0	2	6					
	APPROACH %	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%						
	PEAK HR FACTOR		0.250			0.250			0.250			0.500		0.375					
	APP/DEPART	1	/	2	2	/	1	1	/	2	2	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: Production

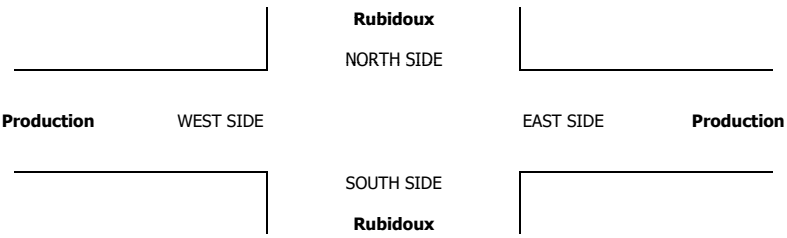
PROJECT #: SC1321
LOCATION #: 11
CONTROL: STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER

N S E W

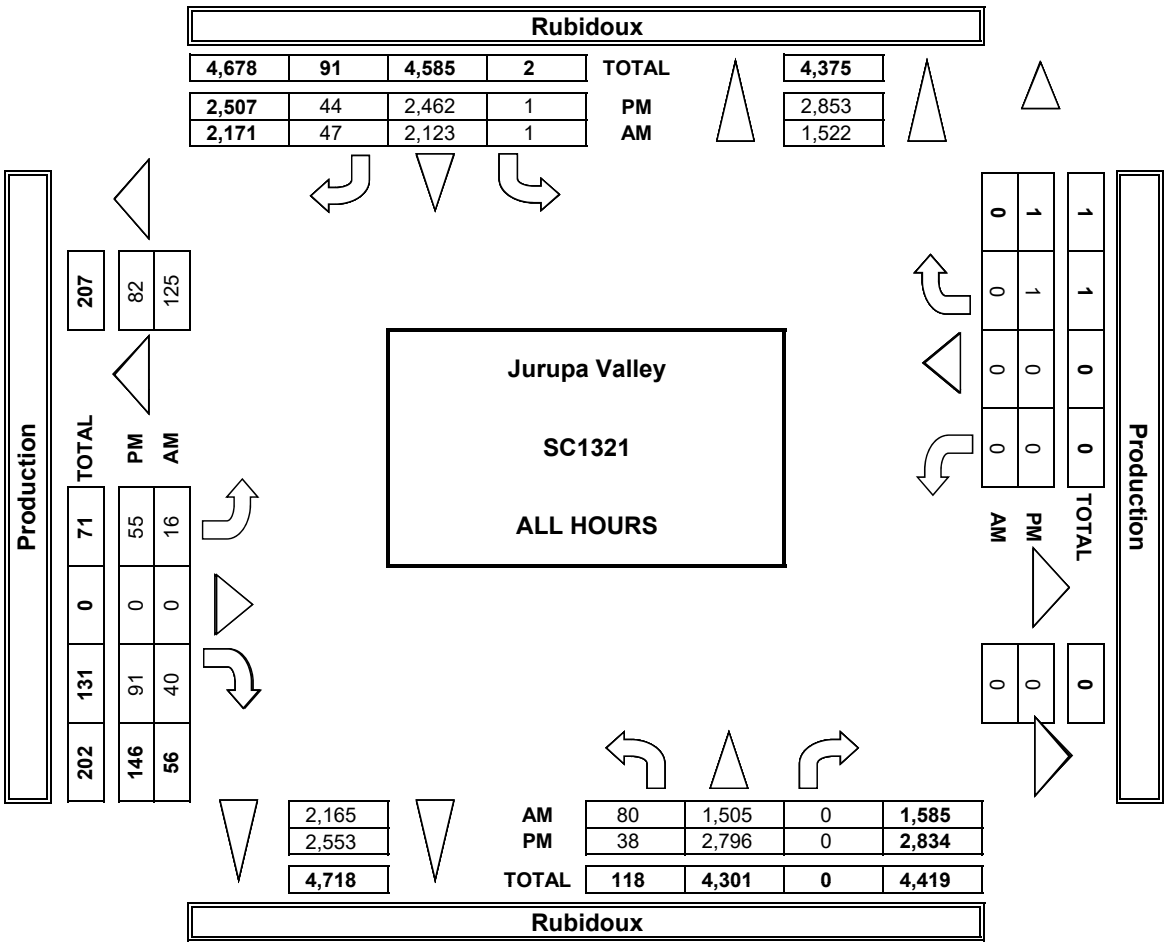
	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 6:30 AM	7	137	0	0	162	4	1	0	1	0	0	0	312	0	0	0	0	0
6:45 AM	6	134	0	0	181	2	3	0	2	0	0	0	328	0	0	0	0	0
7:00 AM	2	145	0	0	193	2	1	0	4	0	0	0	347	0	0	0	0	0
7:15 AM	4	150	0	0	208	1	1	0	3	0	0	0	367	0	0	0	0	0
7:30 AM	6	143	0	0	282	4	1	0	3	0	0	0	439	0	0	0	0	0
7:45 AM	5	142	0	0	212	2	1	0	2	0	0	0	364	0	0	0	0	0
8:00 AM	6	119	0	0	188	4	0	0	6	0	0	0	323	0	0	0	0	0
8:15 AM	12	127	0	1	161	4	1	0	3	0	0	0	309	1	1	0	0	2
8:30 AM	7	105	0	0	158	3	1	0	2	0	0	0	276	1	0	0	0	1
8:45 AM	8	94	0	0	137	4	0	0	3	0	0	0	246	0	0	0	0	0
9:00 AM	10	109	0	0	121	12	3	0	5	0	0	0	260	0	0	0	0	0
9:15 AM	7	100	0	0	120	5	3	0	6	0	0	0	241	0	0	0	0	0
VOLUMES	80	1,505	0	1	2,123	47	16	0	40	0	0	0	3,812	2	1	0	0	3
APPROACH %	5%	95%	0%	0%	98%	2%	29%	0%	71%	0%	0%	0%						
APP/DEPART	1,585	/	1,522	2,171	/	2,165	56	/	0	0	/	125	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	17	580	0	0	895	9	4	0	12	0	0	0	1,517					
APPROACH %	3%	97%	0%	0%	99%	1%	25%	0%	75%	0%	0%	0%						
PEAK HR FACTOR		0.969			0.790			0.800			0.000		0.864					
APP/DEPART	597	/	584	904	/	907	16	/	0	0	/	26	0					
PM 03:30 PM	2	246	0	0	213	6	4	0	15	0	0	0	486	0	0	0	0	0
3:45 PM	4	268	0	1	206	3	5	0	11	0	0	0	498	0	1	0	0	1
4:00 PM	4	263	0	0	220	4	10	0	13	0	0	0	514	0	0	0	0	0
4:15 PM	5	255	0	0	231	5	3	0	8	0	0	0	507	0	0	0	0	0
4:30 PM	3	241	0	0	233	2	6	0	3	0	0	1	489	0	0	0	0	0
4:45 PM	4	254	0	0	236	4	2	0	9	0	0	0	509	0	0	0	0	0
5:00 PM	3	282	0	0	194	5	5	0	10	0	0	0	499	0	0	0	0	0
5:15 PM	4	276	0	0	230	2	3	0	6	0	0	0	521	0	0	0	0	0
5:30 PM	3	207	0	0	199	0	4	0	6	0	0	0	419	0	0	0	0	0
5:45 PM	3	170	0	0	206	5	3	0	4	0	0	0	391	0	0	0	0	0
6:00 PM	3	163	0	0	134	4	6	0	5	0	0	0	315	0	0	0	0	0
6:15 PM	0	171	0	0	160	4	4	0	1	0	0	0	340	0	0	0	0	0
VOLUMES	38	2,796	0	1	2,462	44	55	0	91	0	0	1	5,488	0	1	0	0	1
APPROACH %	1%	99%	0%	0%	98%	2%	38%	0%	62%	0%	0%	100%						
APP/DEPART	2,834	/	2,853	2,507	/	2,553	146	/	0	1	/	82	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	16	1,013	0	0	920	15	21	0	33	0	0	1	2,019					
APPROACH %	2%	98%	0%	0%	98%	2%	39%	0%	61%	0%	0%	100%						
PEAK HR FACTOR		0.963			0.974			0.587			0.250		0.982					
APP/DEPART	1,029	/	1,035	935	/	953	54	/	0	1	/	31	0					

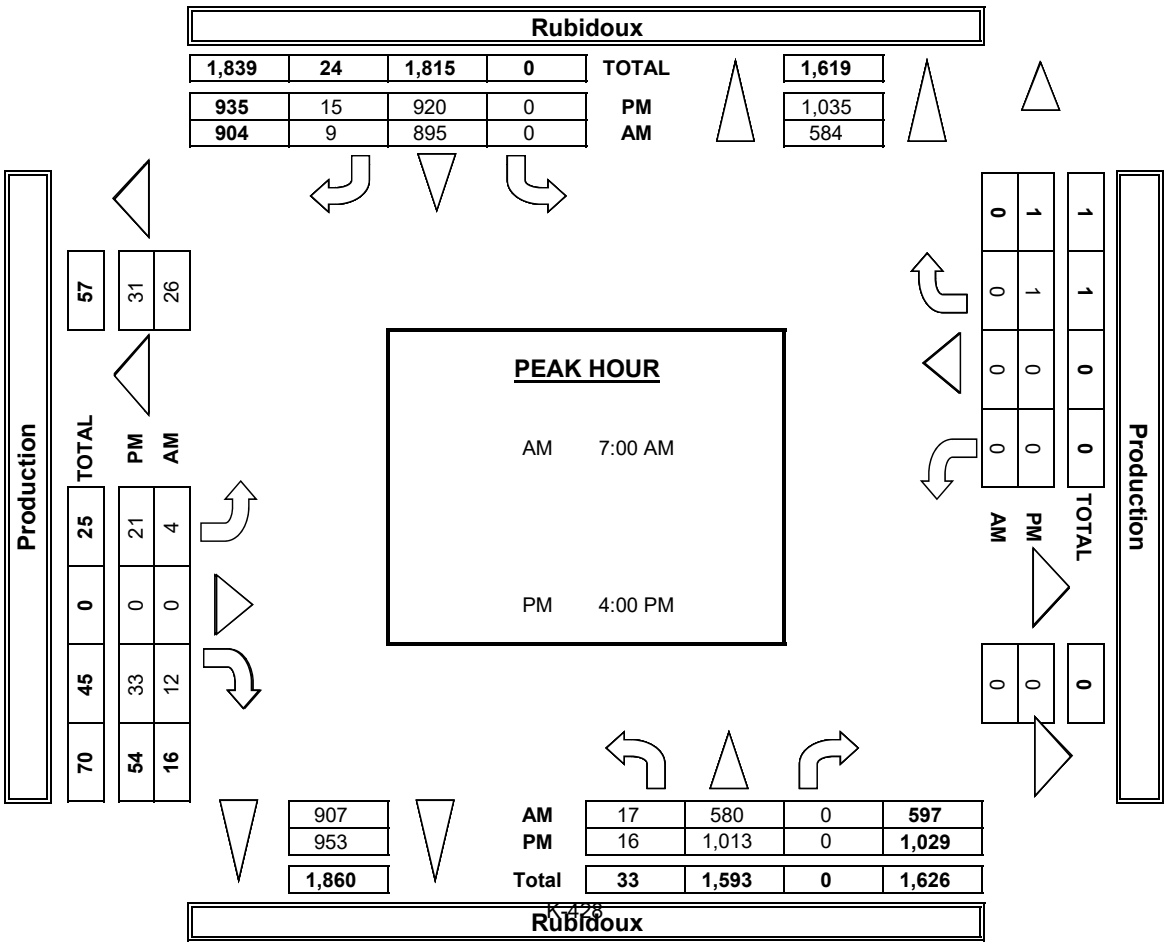


	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM 6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





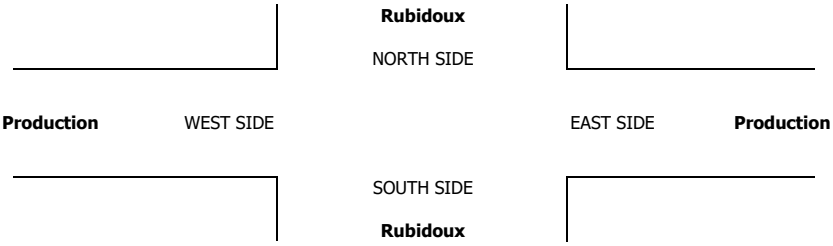
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production			
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	6:30 AM	8	162	0	0	176	4	1	0	1	0	0	0	351
	6:45 AM	6	149	0	0	205	2	4	0	2	0	0	0	368
	7:00 AM	2	167	0	0	216	2	1	0	5	0	0	0	392
	7:15 AM	4	177	0	0	248	1	1	0	4	0	0	0	435
	7:30 AM	7	171	0	0	302	5	1	0	4	0	0	0	488
	7:45 AM	5	157	0	0	234	2	2	0	5	0	0	0	403
	8:00 AM	6	135	0	0	202	4	0	0	8	0	0	0	354
	8:15 AM	15	147	0	1	191	5	1	0	3	0	0	0	362
	8:30 AM	8	128	0	0	191	3	1	0	2	0	0	0	332
	8:45 AM	8	113	0	0	173	5	0	0	4	0	0	0	302
	9:00 AM	13	135	0	0	148	12	3	0	8	0	0	0	318
	9:15 AM	8	124	0	0	148	6	4	0	6	0	0	0	294
	VOLUMES	87	1,762	0	1	2,432	49	18	0	49	0	0	0	4,397
	APPROACH %	5%	95%	0%	0%	98%	2%	26%	0%	74%	0%	0%	0%	
	APP/DEPART	1,849	/	1,779	2,482	/	2,481	67	/	1	0	/	136	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	18	671	0	0	999	10	5	0	16	0	0	0	1,717
	APPROACH %	3%	97%	0%	0%	99%	1%	22%	0%	78%	0%	0%	0%	
	PEAK HR FACTOR		0.951			0.824			0.854			0.000		0.881
	APP/DEPART	689	/	676	1,008	/	1,015	21	/	0	0	/	27	0
PM	03:30 PM	2	298	0	0	237	6	5	0	15	0	0	0	562
	3:45 PM	4	317	0	1	231	3	5	0	11	0	0	0	572
	4:00 PM	4	319	0	0	247	4	11	0	13	0	0	0	597
	4:15 PM	6	297	0	0	255	5	3	0	9	0	0	0	574
	4:30 PM	4	284	0	0	264	2	7	0	3	0	0	1	563
	4:45 PM	4	293	0	0	255	4	2	0	9	0	0	0	567
	5:00 PM	3	320	0	0	216	5	5	0	11	0	0	0	559
	5:15 PM	4	309	0	0	254	2	3	0	6	0	0	0	577
	5:30 PM	3	227	0	0	216	0	4	0	6	0	0	0	455
	5:45 PM	3	185	0	0	224	5	3	0	4	0	0	0	424
	6:00 PM	3	185	0	0	143	4	6	0	5	0	0	0	346
	6:15 PM	0	200	0	0	172	4	4	0	1	0	0	0	380
	VOLUMES	40	3,230	0	1	2,711	44	57	0	92	0	0	1	6,174
	APPROACH %	1%	99%	0%	0%	98%	2%	38%	0%	62%	0%	0%	100%	
	APP/DEPART	3,269	/	3,287	2,756	/	2,803	149	/	1	1	/	84	0
	BEGIN PEAK HR		3:45 PM											
	VOLUMES	18	1,215	0	1	996	14	25	0	36	0	0	1	2,305
	APPROACH %	1%	99%	0%	0%	99%	1%	41%	0%	59%	0%	0%	100%	
	PEAK HR FACTOR		0.955			0.952			0.644			0.250		0.966
	APP/DEPART	1,233	/	1,241	1,011	/	1,032	61	/	1	1	/	32	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

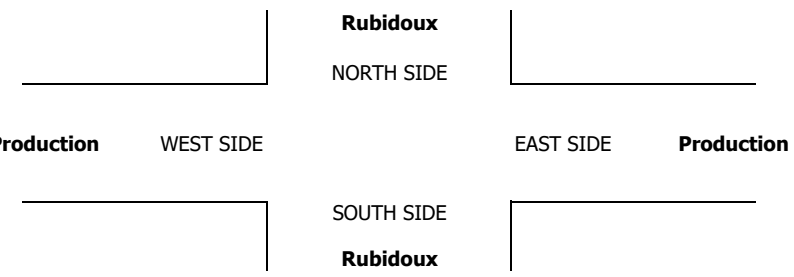
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	6	118	0	0	145	4	1	0	1	0	0	0	275	0	0	0	0	0
6:45 AM	6	117	0	0	161	2	2	0	2	0	0	0	290	0	0	0	0	0
7:00 AM	2	125	0	0	171	2	1	0	3	0	0	0	304	0	0	0	0	0
7:15 AM	4	130	0	0	181	1	1	0	2	0	0	0	319	0	0	0	0	0
7:30 AM	5	124	0	0	263	3	1	0	2	0	0	0	398	0	0	0	0	0
7:45 AM	5	130	0	0	196	2	0	0	0	0	0	0	333	0	0	0	0	0
8:00 AM	6	106	0	0	173	4	0	0	3	0	0	0	292	0	0	0	0	0
8:15 AM	10	110	0	1	138	3	1	0	3	0	0	0	266	0	1	0	0	1
8:30 AM	6	89	0	0	131	3	1	0	2	0	0	0	232	1	0	0	0	1
8:45 AM	8	76	0	0	101	3	0	0	1	0	0	0	189	0	0	0	0	0
9:00 AM	8	91	0	0	93	12	3	0	3	0	0	0	210	0	0	0	0	0
9:15 AM	6	82	0	0	93	4	2	0	6	0	0	0	193	0	0	0	0	0
VOLUMES	72	1,298	0	1	1,846	43	13	0	28	0	0	0	3,301	1	1	0	0	2
APPROACH %	5%	95%	0%	0%	98%	2%	32%	0%	68%	0%	0%	0%						
APP/DEPART	1,370	/	1,312	1,890	/	1,875	41	/	0	0	/	114	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	16	509	0	0	811	8	3	0	7	0	0	0	1,354					
APPROACH %	3%	97%	0%	0%	99%	1%	30%	0%	70%	0%	0%	0%						
PEAK HR FACTOR		0.972			0.770			0.625			0.000		0.851					
APP/DEPART	525	/	512	819	/	818	10	/	0	0	/	24	0					
PM																		
03:30 PM	2	205	0	0	191	6	3	0	15	0	0	0	422	0	0	0	0	0
3:45 PM	4	227	0	1	183	3	5	0	11	0	0	0	434	0	1	0	0	1
4:00 PM	4	220	0	0	194	4	9	0	13	0	0	0	444	0	0	0	0	0
4:15 PM	4	223	0	0	209	5	3	0	7	0	0	0	451	0	0	0	0	0
4:30 PM	2	202	0	0	204	2	5	0	3	0	0	1	419	0	0	0	0	0
4:45 PM	4	217	0	0	220	4	2	0	9	0	0	0	456	0	0	0	0	0
5:00 PM	3	252	0	0	173	5	5	0	9	0	0	0	447	0	0	0	0	0
5:15 PM	4	247	0	0	214	2	3	0	6	0	0	0	476	0	0	0	0	0
5:30 PM	3	185	0	0	189	0	4	0	6	0	0	0	387	0	0	0	0	0
5:45 PM	3	153	0	0	190	5	3	0	4	0	0	0	358	0	0	0	0	0
6:00 PM	3	145	0	0	127	4	6	0	5	0	0	0	290	0	0	0	0	0
6:15 PM	0	148	0	0	153	4	4	0	1	0	0	0	310	0	0	0	0	0
VOLUMES	36	2,424	0	1	2,247	44	52	0	89	0	0	1	4,894	0	1	0	0	1
APPROACH %	1%	99%	0%	0%	98%	2%	37%	0%	63%	0%	0%	100%						
APP/DEPART	2,460	/	2,478	2,292	/	2,336	141	/	0	1	/	80	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	13	918	0	0	811	13	15	0	27	0	0	1	1,798					
APPROACH %	1%	99%	0%	0%	98%	2%	36%	0%	64%	0%	0%	100%						
PEAK HR FACTOR		0.913			0.920			0.750			0.250		0.944					
APP/DEPART	931	/	934	824	/	838	42	/	0	1	/	26	0					



INTERSECTION TURNING MOVEMENT COUNTS

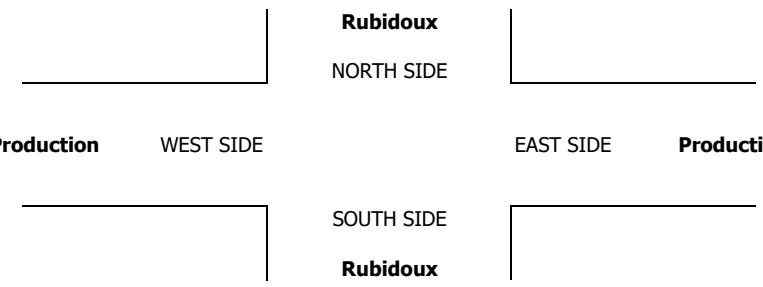
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	1	7	0	0	10	0	0	0	0	0	0	0	18	0	0	0	0	0
	6:45 AM	0	10	0	0	6	0	1	0	0	0	0	0	17	0	0	0	0	0
	7:00 AM	0	10	0	0	11	0	0	0	1	0	0	0	22	0	0	0	0	0
	7:15 AM	0	6	0	0	6	0	0	0	1	0	0	0	13	0	0	0	0	0
	7:30 AM	1	5	0	0	9	1	0	0	1	0	0	0	17	0	0	0	0	0
	7:45 AM	0	5	0	0	5	0	1	0	1	0	0	0	12	0	0	0	0	0
	8:00 AM	0	5	0	0	10	0	0	0	3	0	0	0	18	0	0	0	0	0
	8:15 AM	1	8	0	0	4	1	0	0	0	0	0	0	14	0	0	0	0	0
	8:30 AM	1	5	0	0	10	0	0	0	0	0	0	0	16	0	0	0	0	0
	8:45 AM	0	9	0	0	15	1	0	0	2	0	0	0	27	0	0	0	0	0
	9:00 AM	1	2	0	0	16	0	0	0	1	0	0	0	20	0	0	0	0	0
	9:15 AM	1	7	0	0	14	1	1	0	0	0	0	0	24	0	0	0	0	0
	VOLUMES	6	79	0	0	116	4	3	0	10	0	0	0	218	0	0	0	0	0
	APPROACH %	7%	93%	0%	0%	97%	3%	23%	0%	77%	0%	0%	0%						
	APP/DEPART	85	/	82	120	/	126	13	/	0	0	/	10	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	3	23	0	0	55	2	1	0	3	0	0	0	87					
	APPROACH %	12%	88%	0%	0%	96%	4%	25%	0%	75%	0%	0%	0%						
	PEAK HR FACTOR		0.722			0.891			0.500			0.000		0.806					
	APP/DEPART	26	/	24	57	/	58	4	/	0	0	/	5	0					
PM	03:30 PM	0	13	0	0	8	0	1	0	0	0	0	0	22	0	0	0	0	0
	3:45 PM	0	15	0	0	8	0	0	0	0	0	0	0	23	0	0	0	0	0
	4:00 PM	0	13	0	0	9	0	1	0	0	0	0	0	23	0	0	0	0	0
	4:15 PM	0	11	0	0	6	0	0	0	1	0	0	0	18	0	0	0	0	0
	4:30 PM	1	17	0	0	11	0	1	0	0	0	0	0	30	0	0	0	0	0
	4:45 PM	0	14	0	0	4	0	0	0	0	0	0	0	18	0	0	0	0	0
	5:00 PM	0	9	0	0	8	0	0	0	1	0	0	0	18	0	0	0	0	0
	5:15 PM	0	13	0	0	1	0	0	0	0	0	0	0	14	0	0	0	0	0
	5:30 PM	0	13	0	0	1	0	0	0	0	0	0	0	14	0	0	0	0	0
	5:45 PM	0	12	0	0	7	0	0	0	0	0	0	0	19	0	0	0	0	0
	6:00 PM	0	8	0	0	3	0	0	0	0	0	0	0	11	0	0	0	0	0
	6:15 PM	0	9	0	0	1	0	0	0	0	0	0	0	10	0	0	0	0	0
	VOLUMES	1	147	0	0	67	0	3	0	2	0	0	0	220	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	100%	0%	60%	0%	40%	0%	0%	0%						
	APP/DEPART	148	/	150	67	/	69	5	/	0	0	/	1	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	1	56	0	0	34	0	2	0	1	0	0	0	94					
	APPROACH %	2%	98%	0%	0%	100%	0%	67%	0%	33%	0%	0%	0%						
	PEAK HR FACTOR		0.792			0.773			0.750			0.000		0.783					
	APP/DEPART	57	/	58	34	/	35	3	/	0	0	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

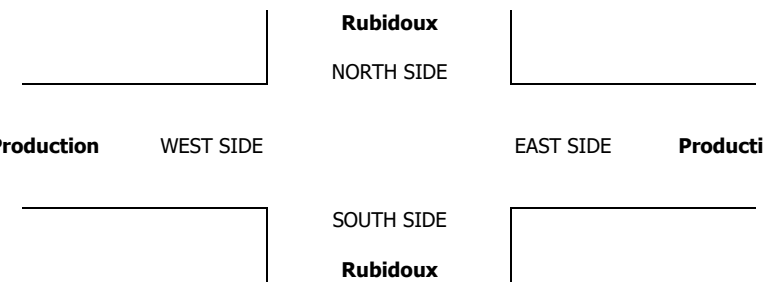
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	3	0	0	5	0	0	0	0	0	0	0	8	0	0	0	0	0
	6:45 AM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0
	7:00 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	7:15 AM	0	3	0	0	5	0	0	0	0	0	0	0	8	0	0	0	0	0
	7:30 AM	0	3	0	0	4	0	0	0	0	0	0	0	7	0	0	0	0	0
	7:45 AM	0	2	0	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0
	8:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:15 AM	0	2	0	0	10	0	0	0	0	0	0	0	12	0	0	0	0	0
	8:30 AM	0	2	0	0	6	0	0	0	0	0	0	0	8	0	0	0	0	0
	8:45 AM	0	4	0	0	14	0	0	0	0	0	0	0	18	0	0	0	0	0
	9:00 AM	0	7	0	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0
	9:15 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	VOLUMES	0	37	0	0	66	0	0	0	0	0	0	0	103	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	37	/	37	66	/	66	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	0	15	0	0	35	0	0	0	0	0	0	0	50					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.536			0.625			0.000			0.000		0.694					
	APP/DEPART	15	/	15	35	/	35	0	/	0	0	/	0	0					
PM	03:30 PM	0	10	0	0	7	0	0	0	0	0	0	0	17	0	0	0	0	0
	3:45 PM	0	11	0	0	8	0	0	0	0	0	0	0	19	0	0	0	0	0
	4:00 PM	0	10	0	0	11	0	0	0	0	0	0	0	21	0	0	0	0	0
	4:15 PM	1	6	0	0	11	0	0	0	0	0	0	0	18	0	0	0	0	0
	4:30 PM	0	10	0	0	11	0	0	0	0	0	0	0	21	0	0	0	0	0
	4:45 PM	0	14	0	0	7	0	0	0	0	0	0	0	21	0	0	0	0	0
	5:00 PM	0	9	0	0	8	0	0	0	0	0	0	0	17	0	0	0	0	0
	5:15 PM	0	6	0	0	7	0	0	0	0	0	0	0	13	0	0	0	0	0
	5:30 PM	0	5	0	0	2	0	0	0	0	0	0	0	7	0	0	0	0	0
	5:45 PM	0	1	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0
	6:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	6:15 PM	0	4	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	VOLUMES	1	88	0	0	78	0	0	0	0	0	0	0	167	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	89	/	88	78	/	78	0	/	0	0	/	1	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	1	40	0	0	40	0	0	0	0	0	0	0	81					
	APPROACH %	2%	98%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.732			0.909			0.000			0.000		0.964					
	APP/DEPART	41	/	40	40	/	40	0	/	0	0	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

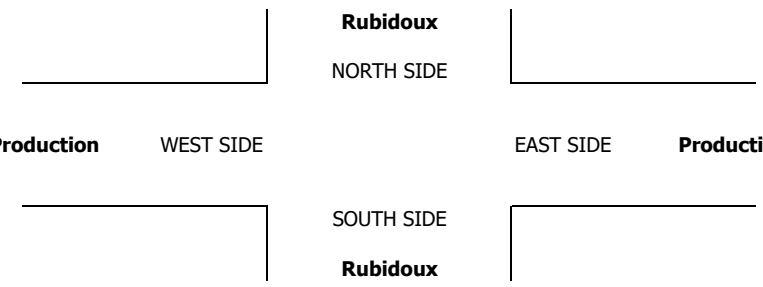
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	9	0	0	2	0	0	0	0	0	0	0	11	0	0	0	0	0
6:45 AM	0	3	0	0	7	0	0	0	0	0	0	0	10	0	0	0	0	0
7:00 AM	0	7	0	0	6	0	0	0	0	0	0	0	13	0	0	0	0	0
7:15 AM	0	10	0	0	16	0	0	0	0	0	0	0	26	0	0	0	0	0
7:30 AM	0	11	0	0	5	0	0	0	0	0	0	0	16	0	0	0	0	0
7:45 AM	0	5	0	0	8	0	0	0	1	0	0	0	14	0	0	0	0	0
8:00 AM	0	5	0	0	4	0	0	0	0	0	0	0	9	0	0	0	0	0
8:15 AM	1	7	0	0	9	0	0	0	0	0	0	0	17	1	0	0	0	1
8:30 AM	0	9	0	0	11	0	0	0	0	0	0	0	20	0	0	0	0	0
8:45 AM	0	5	0	0	7	0	0	0	0	0	0	0	12	0	0	0	0	0
9:00 AM	1	9	0	0	7	0	0	0	1	0	0	0	18	0	0	0	0	0
9:15 AM	0	9	0	0	8	0	0	0	0	0	0	0	17	0	0	0	0	0
VOLUMES	2	89	0	0	90	0	0	0	2	0	0	0	183	1	0	0	0	1
APPROACH %	2%	98%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
APP/DEPART	91	/	89	90	/	93	2	/	0	0	/	1	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	33	0	0	35	0	0	0	1	0	0	0	69					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
PEAK HR FACTOR		0.750			0.547			0.250			0.000		0.663					
APP/DEPART	33	/	33	35	/	36	1	/	0	0	/	0	0					
PM																		
03:30 PM	0	17	0	0	6	0	0	0	0	0	0	0	23	0	0	0	0	0
3:45 PM	0	15	0	0	6	0	0	0	0	0	0	0	21	0	0	0	0	0
4:00 PM	0	19	0	0	5	0	0	0	0	0	0	0	24	0	0	0	0	0
4:15 PM	0	15	0	0	5	0	0	0	0	0	0	0	20	0	0	0	0	0
4:30 PM	0	12	0	0	7	0	0	0	0	0	0	0	19	0	0	0	0	0
4:45 PM	0	9	0	0	5	0	0	0	0	0	0	0	14	0	0	0	0	0
5:00 PM	0	12	0	0	5	0	0	0	0	0	0	0	17	0	0	0	0	0
5:15 PM	0	10	0	0	8	0	0	0	0	0	0	0	18	0	0	0	0	0
5:30 PM	0	4	0	0	7	0	0	0	0	0	0	0	11	0	0	0	0	0
5:45 PM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0
6:00 PM	0	8	0	0	3	0	0	0	0	0	0	0	11	0	0	0	0	0
6:15 PM	0	10	0	0	5	0	0	0	0	0	0	0	15	0	0	0	0	0
VOLUMES	0	135	0	0	67	0	0	0	0	0	0	0	202	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	135	/	135	67	/	67	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	66	0	0	22	0	0	0	0	0	0	0	88					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.868			0.917			0.000			0.000		0.917					
APP/DEPART	66	/	66	22	/	22	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

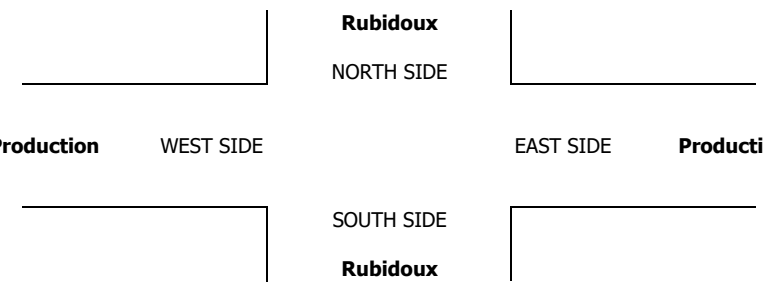
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
BEGIN PEAK HR		6:30 AM																
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
03:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2					
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.500			0.000			0.000		0.500					
APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

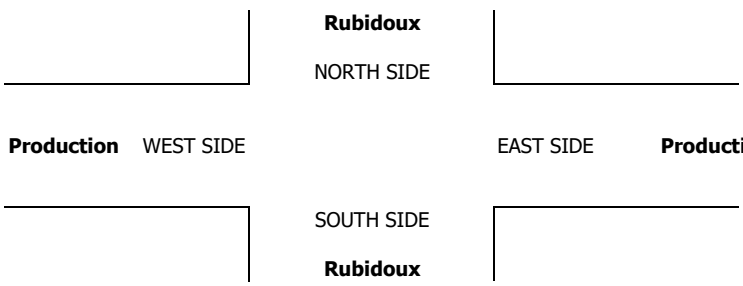
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
THURSDAY	EAST & WEST:	Production	CONTROL:	STOP E/W

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
VOLUMES	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	2	/	2	4	/	4	0	/	0	0	/	0	0					
BEGIN PEAK HR		6:45 AM																
VOLUMES	0	2	0	0	3	0	0	0	0	0	0	0	5					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.500			0.750			0.000			0.000		0.625					
APP/DEPART	2	/	2	3	/	3	0	/	0	0	/	0	0					
PM																		
03:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.500			0.250			0.000			0.000		0.375					
APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: Production

PROJECT #: SC1439
LOCATION #: 8
CONTROL: STOP E

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	13	87	0	0	127	9	10	0	10	0	0	0	256	0	0	0	0	0
	12:15 PM	8	115	0	0	95	6	3	0	16	0	0	0	243	0	0	0	0	0
	12:30 PM	6	120	0	0	104	6	10	0	10	0	0	0	256	0	0	0	0	0
	12:45 PM	9	121	0	0	121	3	6	0	7	0	0	0	267	0	0	0	0	0
	1:00 PM	8	88	0	0	130	3	3	0	3	0	0	0	235	0	0	0	0	0
	1:15 PM	3	113	0	0	114	8	6	0	9	0	0	0	253	0	0	1	0	1
	1:30 PM	8	110	0	0	131	2	9	0	7	0	0	0	267	0	0	0	0	0
	1:45 PM	8	132	0	0	108	4	2	0	10	0	0	0	264	0	0	0	0	0
	VOLUMES	63	886	0	0	930	41	49	0	72	0	0	0	2,041	0	0	1	0	1
	APPROACH %	7%	93%	0%	0%	96%	4%	40%	0%	60%	0%	0%	0%						
	APP/DEPART	949	/	934	971	/	1,002	121	/	0	0	/	105	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	28	432	0	0	496	16	24	0	26	0	0	0	1,022					
	APPROACH %	6%	94%	0%	0%	97%	3%	48%	0%	52%	0%	0%	0%						
	PEAK HR FACTOR		0.885			0.941			0.625			0.000		0.957					
	APP/DEPART	460	/	455	512	/	522	50	/	0	0	/	45	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

Production WEST SIDE EAST SIDE **Production**

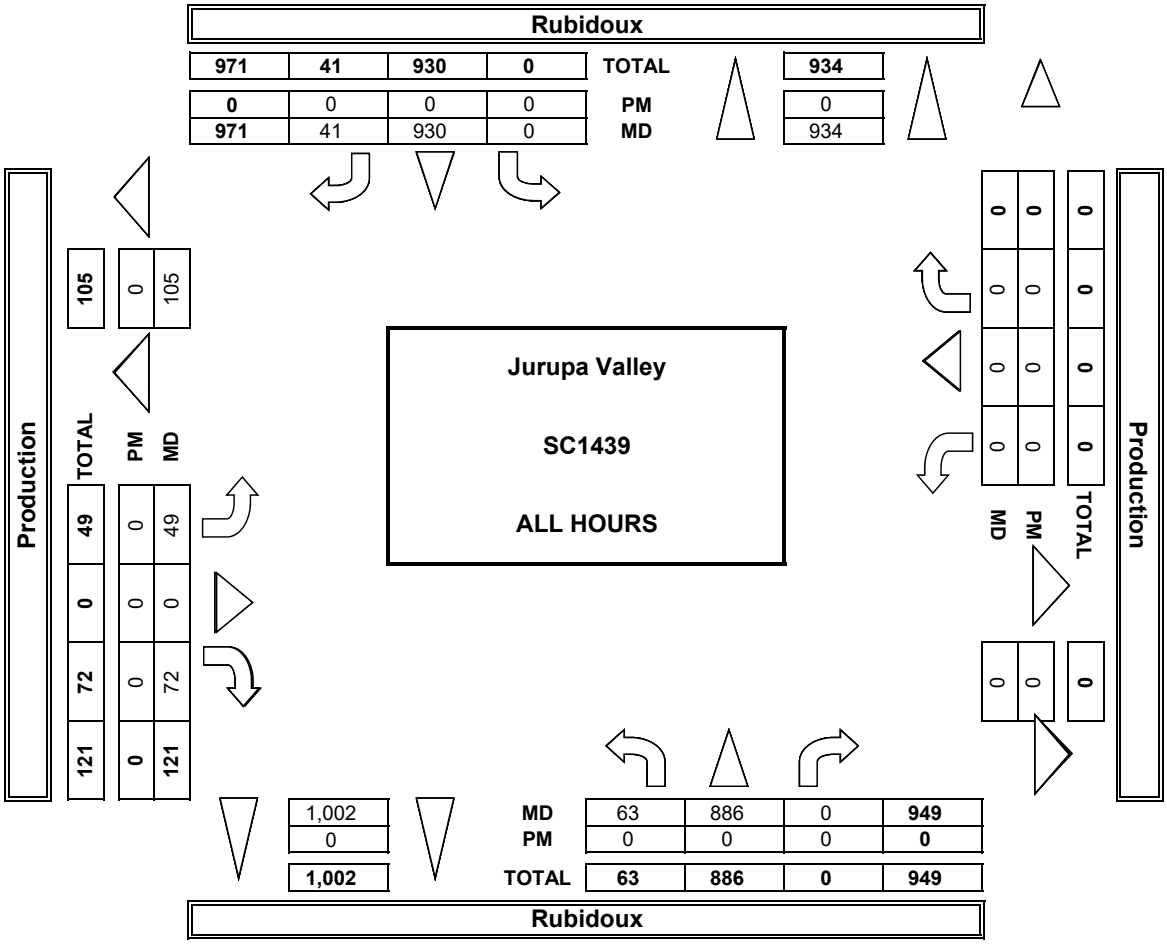
SOUTH SIDE

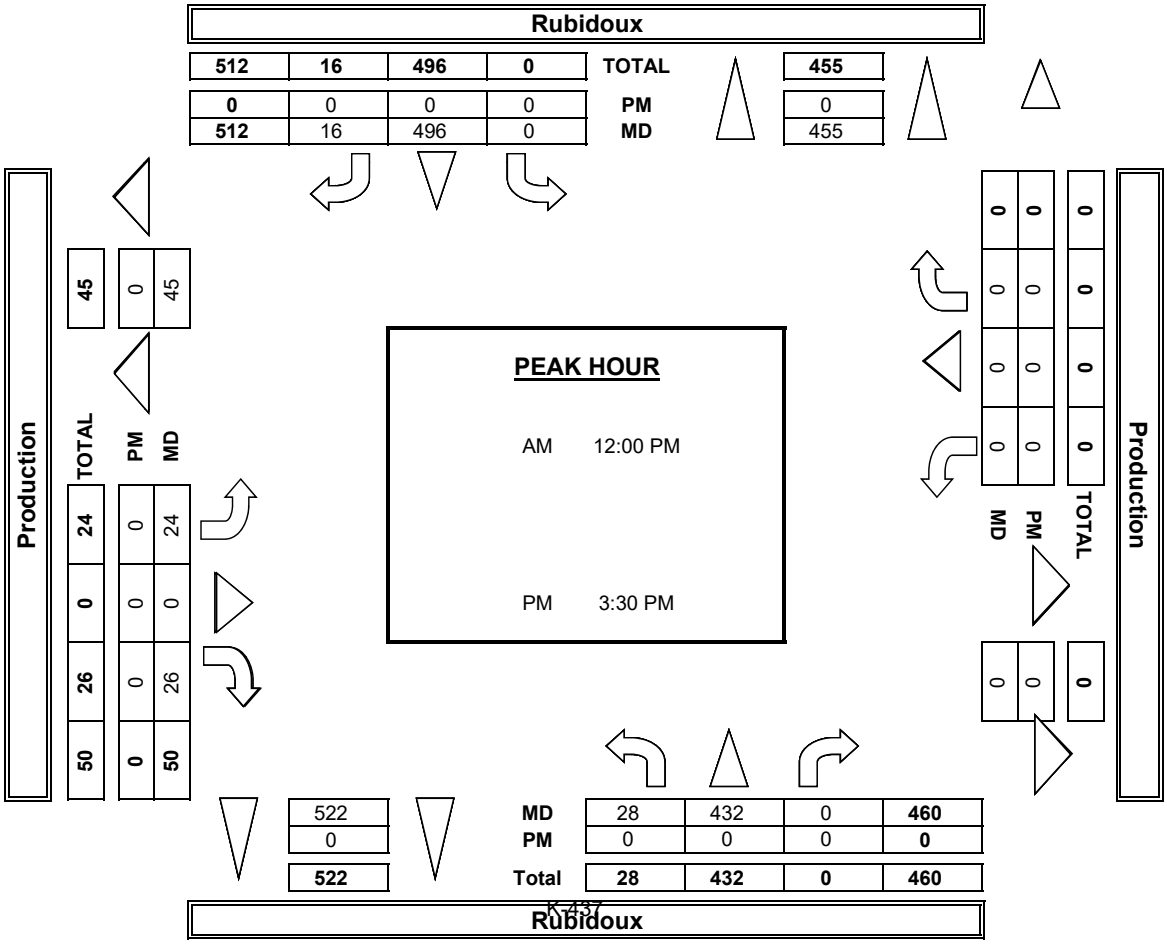
Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





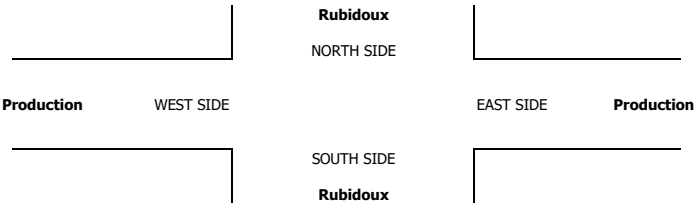
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

	NOTES:											
PCE	Class	1	2	3	4	5	6			AM		▲ N
Adjusted	Factor	1	1.5	2	3	2	2			PM MD OTHER OTHER	◄ W	S ▼ E ►

	NORTHBOUND (Rubidoux)			SOUTHBOUND (Rubidoux)			EASTBOUND (Production)			WESTBOUND (Production)				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
8:00 AM	16	106	0	0	159	10	11	0	14	0	0	0	315					0
8:15 AM	10	160	0	0	115	6	3	0	17	0	0	0	310					0
8:30 AM	7	153	0	0	123	7	11	0	13	0	0	0	313					0
8:45 AM	10	150	0	0	168	3	7	0	8	0	0	0	344					0
9:00 AM	9	111	0	0	167	3	3	0	3	0	0	0	296					0
9:15 AM	3	131	0	0	132	8	6	0	12	0	0	0	292					0
9:30 AM	9	135	0	0	160	3	9	0	8	0	0	0	322					0
9:45 AM	9	158	0	0	131	5	3	0	12	0	0	0	317					0
VOLUMES	71	1,102	0	0	1,154	44	52	0	85	0	0	0	2,508	0	0	0	0	0
APPROACH %	6%	94%	0%	0%	96%	4%	38%	0%	62%	0%	0%	0%						
APP/DEPART	1,173	/	1,154	1,198	/	1,239	137	/	0	0	/	115	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	42	568	0	0	565	26	31	0	51	0	0	0	1,282					
APPROACH %	7%	93%	0%	0%	96%	4%	38%	0%	62%	0%	0%	0%						
PEAK HR FACTOR		0.902			0.863			0.849			0.000		0.931					
APP/DEPART	610	/	599	591	/	616	82	/	0	0	/	67	0					
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		5:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

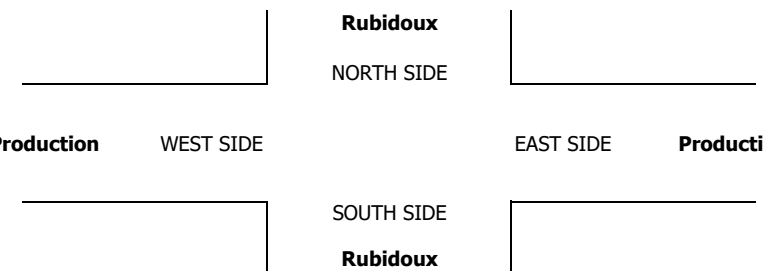
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	10	71	0	0	103	7	9	0	5	0	0	0	205	0	0	0	0	0
	12:15 PM	5	83	0	0	81	6	3	0	15	0	0	0	193	0	0	0	0	0
	12:30 PM	5	92	0	0	90	5	8	0	7	0	0	0	207	0	0	0	0	0
	12:45 PM	8	99	0	0	92	3	5	0	6	0	0	0	213	0	0	0	0	0
	1:00 PM	6	71	0	0	105	3	3	0	3	0	0	0	191	0	0	0	0	0
	1:15 PM	3	98	0	0	100	8	6	0	6	0	0	0	221	0	0	1	0	1
	1:30 PM	7	89	0	0	110	1	9	0	6	0	0	0	222	0	0	0	0	0
	1:45 PM	6	113	0	0	92	3	0	0	6	0	0	0	220	0	0	0	0	0
	VOLUMES	50	716	0	0	773	36	43	0	54	0	0	0	1,672	0	0	1	0	1
	APPROACH %	7%	93%	0%	0%	96%	4%	44%	0%	56%	0%	0%	0%						
	APP/DEPART	766	/	758	809	/	827	97	/	0	0	/	87	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	22	371	0	0	407	15	17	0	21	0	0	0	854					
	APPROACH %	6%	94%	0%	0%	96%	4%	44%	0%	54%	0%	0%	0%						
	PEAK HR FACTOR		0.826			0.950			0.650			0.000		0.962					
	APP/DEPART	393	/	388	422	/	428	39	/	0	0	/	38	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

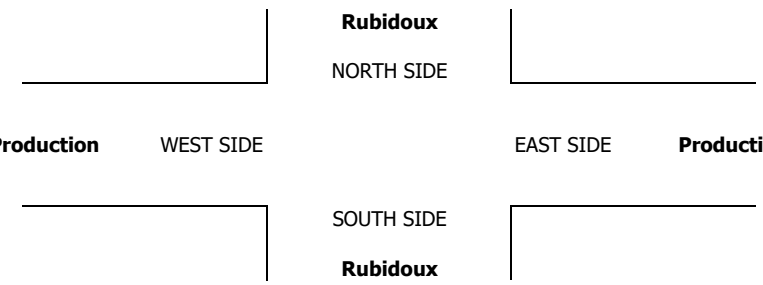
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	6	0	0	4	2	1	0	3	0	0	0	17	0	0	0	0	0
	12:15 PM	3	7	0	0	2	0	0	0	0	0	0	0	12	0	0	0	0	0
	12:30 PM	0	10	0	0	4	1	2	0	1	0	0	0	18	0	0	0	0	0
	12:45 PM	1	7	0	0	2	0	1	0	1	0	0	0	12	0	0	0	0	0
	1:00 PM	2	6	0	0	4	0	0	0	0	0	0	0	12	0	0	0	0	0
	1:15 PM	0	8	0	0	3	0	0	0	2	0	0	0	13	0	0	0	0	0
	1:30 PM	1	9	0	0	6	1	0	0	1	0	0	0	18	0	0	0	0	0
	1:45 PM	2	5	0	0	5	1	2	0	4	0	0	0	19	0	0	0	0	0
	VOLUMES	10	58	0	0	30	5	6	0	12	0	0	0	121	0	0	0	0	0
	APPROACH %	15%	85%	0%	0%	86%	14%	33%	0%	67%	0%	0%	0%						
	APP/DEPART	68	/	64	35	/	42	18	/	0	0	/	15	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	5	28	0	0	18	2	2	0	7	0	0	0	62					
	APPROACH %	15%	85%	0%	0%	90%	10%	22%	0%	78%	0%	0%	0%						
	PEAK HR FACTOR		0.825			0.714			0.375			0.000		0.816					
	APP/DEPART	33	/	30	20	/	25	9	/	0	0	/	7	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

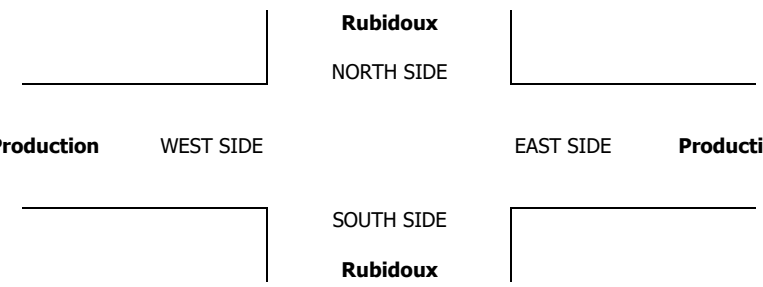
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	2	4	0	0	9	0	0	0	2	0	0	0	17	0	0	0	0	0
	12:15 PM	0	9	0	0	5	0	0	0	1	0	0	0	15	0	0	0	0	0
	12:30 PM	1	8	0	0	3	0	0	0	2	0	0	0	14	0	0	0	0	0
	12:45 PM	0	5	0	0	8	0	0	0	0	0	0	0	13	0	0	0	0	0
	1:00 PM	0	2	0	0	7	0	0	0	0	0	0	0	9	0	0	0	0	0
	1:15 PM	0	0	0	0	6	0	0	0	0	0	0	0	6	0	0	0	0	0
	1:30 PM	0	3	0	0	3	0	0	0	0	0	0	0	6	0	0	0	0	0
	1:45 PM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
	VOLUMES	3	35	0	0	43	0	0	0	5	0	0	0	86	0	0	0	0	0
	APPROACH %	8%	92%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	38	/	35	43	/	48	5	/	0	0	/	3	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	3	26	0	0	25	0	0	0	5	0	0	0	59					
	APPROACH %	10%	90%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.806			0.694			0.625			0.000		0.868					
	APP/DEPART	29	/	26	25	/	30	5	/	0	0	/	3	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

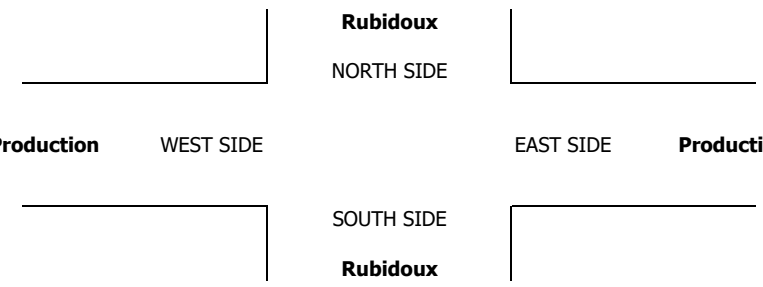
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Rubidoux)			SOUTHBOUND (Rubidoux)			EASTBOUND (Production)			WESTBOUND (Production)				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	6	0	0	10	0	0	0	0	0	0	0	16	0	0	0	0	0
	12:15 PM	0	16	0	0	7	0	0	0	0	0	0	0	23	0	0	0	0	0
	12:30 PM	0	10	0	0	7	0	0	0	0	0	0	0	17	0	0	0	0	0
	12:45 PM	0	10	0	0	19	0	0	0	0	0	0	0	29	0	0	0	0	0
	1:00 PM	0	9	0	0	14	0	0	0	0	0	0	0	23	0	0	0	0	0
	1:15 PM	0	7	0	0	5	0	0	0	1	0	0	0	13	0	0	0	0	0
	1:30 PM	0	8	0	0	11	0	0	0	0	0	0	0	19	0	0	0	0	0
	1:45 PM	0	9	0	0	9	0	0	0	0	0	0	0	18	0	0	0	0	0
	VOLUMES	0	75	0	0	82	0	0	0	1	0	0	0	158	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	75	/	75	82	/	83	1	/	0	0	/	0	0					
	BEGIN PEAK HR		12:15 PM																
	VOLUMES	0	45	0	0	47	0	0	0	0	0	0	0	92					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.703			0.618			0.000			0.000		0.793					
	APP/DEPART	45	/	45	47	/	47	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

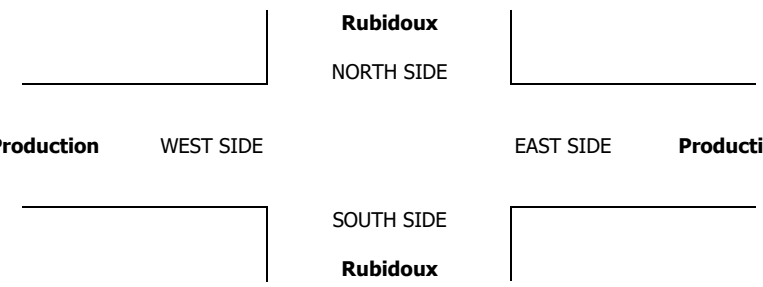
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		11:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



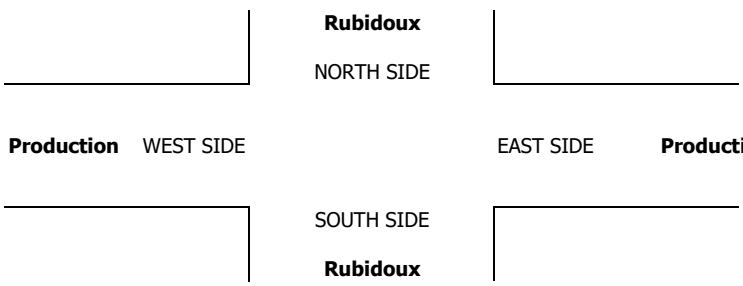
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	8
WEDNESDAY	EAST & WEST:	Production	CONTROL:	STOP E

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Production			WESTBOUND Production				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.250			0.000			0.000		0.375					
	APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 20th Street/Market Street
Weather: Clear

File Name : 01_JVYRUMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	91	80	2	173	42	14	109	165	3	50	58	111	4	7	3	14	463
06:45 AM	102	90	5	197	33	13	96	142	7	57	64	128	5	12	7	24	491
Total	193	170	7	370	75	27	205	307	10	107	122	239	9	19	10	38	954
07:00 AM	84	97	2	183	24	9	97	130	2	49	47	98	0	3	5	8	419
07:15 AM	112	120	5	237	39	5	63	107	0	48	64	112	3	2	1	6	462
07:30 AM	134	147	4	285	56	7	70	133	3	50	41	94	1	6	4	11	523
07:45 AM	131	141	1	273	50	5	75	130	0	49	51	100	0	4	0	4	507
Total	461	505	12	978	169	26	305	500	5	196	203	404	4	15	10	29	1911
08:00 AM	116	91	1	208	45	9	95	149	3	54	43	100	2	3	0	5	462
08:15 AM	91	58	5	154	38	5	70	113	3	47	30	80	4	5	2	11	358
08:30 AM	97	63	3	163	37	10	64	111	4	45	40	89	2	4	5	11	374
08:45 AM	78	66	6	150	31	11	55	97	5	49	30	84	7	8	3	18	349
Total	382	278	15	675	151	35	284	470	15	195	143	353	15	20	10	45	1543
09:00 AM	71	65	7	143	36	9	62	107	8	41	34	83	2	8	5	15	348
09:15 AM	57	62	4	123	36	11	80	127	5	40	37	82	2	12	4	18	350
Grand Total	1164	1080	45	2289	467	108	936	1511	43	579	539	1161	32	74	39	145	5106
Apprch %	50.9	47.2	2		30.9	7.1	61.9		3.7	49.9	46.4		22.1	51	26.9		
Total %	22.8	21.2	0.9	44.8	9.1	2.1	18.3	29.6	0.8	11.3	10.6	22.7	0.6	1.4	0.8	2.8	
Passenger Vehicles	1112	979	23	2114	322	61	891	1274	24	534	405	963	10	27	9	46	4397
% Passenger Vehicles	95.5	90.6	51.1	92.4	69	56.5	95.2	84.3	55.8	92.2	75.1	82.9	31.2	36.5	23.1	31.7	86.1
Large 2 Axle Vehicles	22	46	4	72	29	14	17	60	5	19	25	49	5	6	5	16	197
% Large 2 Axle Vehicles	1.9	4.3	8.9	3.1	6.2	13	1.8	4	11.6	3.3	4.6	4.2	15.6	8.1	12.8	11	3.9
3 Axle Vehicles	12	9	2	23	31	14	10	55	3	7	31	41	3	17	17	37	156
% 3 Axle Vehicles	1	0.8	4.4	1	6.6	13	1.1	3.6	7	1.2	5.8	3.5	9.4	23	43.6	25.5	3.1
4+ Axle Trucks	18	46	16	80	85	19	18	122	11	19	78	108	14	24	8	46	356
% 4+ Axle Trucks	1.5	4.3	35.6	3.5	18.2	17.6	1.9	8.1	25.6	3.3	14.5	9.3	43.8	32.4	20.5	31.7	7

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	112	120	**5**	237	39	5	63	107	0	48	**64**	**112**	**3**	2	1	6	462
07:30 AM	**134**	**147**	4	**285**	**56**	7	70	133	**3**	50	41	94	1	**6**	**4**	**11**	**523**
07:45 AM	131	141	1	273	50	5	75	130	0	49	51	100	0	4	0	4	507
08:00 AM	116	91	1	208	45	**9**	**95**	**149**	3	**54**	43	100	2	3	0	5	462
Total Volume	493	499	11	1003	190	26	303	519	6	201	199	406	6	15	5	26	1954
% App. Total	49.2	49.8	1.1		36.6	5	58.4		1.5	49.5	49		23.1	57.7	19.2		
PHF	.920	.849	.550	.880	.848	.722	.797	.871	.500	.931	.777	.906	.500	.625	.313	.591	.934

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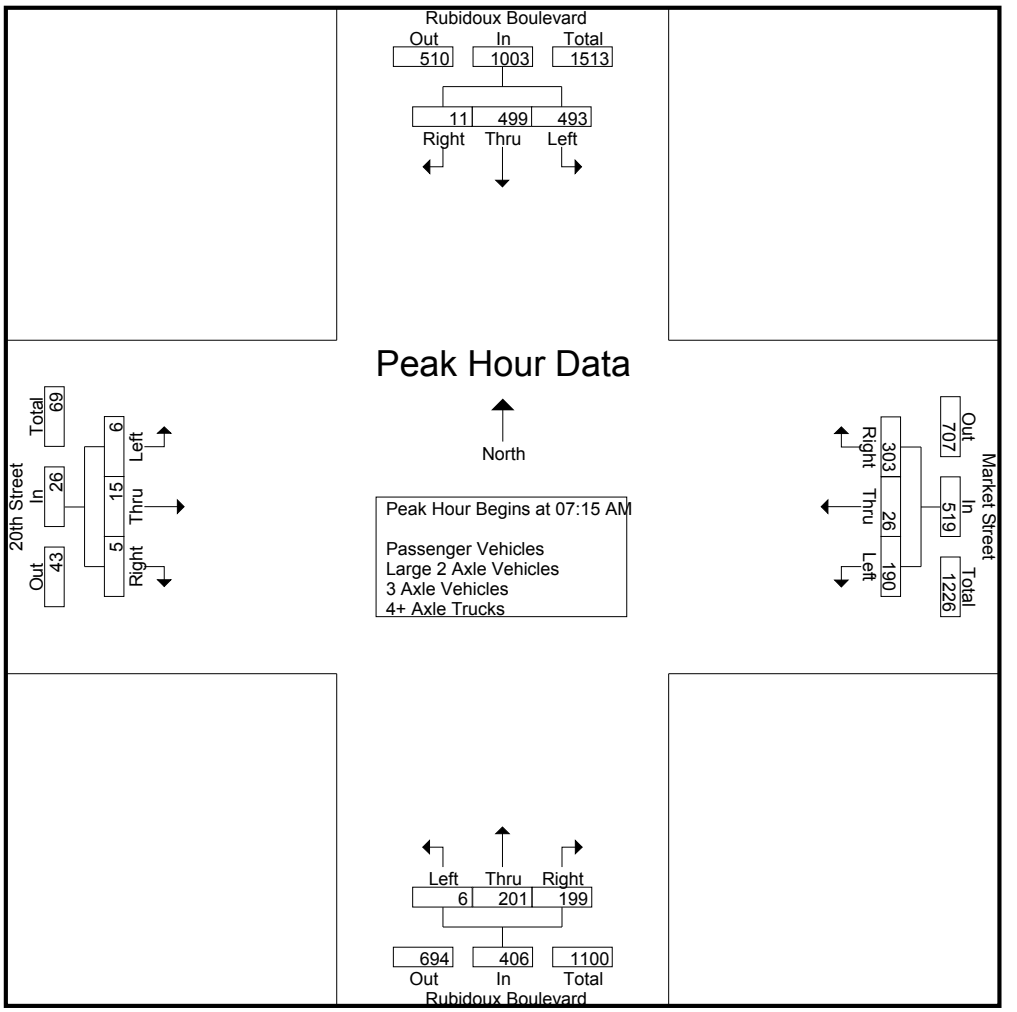
File Name : 01_JVYRUMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				06:30 AM				06:30 AM				08:30 AM			
+0 mins.	112	120	**5**	237	**42**	**14**	**109**	**165**	3	50	58	111	2	4	**5**	11
+15 mins.	**134**	**147**	4	**285**	33	13	96	142	**7**	**57**	**64**	**128**	**7**	8	3	**18**
+30 mins.	131	141	1	273	24	9	97	130	2	49	47	98	2	8	5	15
+45 mins.	116	91	1	208	39	5	63	107	0	48	64	112	2	**12**	4	18
Total Volume	493	499	11	1003	138	41	365	544	12	204	233	449	13	32	17	62
% App. Total	49.2	49.8	1.1		25.4	7.5	67.1		2.7	45.4	51.9		21	51.6	27.4	
PHF	.920	.849	.550	.880	.821	.732	.837	.824	.429	.895	.910	.877	.464	.667	.850	.861

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Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	86	73	2	161	32	4	105	141	2	46	47	95	0	0	0	0	397
06:45 AM	99	79	3	181	20	8	93	121	4	51	57	112	2	2	0	4	418
Total	185	152	5	342	52	12	198	262	6	97	104	207	2	2	0	4	815
07:00 AM	79	92	1	172	18	6	95	119	1	48	40	89	0	1	1	2	382
07:15 AM	110	112	2	224	24	4	61	89	0	45	43	88	1	1	0	2	403
07:30 AM	130	139	4	273	40	4	66	110	2	47	31	80	0	3	0	3	466
07:45 AM	128	138	0	266	37	5	74	116	0	46	46	92	0	2	0	2	476
Total	447	481	7	935	119	19	296	434	3	186	160	349	1	7	1	9	1727
08:00 AM	110	86	1	197	39	5	86	130	0	48	34	82	0	1	0	1	410
08:15 AM	90	51	2	143	27	4	66	97	1	42	22	65	1	3	2	6	311
08:30 AM	91	53	1	145	24	4	59	87	3	43	24	70	0	2	2	4	306
08:45 AM	73	55	3	131	19	8	53	80	3	48	19	70	5	5	1	11	292
Total	364	245	7	616	109	21	264	394	7	181	99	287	6	11	5	22	1319
09:00 AM	63	53	4	120	20	5	58	83	5	36	17	58	1	3	3	7	268
09:15 AM	53	48	0	101	22	4	75	101	3	34	25	62	0	4	0	4	268
Grand Total	1112	979	23	2114	322	61	891	1274	24	534	405	963	10	27	9	46	4397
Apprch %	52.6	46.3	1.1		25.3	4.8	69.9		2.5	55.5	42.1		21.7	58.7	19.6		
Total %	25.3	22.3	0.5	48.1	7.3	1.4	20.3	29	0.5	12.1	9.2	21.9	0.2	0.6	0.2	1	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	110	112	2	224	24	4	61	89	0	45	43	88	**1**	1	0	2	403
07:30 AM	**130**	**139**	**4**	**273**	**40**	4	66	110	**2**	47	31	80	0	**3**	0	**3**	466
07:45 AM	128	138	0	266	37	**5**	74	116	0	46	**46**	**92**	0	2	0	2	**476**
08:00 AM	110	86	1	197	39	5	**86**	**130**	0	**48**	34	82	0	1	0	1	410
Total Volume	478	475	7	960	140	18	287	445	2	186	154	342	1	7	0	8	1755
% App. Total	49.8	49.5	0.7		31.5	4	64.5		0.6	54.4	45		12.5	87.5	0		
PHF	.919	.854	.438	.879	.875	.900	.834	.856	.250	.969	.837	.929	.250	.583	.000	.667	.922

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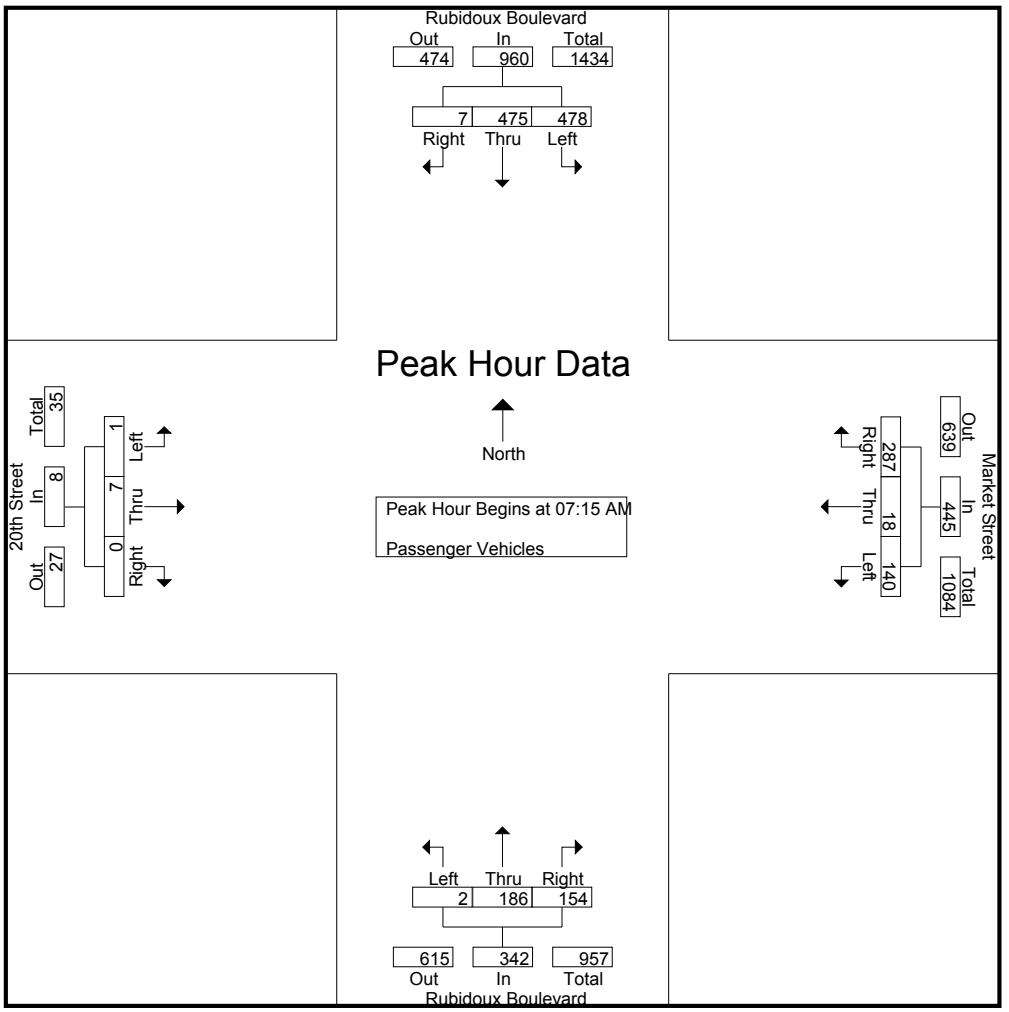
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	110	112	2	224	24	4	61	89	0	45	43	88	**1**	1	0	2
+15 mins.	**130**	**139**	**4**	**273**	**40**	4	66	110	**2**	47	31	80	0	**3**	0	**3**
+30 mins.	128	138	0	266	37	**5**	74	116	0	46	**46**	**92**	0	2	0	2
+45 mins.	110	86	1	197	39	5	**86**	**130**	0	**48**	34	82	0	1	0	1
Total Volume	478	475	7	960	140	18	287	445	2	186	154	342	1	7	0	8
% App. Total	49.8	49.5	0.7		31.5	4	64.5		0.6	54.4	45		12.5	87.5	0	
PHF	.919	.854	.438	.879	.875	.900	.834	.856	.250	.969	.837	.929	.250	.583	.000	.667

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Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	2	3	0	5	1	3	2	6	0	1	3	4	1	0	0	1	16
06:45 AM	1	5	0	6	3	2	0	5	1	3	1	5	1	0	0	1	17
Total	3	8	0	11	4	5	2	11	1	4	4	9	2	0	0	2	33
07:00 AM	1	3	1	5	0	1	0	1	0	1	1	2	0	0	1	1	9
07:15 AM	0	5	0	5	2	0	1	3	0	0	9	9	1	1	0	2	19
07:30 AM	2	2	0	4	2	1	1	4	0	2	0	2	0	0	1	1	11
07:45 AM	2	2	0	4	6	0	0	6	0	2	2	4	0	0	0	0	14
Total	5	12	1	18	10	2	2	14	0	5	12	17	1	1	2	4	53
08:00 AM	2	1	0	3	1	2	4	7	0	2	1	3	0	0	0	0	13
08:15 AM	0	3	0	3	2	1	2	5	0	3	1	4	0	2	0	2	14
08:30 AM	3	3	2	8	2	2	3	7	0	0	0	0	1	0	1	2	17
08:45 AM	3	6	1	10	3	1	0	4	2	1	1	4	1	0	0	1	19
Total	8	13	3	24	8	6	9	23	2	6	3	11	2	2	1	5	63
09:00 AM	5	5	0	10	5	1	1	7	0	0	2	2	0	0	1	1	20
09:15 AM	1	8	0	9	2	0	3	5	2	4	4	10	0	3	1	4	28
Grand Total	22	46	4	72	29	14	17	60	5	19	25	49	5	6	5	16	197
Apprch %	30.6	63.9	5.6		48.3	23.3	28.3		10.2	38.8	51		31.2	37.5	31.2		
Total %	11.2	23.4	2	36.5	14.7	7.1	8.6	30.5	2.5	9.6	12.7	24.9	2.5	3	2.5	8.1	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**5**	0	**5**	2	0	1	3	0	0	**9**	**9**	**1**	**1**	0	**2**	**19**
07:30 AM	**2**	2	0	4	2	1	1	4	0	**2**	0	2	0	0	**1**	1	11
07:45 AM	2	2	0	4	**6**	0	0	6	0	2	2	4	0	0	0	0	14
08:00 AM	2	1	0	3	1	**2**	**4**	**7**	0	2	1	3	0	0	0	0	13
Total Volume	6	10	0	16	11	3	6	20	0	6	12	18	1	1	1	3	57
% App. Total	37.5	62.5	0		55	15	30		0	33.3	66.7		33.3	33.3	33.3		
PHF	.750	.500	.000	.800	.458	.375	.375	.714	.000	.750	.333	.500	.250	.250	.250	.375	.750

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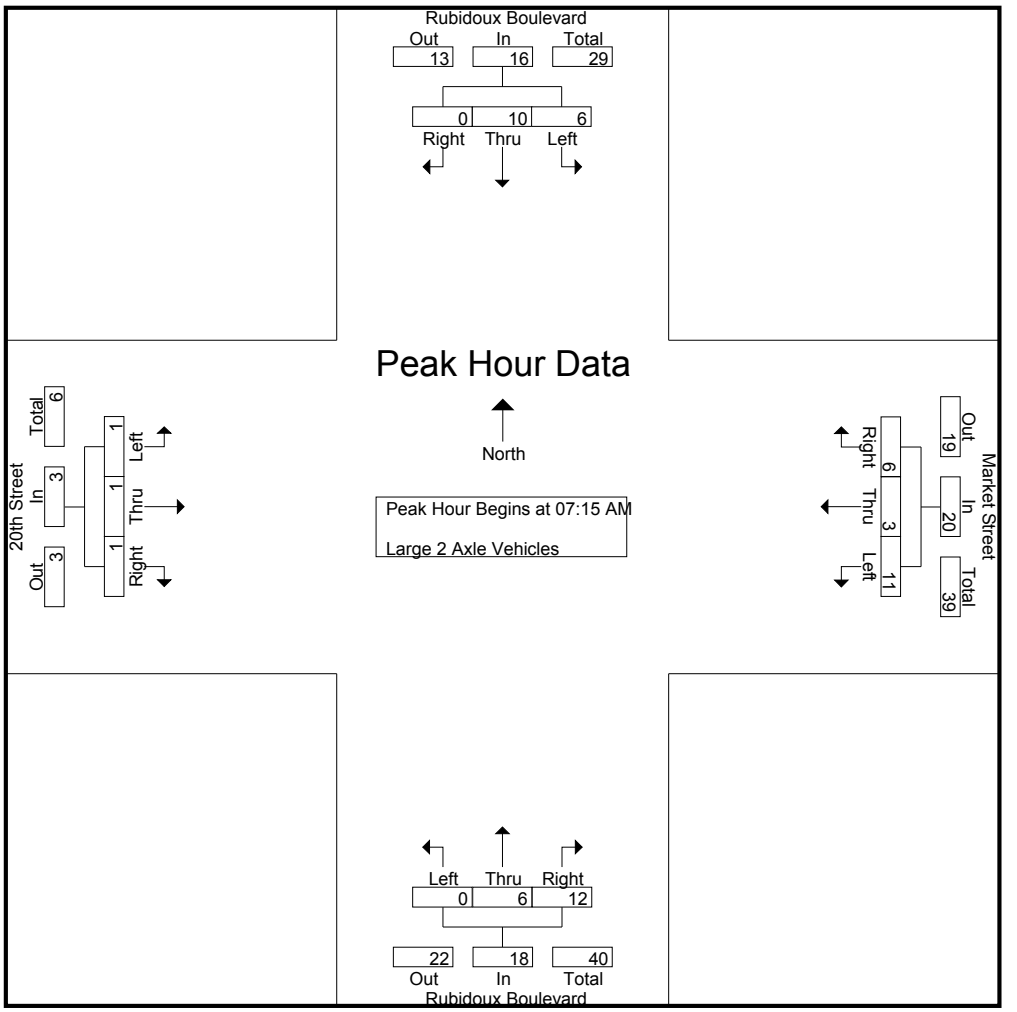
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**5**	0	**5**	2	0	1	3	0	0	**9**	**9**	**1**	**1**	0	**2**
+15 mins.	**2**	2	0	4	2	1	1	4	0	**2**	0	2	0	0	**1**	1
+30 mins.	2	2	0	4	**6**	0	0	6	0	2	2	4	0	0	0	0
+45 mins.	2	1	0	3	1	**2**	**4**	**7**	0	2	1	3	0	0	0	0
Total Volume	6	10	0	16	11	3	6	20	0	6	12	18	1	1	1	3
% App. Total	37.5	62.5	0		55	15	30		0	33.3	66.7		33.3	33.3	33.3	
PHF	.750	.500	.000	.800	.458	.375	.375	.714	.000	.750	.333	.500	.250	.250	.250	.375

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Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	2	0	0	2	2	7	1	10	0	1	2	3	0	5	3	8	23
06:45 AM	0	1	0	1	3	1	0	4	1	2	0	3	1	8	7	16	24
Total	2	1	0	3	5	8	1	14	1	3	2	6	1	13	10	24	47
07:00 AM	2	0	0	2	1	0	0	1	0	0	1	1	0	1	1	2	6
07:15 AM	1	2	1	4	7	1	1	9	0	0	3	3	1	0	1	2	18
07:30 AM	0	0	0	0	0	0	3	3	0	0	3	3	0	1	2	3	9
07:45 AM	1	0	1	2	3	0	1	4	0	0	1	1	0	0	0	0	7
Total	4	2	2	8	11	1	5	17	0	0	8	8	1	2	4	7	40
08:00 AM	0	0	0	0	2	1	2	5	1	1	2	4	0	0	0	0	9
08:15 AM	0	1	0	1	3	0	0	3	0	0	3	3	0	0	0	0	7
08:30 AM	2	1	0	3	3	0	0	3	0	1	6	7	0	0	2	2	15
08:45 AM	1	2	0	3	2	0	0	2	0	0	0	0	0	0	0	0	5
Total	3	4	0	7	10	1	2	13	1	2	11	14	0	0	2	2	36
09:00 AM	2	2	0	4	2	0	1	3	1	2	7	10	1	2	0	3	20
09:15 AM	1	0	0	1	3	4	1	8	0	0	3	3	0	0	1	1	13
Grand Total	12	9	2	23	31	14	10	55	3	7	31	41	3	17	17	37	156
Apprch %	52.2	39.1	8.7		56.4	25.5	18.2		7.3	17.1	75.6		8.1	45.9	45.9		
Total %	7.7	5.8	1.3	14.7	19.9	9	6.4	35.3	1.9	4.5	19.9	26.3	1.9	10.9	10.9	23.7	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	**2**	**1**	**4**	**7**	**1**	1	**9**	0	0	**3**	3	**1**	0	1	2	**18**
07:30 AM	0	0	0	0	0	0	**3**	3	0	0	3	3	0	**1**	**2**	**3**	9
07:45 AM	1	0	1	2	3	0	1	4	0	0	1	1	0	0	0	0	7
08:00 AM	0	0	0	0	2	1	2	5	**1**	**1**	2	**4**	0	0	0	0	9
Total Volume	2	2	2	6	12	2	7	21	1	1	9	11	1	1	3	5	43
% App. Total	33.3	33.3	33.3		57.1	9.5	33.3		9.1	9.1	81.8		20	20	60		
PHF	.500	.250	.500	.375	.429	.500	.583	.583	.250	.250	.750	.688	.250	.250	.375	.417	.597

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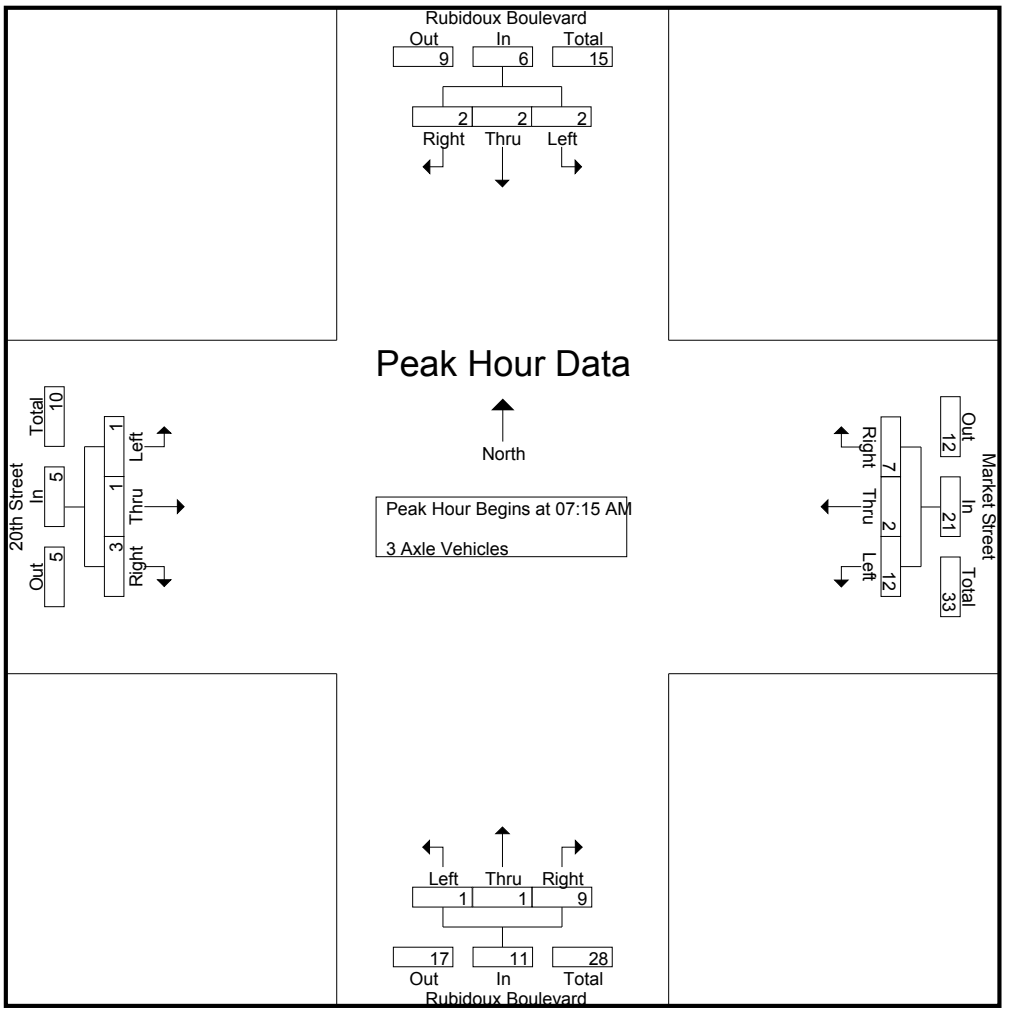
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	**2**	**1**	**4**	**7**	**1**	1	**9**	0	0	**3**	3	**1**	0	1	2
+15 mins.	0	0	0	0	0	0	**3**	3	0	0	3	3	0	**1**	**2**	**3**
+30 mins.	1	0	1	2	3	0	1	4	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	2	1	2	5	**1**	**1**	2	**4**	0	0	0	0
Total Volume	2	2	2	6	12	2	7	21	1	1	9	11	1	1	3	5
% App. Total	33.3	33.3	33.3		57.1	9.5	33.3		9.1	9.1	81.8		20	20	60	
PHF	.500	.250	.500	.375	.429	.500	.583	.583	.250	.250	.750	.688	.250	.250	.375	.417

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Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	1	4	0	5	7	0	1	8	1	2	6	9	3	2	0	5	27
06:45 AM	2	5	2	9	7	2	3	12	1	1	6	8	1	2	0	3	32
Total	3	9	2	14	14	2	4	20	2	3	12	17	4	4	0	8	59
07:00 AM	2	2	0	4	5	2	2	9	1	0	5	6	0	1	2	3	22
07:15 AM	1	1	2	4	6	0	0	6	0	3	9	12	0	0	0	0	22
07:30 AM	2	6	0	8	14	2	0	16	1	1	7	9	1	2	1	4	37
07:45 AM	0	1	0	1	4	0	0	4	0	1	2	3	0	2	0	2	10
Total	5	10	2	17	29	4	2	35	2	5	23	30	1	5	3	9	91
08:00 AM	4	4	0	8	3	1	3	7	2	3	6	11	2	2	0	4	30
08:15 AM	1	3	3	7	6	0	2	8	2	2	4	8	3	0	0	3	26
08:30 AM	1	6	0	7	8	4	2	14	1	1	10	12	1	2	0	3	36
08:45 AM	1	3	2	6	7	2	2	11	0	0	10	10	1	3	2	6	33
Total	7	16	5	28	24	7	9	40	5	6	30	41	7	7	2	16	125
09:00 AM	1	5	3	9	9	3	2	14	2	3	8	13	0	3	1	4	40
09:15 AM	2	6	4	12	9	3	1	13	0	2	5	7	2	5	2	9	41
Grand Total	18	46	16	80	85	19	18	122	11	19	78	108	14	24	8	46	356
Apprch %	22.5	57.5	20		69.7	15.6	14.8		10.2	17.6	72.2		30.4	52.2	17.4		
Total %	5.1	12.9	4.5	22.5	23.9	5.3	5.1	34.3	3.1	5.3	21.9	30.3	3.9	6.7	2.2	12.9	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	1	**2**	4	6	0	0	6	0	**3**	**9**	**12**	0	0	0	0	22
07:30 AM	2	**6**	0	**8**	**14**	**2**	0	**16**	1	1	7	9	1	**2**	**1**	**4**	**37**
07:45 AM	0	1	0	1	4	0	0	4	0	1	2	3	0	2	0	2	10
08:00 AM	**4**	4	0	8	3	1	**3**	7	**2**	3	6	11	**2**	2	0	4	30
Total Volume	7	12	2	21	27	3	3	33	3	8	24	35	3	6	1	10	99
% App. Total	33.3	57.1	9.5		81.8	9.1	9.1		8.6	22.9	68.6		30	60	10		
PHF	.438	.500	.250	.656	.482	.375	.250	.516	.375	.667	.667	.729	.375	.750	.250	.625	.669

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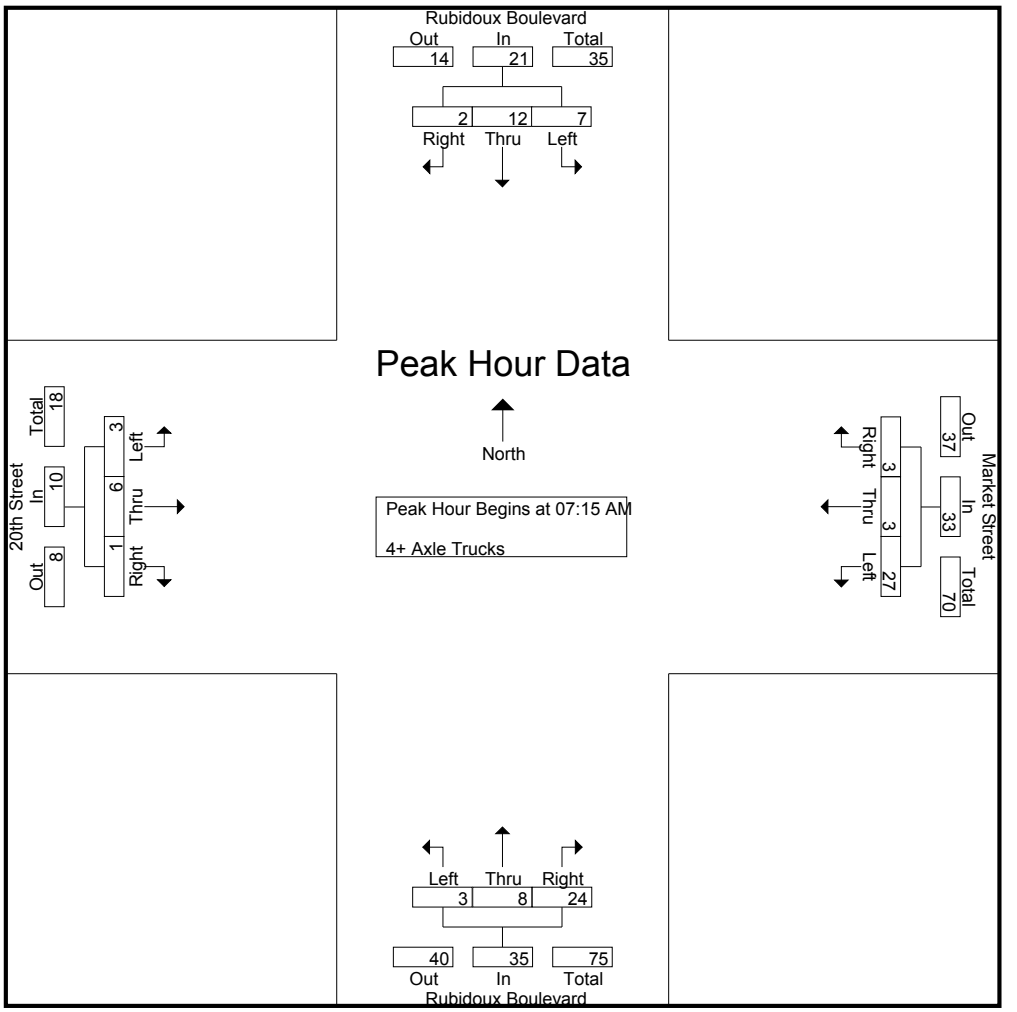
File Name : 01_JVYRUMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	1	**2**	4	6	0	0	6	0	**3**	**9**	**12**	0	0	0	0
+15 mins.	2	**6**	0	**8**	**14**	**2**	0	**16**	1	1	7	9	1	**2**	**1**	**4**
+30 mins.	0	1	0	1	4	0	0	4	0	1	2	3	0	2	0	2
+45 mins.	**4**	4	0	8	3	1	**3**	7	**2**	3	6	11	**2**	2	0	4
Total Volume	7	12	2	21	27	3	3	33	3	8	24	35	3	6	1	10
% App. Total	33.3	57.1	9.5		81.8	9.1	9.1		8.6	22.9	68.6		30	60	10	
PHF	.438	.500	.250	.656	.482	.375	.250	.516	.375	.667	.667	.729	.375	.750	.250	.625

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File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	94	85	5	184	68	4	83	155	6	68	98	172	16	15	4	35	546
03:45 PM	93	99	4	196	75	8	104	187	7	84	107	198	4	16	4	24	605
Total	187	184	9	380	143	12	187	342	13	152	205	370	20	31	8	59	1151
04:00 PM	109	116	1	226	53	9	73	135	3	87	76	166	5	15	2	22	549
04:15 PM	120	105	7	232	71	10	89	170	1	78	57	136	6	12	3	21	559
04:30 PM	93	101	4	198	47	8	92	147	3	96	72	171	1	10	2	13	529
04:45 PM	125	110	2	237	60	6	104	170	4	72	94	170	3	13	1	17	594
Total	447	432	14	893	231	33	358	622	11	333	299	643	15	50	8	73	2231
05:00 PM	98	99	4	201	67	6	112	185	1	90	94	185	8	15	0	23	594
05:15 PM	96	103	6	205	57	7	111	175	3	79	87	169	7	11	0	18	567
05:30 PM	117	111	7	235	55	8	113	176	1	90	93	184	6	10	1	17	612
05:45 PM	99	79	1	179	47	3	96	146	3	94	75	172	2	2	1	5	502
Total	410	392	18	820	226	24	432	682	8	353	349	710	23	38	2	63	2275
06:00 PM	71	74	5	150	53	3	67	123	1	73	72	146	2	7	0	9	428
06:15 PM	91	60	4	155	48	1	73	122	1	68	51	120	4	6	2	12	409
Grand Total	1206	1142	50	2398	701	73	1117	1891	34	979	976	1989	64	132	20	216	6494
Apprch %	50.3	47.6	2.1		37.1	3.9	59.1		1.7	49.2	49.1		29.6	61.1	9.3		
Total %	18.6	17.6	0.8	36.9	10.8	1.1	17.2	29.1	0.5	15.1	15	30.6	1	2	0.3	3.3	
Passenger Vehicles	1160	1063	37	2260	590	49	1080	1719	13	889	791	1693	51	107	11	169	5841
% Passenger Vehicles	96.2	93.1	74	94.2	84.2	67.1	96.7	90.9	38.2	90.8	81	85.1	79.7	81.1	55	78.2	89.9
Large 2 Axle Vehicles	10	19	4	33	25	5	9	39	7	40	27	74	3	12	1	16	162
% Large 2 Axle Vehicles	0.8	1.7	8	1.4	3.6	6.8	0.8	2.1	20.6	4.1	2.8	3.7	4.7	9.1	5	7.4	2.5
3 Axle Vehicles	23	20	3	46	18	5	11	34	3	15	47	65	2	0	3	5	150
% 3 Axle Vehicles	1.9	1.8	6	1.9	2.6	6.8	1	1.8	8.8	1.5	4.8	3.3	3.1	0	15	2.3	2.3
4+ Axle Trucks	13	40	6	59	68	14	17	99	11	35	111	157	8	13	5	26	341
% 4+ Axle Trucks	1.1	3.5	12	2.5	9.7	19.2	1.5	5.2	32.4	3.6	11.4	7.9	12.5	9.8	25	12	5.3

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**125**	110	2	**237**	60	6	104	170	**4**	72	**94**	170	3	13	**1**	17	594
05:00 PM	98	99	4	201	**67**	6	112	**185**	1	**90**	94	**185**	**8**	**15**	0	**23**	594
05:15 PM	96	103	6	205	57	7	111	175	3	79	87	169	7	11	0	18	567
05:30 PM	117	**111**	**7**	235	55	**8**	**113**	176	1	90	93	184	6	10	1	17	**612**
Total Volume	436	423	19	878	239	27	440	706	9	331	368	708	24	49	2	75	2367
% App. Total	49.7	48.2	2.2		33.9	3.8	62.3		1.3	46.8	52		32	65.3	2.7		
PHF	.872	.953	.679	.926	.892	.844	.973	.954	.563	.919	.979	.957	.750	.817	.500	.815	.967

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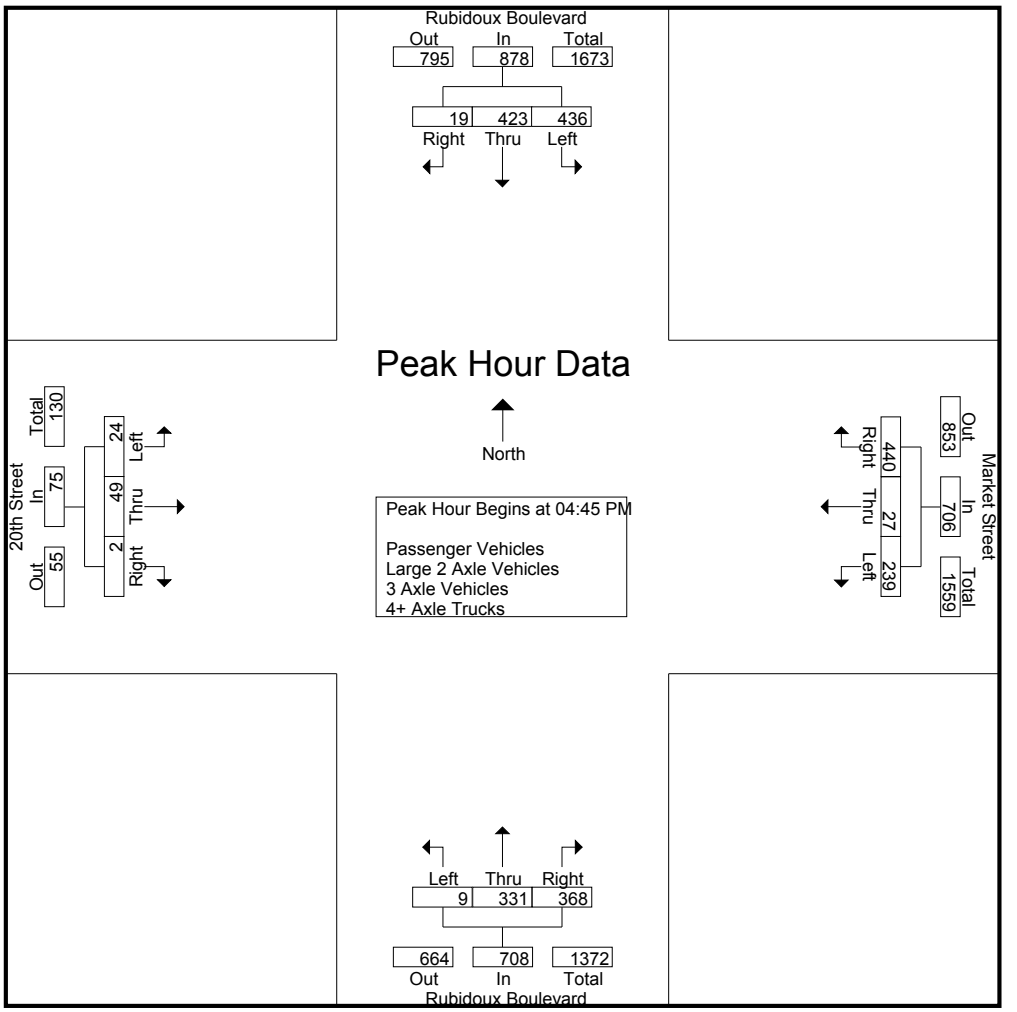
File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				05:00 PM				03:30 PM			
+0 mins.	109	**116**	1	226	60	6	104	170	1	90	**94**	**185**	**16**	15	**4**	**35**
+15 mins.	120	105	**7**	232	**67**	6	112	**185**	**3**	79	87	169	4	**16**	4	24
+30 mins.	93	101	4	198	57	7	111	175	1	90	93	184	5	15	2	22
+45 mins.	**125**	110	2	**237**	55	**8**	**113**	176	3	**94**	75	172	6	12	3	21
Total Volume	447	432	14	893	239	27	440	706	8	353	349	710	31	58	13	102
% App. Total	50.1	48.4	1.6		33.9	3.8	62.3		1.1	49.7	49.2		30.4	56.9	12.7	
PHF	.894	.931	.500	.942	.892	.844	.973	.954	.667	.939	.928	.959	.484	.906	.813	.729

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File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	87	78	4	169	54	3	74	131	2	64	76	142	12	11	1	24	466
03:45 PM	91	87	2	180	63	5	99	167	2	79	84	165	4	15	4	23	535
Total	178	165	6	349	117	8	173	298	4	143	160	307	16	26	5	47	1001
04:00 PM	107	108	1	216	42	3	72	117	1	81	60	142	3	10	1	14	489
04:15 PM	115	100	4	219	63	4	88	155	0	73	45	118	4	9	0	13	505
04:30 PM	87	90	3	180	34	8	85	127	2	87	57	146	1	8	2	11	464
04:45 PM	120	107	2	229	54	5	100	159	1	63	83	147	3	11	0	14	549
Total	429	405	10	844	193	20	345	558	4	304	245	553	11	38	3	52	2007
05:00 PM	95	92	2	189	58	3	111	172	1	83	75	159	8	15	0	23	543
05:15 PM	93	95	6	194	53	5	110	168	1	71	78	150	6	8	0	14	526
05:30 PM	111	106	5	222	46	6	109	161	1	79	79	159	4	6	1	11	553
05:45 PM	97	75	1	173	37	3	95	135	1	80	63	144	2	2	1	5	457
Total	396	368	14	778	194	17	425	636	4	313	295	612	20	31	2	53	2079
06:00 PM	68	68	5	141	43	3	64	110	0	67	52	119	2	6	0	8	378
06:15 PM	89	57	2	148	43	1	73	117	1	62	39	102	2	6	1	9	376
Grand Total	1160	1063	37	2260	590	49	1080	1719	13	889	791	1693	51	107	11	169	5841
Apprch %	51.3	47	1.6		34.3	2.9	62.8		0.8	52.5	46.7		30.2	63.3	6.5		
Total %	19.9	18.2	0.6	38.7	10.1	0.8	18.5	29.4	0.2	15.2	13.5	29	0.9	1.8	0.2	2.9	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**120**	**107**	2	**229**	54	5	100	159	**1**	63	**83**	147	3	11	0	14	549
05:00 PM	95	92	2	189	**58**	3	**111**	**172**	1	**83**	75	**159**	**8**	**15**	0	**23**	543
05:15 PM	93	95	**6**	194	53	5	110	168	1	71	78	150	6	8	0	14	526
05:30 PM	111	106	5	222	46	**6**	109	161	1	79	79	159	4	6	**1**	11	**553**
Total Volume	419	400	15	834	211	19	430	660	4	296	315	615	21	40	1	62	2171
% App. Total	50.2	48	1.8		32	2.9	65.2		0.7	48.1	51.2		33.9	64.5	1.6		
PHF	.873	.935	.625	.910	.909	.792	.968	.959	1.00	.892	.949	.967	.656	.667	.250	.674	.981

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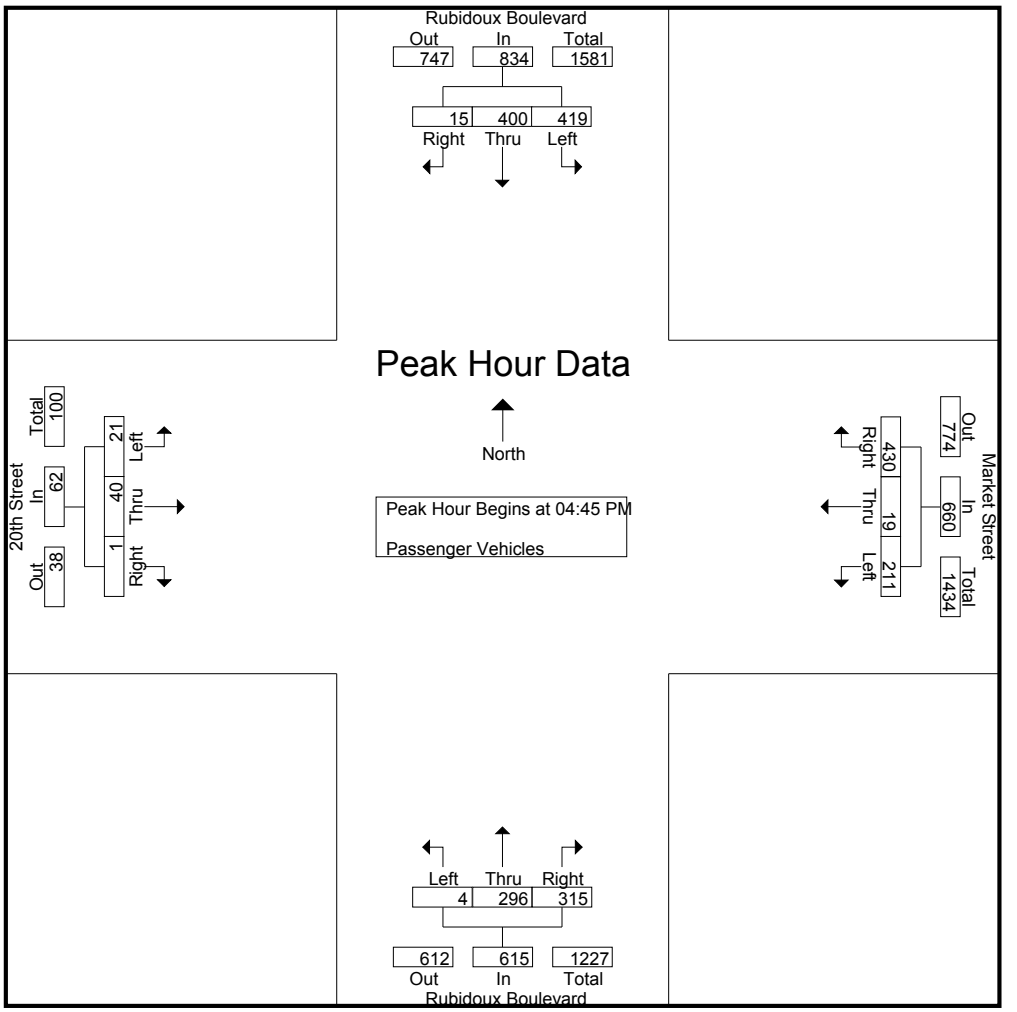
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**120**	**107**	2	**229**	54	5	100	159	**1**	63	**83**	147	3	11	0	14
+15 mins.	95	92	2	189	**58**	3	**111**	**172**	1	**83**	75	**159**	**8**	**15**	0	**23**
+30 mins.	93	95	**6**	194	53	5	110	168	1	71	78	150	6	8	0	14
+45 mins.	111	106	5	222	46	**6**	109	161	1	79	79	159	4	6	**1**	11
Total Volume	419	400	15	834	211	19	430	660	4	296	315	615	21	40	1	62
% App. Total	50.2	48	1.8		32	2.9	65.2		0.7	48.1	51.2		33.9	64.5	1.6	
PHF	.873	.935	.625	.910	.909	.792	.968	.959	1.000	.892	.949	.967	.656	.667	.250	.674

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File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	2	4	0	6	6	0	5	11	3	2	7	12	1	4	0	5	34
03:45 PM	1	2	0	3	2	1	1	4	1	2	3	6	0	0	0	0	13
Total	3	6	0	9	8	1	6	15	4	4	10	18	1	4	0	5	47
04:00 PM	1	3	0	4	3	1	0	4	0	2	3	5	1	1	1	3	16
04:15 PM	2	1	2	5	1	1	0	2	0	3	1	4	0	0	0	0	11
04:30 PM	1	1	0	2	2	0	2	4	0	4	4	8	0	1	0	1	15
04:45 PM	1	0	0	1	0	0	0	0	2	3	2	7	0	2	0	2	10
Total	5	5	2	12	6	2	2	10	2	12	10	24	1	4	1	6	52
05:00 PM	0	1	1	2	2	1	0	3	0	4	1	5	0	0	0	0	10
05:15 PM	0	4	0	4	0	1	0	1	0	3	0	3	0	1	0	1	9
05:30 PM	1	1	1	3	3	0	0	3	0	6	2	8	1	3	0	4	18
05:45 PM	0	0	0	0	4	0	0	4	1	5	0	6	0	0	0	0	10
Total	1	6	2	9	9	2	0	11	1	18	3	22	1	4	0	5	47
06:00 PM	1	0	0	1	1	0	1	2	0	3	2	5	0	0	0	0	8
06:15 PM	0	2	0	2	1	0	0	1	0	3	2	5	0	0	0	0	8
Grand Total	10	19	4	33	25	5	9	39	7	40	27	74	3	12	1	16	162
Apprch %	30.3	57.6	12.1		64.1	12.8	23.1		9.5	54.1	36.5		18.8	75	6.2		
Total %	6.2	11.7	2.5	20.4	15.4	3.1	5.6	24.1	4.3	24.7	16.7	45.7	1.9	7.4	0.6	9.9	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	0	1	0	0	0	0	**2**	3	**2**	7	0	2	0	2	10
05:00 PM	0	1	**1**	2	2	**1**	0	**3**	0	4	1	5	0	0	0	0	10
05:15 PM	0	**4**	0	**4**	0	1	0	1	0	3	0	3	0	1	0	1	9
05:30 PM	1	1	1	3	**3**	0	0	3	0	**6**	2	**8**	**1**	**3**	0	**4**	**18**
Total Volume	2	6	2	10	5	2	0	7	2	16	5	23	1	6	0	7	47
% App. Total	20	60	20		71.4	28.6	0		8.7	69.6	21.7		14.3	85.7	0		
PHF	.500	.375	.500	.625	.417	.500	.000	.583	.250	.667	.625	.719	.250	.500	.000	.438	.653

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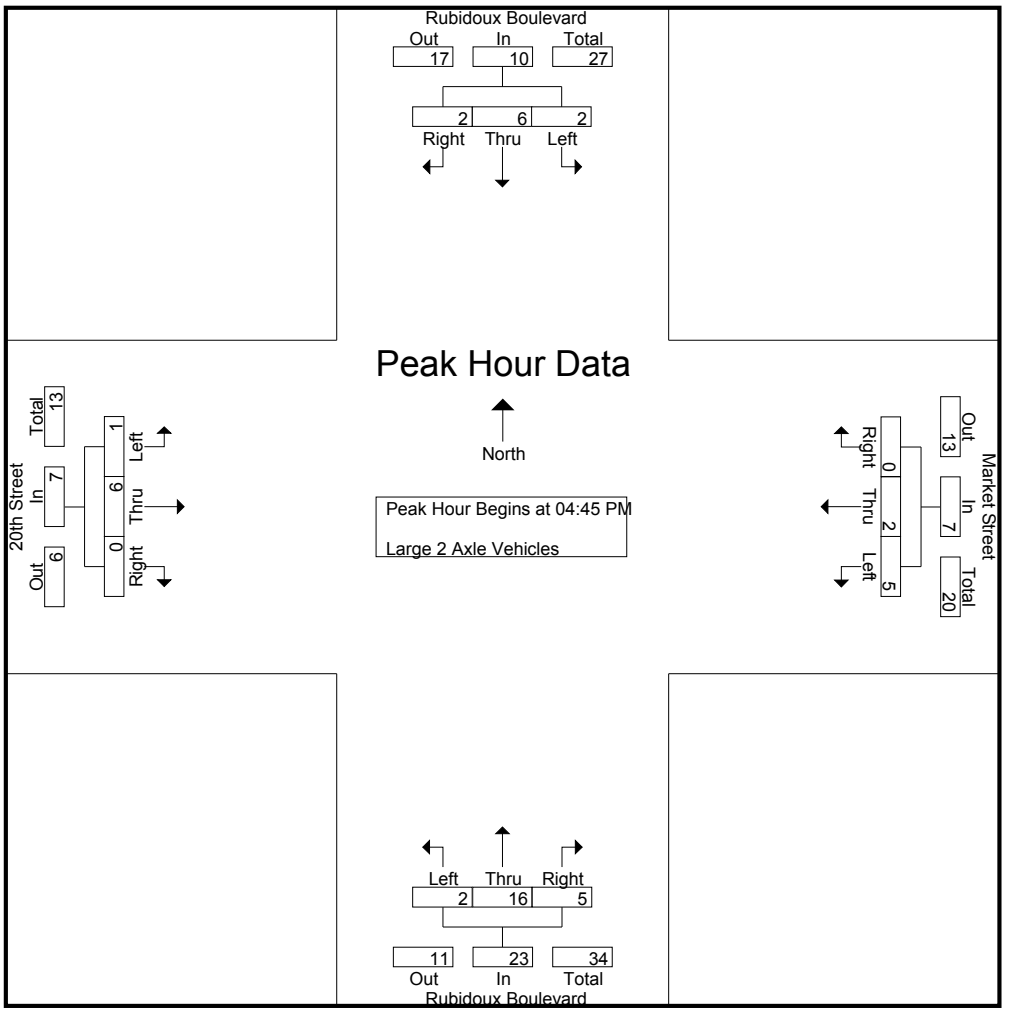
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	0	0	1	0	0	0	0	**2**	3	**2**	7	0	2	0	2
+15 mins.	0	1	**1**	2	2	**1**	0	**3**	0	4	1	5	0	0	0	0
+30 mins.	0	**4**	0	**4**	0	1	0	1	0	3	0	3	0	1	0	1
+45 mins.	1	1	1	3	**3**	0	0	3	0	**6**	2	**8**	**1**	**3**	0	**4**
Total Volume	2	6	2	10	5	2	0	7	2	16	5	23	1	6	0	7
% App. Total	20	60	20		71.4	28.6	0		8.7	69.6	21.7		14.3	85.7	0	
PHF	.500	.375	.500	.625	.417	.500	.000	.583	.250	.667	.625	.719	.250	.500	.000	.438

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 20th Street/Market Street
Weather: Clear

File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

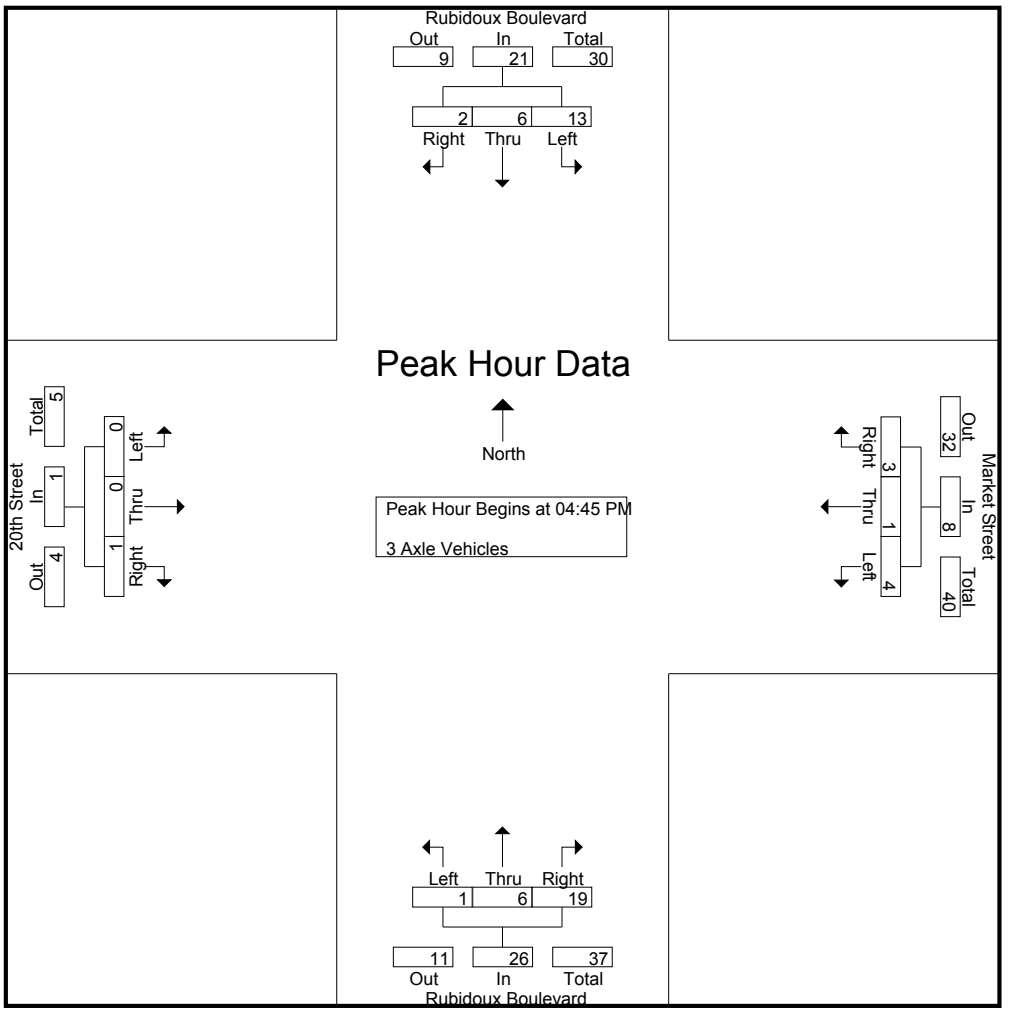
	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	1	0	0	1	1	0	2	3	0	0	2	2	0	0	1	1	7
03:45 PM	0	5	0	5	2	0	2	4	1	1	6	8	0	0	0	0	17
Total	1	5	0	6	3	0	4	7	1	1	8	10	0	0	1	1	24
04:00 PM	1	3	0	4	3	1	0	4	0	1	3	4	1	0	0	1	13
04:15 PM	2	0	0	2	2	3	0	5	0	1	3	4	1	0	1	2	13
04:30 PM	5	6	1	12	4	0	2	6	0	1	7	8	0	0	0	0	26
04:45 PM	4	1	0	5	1	0	1	2	0	3	5	8	0	0	1	1	16
Total	12	10	1	23	10	4	3	17	0	6	18	24	2	0	2	4	68
05:00 PM	2	2	1	5	2	0	0	2	0	1	7	8	0	0	0	0	15
05:15 PM	2	2	0	4	0	1	1	2	1	1	2	4	0	0	0	0	10
05:30 PM	5	1	1	7	1	0	1	2	0	1	5	6	0	0	0	0	15
05:45 PM	1	0	0	1	0	0	1	1	0	5	3	8	0	0	0	0	10
Total	10	5	2	17	3	1	3	7	1	8	17	26	0	0	0	0	50
06:00 PM	0	0	0	0	2	0	1	3	1	0	4	5	0	0	0	0	8
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	23	20	3	46	18	5	11	34	3	15	47	65	2	0	3	5	150
Apprch %	50	43.5	6.5		52.9	14.7	32.4		4.6	23.1	72.3		40	0	60		
Total %	15.3	13.3	2	30.7	12	3.3	7.3	22.7	2	10	31.3	43.3	1.3	0	2	3.3	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	1	0	5	1	0	**1**	**2**	0	**3**	5	**8**	0	0	**1**	**1**	**16**
05:00 PM	2	**2**	**1**	5	**2**	0	0	2	0	1	**7**	8	0	0	0	0	15
05:15 PM	2	2	0	4	0	**1**	1	2	**1**	1	2	4	0	0	0	0	10
05:30 PM	**5**	1	1	**7**	1	0	1	2	0	1	5	6	0	0	0	0	15
Total Volume	13	6	2	21	4	1	3	8	1	6	19	26	0	0	1	1	56
% App. Total	61.9	28.6	9.5		50	12.5	37.5		3.8	23.1	73.1		0	0	100		
PHF	.650	.750	.500	.750	.500	.250	.750	1.00	.250	.500	.679	.813	.000	.000	.250	.250	.875

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 20th Street/Market Street
Weather: Clear

File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	4	1	0	5	1	0	**1**	**2**	0	**3**	5	**8**	0	0	**1**	**1**
+15 mins.	2	**2**	**1**	5	**2**	0	0	2	0	1	**7**	8	0	0	0	0
+30 mins.	2	2	0	4	0	**1**	1	2	**1**	1	2	4	0	0	0	0
+45 mins.	**5**	1	1	**7**	1	0	1	2	0	1	5	6	0	0	0	0
Total Volume	13	6	2	21	4	1	3	8	1	6	19	26	0	0	1	1
% App. Total	61.9	28.6	9.5		50	12.5	37.5		3.8	23.1	73.1		0	0	100	
PHF	.650	.750	.500	.750	.500	.250	.750	1.000	.250	.500	.679	.813	.000	.000	.250	.250

Counts Unlimited
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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 20th Street/Market Street
Weather: Clear

File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	4	3	1	8	7	1	2	10	1	2	13	16	3	0	2	5	39
03:45 PM	1	5	2	8	8	2	2	12	3	2	14	19	0	1	0	1	40
Total	5	8	3	16	15	3	4	22	4	4	27	35	3	1	2	6	79
04:00 PM	0	2	0	2	5	4	1	10	2	3	10	15	0	4	0	4	31
04:15 PM	1	4	1	6	5	2	1	8	1	1	8	10	1	3	2	6	30
04:30 PM	0	4	0	4	7	0	3	10	1	4	4	9	0	1	0	1	24
04:45 PM	0	2	0	2	5	1	3	9	1	3	4	8	0	0	0	0	19
Total	1	12	1	14	22	7	8	37	5	11	26	42	1	8	2	11	104
05:00 PM	1	4	0	5	5	2	1	8	0	2	11	13	0	0	0	0	26
05:15 PM	1	2	0	3	4	0	0	4	1	4	7	12	1	2	0	3	22
05:30 PM	0	3	0	3	5	2	3	10	0	4	7	11	1	1	0	2	26
05:45 PM	1	4	0	5	6	0	0	6	1	4	9	14	0	0	0	0	25
Total	3	13	0	16	20	4	4	28	2	14	34	50	2	3	0	5	99
06:00 PM	2	6	0	8	7	0	1	8	0	3	14	17	0	1	0	1	34
06:15 PM	2	1	2	5	4	0	0	4	0	3	10	13	2	0	1	3	25
Grand Total	13	40	6	59	68	14	17	99	11	35	111	157	8	13	5	26	341
Apprch %	22	67.8	10.2		68.7	14.1	17.2		7	22.3	70.7		30.8	50	19.2		
Total %	3.8	11.7	1.8	17.3	19.9	4.1	5	29	3.2	10.3	32.6	46	2.3	3.8	1.5	7.6	

	Rubidoux Boulevard Southbound				Market Street Westbound				Rubidoux Boulevard Northbound				20th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	2	0	2	**5**	1	**3**	9	**1**	3	4	8	0	0	0	0	19
05:00 PM	**1**	**4**	0	**5**	5	**2**	1	8	0	2	**11**	**13**	0	0	0	0	**26**
05:15 PM	1	2	0	3	4	0	0	4	1	**4**	7	12	**1**	**2**	0	**3**	22
05:30 PM	0	3	0	3	5	2	3	**10**	0	4	7	11	1	1	0	2	26
Total Volume	2	11	0	13	19	5	7	31	2	13	29	44	2	3	0	5	93
% App. Total	15.4	84.6	0		61.3	16.1	22.6		4.5	29.5	65.9		40	60	0		
PHF	.500	.688	.000	.650	.950	.625	.583	.775	.500	.813	.659	.846	.500	.375	.000	.417	.894

Counts Unlimited
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City of Jurupa Valley
N/S: Rubidoux Boulevard
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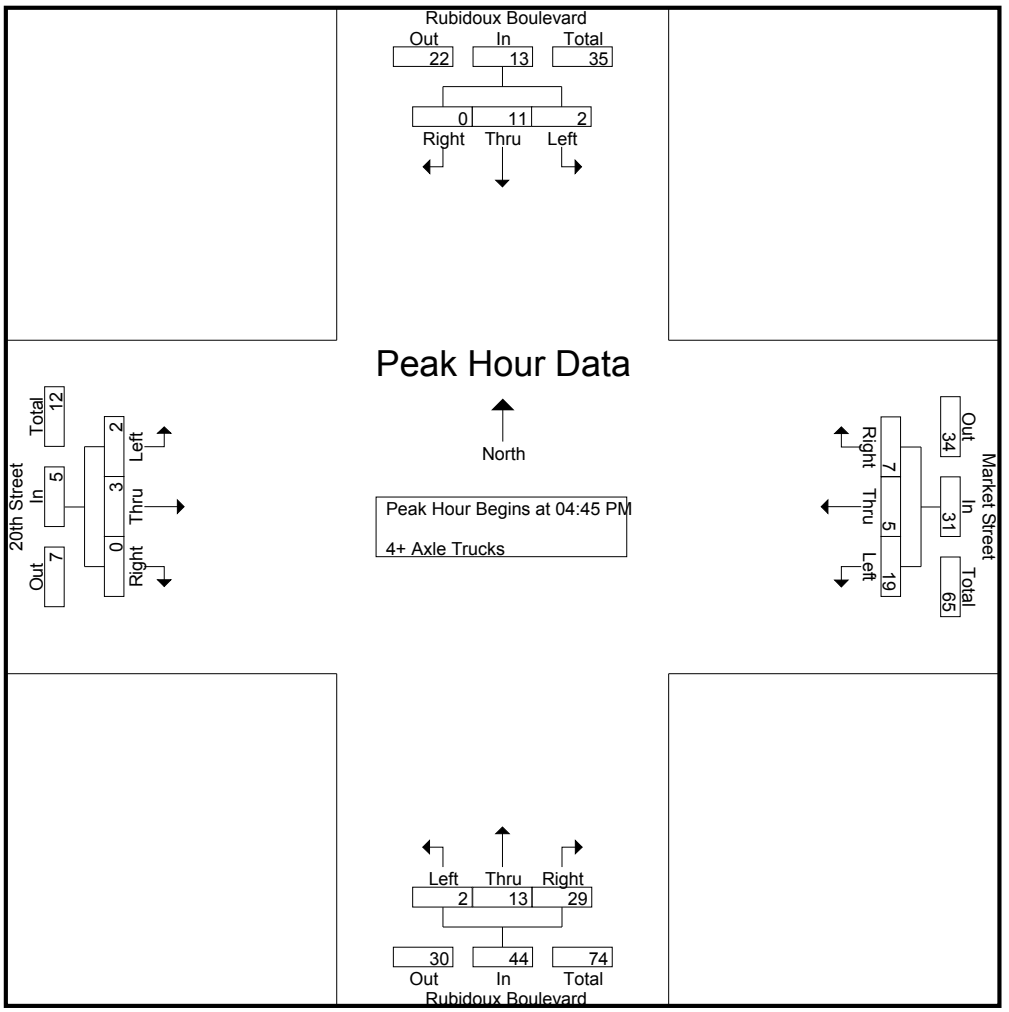
Weather: Clear

File Name : 01_JVYRUMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	2	0	2	**5**	1	**3**	9	**1**	3	4	8	0	0	0	0
+15 mins.	**1**	**4**	0	**5**	5	**2**	1	8	0	2	**11**	**13**	0	0	0	0
+30 mins.	1	2	0	3	4	0	0	4	1	**4**	7	12	**1**	**2**	0	**3**
+45 mins.	0	3	0	3	5	2	3	**10**	0	4	7	11	1	1	0	2
Total Volume	2	11	0	13	19	5	7	31	2	13	29	44	2	3	0	5
% App. Total	15.4	84.6	0		61.3	16.1	22.6		4.5	29.5	65.9		40	60	0	
PHF	.500	.688	.000	.650	.950	.625	.583	.775	.500	.813	.659	.846	.500	.375	.000	.417

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: Market

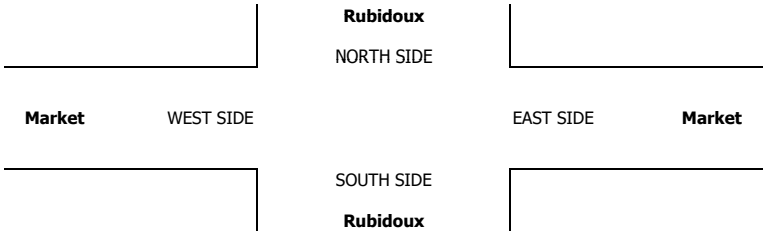
PROJECT #: SC1439
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N S E W

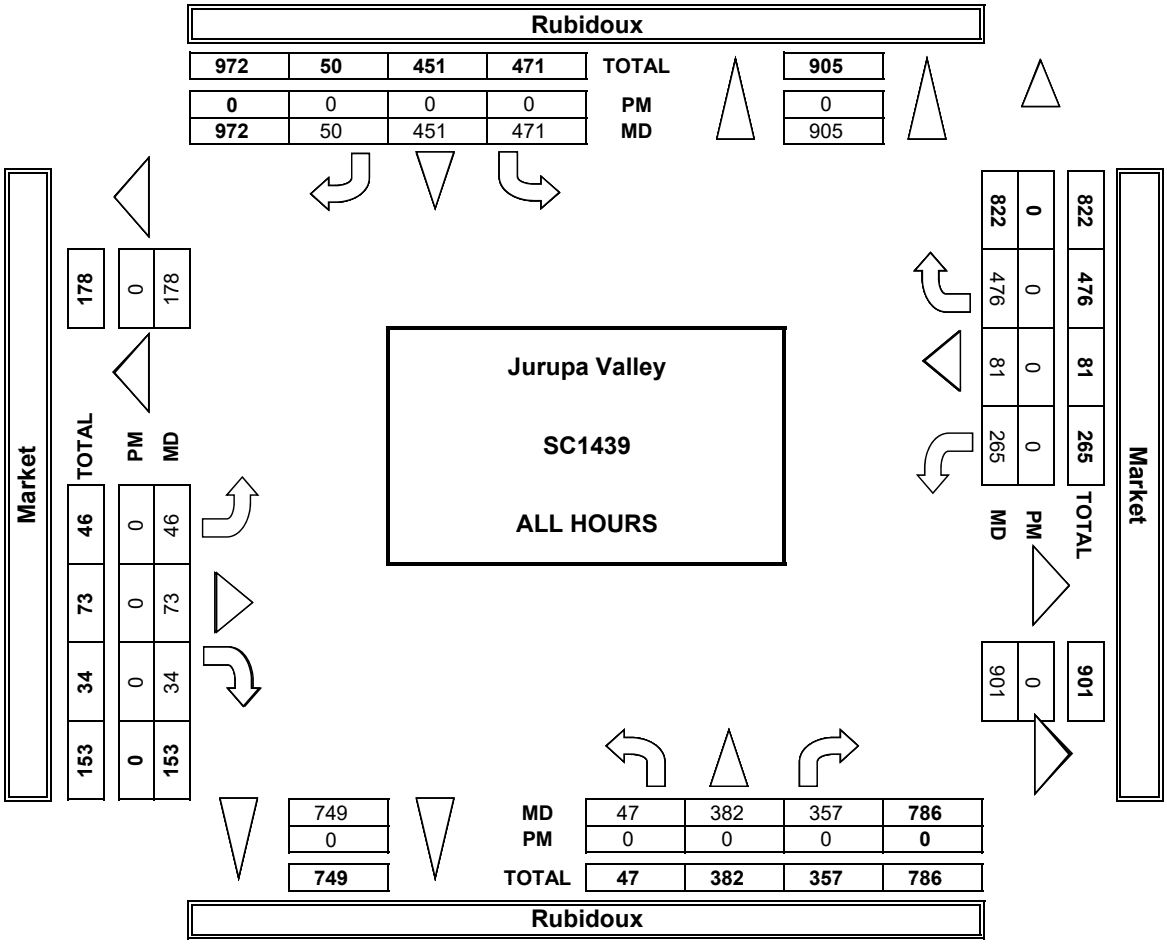
		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	6	46	50	66	64	8	3	6	2	28	6	44	329	0	0	0	0	0
	12:15 PM	1	52	34	59	51	4	6	7	3	42	10	75	344	0	0	0	0	0
	12:30 PM	5	52	48	59	48	5	5	8	7	33	5	60	335	0	1	0	0	1
	12:45 PM	3	41	34	52	56	8	3	4	5	24	10	69	309	0	0	0	0	0
	1:00 PM	5	47	47	47	66	9	8	9	2	32	13	49	334	0	0	0	0	0
	1:15 PM	15	47	39	74	54	5	5	8	4	35	11	55	352	0	0	0	0	0
	1:30 PM	6	48	48	46	59	6	9	12	5	44	13	58	354	0	0	0	0	0
	1:45 PM	6	49	57	68	53	5	7	19	6	27	13	66	376	0	0	0	1	1
	VOLUMES	47	382	357	471	451	50	46	73	34	265	81	476	2,733	0	1	0	1	2
	APPROACH %	6%	49%	45%	48%	46%	5%	30%	48%	22%	32%	10%	58%						
	APP/DEPART	786	/	905	972	/	749	153	/	901	822	/	178	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	32	191	191	235	232	25	29	48	17	138	50	228	1,416					
	APPROACH %	8%	46%	46%	48%	47%	5%	31%	51%	18%	33%	12%	55%						
	PEAK HR FACTOR		0.924			0.925			0.734			0.904		0.941					
	APP/DEPART	414	/	448	492	/	386	94	/	475	416	/	107	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

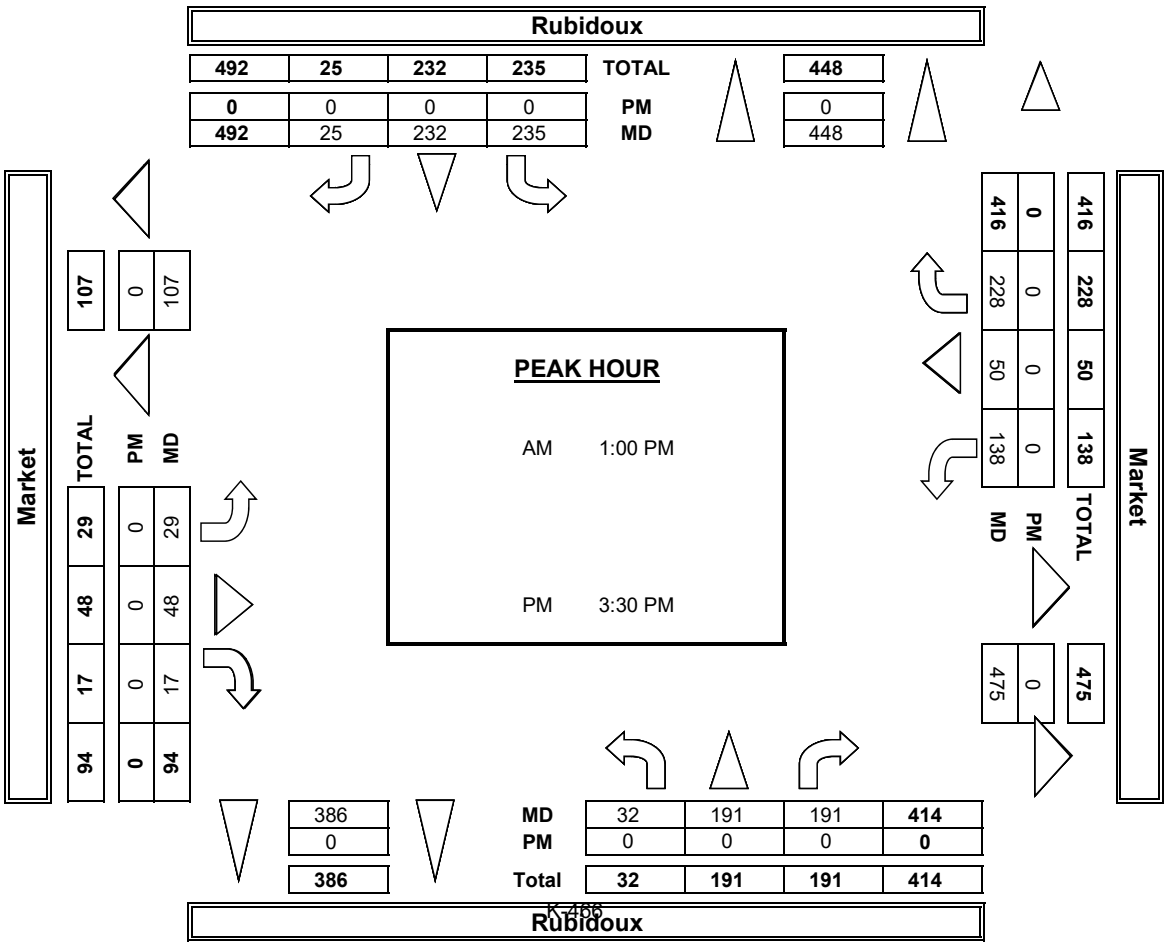


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





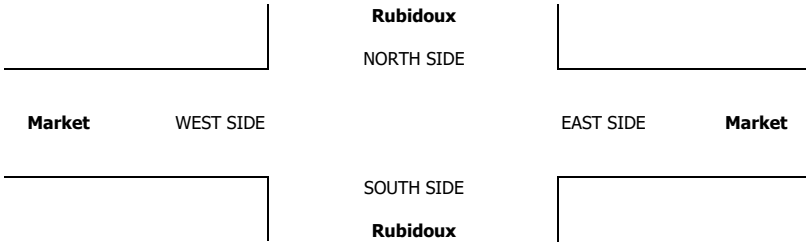
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
WEDNESDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	11	55	86	73	87	17	7	12	6	47	10	52	462
	8:15 AM	2	69	66	76	62	7	10	10	5	69	21	99	493
	8:30 AM	8	67	93	67	56	10	11	15	12	54	6	74	472
	8:45 AM	5	48	51	64	72	12	5	11	12	37	14	82	410
	9:00 AM	10	60	74	60	85	15	16	14	3	50	26	58	468
	9:15 AM	31	53	65	85	70	12	8	13	8	58	21	64	486
	9:30 AM	12	61	69	55	77	11	16	16	10	79	24	66	493
	9:45 AM	13	60	94	82	69	9	12	28	11	51	28	76	531
	VOLUMES	92	472	596	560	576	91	83	117	66	443	149	569	3,812
	APPROACH %	8%	41%	51%	46%	47%	7%	31%	44%	25%	38%	13%	49%	
	APP/DEPART	1,159	/	1,124	1,227	/	1,085	266	/	1,272	1,161	/	331	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	66	233	301	282	301	46	50	70	32	237	98	264	1,977
	APPROACH %	11%	39%	50%	45%	48%	7%	33%	46%	21%	40%	16%	44%	
	PEAK HR FACTOR		0.903			0.942			0.755			0.893		0.931
	APP/DEPART	600	/	547	628	/	569	151	/	652	599	/	209	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

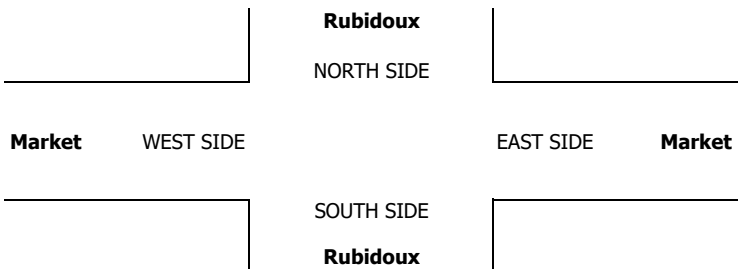
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
WEDNESDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	2	39	25	61	46	2	1	3	0	15	4	36	234	0	0	0	0	0
12:15 PM	0	39	13	47	41	2	4	4	2	23	4	56	235	0	0	0	0	0
12:30 PM	3	39	20	52	44	2	1	4	4	21	4	48	242	0	1	0	0	1
12:45 PM	1	35	19	43	47	5	2	0	1	16	7	57	233	0	0	0	0	0
1:00 PM	2	35	26	40	52	5	3	6	1	19	5	40	234	0	0	0	0	0
1:15 PM	2	42	20	62	45	1	3	3	1	19	3	46	247	0	0	0	0	0
1:30 PM	1	39	31	39	46	3	4	8	2	23	5	49	250	0	0	0	0	0
1:45 PM	2	40	31	56	45	2	4	12	3	13	4	56	268	0	0	0	1	1
VOLUMES	13	308	185	400	366	22	22	40	14	149	36	388	1,943	0	1	0	1	2
APPROACH %	3%	61%	37%	51%	46%	3%	29%	53%	18%	26%	6%	68%						
APP/DEPART	506	/	719	788	/	528	76	/	625	573	/	71	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	7	156	108	197	188	11	14	29	7	73	17	191	999					
APPROACH %	3%	58%	40%	50%	47%	3%	28%	58%	14%	26%	6%	68%						
PEAK HR FACTOR		0.928			0.917			0.658			0.916		0.932					
APP/DEPART	271	/	361	396	/	268	50	/	335	282	/	35	0					
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

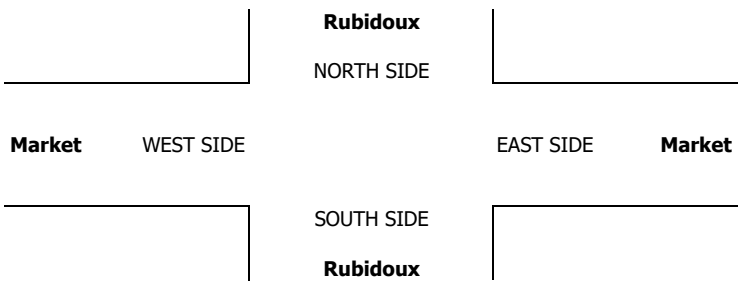
DATE:				
8/23/17	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
WEDNESDAY	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
	EAST & WEST:	Market	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	2	4	1	7	0	0	0	0	4	0	3	21	0	0	0	0	0
12:15 PM	0	5	3	3	3	1	0	2	0	3	0	7	27	0	0	0	0	0
12:30 PM	0	6	3	2	0	0	0	1	0	0	0	3	15	0	0	0	0	0
12:45 PM	0	2	5	3	1	0	0	1	1	1	1	6	21	0	0	0	0	0
1:00 PM	0	7	6	1	4	1	1	1	0	3	1	4	29	0	0	0	0	0
1:15 PM	2	3	5	6	1	0	1	2	1	2	2	6	31	0	0	0	0	0
1:30 PM	2	2	4	2	2	1	1	1	0	3	1	7	26	0	0	0	0	0
1:45 PM	1	4	3	6	0	1	1	3	0	2	0	4	25	0	0	0	0	0
VOLUMES	5	31	33	24	18	4	4	11	2	18	5	40	195	0	0	0	0	0
APPROACH %	7%	45%	48%	52%	39%	9%	24%	65%	12%	29%	8%	63%						
APP/DEPART	69	/	75	46	/	38	17	/	68	63	/	14	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	5	16	18	15	7	3	4	7	1	10	4	21	111					
APPROACH %	13%	41%	46%	60%	28%	12%	33%	58%	8%	29%	11%	60%						
PEAK HR FACTOR		0.750			0.893			0.750			0.795		0.895					
APP/DEPART	39	/	41	25	/	18	12	/	40	35	/	12	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

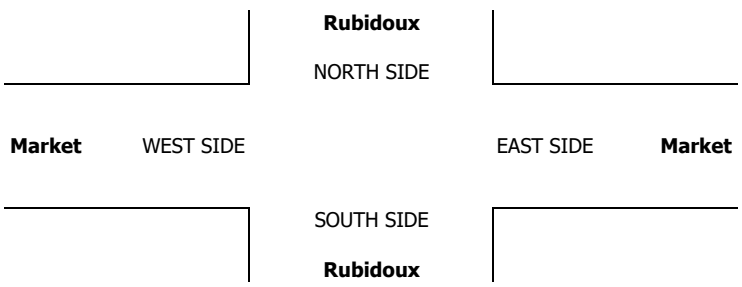
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
WEDNESDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	3	2	8	2	2	3	0	0	0	1	0	4	25	0	0	0	0	0
	12:15 PM	1	2	5	3	5	0	0	0	0	7	1	4	28	0	0	0	0	0
	12:30 PM	1	2	7	3	0	1	2	0	1	3	1	6	27	0	0	0	0	0
	12:45 PM	2	2	6	2	1	2	0	0	0	2	1	1	19	0	0	0	0	0
	1:00 PM	1	1	6	0	3	1	1	0	1	4	2	3	23	0	0	0	0	0
	1:15 PM	7	0	5	4	1	1	0	2	1	6	3	0	30	0	0	0	0	0
	1:30 PM	1	1	7	2	4	0	2	3	1	3	4	0	28	0	0	0	0	0
	1:45 PM	0	0	11	1	0	1	0	1	1	0	3	4	22	0	0	0	0	0
	VOLUMES	16	10	55	17	16	9	5	6	5	26	15	22	202	0	0	0	0	0
	APPROACH %	20%	12%	68%	40%	38%	21%	31%	38%	31%	41%	24%	35%						
	APP/DEPART	81	/	37	42	/	47	16	/	78	63	/	40	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	9	2	29	7	8	3	3	6	4	13	12	7	103					
	APPROACH %	23%	5%	73%	39%	44%	17%	23%	46%	31%	41%	38%	22%						
	PEAK HR FACTOR		0.833			0.750			0.542			0.889		0.858					
	APP/DEPART	40	/	12	18	/	25	13	/	42	32	/	24	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

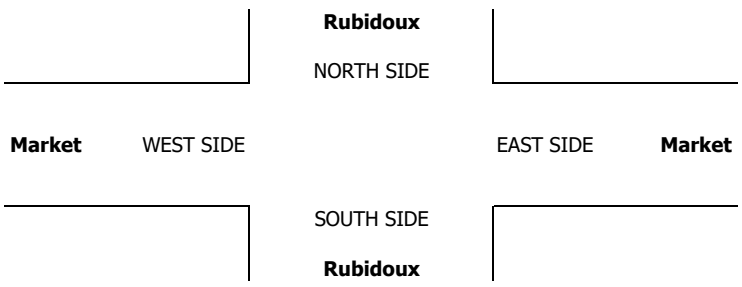
DATE:				
8/23/17	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
WEDNESDAY	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
	EAST & WEST:	Market	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	3	13	2	8	3	2	3	2	8	2	1	48	0	0	0	0	0
12:15 PM	0	6	12	6	2	1	2	1	1	9	5	8	53	0	0	0	0	0
12:30 PM	1	5	18	2	4	2	2	3	2	9	0	3	51	0	0	0	0	0
12:45 PM	0	2	4	4	7	1	1	3	3	5	1	4	35	0	0	0	0	0
1:00 PM	2	4	9	6	7	2	3	2	0	6	5	2	48	0	0	0	0	0
1:15 PM	4	2	9	2	7	3	1	1	1	8	3	3	44	0	0	0	0	0
1:30 PM	2	5	6	3	6	2	2	0	2	15	3	2	48	0	0	0	0	0
1:45 PM	3	4	12	5	8	1	2	3	2	11	6	2	59	0	0	0	0	0
MD VOLUMES	13	31	83	30	49	15	15	16	13	71	25	25	386	0	0	0	0	0
MD APPROACH %	10%	24%	65%	32%	52%	16%	34%	36%	30%	59%	21%	21%						
MD APP/DEPART	127	/	71	94	/	133	44	/	129	121	/	53	0					
MD BEGIN PEAK HR		1:00 PM																
MD VOLUMES	11	15	36	16	28	8	8	6	5	40	17	9	199					
MD APPROACH %	18%	24%	58%	31%	54%	15%	42%	32%	26%	61%	26%	14%						
MD PEAK HR FACTOR		0.816			0.867			0.679			0.825		0.843					
MD APP/DEPART	62	/	32	52	/	73	19	/	58	66	/	36	0					
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PM APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM BEGIN PEAK HR		3:30 PM																
PM VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
PM APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PM PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
PM APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

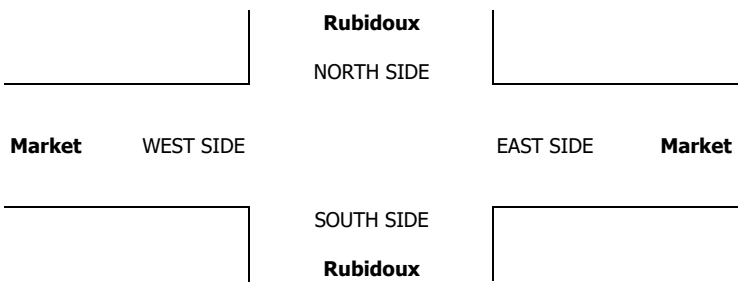
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
WEDNESDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Rubidoux)			SOUTHBOUND (Rubidoux)			EASTBOUND (Market)			WESTBOUND (Market)				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

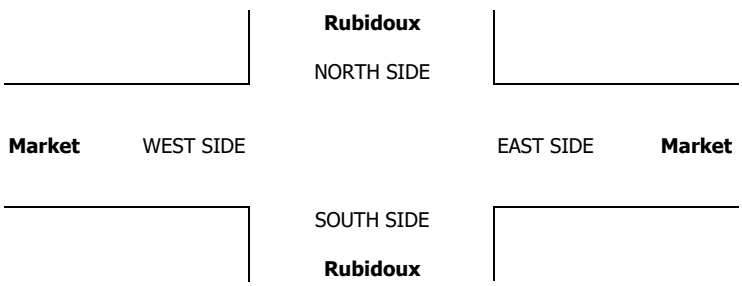
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	9
WEDNESDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	1:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0
	VOLUMES	0	2	1	0	2	0	0	0	0	1	0	1	7	0	0	0	0	0
	APPROACH %	0%	67%	33%	0%	100%	0%	0%	0%	0%	50%	0%	50%						
	APP/DEPART	3	/	3	2	/	3	0	/	1	2	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	2	0	0	1	0	0	0	0	1	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.500			0.250			0.000			0.250		0.500					
	APP/DEPART	2	/	2	1	/	2	0	/	0	1	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 24th Street
Weather: Clear

File Name : 08_JVYRU24AM
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	10	101	0	111	1	1	3	5	3	103	4	110	0	0	1	1	227
06:45 AM	13	104	0	117	2	2	4	8	1	114	6	121	1	1	2	4	250
Total	23	205	0	228	3	3	7	13	4	217	10	231	1	1	3	5	477
07:00 AM	13	124	0	137	3	0	4	7	5	110	7	122	1	1	6	8	274
07:15 AM	18	160	1	179	1	2	2	5	6	89	2	97	0	0	1	1	282
07:30 AM	29	166	0	195	0	0	2	2	0	108	4	112	0	1	0	1	310
07:45 AM	23	172	0	195	2	0	4	6	3	90	8	101	0	0	1	1	303
Total	83	622	1	706	6	2	12	20	14	397	21	432	1	2	8	11	1169
08:00 AM	15	138	0	153	3	2	1	6	2	94	15	111	0	0	4	4	274
08:15 AM	15	121	0	136	4	1	1	6	6	113	5	124	0	2	1	3	269
08:30 AM	8	111	0	119	3	1	3	7	5	90	3	98	0	1	3	4	228
08:45 AM	4	100	0	104	3	0	1	4	3	98	8	109	0	2	1	3	220
Total	42	470	0	512	13	4	6	23	16	395	31	442	0	5	9	14	991
09:00 AM	6	89	0	95	6	1	3	10	2	64	4	70	1	2	2	5	180
09:15 AM	2	94	0	96	3	1	3	7	0	71	6	77	0	2	1	3	183
Grand Total	156	1480	1	1637	31	11	31	73	36	1144	72	1252	3	12	23	38	3000
Apprch %	9.5	90.4	0.1		42.5	15.1	42.5		2.9	91.4	5.8		7.9	31.6	60.5		
Total %	5.2	49.3	0	54.6	1	0.4	1	2.4	1.2	38.1	2.4	41.7	0.1	0.4	0.8	1.3	
Passenger Vehicles	152	1140	1	1293	24	8	27	59	20	908	50	978	3	12	9	24	2354
% Passenger Vehicles	97.4	77	100	79	77.4	72.7	87.1	80.8	55.6	79.4	69.4	78.1	100	100	39.1	63.2	78.5
Large 2 Axle Vehicles	3	126	0	129	5	2	3	10	4	67	9	80	0	0	3	3	222
% Large 2 Axle Vehicles	1.9	8.5	0	7.9	16.1	18.2	9.7	13.7	11.1	5.9	12.5	6.4	0	0	13	7.9	7.4
3 Axle Vehicles	0	56	0	56	1	0	0	1	6	63	3	72	0	0	7	7	136
% 3 Axle Vehicles	0	3.8	0	3.4	3.2	0	0	1.4	16.7	5.5	4.2	5.8	0	0	30.4	18.4	4.5
4+ Axle Trucks	1	158	0	159	1	1	1	3	6	106	10	122	0	0	4	4	288
% 4+ Axle Trucks	0.6	10.7	0	9.7	3.2	9.1	3.2	4.1	16.7	9.3	13.9	9.7	0	0	17.4	10.5	9.6

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	13	124	0	137	**3**	0	**4**	**7**	5	**110**	7	**122**	**1**	**1**	**6**	**8**	274
07:15 AM	18	160	**1**	179	1	**2**	2	5	**6**	89	2	97	0	0	1	1	282
07:30 AM	**29**	166	0	**195**	0	0	2	2	0	108	4	112	0	1	0	1	**310**
07:45 AM	23	**172**	0	195	2	0	4	6	3	90	**8**	101	0	0	1	1	303
Total Volume	83	622	1	706	6	2	12	20	14	397	21	432	1	2	8	11	1169
% App. Total	11.8	88.1	0.1		30	10	60		3.2	91.9	4.9		9.1	18.2	72.7		
PHF	.716	.904	.250	.905	.500	.250	.750	.714	.583	.902	.656	.885	.250	.500	.333	.344	.943

Counts Unlimited
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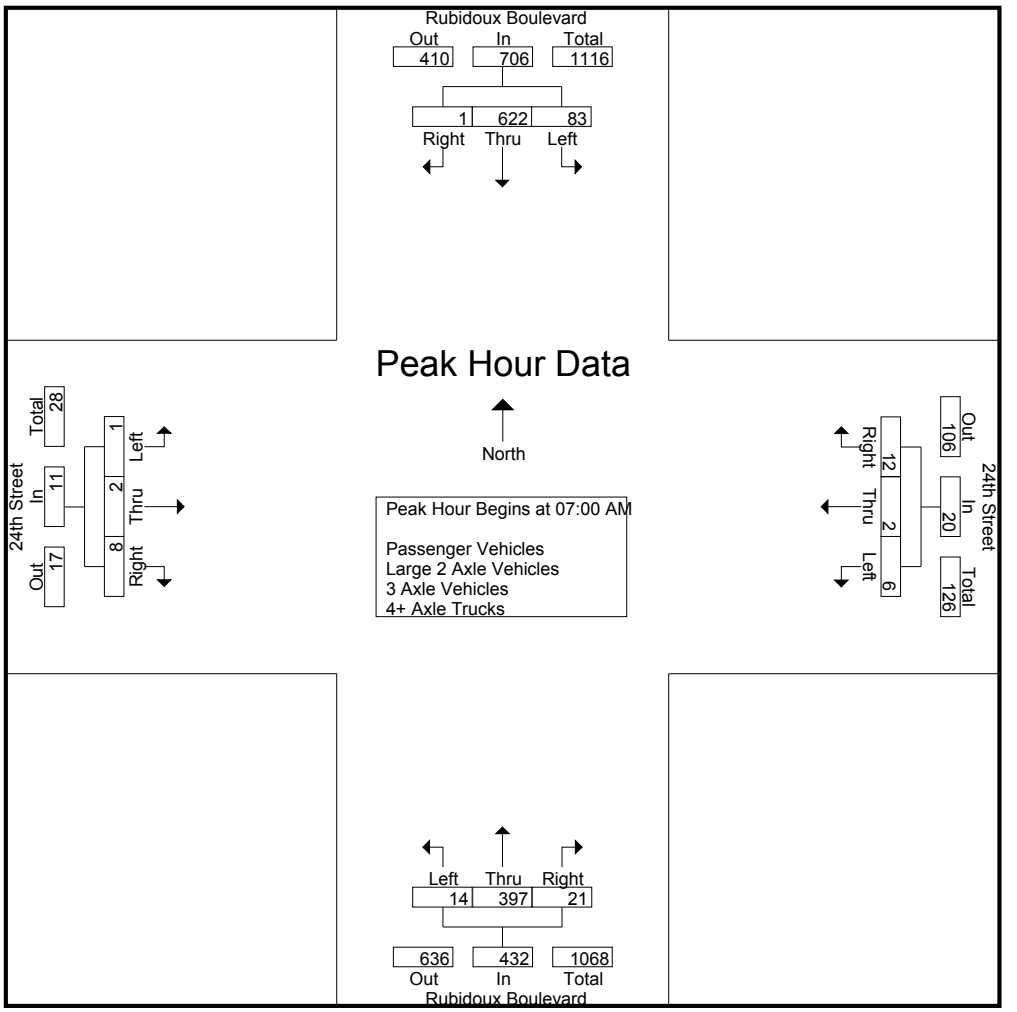
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 24th Street
Weather: Clear

File Name : 08_JVYRU24AM
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:30 AM				06:45 AM				08:15 AM			
+0 mins.	18	160	**1**	179	3	**1**	**3**	7	1	**114**	6	121	0	**2**	1	3
+15 mins.	**29**	166	0	**195**	3	0	1	4	5	110	**7**	**122**	0	1	**3**	4
+30 mins.	23	**172**	0	195	**6**	1	3	**10**	**6**	89	2	97	0	2	1	3
+45 mins.	15	138	0	153	3	1	3	7	0	108	4	112	**1**	2	2	**5**
Total Volume	85	636	1	722	15	3	10	28	12	421	19	452	1	7	7	15
% App. Total	11.8	88.1	0.1		53.6	10.7	35.7		2.7	93.1	4.2		6.7	46.7	46.7	
PHF	.733	.924	.250	.926	.625	.750	.833	.700	.500	.923	.679	.926	.250	.875	.583	.750

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City of Jurupa Valley
N/S: Rubidoux Boulevard
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Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	10	84	0	94	0	1	3	4	3	87	3	93	0	0	0	0	191
06:45 AM	12	88	0	100	2	2	4	8	1	102	5	108	1	1	1	3	219
Total	22	172	0	194	2	3	7	12	4	189	8	201	1	1	1	3	410
07:00 AM	13	97	0	110	3	0	4	7	3	88	5	96	1	1	1	3	216
07:15 AM	17	129	1	147	1	1	1	3	4	74	1	79	0	0	0	0	229
07:30 AM	29	141	0	170	0	0	2	2	0	93	4	97	0	1	0	1	270
07:45 AM	23	149	0	172	1	0	3	4	2	74	7	83	0	0	0	0	259
Total	82	516	1	599	5	1	10	16	9	329	17	355	1	2	1	4	974
08:00 AM	14	106	0	120	3	1	1	5	1	67	12	80	0	0	3	3	208
08:15 AM	15	83	0	98	3	1	1	5	2	80	1	83	0	2	1	3	189
08:30 AM	7	73	0	80	1	1	2	4	1	61	2	64	0	1	1	2	150
08:45 AM	4	66	0	70	2	0	1	3	1	83	5	89	0	2	0	2	164
Total	40	328	0	368	9	3	5	17	5	291	20	316	0	5	5	10	711
09:00 AM	6	59	0	65	6	0	3	9	2	45	1	48	1	2	2	5	127
09:15 AM	2	65	0	67	2	1	2	5	0	54	4	58	0	2	0	2	132
Grand Total	152	1140	1	1293	24	8	27	59	20	908	50	978	3	12	9	24	2354
Apprch %	11.8	88.2	0.1		40.7	13.6	45.8		2	92.8	5.1		12.5	50	37.5		
Total %	6.5	48.4	0	54.9	1	0.3	1.1	2.5	0.8	38.6	2.1	41.5	0.1	0.5	0.4	1	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	13	97	0	110	**3**	0	**4**	**7**	3	88	5	96	**1**	**1**	**1**	**3**	216
07:15 AM	17	129	**1**	147	1	**1**	1	3	**4**	74	1	79	0	0	0	0	229
07:30 AM	**29**	141	0	170	0	0	2	2	0	**93**	4	**97**	0	1	0	1	**270**
07:45 AM	23	**149**	0	**172**	1	0	3	4	2	74	**7**	83	0	0	0	0	259
Total Volume	82	516	1	599	5	1	10	16	9	329	17	355	1	2	1	4	974
% App. Total	13.7	86.1	0.2		31.2	6.2	62.5		2.5	92.7	4.8		25	50	25		
PHF	.707	.866	.250	.871	.417	.250	.625	.571	.563	.884	.607	.915	.250	.500	.250	.333	.902

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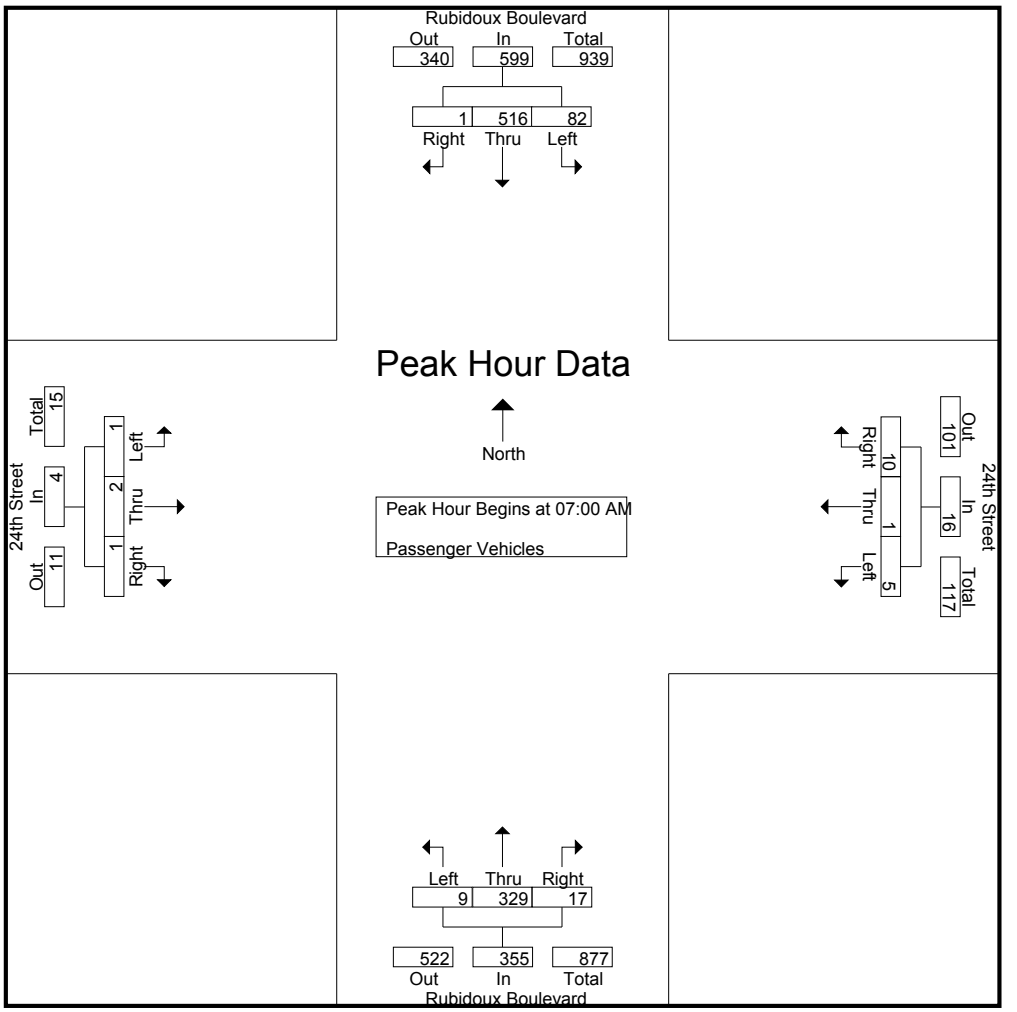
Weather: Clear

File Name : 08_JVYRU24AM
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	13	97	0	110	**3**	0	**4**	**7**	3	88	5	96	**1**	**1**	**1**	**3**
+15 mins.	17	129	**1**	147	1	**1**	1	3	**4**	74	1	79	0	0	0	0
+30 mins.	**29**	141	0	170	0	0	2	2	0	**93**	4	**97**	0	1	0	1
+45 mins.	23	**149**	0	**172**	1	0	3	4	2	74	**7**	83	0	0	0	0
Total Volume	82	516	1	599	5	1	10	16	9	329	17	355	1	2	1	4
% App. Total	13.7	86.1	0.2		31.2	6.2	62.5		2.5	92.7	4.8		25	50	25	
PHF	.707	.866	.250	.871	.417	.250	.625	.571	.563	.884	.607	.915	.250	.500	.250	.333

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City of Jurupa Valley
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Weather: Clear

File Name : 08_JVYRU24AM
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	5	0	5	1	0	0	1	0	5	0	5	0	0	0	0	11
06:45 AM	0	8	0	8	0	0	0	0	0	4	1	5	0	0	1	1	14
Total	0	13	0	13	1	0	0	1	0	9	1	10	0	0	1	1	25
07:00 AM	0	12	0	12	0	0	0	0	1	7	1	9	0	0	0	0	21
07:15 AM	1	9	0	10	0	1	1	2	0	4	0	4	0	0	1	1	17
07:30 AM	0	10	0	10	0	0	0	0	0	3	0	3	0	0	0	0	13
07:45 AM	0	5	0	5	1	0	0	1	0	4	1	5	0	0	0	0	11
Total	1	36	0	37	1	1	1	3	1	18	2	21	0	0	1	1	62
08:00 AM	1	7	0	8	0	1	0	1	0	12	1	13	0	0	0	0	22
08:15 AM	0	8	0	8	1	0	0	1	0	8	0	8	0	0	0	0	17
08:30 AM	1	16	0	17	1	0	1	2	1	3	1	5	0	0	1	1	25
08:45 AM	0	17	0	17	1	0	0	1	2	2	0	4	0	0	0	0	22
Total	2	48	0	50	3	1	1	5	3	25	2	30	0	0	1	1	86
09:00 AM	0	16	0	16	0	0	0	0	0	6	2	8	0	0	0	0	24
09:15 AM	0	13	0	13	0	0	1	1	0	9	2	11	0	0	0	0	25
Grand Total	3	126	0	129	5	2	3	10	4	67	9	80	0	0	3	3	222
Apprch %	2.3	97.7	0		50	20	30		5	83.8	11.2		0	0	100		
Total %	1.4	56.8	0	58.1	2.3	0.9	1.4	4.5	1.8	30.2	4.1	36	0	0	1.4	1.4	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**12**	0	**12**	0	0	0	0	**1**	**7**	**1**	**9**	0	0	0	0	**21**
07:15 AM	**1**	9	0	10	0	**1**	**1**	**2**	0	4	0	4	0	0	**1**	**1**	17
07:30 AM	0	10	0	10	0	0	0	0	0	3	0	3	0	0	0	0	13
07:45 AM	0	5	0	5	**1**	0	0	1	0	4	1	5	0	0	0	0	11
Total Volume	1	36	0	37	1	1	1	3	1	18	2	21	0	0	1	1	62
% App. Total	2.7	97.3	0		33.3	33.3	33.3		4.8	85.7	9.5		0	0	100		
PHF	.250	.750	.000	.771	.250	.250	.250	.375	.250	.643	.500	.583	.000	.000	.250	.250	.738

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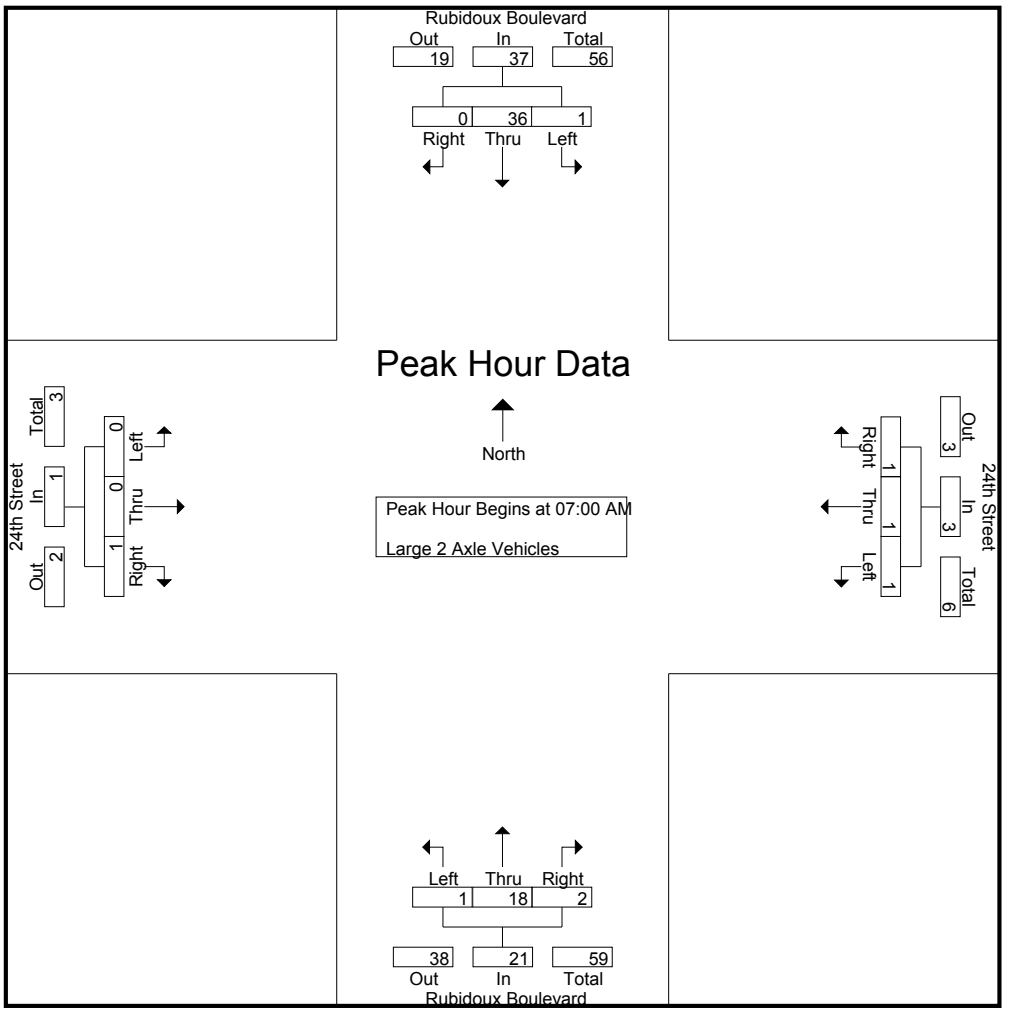
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**12**	0	**12**	0	0	0	0	**1**	**7**	**1**	**9**	0	0	0	0
+15 mins.	**1**	9	0	10	0	**1**	**1**	**2**	0	4	0	4	0	0	**1**	**1**
+30 mins.	0	10	0	10	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	5	0	5	**1**	0	0	1	0	4	1	5	0	0	0	0
Total Volume	1	36	0	37	1	1	1	3	1	18	2	21	0	0	1	1
% App. Total	2.7	97.3	0		33.3	33.3	33.3		4.8	85.7	9.5		0	0	100	
PHF	.250	.750	.000	.771	.250	.250	.250	.375	.250	.643	.500	.583	.000	.000	.250	.250

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Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	4	0	4	0	0	0	0	0	5	1	6	0	0	4	4	14
07:15 AM	0	8	0	8	0	0	0	0	0	4	0	4	0	0	0	0	12
07:30 AM	0	8	0	8	0	0	0	0	0	5	0	5	0	0	0	0	13
07:45 AM	0	4	0	4	0	0	0	0	1	7	0	8	0	0	1	1	13
Total	0	24	0	24	0	0	0	0	1	21	1	23	0	0	5	5	52
08:00 AM	0	4	0	4	0	0	0	0	0	9	1	10	0	0	1	1	15
08:15 AM	0	12	0	12	0	0	0	0	3	12	1	16	0	0	0	0	28
08:30 AM	0	9	0	9	1	0	0	1	2	12	0	14	0	0	0	0	24
08:45 AM	0	7	0	7	0	0	0	0	0	9	0	9	0	0	1	1	17
Total	0	32	0	32	1	0	0	1	5	42	2	49	0	0	2	2	84
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	56	0	56	1	0	0	1	6	63	3	72	0	0	7	7	136
Apprch %	0	100	0		100	0	0		8.3	87.5	4.2		0	0	100		
Total %	0	41.2	0	41.2	0.7	0	0	0.7	4.4	46.3	2.2	52.9	0	0	5.1	5.1	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	4	0	4	0	0	0	0	0	5	**1**	6	0	0	**4**	**4**	**14**
07:15 AM	0	**8**	0	**8**	0	0	0	0	0	4	0	4	0	0	0	0	12
07:30 AM	0	8	0	8	0	0	0	0	0	5	0	5	0	0	0	0	13
07:45 AM	0	4	0	4	0	0	0	0	**1**	**7**	0	**8**	0	0	1	1	13
Total Volume	0	24	0	24	0	0	0	0	1	21	1	23	0	0	5	5	52
% App. Total	0	100	0		0	0	0		4.3	91.3	4.3		0	0	100		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.250	.750	.250	.719	.000	.000	.313	.313	.929

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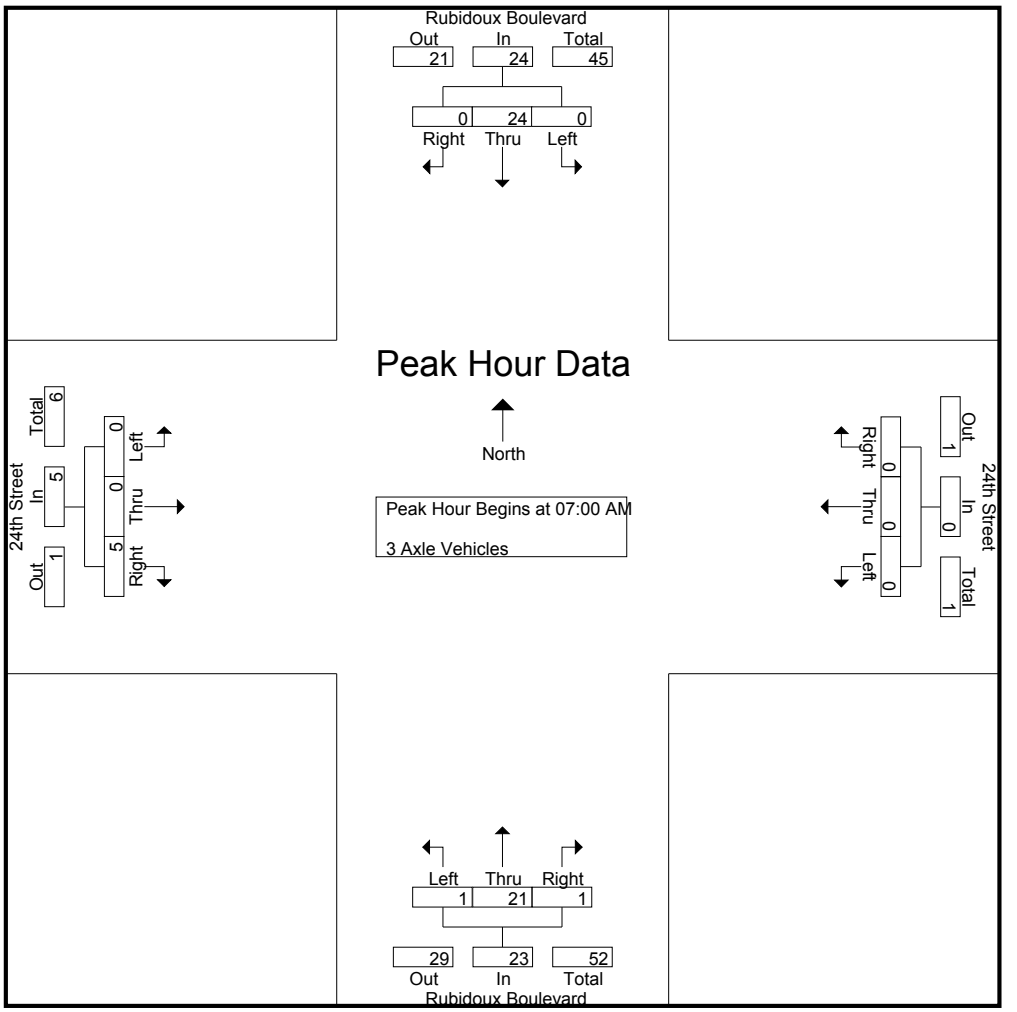
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	4	0	4	0	0	0	0	0	5	**1**	6	0	0	**4**	**4**
+15 mins.	0	**8**	0	**8**	0	0	0	0	0	4	0	4	0	0	0	0
+30 mins.	0	8	0	8	0	0	0	0	0	5	0	5	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	**1**	**7**	0	**8**	0	0	1	1
Total Volume	0	24	0	24	0	0	0	0	1	21	1	23	0	0	5	5
% App. Total	0	100	0		0	0	0		4.3	91.3	4.3		0	0	100	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.250	.750	.250	.719	.000	.000	.313	.313

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Site Code : 05117022
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Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	12	0	12	0	0	0	0	0	11	1	12	0	0	1	1	25
06:45 AM	1	8	0	9	0	0	0	0	0	8	0	8	0	0	0	0	17
Total	1	20	0	21	0	0	0	0	0	19	1	20	0	0	1	1	42
07:00 AM	0	11	0	11	0	0	0	0	1	10	0	11	0	0	1	1	23
07:15 AM	0	14	0	14	0	0	0	0	2	7	1	10	0	0	0	0	24
07:30 AM	0	7	0	7	0	0	0	0	0	7	0	7	0	0	0	0	14
07:45 AM	0	14	0	14	0	0	1	1	0	5	0	5	0	0	0	0	20
Total	0	46	0	46	0	0	1	1	3	29	1	33	0	0	1	1	81
08:00 AM	0	21	0	21	0	0	0	0	1	6	1	8	0	0	0	0	29
08:15 AM	0	18	0	18	0	0	0	0	1	13	3	17	0	0	0	0	35
08:30 AM	0	13	0	13	0	0	0	0	1	14	0	15	0	0	1	1	29
08:45 AM	0	10	0	10	0	0	0	0	0	4	3	7	0	0	0	0	17
Total	0	62	0	62	0	0	0	0	3	37	7	47	0	0	1	1	110
09:00 AM	0	14	0	14	0	1	0	1	0	13	1	14	0	0	0	0	29
09:15 AM	0	16	0	16	1	0	0	1	0	8	0	8	0	0	1	1	26
Grand Total	1	158	0	159	1	1	1	3	6	106	10	122	0	0	4	4	288
Apprch %	0.6	99.4	0		33.3	33.3	33.3		4.9	86.9	8.2		0	0	100		
Total %	0.3	54.9	0	55.2	0.3	0.3	0.3	1	2.1	36.8	3.5	42.4	0	0	1.4	1.4	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	11	0	11	0	0	0	0	1	**10**	0	**11**	0	0	**1**	**1**	23
07:15 AM	0	**14**	0	**14**	0	0	0	0	**2**	7	**1**	10	0	0	0	0	**24**
07:30 AM	0	7	0	7	0	0	0	0	0	7	0	7	0	0	0	0	14
07:45 AM	0	14	0	14	0	0	**1**	**1**	0	5	0	5	0	0	0	0	20
Total Volume	0	46	0	46	0	0	1	1	3	29	1	33	0	0	1	1	81
% App. Total	0	100	0		0	0	100		9.1	87.9	3		0	0	100		
PHF	.000	.821	.000	.821	.000	.000	.250	.250	.375	.725	.250	.750	.000	.000	.250	.250	.844

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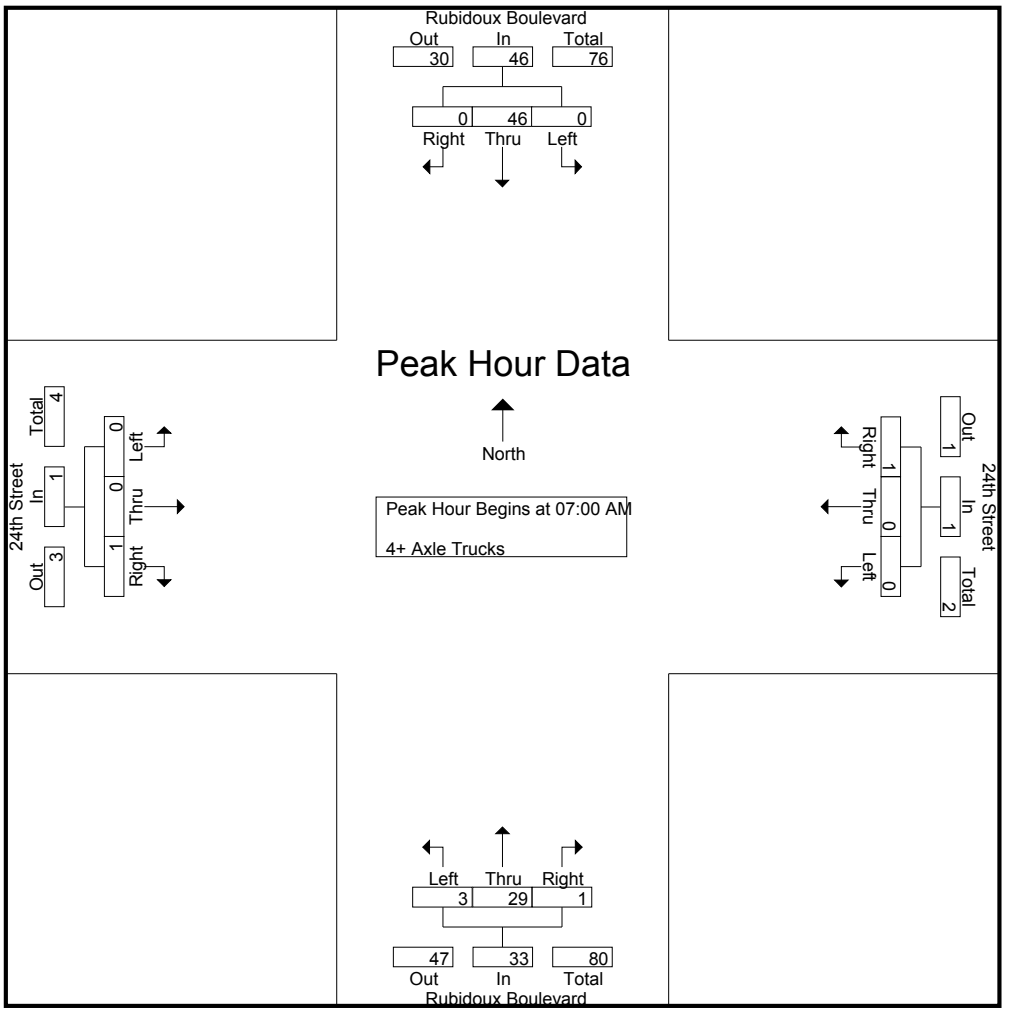
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	11	0	11	0	0	0	0	1	**10**	0	**11**	0	0	**1**	**1**
+15 mins.	0	**14**	0	**14**	0	0	0	0	**2**	7	**1**	10	0	0	0	0
+30 mins.	0	7	0	7	0	0	0	0	0	7	0	7	0	0	0	0
+45 mins.	0	14	0	14	0	0	**1**	**1**	0	5	0	5	0	0	0	0
Total Volume	0	46	0	46	0	0	1	1	3	29	1	33	0	0	1	1
% App. Total	0	100	0		0	0	100		9.1	87.9	3		0	0	100	
PHF	.000	.821	.000	.821	.000	.000	.250	.250	.375	.725	.250	.750	.000	.000	.250	.250

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File Name : 08_JVYRU24PM
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	7	142	2	151	7	2	1	10	1	165	5	171	0	7	6	13	345
03:45 PM	27	148	1	176	2	2	7	11	3	177	10	190	0	2	2	4	381
Total	34	290	3	327	9	4	8	21	4	342	15	361	0	9	8	17	726
04:00 PM	33	141	0	174	4	1	7	12	3	172	13	188	1	2	3	6	380
04:15 PM	24	150	2	176	8	3	5	16	0	158	15	173	2	4	4	10	375
04:30 PM	19	149	1	169	3	4	6	13	2	179	19	200	1	5	5	11	393
04:45 PM	16	145	0	161	5	0	3	8	2	160	20	182	0	2	3	5	356
Total	92	585	3	680	20	8	21	49	7	669	67	743	4	13	15	32	1504
05:00 PM	18	148	0	166	3	1	7	11	2	167	19	188	1	4	2	7	372
05:15 PM	24	144	1	169	4	2	7	13	3	168	30	201	0	1	1	2	385
05:30 PM	20	150	0	170	6	0	5	11	7	172	12	191	0	3	2	5	377
05:45 PM	13	107	4	124	3	2	3	8	5	158	15	178	1	0	1	2	312
Total	75	549	5	629	16	5	22	43	17	665	76	758	2	8	6	16	1446
06:00 PM	8	118	9	135	2	4	1	7	8	137	11	156	2	1	5	8	306
06:15 PM	8	95	1	104	3	2	1	6	2	115	5	122	3	1	5	9	241
Grand Total	217	1637	21	1875	50	23	53	126	38	1928	174	2140	11	32	39	82	4223
Apprch %	11.6	87.3	1.1		39.7	18.3	42.1		1.8	90.1	8.1		13.4	39	47.6		
Total %	5.1	38.8	0.5	44.4	1.2	0.5	1.3	3	0.9	45.7	4.1	50.7	0.3	0.8	0.9	1.9	
Passenger Vehicles	213	1431	21	1665	48	23	49	120	30	1569	149	1748	11	31	37	79	3612
% Passenger Vehicles	98.2	87.4	100	88.8	96	100	92.5	95.2	78.9	81.4	85.6	81.7	100	96.9	94.9	96.3	85.5
Large 2 Axle Vehicles	1	73	0	74	1	0	3	4	1	107	10	118	0	0	1	1	197
% Large 2 Axle Vehicles	0.5	4.5	0	3.9	2	0	5.7	3.2	2.6	5.5	5.7	5.5	0	0	2.6	1.2	4.7
3 Axle Vehicles	1	37	0	38	0	0	1	1	1	80	1	82	0	0	0	0	121
% 3 Axle Vehicles	0.5	2.3	0	2	0	0	1.9	0.8	2.6	4.1	0.6	3.8	0	0	0	0	2.9
4+ Axle Trucks	2	96	0	98	1	0	0	1	6	172	14	192	0	1	1	2	293
% 4+ Axle Trucks	0.9	5.9	0	5.2	2	0	0	0.8	15.8	8.9	8	9	0	3.1	2.6	2.4	6.9

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	27	148	1	**176**	2	2	**7**	11	**3**	177	10	190	0	2	2	4	381
04:00 PM	**33**	141	0	174	4	1	7	12	3	172	13	188	1	2	3	6	380
04:15 PM	24	**150**	**2**	176	**8**	3	5	**16**	0	158	15	173	**2**	4	4	10	375
04:30 PM	19	149	1	169	3	**4**	6	13	2	**179**	**19**	**200**	1	**5**	**5**	**11**	**393**
Total Volume	103	588	4	695	17	10	25	52	8	686	57	751	4	13	14	31	1529
% App. Total	14.8	84.6	0.6		32.7	19.2	48.1		1.1	91.3	7.6		12.9	41.9	45.2		
PHF	.780	.980	.500	.987	.531	.625	.893	.813	.667	.958	.750	.939	.500	.650	.700	.705	.973

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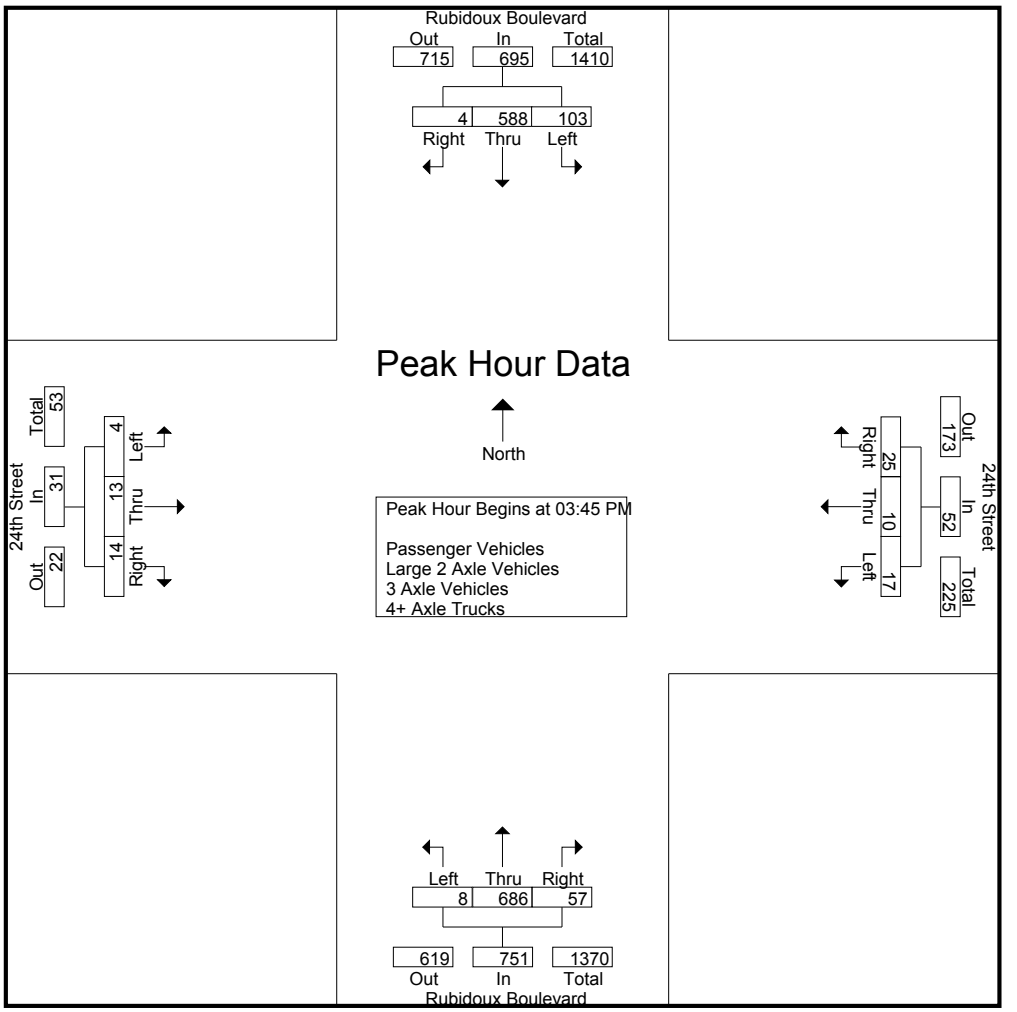
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				04:30 PM				03:30 PM			
+0 mins.	27	148	1	**176**	2	2	**7**	11	2	**179**	19	200	0	**7**	**6**	**13**
+15 mins.	**33**	141	0	174	4	1	7	12	2	160	20	182	0	2	2	4
+30 mins.	24	**150**	**2**	176	**8**	3	5	**16**	2	167	19	188	1	2	3	6
+45 mins.	19	149	1	169	3	**4**	6	13	**3**	168	**30**	**201**	**2**	4	4	10
Total Volume	103	588	4	695	17	10	25	52	9	674	88	771	3	15	15	33
% App. Total	14.8	84.6	0.6		32.7	19.2	48.1		1.2	87.4	11.4		9.1	45.5	45.5	
PHF	.780	.980	.500	.987	.531	.625	.893	.813	.750	.941	.733	.959	.375	.536	.625	.635

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Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	7	116	2	125	7	2	1	10	1	131	5	137	0	7	6	13	285
03:45 PM	27	121	1	149	2	2	6	10	1	139	5	145	0	2	2	4	308
Total	34	237	3	274	9	4	7	20	2	270	10	282	0	9	8	17	593
04:00 PM	32	123	0	155	4	1	6	11	3	141	12	156	1	2	3	6	328
04:15 PM	24	136	2	162	7	3	5	15	0	125	13	138	2	3	4	9	324
04:30 PM	17	124	1	142	3	4	6	13	0	150	13	163	1	5	4	10	328
04:45 PM	16	130	0	146	5	0	3	8	2	131	16	149	0	2	3	5	308
Total	89	513	3	605	19	8	20	47	5	547	54	606	4	12	14	30	1288
05:00 PM	18	130	0	148	3	1	6	10	2	145	19	166	1	4	1	6	330
05:15 PM	24	135	1	160	3	2	7	12	3	135	26	164	0	1	1	2	338
05:30 PM	20	135	0	155	6	0	4	10	6	145	10	161	0	3	2	5	331
05:45 PM	13	96	4	113	3	2	3	8	4	124	15	143	1	0	1	2	266
Total	75	496	5	576	15	5	20	40	15	549	70	634	2	8	5	15	1265
06:00 PM	7	99	9	115	2	4	1	7	6	109	11	126	2	1	5	8	256
06:15 PM	8	86	1	95	3	2	1	6	2	94	4	100	3	1	5	9	210
Grand Total	213	1431	21	1665	48	23	49	120	30	1569	149	1748	11	31	37	79	3612
Apprch %	12.8	85.9	1.3		40	19.2	40.8		1.7	89.8	8.5		13.9	39.2	46.8		
Total %	5.9	39.6	0.6	46.1	1.3	0.6	1.4	3.3	0.8	43.4	4.1	48.4	0.3	0.9	1	2.2	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	27	121	1	149	2	2	**6**	10	1	139	5	145	0	2	2	4	308
04:00 PM	**32**	123	0	155	4	1	6	11	**3**	141	12	156	1	2	3	6	**328**
04:15 PM	24	**136**	**2**	**162**	**7**	3	5	**15**	0	125	**13**	138	**2**	3	**4**	9	324
04:30 PM	17	124	1	142	3	**4**	6	13	0	**150**	13	**163**	1	**5**	4	**10**	328
Total Volume	100	504	4	608	16	10	23	49	4	555	43	602	4	12	13	29	1288
% App. Total	16.4	82.9	0.7		32.7	20.4	46.9		0.7	92.2	7.1		13.8	41.4	44.8		
PHF	.781	.926	.500	.938	.571	.625	.958	.817	.333	.925	.827	.923	.500	.600	.813	.725	.982

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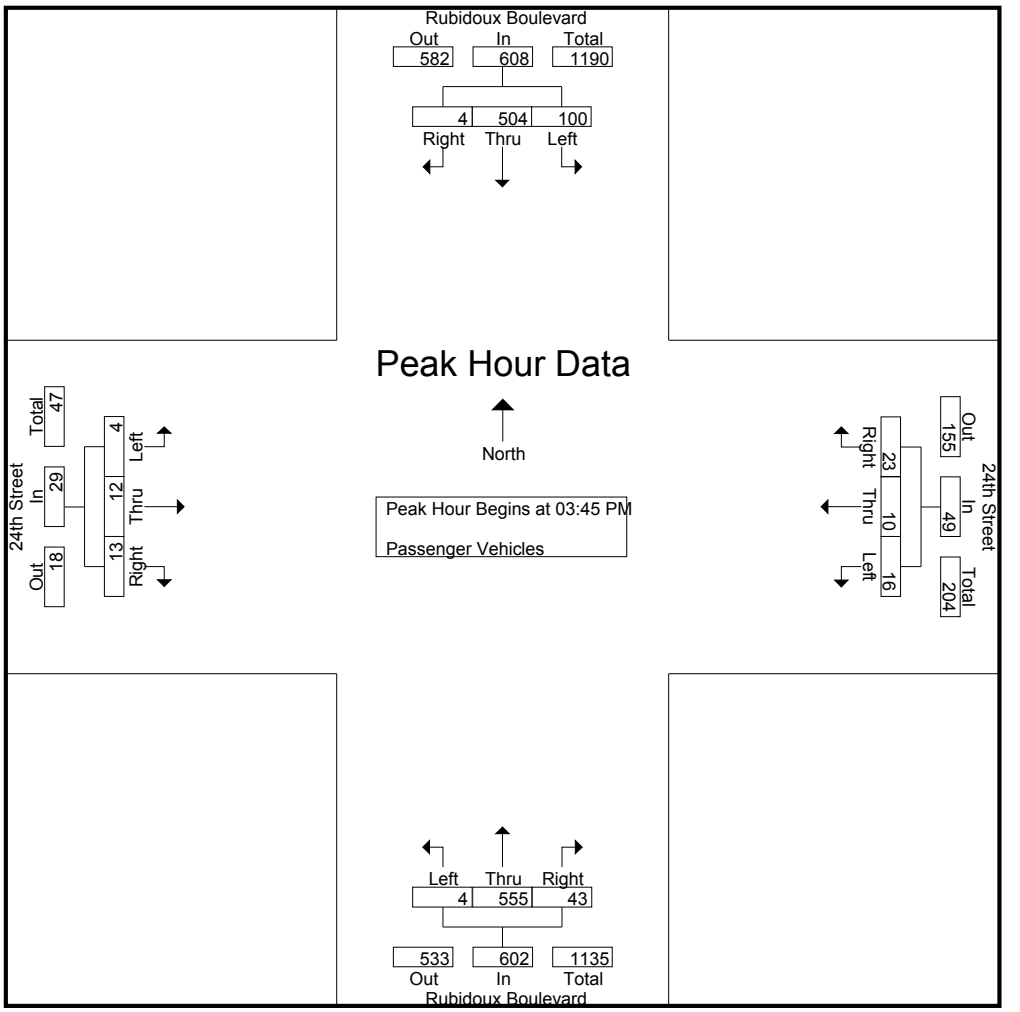
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	27	121	1	149	2	2	**6**	10	1	139	5	145	0	2	2	4
+15 mins.	**32**	123	0	155	4	1	6	11	**3**	141	12	156	1	2	3	6
+30 mins.	24	**136**	**2**	**162**	**7**	3	5	**15**	0	125	**13**	138	**2**	3	**4**	9
+45 mins.	17	124	1	142	3	**4**	6	13	0	**150**	13	**163**	1	**5**	4	**10**
Total Volume	100	504	4	608	16	10	23	49	4	555	43	602	4	12	13	29
% App. Total	16.4	82.9	0.7		32.7	20.4	46.9		0.7	92.2	7.1		13.8	41.4	44.8	
PHF	.781	.926	.500	.938	.571	.625	.958	.817	.333	.925	.827	.923	.500	.600	.813	.725

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Site Code : 05117022
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	10	0	10	0	0	0	0	0	13	0	13	0	0	0	0	23
03:45 PM	0	10	0	10	0	0	1	1	0	7	3	10	0	0	0	0	21
Total	0	20	0	20	0	0	1	1	0	20	3	23	0	0	0	0	44
04:00 PM	1	8	0	9	0	0	1	1	0	14	1	15	0	0	0	0	25
04:15 PM	0	6	0	6	1	0	0	1	0	7	2	9	0	0	0	0	16
04:30 PM	0	11	0	11	0	0	0	0	1	11	2	14	0	0	1	1	26
04:45 PM	0	4	0	4	0	0	0	0	0	3	1	4	0	0	0	0	8
Total	1	29	0	30	1	0	1	2	1	35	6	42	0	0	1	1	75
05:00 PM	0	3	0	3	0	0	1	1	0	7	0	7	0	0	0	0	11
05:15 PM	0	4	0	4	0	0	0	0	0	6	1	7	0	0	0	0	11
05:30 PM	0	7	0	7	0	0	0	0	0	8	0	8	0	0	0	0	15
05:45 PM	0	4	0	4	0	0	0	0	0	17	0	17	0	0	0	0	21
Total	0	18	0	18	0	0	1	1	0	38	1	39	0	0	0	0	58
06:00 PM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
06:15 PM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
Grand Total	1	73	0	74	1	0	3	4	1	107	10	118	0	0	1	1	197
Apprch %	1.4	98.6	0		25	0	75		0.8	90.7	8.5		0	0	100		
Total %	0.5	37.1	0	37.6	0.5	0	1.5	2	0.5	54.3	5.1	59.9	0	0	0.5	0.5	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	10	0	10	0	0	**1**	**1**	0	7	**3**	10	0	0	0	0	21
04:00 PM	**1**	8	0	9	0	0	1	1	0	**14**	1	**15**	0	0	0	0	25
04:15 PM	0	6	0	6	**1**	0	0	1	0	7	2	9	0	0	0	0	16
04:30 PM	0	**11**	0	**11**	0	0	0	0	**1**	11	2	14	0	0	**1**	**1**	**26**
Total Volume	1	35	0	36	1	0	2	3	1	39	8	48	0	0	1	1	88
% App. Total	2.8	97.2	0		33.3	0	66.7		2.1	81.2	16.7		0	0	100		
PHF	.250	.795	.000	.818	.250	.000	.500	.750	.250	.696	.667	.800	.000	.000	.250	.250	.846

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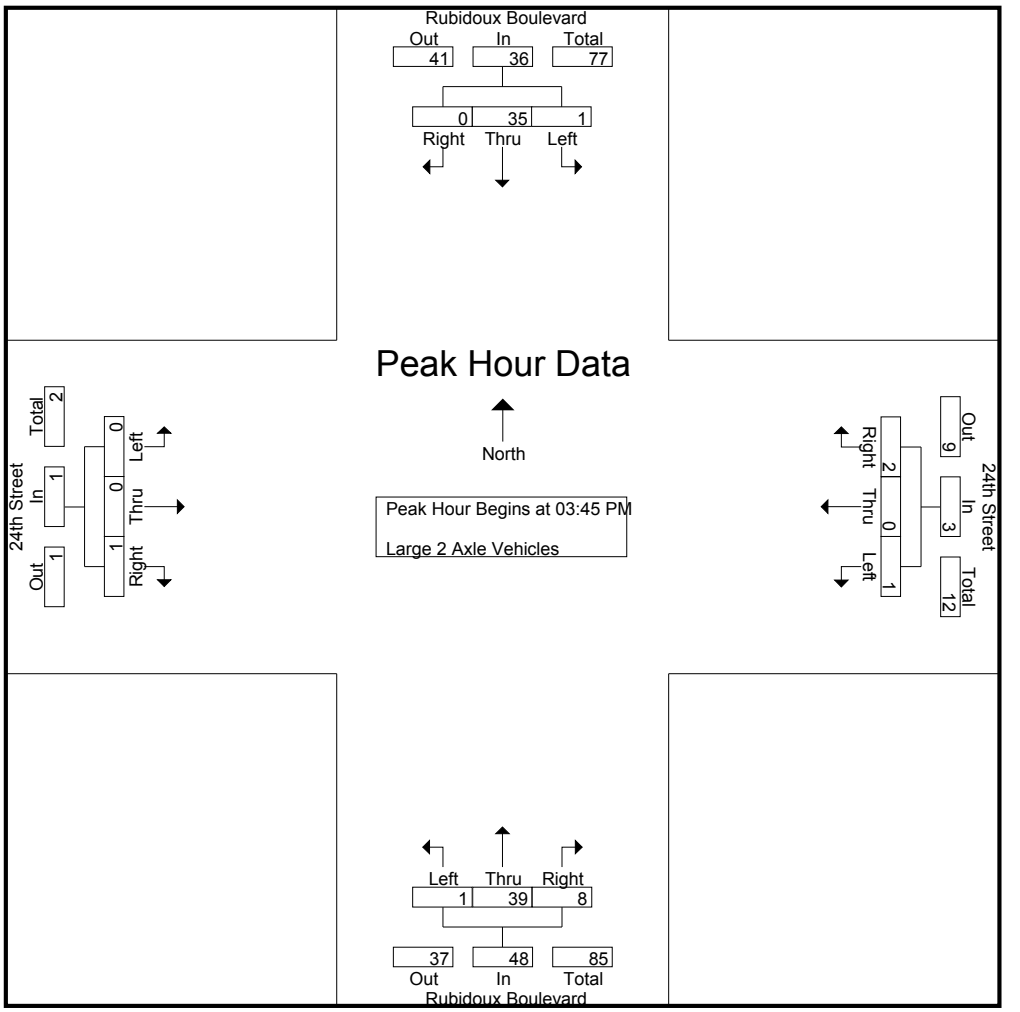
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	10	0	10	0	0	**1**	**1**	0	7	**3**	10	0	0	0	0
+15 mins.	**1**	8	0	9	0	0	1	1	0	**14**	1	**15**	0	0	0	0
+30 mins.	0	6	0	6	**1**	0	0	1	0	7	2	9	0	0	0	0
+45 mins.	0	**11**	0	**11**	0	0	0	0	**1**	11	2	14	0	0	**1**	**1**
Total Volume	1	35	0	36	1	0	2	3	1	39	8	48	0	0	1	1
% App. Total	2.8	97.2	0		33.3	0	66.7		2.1	81.2	16.7		0	0	100	
PHF	.250	.795	.000	.818	.250	.000	.500	.750	.250	.696	.667	.800	.000	.000	.250	.250

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Start Date : 2/2/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	5	0	5	0	0	0	0	0	7	0	7	0	0	0	0	12
03:45 PM	0	9	0	9	0	0	0	0	0	11	0	11	0	0	0	0	20
Total	0	14	0	14	0	0	0	0	0	18	0	18	0	0	0	0	32
04:00 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
04:15 PM	0	3	0	3	0	0	0	0	0	9	0	9	0	0	0	0	12
04:30 PM	0	1	0	1	0	0	0	0	1	5	0	6	0	0	0	0	7
04:45 PM	0	1	0	1	0	0	0	0	0	10	1	11	0	0	0	0	12
Total	0	8	0	8	0	0	0	0	1	27	1	29	0	0	0	0	37
05:00 PM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
05:15 PM	0	2	0	2	0	0	0	0	0	8	0	8	0	0	0	0	10
05:30 PM	0	2	0	2	0	0	1	1	0	6	0	6	0	0	0	0	9
05:45 PM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
Total	0	9	0	9	0	0	1	1	0	24	0	24	0	0	0	0	34
06:00 PM	1	5	0	6	0	0	0	0	0	8	0	8	0	0	0	0	14
06:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Grand Total	1	37	0	38	0	0	1	1	1	80	1	82	0	0	0	0	121
Apprch %	2.6	97.4	0		0	0	100		1.2	97.6	1.2		0	0	0		
Total %	0.8	30.6	0	31.4	0	0	0.8	0.8	0.8	66.1	0.8	67.8	0	0	0	0	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	**9**	0	**9**	0	0	0	0	0	**11**	0	**11**	0	0	0	0	**20**
04:00 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
04:15 PM	0	3	0	3	0	0	0	0	0	9	0	9	0	0	0	0	12
04:30 PM	0	1	0	1	0	0	0	0	**1**	5	0	6	0	0	0	0	7
Total Volume	0	16	0	16	0	0	0	0	1	28	0	29	0	0	0	0	45
% App. Total	0	100	0		0	0	0		3.4	96.6	0		0	0	0		
PHF	.000	.444	.000	.444	.000	.000	.000	.000	.250	.636	.000	.659	.000	.000	.000	.000	.563

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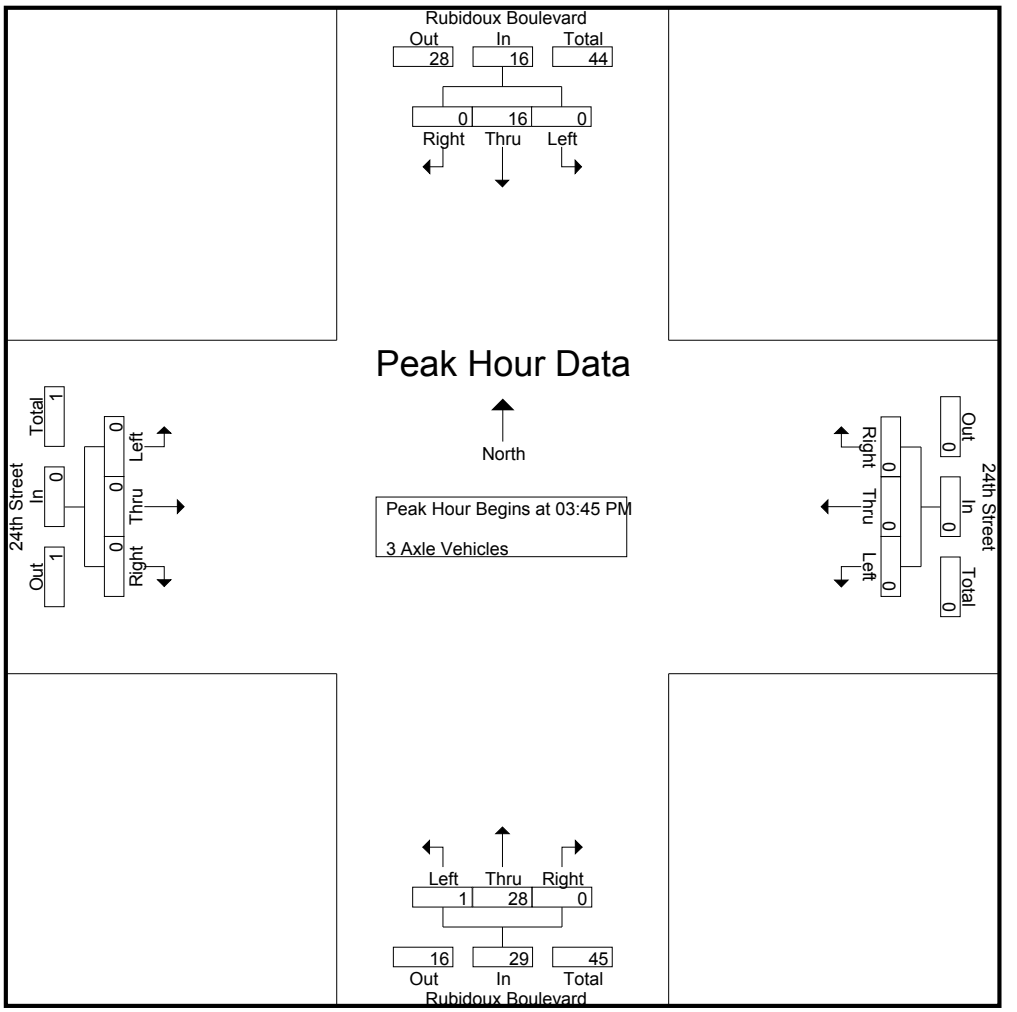
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	**9**	0	**9**	0	0	0	0	0	**11**	0	**11**	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	0	9	0	9	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	**1**	5	0	6	0	0	0	0
Total Volume	0	16	0	16	0	0	0	0	1	28	0	29	0	0	0	0
% App. Total	0	100	0		0	0	0		3.4	96.6	0		0	0	0	
PHF	.000	.444	.000	.444	.000	.000	.000	.000	.250	.636	.000	.659	.000	.000	.000	.000

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Start Date : 2/2/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

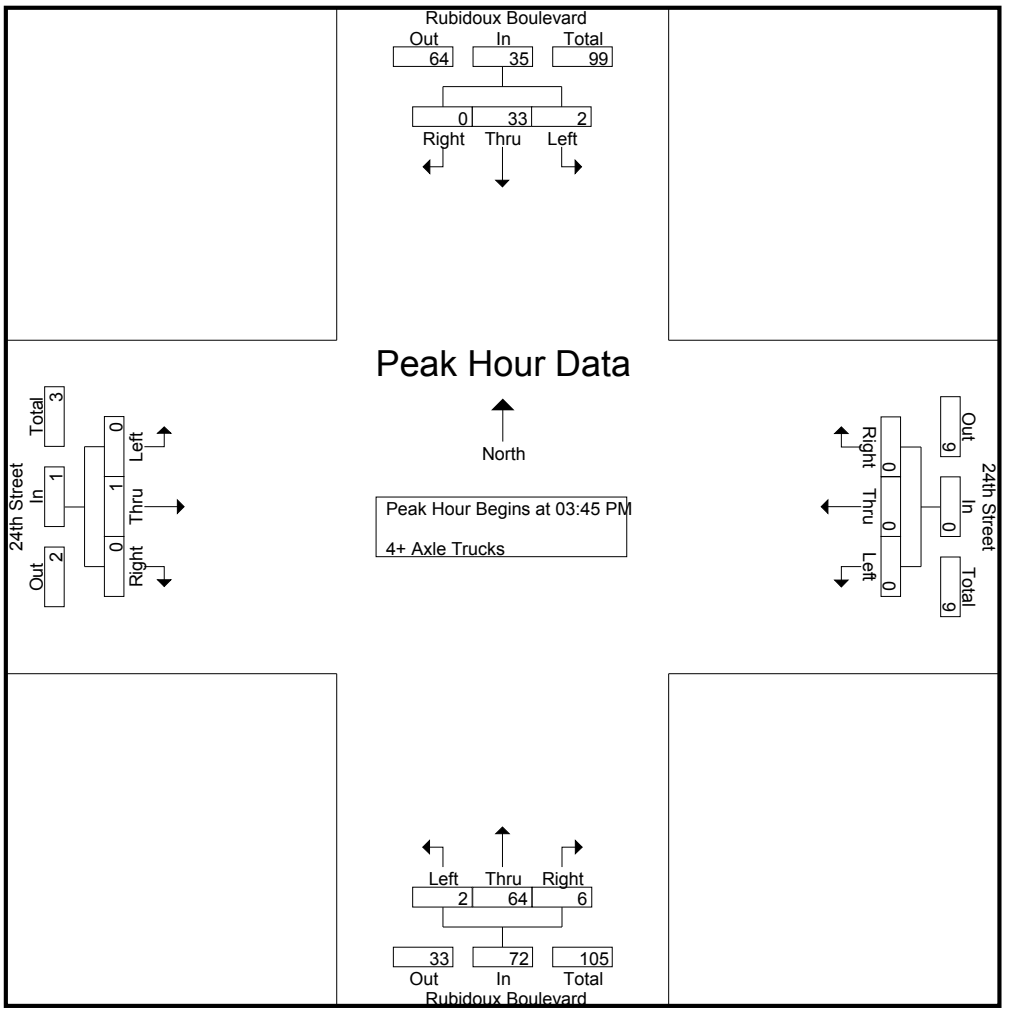
	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	11	0	11	0	0	0	0	0	14	0	14	0	0	0	0	25
03:45 PM	0	8	0	8	0	0	0	0	2	20	2	24	0	0	0	0	32
Total	0	19	0	19	0	0	0	0	2	34	2	38	0	0	0	0	57
04:00 PM	0	7	0	7	0	0	0	0	0	14	0	14	0	0	0	0	21
04:15 PM	0	5	0	5	0	0	0	0	0	17	0	17	0	1	0	1	23
04:30 PM	2	13	0	15	0	0	0	0	0	13	4	17	0	0	0	0	32
04:45 PM	0	10	0	10	0	0	0	0	0	16	2	18	0	0	0	0	28
Total	2	35	0	37	0	0	0	0	0	60	6	66	0	1	0	1	104
05:00 PM	0	12	0	12	0	0	0	0	0	9	0	9	0	0	1	1	22
05:15 PM	0	3	0	3	1	0	0	1	0	19	3	22	0	0	0	0	26
05:30 PM	0	6	0	6	0	0	0	0	1	13	2	16	0	0	0	0	22
05:45 PM	0	5	0	5	0	0	0	0	1	13	0	14	0	0	0	0	19
Total	0	26	0	26	1	0	0	1	2	54	5	61	0	0	1	1	89
06:00 PM	0	11	0	11	0	0	0	0	2	13	0	15	0	0	0	0	26
06:15 PM	0	5	0	5	0	0	0	0	0	11	1	12	0	0	0	0	17
Grand Total	2	96	0	98	1	0	0	1	6	172	14	192	0	1	1	2	293
Apprch %	2	98	0		100	0	0		3.1	89.6	7.3		0	50	50		
Total %	0.7	32.8	0	33.4	0.3	0	0	0.3	2	58.7	4.8	65.5	0	0.3	0.3	0.7	

	Rubidoux Boulevard Southbound				24th Street Westbound				Rubidoux Boulevard Northbound				24th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	8	0	8	0	0	0	0	**2**	**20**	2	**24**	0	0	0	0	**32**
04:00 PM	0	7	0	7	0	0	0	0	0	14	0	14	0	0	0	0	21
04:15 PM	0	5	0	5	0	0	0	0	0	17	0	17	0	**1**	0	**1**	23
04:30 PM	**2**	**13**	0	**15**	0	0	0	0	0	13	**4**	17	0	0	0	0	32
Total Volume	2	33	0	35	0	0	0	0	2	64	6	72	0	1	0	1	108
% App. Total	5.7	94.3	0		0	0	0		2.8	88.9	8.3		0	100	0		
PHF	.250	.635	.000	.583	.000	.000	.000	.000	.250	.800	.375	.750	.000	.250	.000	.250	.844

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 24th Street
Weather: Clear

File Name : 08_JVYRU24PM
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	8	0	8	0	0	0	0	**2**	**20**	2	**24**	0	0	0	0
+15 mins.	0	7	0	7	0	0	0	0	0	14	0	14	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	17	0	17	0	**1**	0	**1**
+45 mins.	**2**	**13**	0	**15**	0	0	0	0	0	13	**4**	17	0	0	0	0
Total Volume	2	33	0	35	0	0	0	0	2	64	6	72	0	1	0	1
% App. Total	5.7	94.3	0		0	0	0		2.8	88.9	8.3		0	100	0	
PHF	.250	.635	.000	.583	.000	.000	.000	.000	.250	.800	.375	.750	.000	.250	.000	.250

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: 24th

PROJECT #: SC1439
LOCATION #: 11
CONTROL: STOP E/W

NOTES:

AM
PM
MD
OTHER
OTHER

N ▲ S ▼ W ◄ E ►

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	3	101	5	5	89	0	0	1	1	6	0	3	214	0	0	0	0	0
	12:15 PM	3	86	13	6	90	0	0	2	3	5	0	1	209	0	0	0	0	0
	12:30 PM	5	103	6	6	81	1	0	0	3	1	3	2	211	0	0	0	0	0
	12:45 PM	2	76	8	2	81	1	0	1	3	4	5	4	187	0	0	0	0	0
	1:00 PM	4	98	6	4	95	0	1	1	2	3	2	0	216	1	0	0	0	1
	1:15 PM	1	100	10	2	91	0	1	1	0	7	0	2	215	0	0	0	0	0
	1:30 PM	3	98	5	7	100	1	1	0	3	6	2	3	229	0	0	0	0	0
	1:45 PM	3	110	9	4	80	0	0	4	2	6	0	3	221	0	0	0	0	0
	VOLUMES	24	774	62	36	707	3	3	10	17	38	12	18	1,704	1	0	0	0	1
	APPROACH %	3%	90%	7%	5%	95%	0%	10%	33%	57%	56%	18%	26%						
	APP/DEPART	860	/	795	746	/	763	30	/	108	68	/	38	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	11	406	30	17	366	1	3	6	7	22	4	8	881					
	APPROACH %	2%	91%	7%	4%	95%	0%	19%	38%	44%	65%	12%	24%						
	PEAK HR FACTOR		0.916			0.889			0.667			0.773		0.962					
	APP/DEPART	447	/	417	384	/	396	16	/	53	34	/	15	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

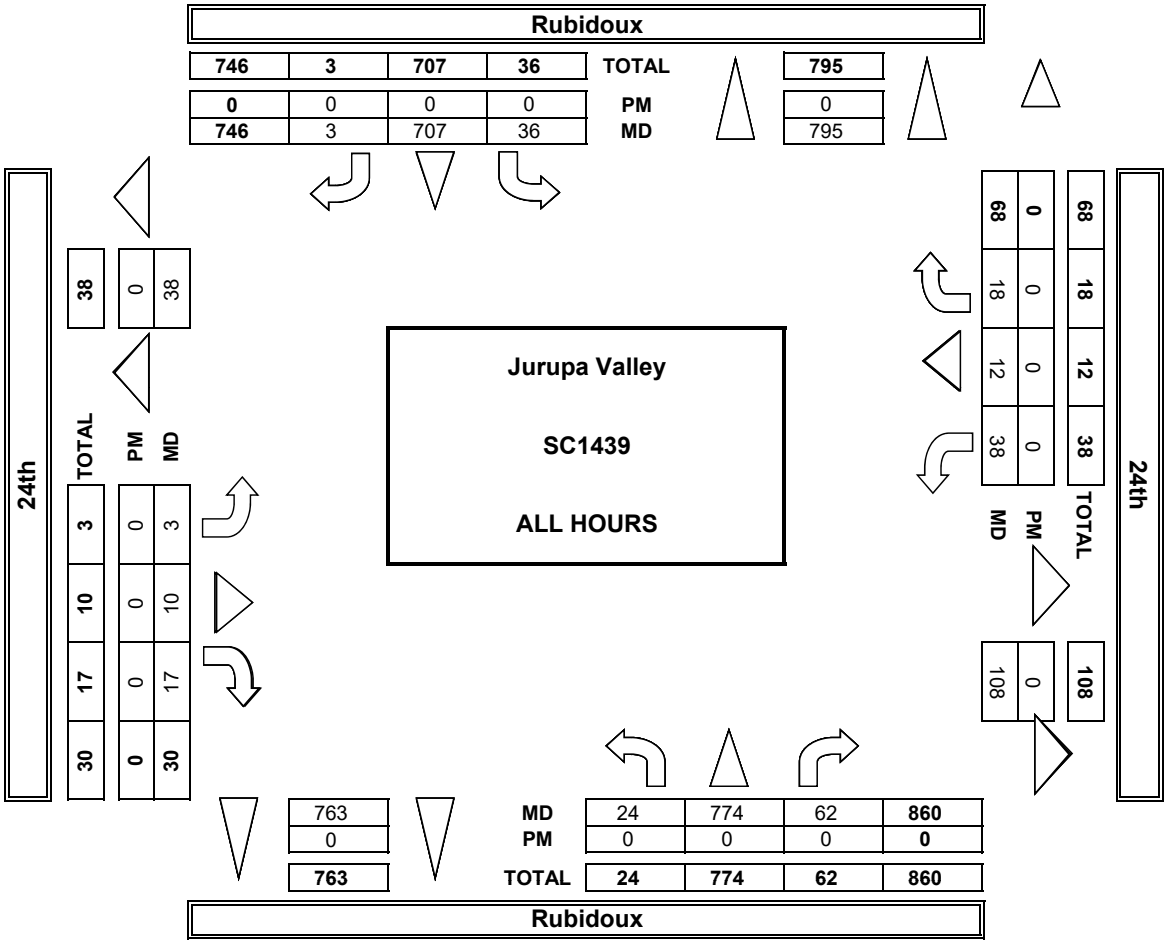
24th WEST SIDE EAST SIDE **24th**

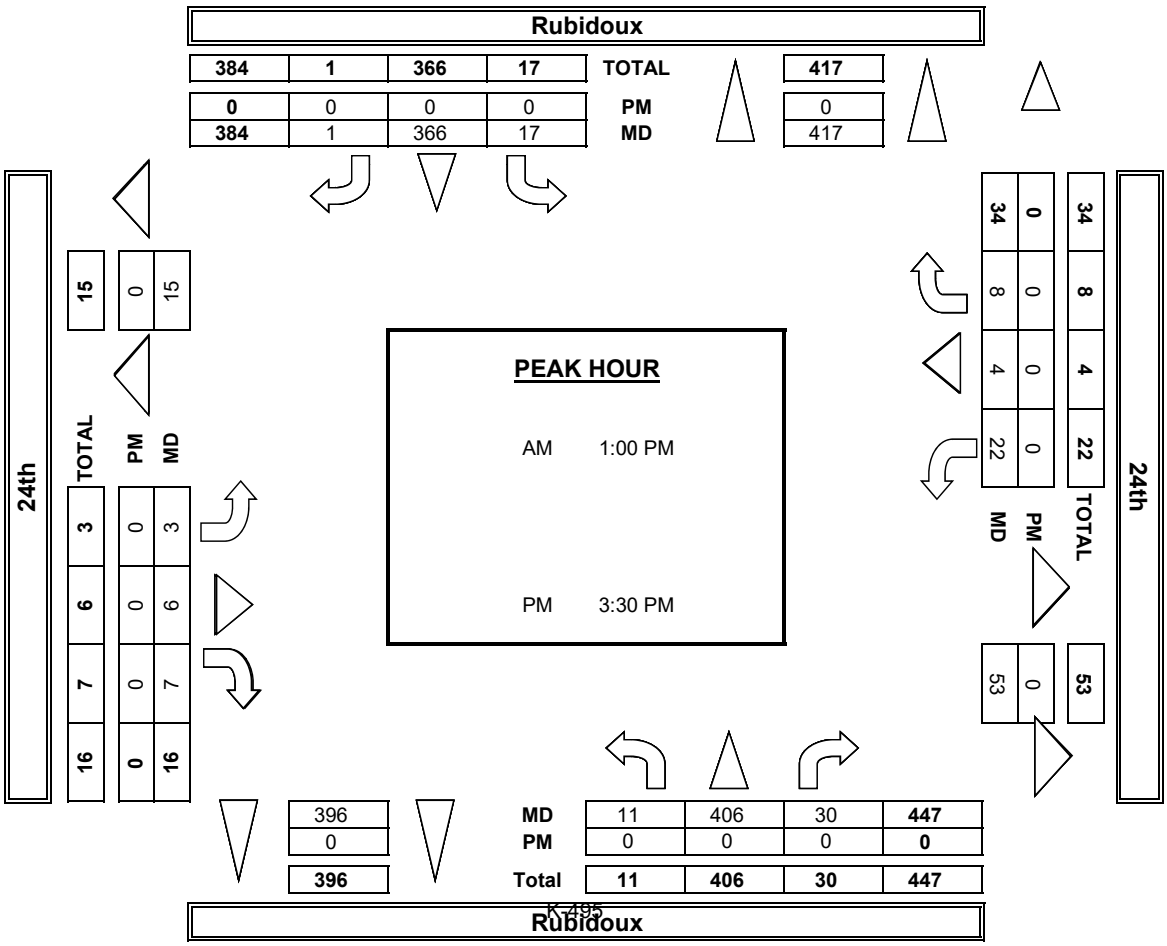
SOUTH SIDE

Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th			
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	8:00 AM	4	149	6	6	133	0	0	1	1	7	0	3	309
	8:15 AM	3	137	23	6	129	0	0	2	3	9	0	1	313
	8:30 AM	5	166	8	6	115	1	0	0	3	1	4	2	310
	8:45 AM	2	99	16	2	117	1	0	1	4	6	5	5	256
	9:00 AM	5	144	13	4	133	0	1	1	2	5	3	0	309
	9:15 AM	1	146	17	2	132	0	1	1	0	10	0	2	312
	9:30 AM	5	138	8	7	158	1	1	0	3	12	2	4	338
	9:45 AM	3	164	13	4	126	0	0	5	4	11	0	4	333
	VOLUMES	28	1,145	102	37	1,041	3	3	11	20	59	14	21	2,482
	APPROACH %	2%	90%	8%	3%	96%	0%	9%	32%	59%	63%	15%	22%	
	APP/DEPART	1,275	/	1,169	1,081	/	1,120	33	/	150	93	/	45	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	14	592	51	17	548	1	3	7	9	37	5	10	1,292
	APPROACH %	2%	90%	8%	3%	97%	0%	16%	35%	49%	72%	9%	19%	
	PEAK HR FACTOR		0.914			0.855			0.544			0.736		0.956
	APP/DEPART	656	/	605	566	/	594	19	/	74	52	/	20	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Rubidoux

NORTH SIDE

24th WEST SIDE EAST SIDE **24th**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

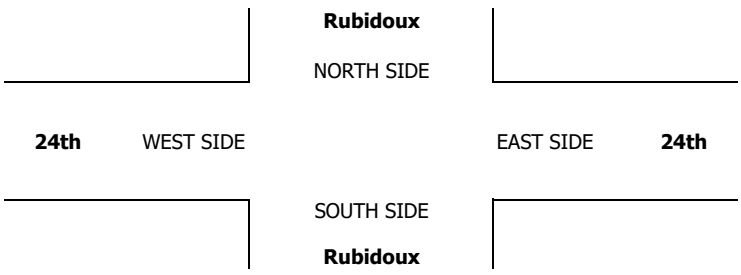
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th				U-TURNS				
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12:00 PM	2	63	4	3	57	0	0	1	1	5	0	3	139	0	0	0	0	0
12:15 PM	3	53	5	6	60	0	0	2	3	3	0	1	136	0	0	0	0	0
12:30 PM	5	60	4	6	62	1	0	0	3	1	1	2	145	0	0	0	0	0
12:45 PM	2	52	2	2	61	1	0	1	2	2	5	3	133	0	0	0	0	0
1:00 PM	3	63	2	4	67	0	1	1	2	1	1	0	145	1	0	0	0	1
1:15 PM	1	62	5	2	62	0	1	1	0	4	0	2	140	0	0	0	0	0
1:30 PM	2	69	2	7	63	1	1	0	3	2	2	2	154	0	0	0	0	0
1:45 PM	3	73	6	4	56	0	0	3	1	3	0	2	151	0	0	0	0	0
VOLUMES	21	498	30	34	488	3	3	9	15	21	9	15	1,146	1	0	0	0	1
APPROACH %	4%	91%	5%	6%	93%	1%	11%	33%	56%	47%	20%	33%						
APP/DEPART	549	/	516	525	/	525	27	/	73	45	/	32	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	8	267	15	17	248	1	3	5	6	10	3	6	590					
APPROACH %	3%	92%	5%	6%	93%	0%	21%	36%	43%	53%	16%	32%						
PEAK HR FACTOR		0.887			0.937			0.875			0.792		0.958					
APP/DEPART	291	/	276	266	/	265	14	/	37	19	/	12	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

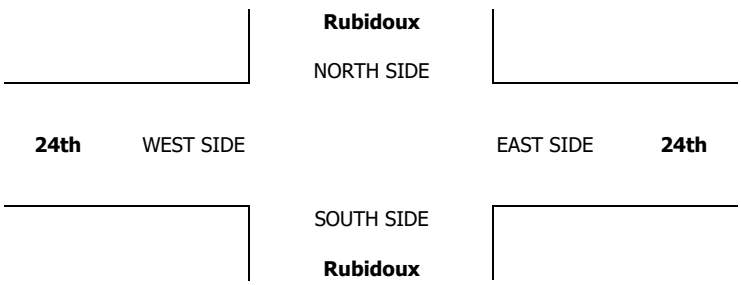
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	6	1	2	9	0	0	0	0	1	0	0	19	0	0	0	0	0
	12:15 PM	0	8	3	0	6	0	0	0	0	0	0	0	17	0	0	0	0	0
	12:30 PM	0	9	1	0	0	0	0	0	0	0	2	0	12	0	0	0	0	0
	12:45 PM	0	6	2	0	3	0	0	0	1	1	0	1	14	0	0	0	0	0
	1:00 PM	0	13	0	0	7	0	0	0	0	1	1	0	22	0	0	0	0	0
	1:15 PM	0	10	2	0	4	0	0	0	0	2	0	0	18	0	0	0	0	0
	1:30 PM	0	8	2	0	5	0	0	0	0	1	0	0	16	0	0	0	0	0
	1:45 PM	0	8	1	0	2	0	0	1	0	0	0	0	12	0	0	0	0	0
	VOLUMES	0	68	12	2	36	0	0	1	1	6	3	1	130	0	0	0	0	0
	APPROACH %	0%	85%	15%	5%	95%	0%	0%	50%	50%	60%	30%	10%						
	APP/DEPART	80	/	69	38	/	43	2	/	15	10	/	3	0					
	BEGIN PEAK HR		12:45 PM																
	VOLUMES	0	37	6	0	19	0	0	0	1	5	1	1	70					
	APPROACH %	0%	86%	14%	0%	100%	0%	0%	0%	100%	71%	14%	14%						
	PEAK HR FACTOR		0.827			0.679			0.250			0.875		0.795					
	APP/DEPART	43	/	38	19	/	25	1	/	6	7	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

CLASS 3: 3-AXLE TRUCKS

NOTES:

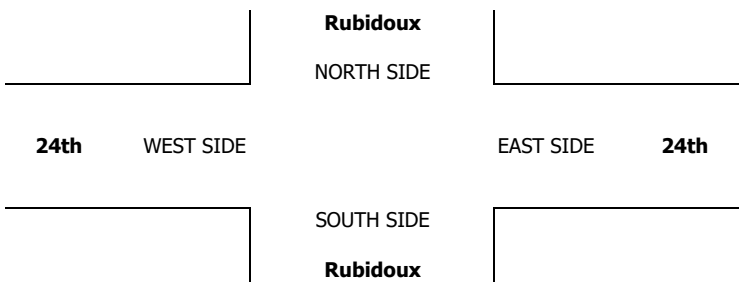
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th			
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	13	0	0	3	0	0	0	0	0	0	0	17
	12:15 PM	0	8	1	0	12	0	0	0	0	0	0	0	21
	12:30 PM	0	10	1	0	4	0	0	0	0	0	0	0	15
	12:45 PM	0	10	1	0	3	0	0	0	0	1	0	0	15
	1:00 PM	1	8	0	0	8	0	0	0	0	1	0	0	18
	1:15 PM	0	12	0	0	8	0	0	0	0	0	0	0	20
	1:30 PM	0	9	0	0	8	0	0	0	0	1	0	0	18
	1:45 PM	0	11	1	0	1	0	0	0	0	1	0	0	14
	VOLUMES	2	81	4	0	47	0	0	0	0	4	0	0	138
	APPROACH %	2%	93%	5%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	87	/	81	47	/	51	0	/	4	4	/	2	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	1	39	1	0	27	0	0	0	0	3	0	0	71
	APPROACH %	2%	95%	2%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.854			0.844			0.000			0.750		0.888
	APP/DEPART	41	/	39	27	/	30	0	/	1	3	/	1	0
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0

NB	SB	EB	WB	TTL
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

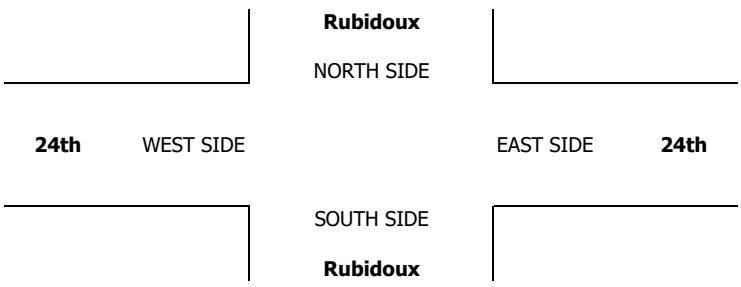
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th				U-TURNS				
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	17	0	0	18	0	0	0	0	0	0	0	35	0	0	0	0	0
12:15 PM	0	18	3	0	12	0	0	0	0	2	0	0	35	0	0	0	0	0
12:30 PM	0	24	0	0	15	0	0	0	0	0	0	0	39	0	0	0	0	0
12:45 PM	0	6	3	0	15	0	0	0	0	0	0	0	24	0	0	0	0	0
1:00 PM	0	15	3	0	13	0	0	0	0	0	0	0	31	0	0	0	0	0
1:15 PM	0	15	3	0	16	0	0	0	0	1	0	0	35	0	0	0	0	0
1:30 PM	1	13	1	0	23	0	0	0	0	2	0	0	40	0	0	0	0	0
1:45 PM	0	19	1	0	21	0	0	0	1	2	0	0	44	0	0	0	0	0
VOLUMES	1	127	14	0	133	0	0	0	1	7	0	0	283	0	0	0	0	0
APPROACH %	1%	89%	10%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
APP/DEPART	142	/	127	133	/	141	1	/	14	7	/	1	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	1	62	8	0	73	0	0	0	1	5	0	0	150					
APPROACH %	1%	87%	11%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
PEAK HR FACTOR		0.888			0.793			0.250			0.625		0.852					
APP/DEPART	71	/	62	73	/	79	1	/	8	5	/	1	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

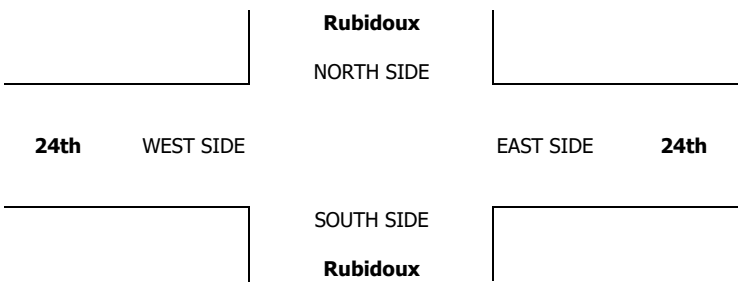
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th				U-TURNS				
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		11:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



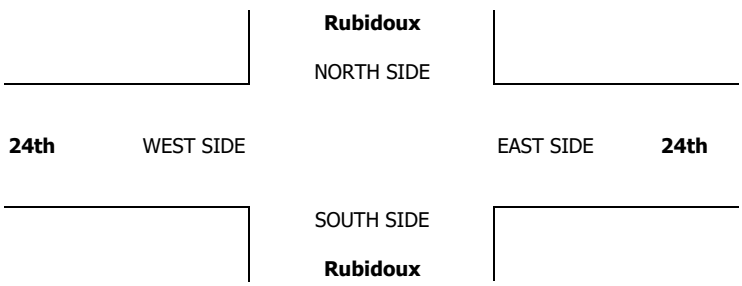
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	11
WEDNESDAY	EAST & WEST:	24th	CONTROL:	STOP E/W

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 24th			WESTBOUND 24th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	0	0
	1:45 PM	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	0	0
	VOLUMES	0	1	2	0	3	0	0	0	0	0	0	2	8	0	0	0	0	0
	APPROACH %	0%	33%	67%	0%	100%	0%	0%	0%	0%	0%	0%	100%						
	APP/DEPART	3	/	3	3	/	3	0	/	2	2	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	0	1	0	2	0	0	0	0	0	0	2	5					
	APPROACH %	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%						
	PEAK HR FACTOR		0.250			0.500			0.000			0.500		0.625					
	APP/DEPART	1	/	2	2	/	2	0	/	1	2	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 26th Street
Weather: Clear

File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	3	110	1	114	1	1	4	6	0	113	3	116	0	1	0	1	237
06:45 AM	1	123	0	124	1	1	2	4	3	127	1	131	0	0	2	2	261
Total	4	233	1	238	2	2	6	10	3	240	4	247	0	1	2	3	498
07:00 AM	1	147	0	148	1	0	1	2	3	121	1	125	0	0	1	1	276
07:15 AM	2	153	0	155	0	0	1	1	0	104	3	107	0	0	0	0	263
07:30 AM	1	162	0	163	1	0	1	2	3	97	1	101	0	0	1	1	267
07:45 AM	1	175	0	176	3	1	0	4	2	108	1	111	0	0	1	1	292
Total	5	637	0	642	5	1	3	9	8	430	6	444	0	0	3	3	1098
08:00 AM	1	137	0	138	0	0	1	1	2	110	2	114	0	0	1	1	254
08:15 AM	1	135	0	136	4	0	1	5	2	124	3	129	0	1	1	2	272
08:30 AM	0	113	0	113	2	0	0	2	0	98	4	102	0	1	0	1	218
08:45 AM	1	101	1	103	1	0	0	1	0	113	3	116	1	0	0	1	221
Total	3	486	1	490	7	0	2	9	4	445	12	461	1	2	2	5	965
09:00 AM	2	101	0	103	2	0	3	5	1	81	4	86	0	1	1	2	196
09:15 AM	1	103	0	104	7	1	1	9	0	75	3	78	0	1	0	1	192
Grand Total	15	1560	2	1577	23	4	15	42	16	1271	29	1316	1	5	8	14	2949
Apprch %	1	98.9	0.1		54.8	9.5	35.7		1.2	96.6	2.2		7.1	35.7	57.1		
Total %	0.5	52.9	0.1	53.5	0.8	0.1	0.5	1.4	0.5	43.1	1	44.6	0	0.2	0.3	0.5	
Passenger Vehicles	11	1163	0	1174	10	4	11	25	15	990	23	1028	0	4	5	9	2236
% Passenger Vehicles	73.3	74.6	0	74.4	43.5	100	73.3	59.5	93.8	77.9	79.3	78.1	0	80	62.5	64.3	75.8
Large 2 Axle Vehicles	3	139	2	144	6	0	2	8	0	76	4	80	1	0	2	3	235
% Large 2 Axle Vehicles	20	8.9	100	9.1	26.1	0	13.3	19	0	6	13.8	6.1	100	0	25	21.4	8
3 Axle Vehicles	0	95	0	95	1	0	2	3	1	86	0	87	0	1	1	2	187
% 3 Axle Vehicles	0	6.1	0	6	4.3	0	13.3	7.1	6.2	6.8	0	6.6	0	20	12.5	14.3	6.3
4+ Axle Trucks	1	163	0	164	6	0	0	6	0	119	2	121	0	0	0	0	291
% 4+ Axle Trucks	6.7	10.4	0	10.4	26.1	0	0	14.3	0	9.4	6.9	9.2	0	0	0	0	9.9

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	147	0	148	1	0	**1**	2	**3**	**121**	1	**125**	0	0	**1**	**1**	276
07:15 AM	**2**	153	0	155	0	0	1	1	0	104	**3**	107	0	0	0	0	263
07:30 AM	1	162	0	163	1	0	1	2	3	97	1	101	0	0	1	1	267
07:45 AM	1	**175**	0	**176**	**3**	**1**	0	**4**	2	108	1	111	0	0	1	1	**292**
Total Volume	5	637	0	642	5	1	3	9	8	430	6	444	0	0	3	3	1098
% App. Total	0.8	99.2	0		55.6	11.1	33.3		1.8	96.8	1.4		0	0	100		
PHF	.625	.910	.000	.912	.417	.250	.750	.563	.667	.888	.500	.888	.000	.000	.750	.750	.940

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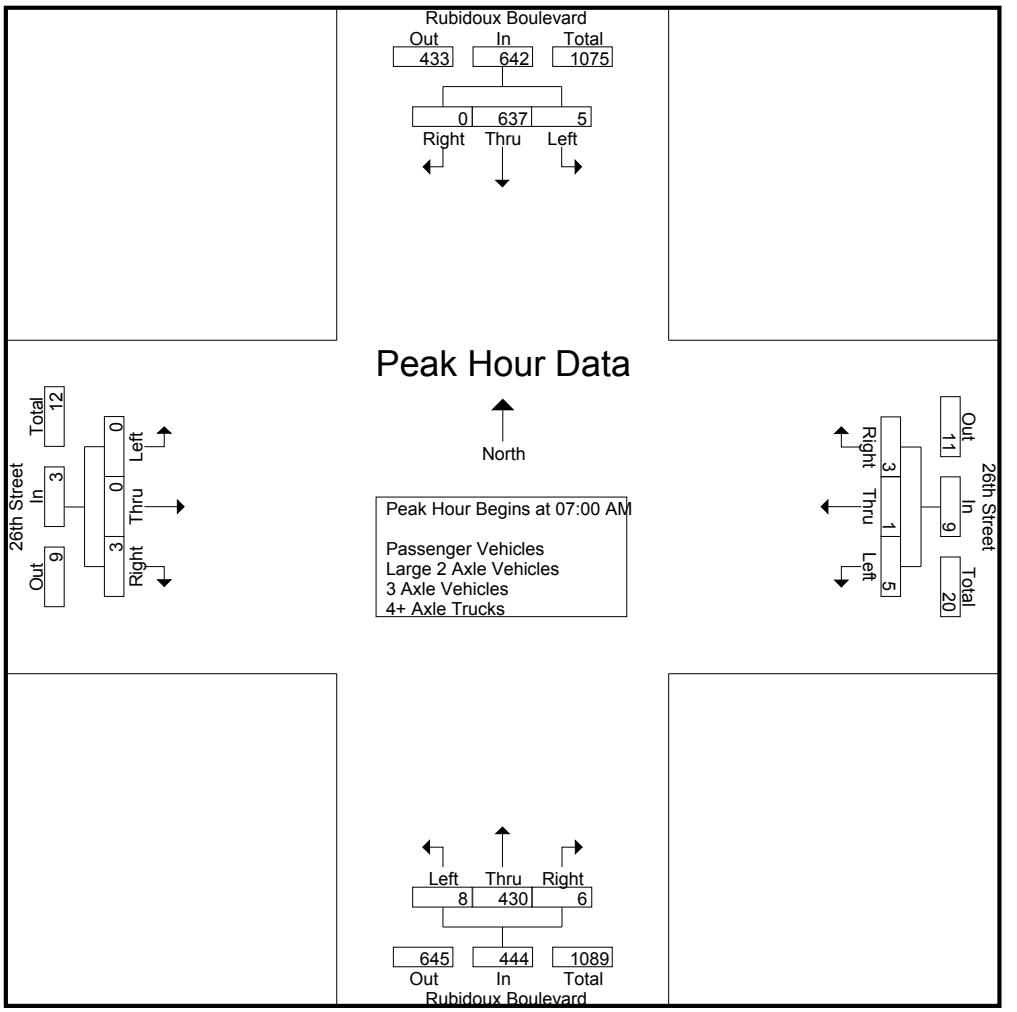
File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:30 AM				06:30 AM				08:15 AM			
+0 mins.	1	147	0	148	2	0	0	2	0	113	**3**	116	0	**1**	**1**	**2**
+15 mins.	**2**	153	0	155	1	0	0	1	**3**	**127**	1	**131**	0	1	0	1
+30 mins.	1	162	0	163	2	0	**3**	5	3	121	1	125	**1**	0	0	1
+45 mins.	1	**175**	0	**176**	**7**	**1**	1	**9**	0	104	3	107	0	1	1	2
Total Volume	5	637	0	642	12	1	4	17	6	465	8	479	1	3	2	6
% App. Total	0.8	99.2	0		70.6	5.9	23.5		1.3	97.1	1.7		16.7	50	33.3	
PHF	.625	.910	.000	.912	.429	.250	.333	.472	.500	.915	.667	.914	.250	.750	.500	.750

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File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	3	86	0	89	0	1	3	4	0	93	2	95	0	1	0	1	189
06:45 AM	1	87	0	88	1	1	2	4	3	111	1	115	0	0	0	0	207
Total	4	173	0	177	1	2	5	8	3	204	3	210	0	1	0	1	396
07:00 AM	1	105	0	106	0	0	1	1	3	92	0	95	0	0	1	1	203
07:15 AM	1	126	0	127	0	0	1	1	0	87	3	90	0	0	0	0	218
07:30 AM	1	138	0	139	0	0	1	1	3	84	0	87	0	0	1	1	228
07:45 AM	1	148	0	149	1	1	0	2	2	90	0	92	0	0	1	1	244
Total	4	517	0	521	1	1	3	5	8	353	3	364	0	0	3	3	893
08:00 AM	1	106	0	107	0	0	1	1	2	80	2	84	0	0	0	0	192
08:15 AM	0	95	0	95	3	0	1	4	1	85	2	88	0	1	1	2	189
08:30 AM	0	78	0	78	0	0	0	0	0	66	4	70	0	1	0	1	149
08:45 AM	0	64	0	64	0	0	0	0	0	93	3	96	0	0	0	0	160
Total	1	343	0	344	3	0	2	5	3	324	11	338	0	2	1	3	690
09:00 AM	1	65	0	66	1	0	1	2	1	56	4	61	0	0	1	1	130
09:15 AM	1	65	0	66	4	1	0	5	0	53	2	55	0	1	0	1	127
Grand Total	11	1163	0	1174	10	4	11	25	15	990	23	1028	0	4	5	9	2236
Apprch %	0.9	99.1	0		40	16	44		1.5	96.3	2.2		0	44.4	55.6		
Total %	0.5	52	0	52.5	0.4	0.2	0.5	1.1	0.7	44.3	1	46	0	0.2	0.2	0.4	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	105	0	106	0	0	**1**	1	**3**	**92**	0	**95**	0	0	**1**	**1**	203
07:15 AM	1	126	0	127	0	0	1	1	0	87	**3**	90	0	0	0	0	218
07:30 AM	1	138	0	139	0	0	1	1	3	84	0	87	0	0	1	1	228
07:45 AM	1	**148**	0	**149**	**1**	**1**	0	**2**	2	90	0	92	0	0	1	1	**244**
Total Volume	4	517	0	521	1	1	3	5	8	353	3	364	0	0	3	3	893
% App. Total	0.8	99.2	0		20	20	60		2.2	97	0.8		0	0	100		
PHF	1.00	.873	.000	.874	.250	.250	.750	.625	.667	.959	.250	.958	.000	.000	.750	.750	.915

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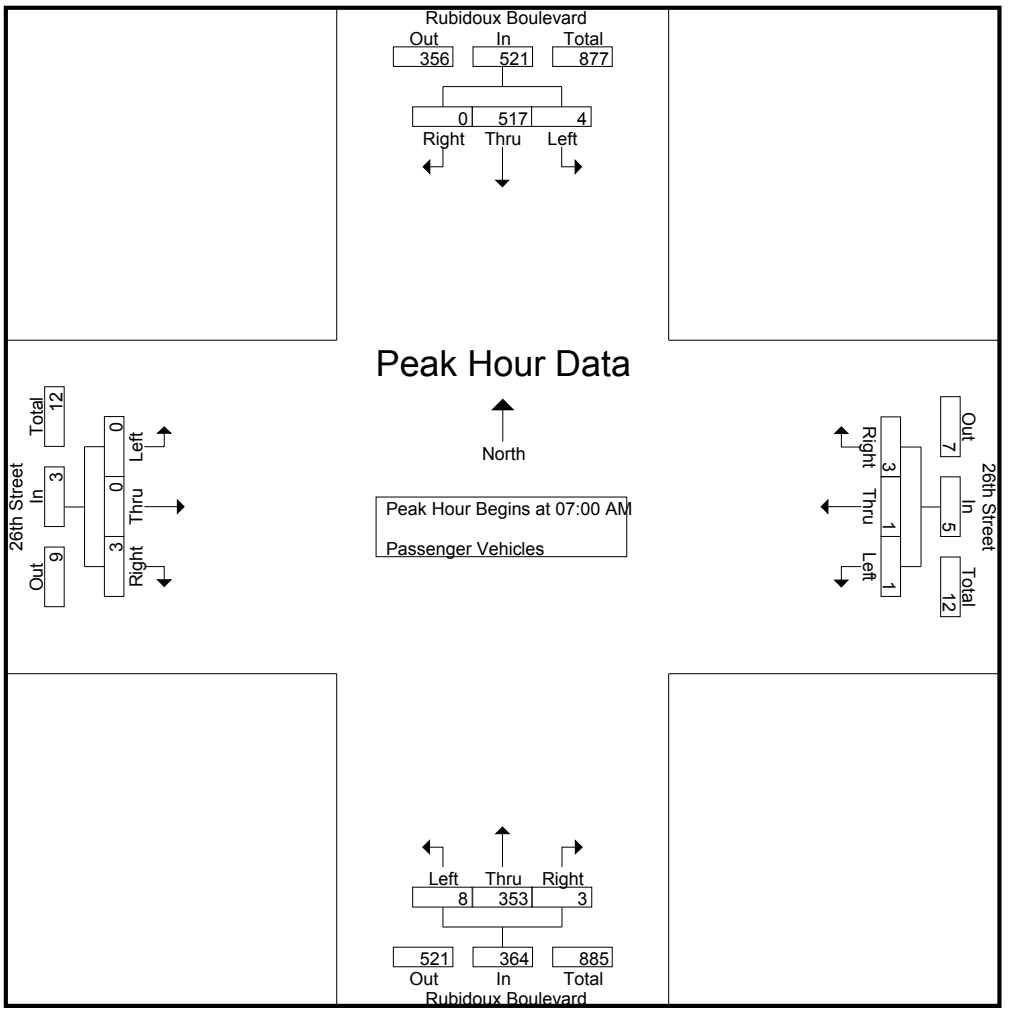
File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	105	0	106	0	0	**1**	1	**3**	**92**	0	**95**	0	0	**1**	**1**
+15 mins.	1	126	0	127	0	0	1	1	0	87	**3**	90	0	0	0	0
+30 mins.	1	138	0	139	0	0	1	1	3	84	0	87	0	0	1	1
+45 mins.	1	**148**	0	**149**	**1**	**1**	0	**2**	2	90	0	92	0	0	1	1
Total Volume	4	517	0	521	1	1	3	5	8	353	3	364	0	0	3	3
% App. Total	0.8	99.2	0		20	20	60		2.2	97	0.8		0	0	100	
PHF	1.000	.873	.000	.874	.250	.250	.750	.625	.667	.959	.250	.958	.000	.000	.750	.750

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City of Jurupa Valley
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File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	7	1	8	0	0	0	0	0	5	1	6	0	0	0	0	14
06:45 AM	0	11	0	11	0	0	0	0	0	6	0	6	0	0	1	1	18
Total	0	18	1	19	0	0	0	0	0	11	1	12	0	0	1	1	32
07:00 AM	0	14	0	14	0	0	0	0	0	9	1	10	0	0	0	0	24
07:15 AM	1	10	0	11	0	0	0	0	0	5	0	5	0	0	0	0	16
07:30 AM	0	11	0	11	0	0	0	0	0	4	1	5	0	0	0	0	16
07:45 AM	0	10	0	10	1	0	0	1	0	5	1	6	0	0	0	0	17
Total	1	45	0	46	1	0	0	1	0	23	3	26	0	0	0	0	73
08:00 AM	0	6	0	6	0	0	0	0	0	12	0	12	0	0	1	1	19
08:15 AM	1	9	0	10	1	0	0	1	0	6	0	6	0	0	0	0	17
08:30 AM	0	13	0	13	2	0	0	2	0	5	0	5	0	0	0	0	20
08:45 AM	0	19	1	20	0	0	0	0	0	5	0	5	1	0	0	1	26
Total	1	47	1	49	3	0	0	3	0	28	0	28	1	0	1	2	82
09:00 AM	1	16	0	17	0	0	1	1	0	6	0	6	0	0	0	0	24
09:15 AM	0	13	0	13	2	0	1	3	0	8	0	8	0	0	0	0	24
Grand Total	3	139	2	144	6	0	2	8	0	76	4	80	1	0	2	3	235
Apprch %	2.1	96.5	1.4		75	0	25		0	95	5		33.3	0	66.7		
Total %	1.3	59.1	0.9	61.3	2.6	0	0.9	3.4	0	32.3	1.7	34	0.4	0	0.9	1.3	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**14**	0	**14**	0	0	0	0	0	**9**	**1**	**10**	0	0	0	0	**24**
07:15 AM	**1**	10	0	11	0	0	0	0	0	5	0	5	0	0	0	0	16
07:30 AM	0	11	0	11	0	0	0	0	0	4	1	5	0	0	0	0	16
07:45 AM	0	10	0	10	**1**	0	0	**1**	0	5	1	6	0	0	0	0	17
Total Volume	1	45	0	46	1	0	0	1	0	23	3	26	0	0	0	0	73
% App. Total	2.2	97.8	0		100	0	0		0	88.5	11.5		0	0	0		
PHF	.250	.804	.000	.821	.250	.000	.000	.250	.000	.639	.750	.650	.000	.000	.000	.000	.760

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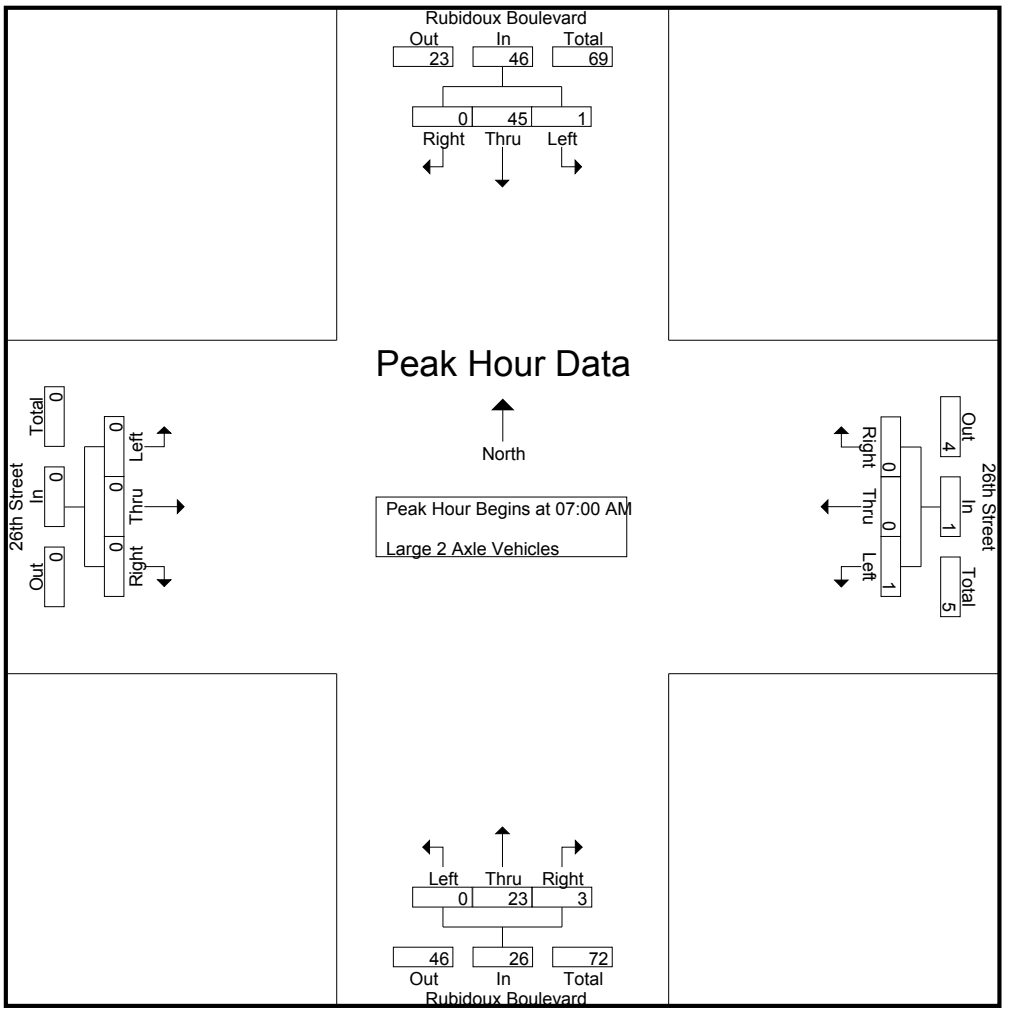
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**14**	0	**14**	0	0	0	0	0	**9**	**1**	**10**	0	0	0	0
+15 mins.	**1**	10	0	11	0	0	0	0	0	5	0	5	0	0	0	0
+30 mins.	0	11	0	11	0	0	0	0	0	4	1	5	0	0	0	0
+45 mins.	0	10	0	10	**1**	0	0	**1**	0	5	1	6	0	0	0	0
Total Volume	1	45	0	46	1	0	0	1	0	23	3	26	0	0	0	0
% App. Total	2.2	97.8	0		100	0	0		0	88.5	11.5		0	0	0	
PHF	.250	.804	.000	.821	.250	.000	.000	.250	.000	.639	.750	.650	.000	.000	.000	.000

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City of Jurupa Valley
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File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	3	0	3	0	0	1	1	0	4	0	4	0	0	0	0	8
06:45 AM	0	18	0	18	0	0	0	0	0	3	0	3	0	0	1	1	22
Total	0	21	0	21	0	0	1	1	0	7	0	7	0	0	1	1	30
07:00 AM	0	16	0	16	1	0	0	1	0	9	0	9	0	0	0	0	26
07:15 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
07:30 AM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
07:45 AM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
Total	0	27	0	27	1	0	0	1	0	20	0	20	0	0	0	0	48
08:00 AM	0	6	0	6	0	0	0	0	0	11	0	11	0	0	0	0	17
08:15 AM	0	12	0	12	0	0	0	0	1	16	0	17	0	0	0	0	29
08:30 AM	0	10	0	10	0	0	0	0	0	12	0	12	0	0	0	0	22
08:45 AM	0	6	0	6	0	0	0	0	0	8	0	8	0	0	0	0	14
Total	0	34	0	34	0	0	0	0	1	47	0	48	0	0	0	0	82
09:00 AM	0	6	0	6	0	0	1	1	0	8	0	8	0	1	0	1	16
09:15 AM	0	7	0	7	0	0	0	0	0	4	0	4	0	0	0	0	11
Grand Total	0	95	0	95	1	0	2	3	1	86	0	87	0	1	1	2	187
Apprch %	0	100	0		33.3	0	66.7		1.1	98.9	0		0	50	50		
Total %	0	50.8	0	50.8	0.5	0	1.1	1.6	0.5	46	0	46.5	0	0.5	0.5	1.1	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**16**	0	**16**	**1**	0	0	**1**	0	**9**	0	**9**	0	0	0	0	**26**
07:15 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
07:30 AM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
07:45 AM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
Total Volume	0	27	0	27	1	0	0	1	0	20	0	20	0	0	0	0	48
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.422	.000	.422	.250	.000	.000	.250	.000	.556	.000	.556	.000	.000	.000	.000	.462

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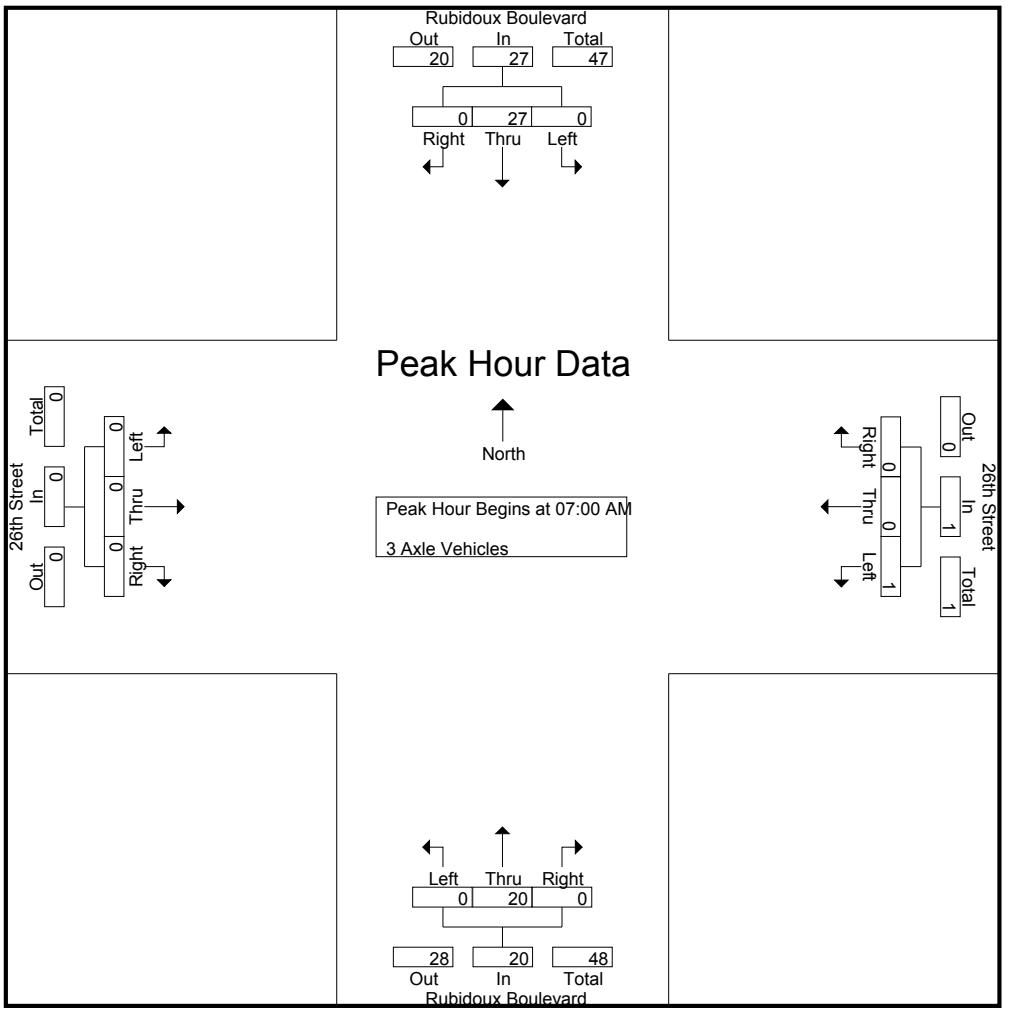
File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**16**	0	**16**	**1**	0	0	**1**	0	**9**	0	**9**	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0
Total Volume	0	27	0	27	1	0	0	1	0	20	0	20	0	0	0	0
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0	
PHF	.000	.422	.000	.422	.250	.000	.000	.250	.000	.556	.000	.556	.000	.000	.000	.000

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Weather: Clear

File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	14	0	14	1	0	0	1	0	11	0	11	0	0	0	0	26
06:45 AM	0	7	0	7	0	0	0	0	0	7	0	7	0	0	0	0	14
Total	0	21	0	21	1	0	0	1	0	18	0	18	0	0	0	0	40
07:00 AM	0	12	0	12	0	0	0	0	0	11	0	11	0	0	0	0	23
07:15 AM	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0	25
07:30 AM	0	8	0	8	1	0	0	1	0	6	0	6	0	0	0	0	15
07:45 AM	0	14	0	14	1	0	0	1	0	6	0	6	0	0	0	0	21
Total	0	48	0	48	2	0	0	2	0	34	0	34	0	0	0	0	84
08:00 AM	0	19	0	19	0	0	0	0	0	7	0	7	0	0	0	0	26
08:15 AM	0	19	0	19	0	0	0	0	0	17	1	18	0	0	0	0	37
08:30 AM	0	12	0	12	0	0	0	0	0	15	0	15	0	0	0	0	27
08:45 AM	1	12	0	13	1	0	0	1	0	7	0	7	0	0	0	0	21
Total	1	62	0	63	1	0	0	1	0	46	1	47	0	0	0	0	111
09:00 AM	0	14	0	14	1	0	0	1	0	11	0	11	0	0	0	0	26
09:15 AM	0	18	0	18	1	0	0	1	0	10	1	11	0	0	0	0	30
Grand Total	1	163	0	164	6	0	0	6	0	119	2	121	0	0	0	0	291
Apprch %	0.6	99.4	0		100	0	0		0	98.3	1.7		0	0	0		
Total %	0.3	56	0	56.4	2.1	0	0	2.1	0	40.9	0.7	41.6	0	0	0	0	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	12	0	12	0	0	0	0	0	**11**	0	**11**	0	0	0	0	23
07:15 AM	0	**14**	0	**14**	0	0	0	0	0	11	0	11	0	0	0	0	**25**
07:30 AM	0	8	0	8	**1**	0	0	**1**	0	6	0	6	0	0	0	0	15
07:45 AM	0	14	0	14	1	0	0	1	0	6	0	6	0	0	0	0	21
Total Volume	0	48	0	48	2	0	0	2	0	34	0	34	0	0	0	0	84
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.857	.000	.857	.500	.000	.000	.500	.000	.773	.000	.773	.000	.000	.000	.000	.840

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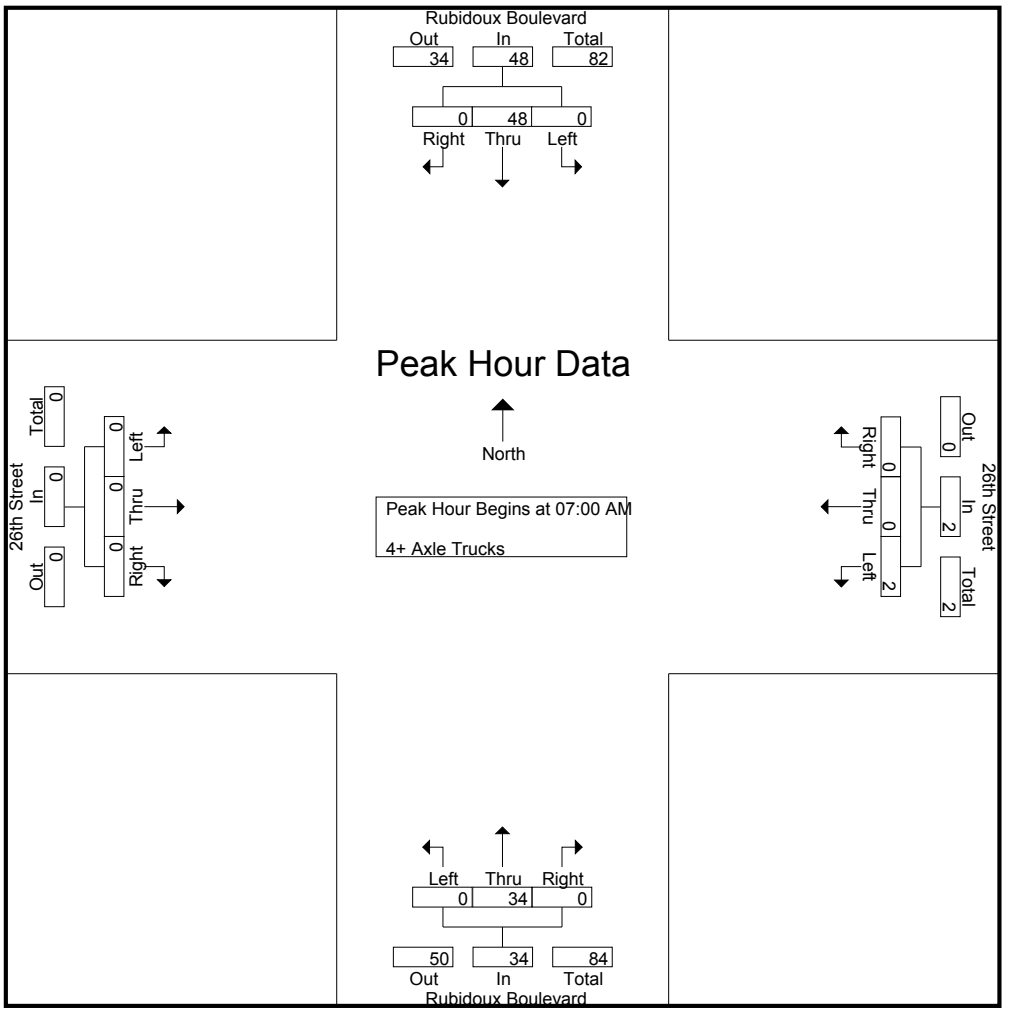
File Name : 19_JVYRU26AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	12	0	12	0	0	0	0	0	**11**	0	**11**	0	0	0	0
+15 mins.	0	**14**	0	**14**	0	0	0	0	0	11	0	11	0	0	0	0
+30 mins.	0	8	0	8	**1**	0	0	**1**	0	6	0	6	0	0	0	0
+45 mins.	0	14	0	14	1	0	0	1	0	6	0	6	0	0	0	0
Total Volume	0	48	0	48	2	0	0	2	0	34	0	34	0	0	0	0
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0	
PHF	.000	.857	.000	.857	.500	.000	.000	.500	.000	.773	.000	.773	.000	.000	.000	.000

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File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	155	1	156	5	0	2	7	0	153	6	159	0	0	2	2	324
03:45 PM	0	139	1	140	3	0	2	5	2	161	6	169	2	0	2	4	318
Total	0	294	2	296	8	0	4	12	2	314	12	328	2	0	4	6	642
04:00 PM	3	164	0	167	2	0	3	5	3	200	5	208	0	0	1	1	381
04:15 PM	4	172	1	177	1	0	5	6	1	180	5	186	0	0	1	1	370
04:30 PM	3	135	1	139	2	0	1	3	0	178	7	185	0	0	4	4	331
04:45 PM	1	148	0	149	2	0	4	6	0	192	4	196	0	0	3	3	354
Total	11	619	2	632	7	0	13	20	4	750	21	775	0	0	9	9	1436
05:00 PM	0	163	0	163	1	1	5	7	1	186	3	190	0	0	3	3	363
05:15 PM	1	153	2	156	3	0	3	6	3	199	3	205	0	1	0	1	368
05:30 PM	0	156	0	156	0	0	3	3	1	180	2	183	0	0	3	3	345
05:45 PM	2	121	0	123	3	1	1	5	0	166	0	166	0	1	0	1	295
Total	3	593	2	598	7	2	12	21	5	731	8	744	0	2	6	8	1371
06:00 PM	1	103	0	104	1	0	1	2	1	124	2	127	1	0	1	2	235
06:15 PM	0	82	1	83	3	0	2	5	1	99	3	103	0	0	0	0	191
Grand Total	15	1691	7	1713	26	2	32	60	13	2018	46	2077	3	2	20	25	3875
Apprch %	0.9	98.7	0.4		43.3	3.3	53.3		0.6	97.2	2.2		12	8	80		
Total %	0.4	43.6	0.2	44.2	0.7	0.1	0.8	1.5	0.3	52.1	1.2	53.6	0.1	0.1	0.5	0.6	
Passenger Vehicles	11	1508	7	1526	19	2	24	45	13	1647	34	1694	3	2	19	24	3289
% Passenger Vehicles	73.3	89.2	100	89.1	73.1	100	75	75	100	81.6	73.9	81.6	100	100	95	96	84.9
Large 2 Axle Vehicles	1	66	0	67	1	0	3	4	0	119	3	122	0	0	1	1	194
% Large 2 Axle Vehicles	6.7	3.9	0	3.9	3.8	0	9.4	6.7	0	5.9	6.5	5.9	0	0	5	4	5
3 Axle Vehicles	2	20	0	22	1	0	2	3	0	56	2	58	0	0	0	0	83
% 3 Axle Vehicles	13.3	1.2	0	1.3	3.8	0	6.2	5	0	2.8	4.3	2.8	0	0	0	0	2.1
4+ Axle Trucks	1	97	0	98	5	0	3	8	0	196	7	203	0	0	0	0	309
% 4+ Axle Trucks	6.7	5.7	0	5.7	19.2	0	9.4	13.3	0	9.7	15.2	9.8	0	0	0	0	8

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	3	164	0	167	**2**	0	3	5	**3**	**200**	5	**208**	0	0	1	1	**381**
04:15 PM	**4**	**172**	**1**	**177**	1	0	**5**	**6**	1	180	5	186	0	0	1	1	370
04:30 PM	3	135	1	139	2	0	1	3	0	178	**7**	185	0	0	**4**	**4**	331
04:45 PM	1	148	0	149	2	0	4	6	0	192	4	196	0	0	3	3	354
Total Volume	11	619	2	632	7	0	13	20	4	750	21	775	0	0	9	9	1436
% App. Total	1.7	97.9	0.3		35	0	65		0.5	96.8	2.7		0	0	100		
PHF	.688	.900	.500	.893	.875	.000	.650	.833	.333	.938	.750	.931	.000	.000	.563	.563	.942

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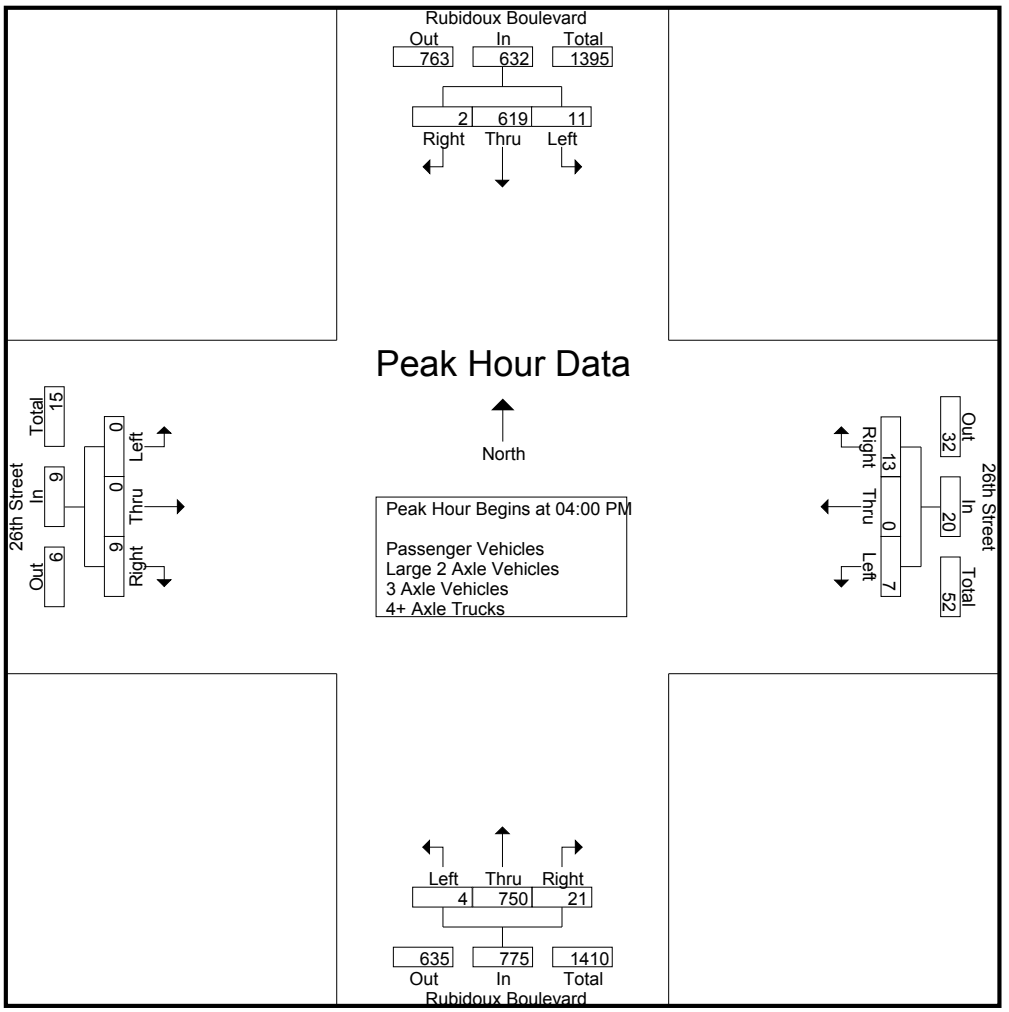
File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				04:30 PM				04:15 PM			
+0 mins.	0	155	**1**	156	**5**	0	2	**7**	0	178	**7**	185	0	0	1	1
+15 mins.	0	139	1	140	3	0	2	5	0	192	4	196	0	0	**4**	**4**
+30 mins.	3	164	0	167	2	0	3	5	1	186	3	190	0	0	3	3
+45 mins.	**4**	**172**	1	**177**	1	0	**5**	6	**3**	**199**	3	**205**	0	0	3	3
Total Volume	7	630	3	640	11	0	12	23	4	755	17	776	0	0	11	11
% App. Total	1.1	98.4	0.5		47.8	0	52.2		0.5	97.3	2.2		0	0	100	
PHF	.438	.916	.750	.904	.550	.000	.600	.821	.333	.948	.607	.946	.000	.000	.688	.688

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N/S: Rubidoux Boulevard
E/W: 26th Street
Weather: Clear

File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	133	1	134	4	0	2	6	0	127	6	133	0	0	1	1	274
03:45 PM	0	123	1	124	2	0	0	2	2	127	3	132	2	0	2	4	262
Total	0	256	2	258	6	0	2	8	2	254	9	265	2	0	3	5	536
04:00 PM	2	144	0	146	0	0	3	3	3	171	5	179	0	0	1	1	329
04:15 PM	1	158	1	160	1	0	4	5	1	142	2	145	0	0	1	1	311
04:30 PM	3	114	1	118	1	0	1	2	0	145	7	152	0	0	4	4	276
04:45 PM	1	136	0	137	2	0	4	6	0	158	2	160	0	0	3	3	306
Total	7	552	2	561	4	0	12	16	4	616	16	636	0	0	9	9	1222
05:00 PM	0	145	0	145	0	1	2	3	1	162	2	165	0	0	3	3	316
05:15 PM	1	141	2	144	3	0	2	5	3	163	2	168	0	1	0	1	318
05:30 PM	0	142	0	142	0	0	2	2	1	147	1	149	0	0	3	3	296
05:45 PM	2	107	0	109	3	1	1	5	0	130	0	130	0	1	0	1	245
Total	3	535	2	540	6	2	7	15	5	602	5	612	0	2	6	8	1175
06:00 PM	1	95	0	96	0	0	1	1	1	99	2	102	1	0	1	2	201
06:15 PM	0	70	1	71	3	0	2	5	1	76	2	79	0	0	0	0	155
Grand Total	11	1508	7	1526	19	2	24	45	13	1647	34	1694	3	2	19	24	3289
Apprch %	0.7	98.8	0.5		42.2	4.4	53.3		0.8	97.2	2		12.5	8.3	79.2		
Total %	0.3	45.8	0.2	46.4	0.6	0.1	0.7	1.4	0.4	50.1	1	51.5	0.1	0.1	0.6	0.7	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	2	144	0	146	0	0	3	3	**3**	**171**	5	**179**	0	0	1	1	**329**
04:15 PM	1	**158**	**1**	**160**	1	0	**4**	5	1	142	2	145	0	0	1	1	311
04:30 PM	**3**	114	1	118	1	0	1	2	0	145	**7**	152	0	0	**4**	**4**	276
04:45 PM	1	136	0	137	**2**	0	4	**6**	0	158	2	160	0	0	3	3	306
Total Volume	7	552	2	561	4	0	12	16	4	616	16	636	0	0	9	9	1222
% App. Total	1.2	98.4	0.4		25	0	75		0.6	96.9	2.5		0	0	100		
PHF	.583	.873	.500	.877	.500	.000	.750	.667	.333	.901	.571	.888	.000	.000	.563	.563	.929

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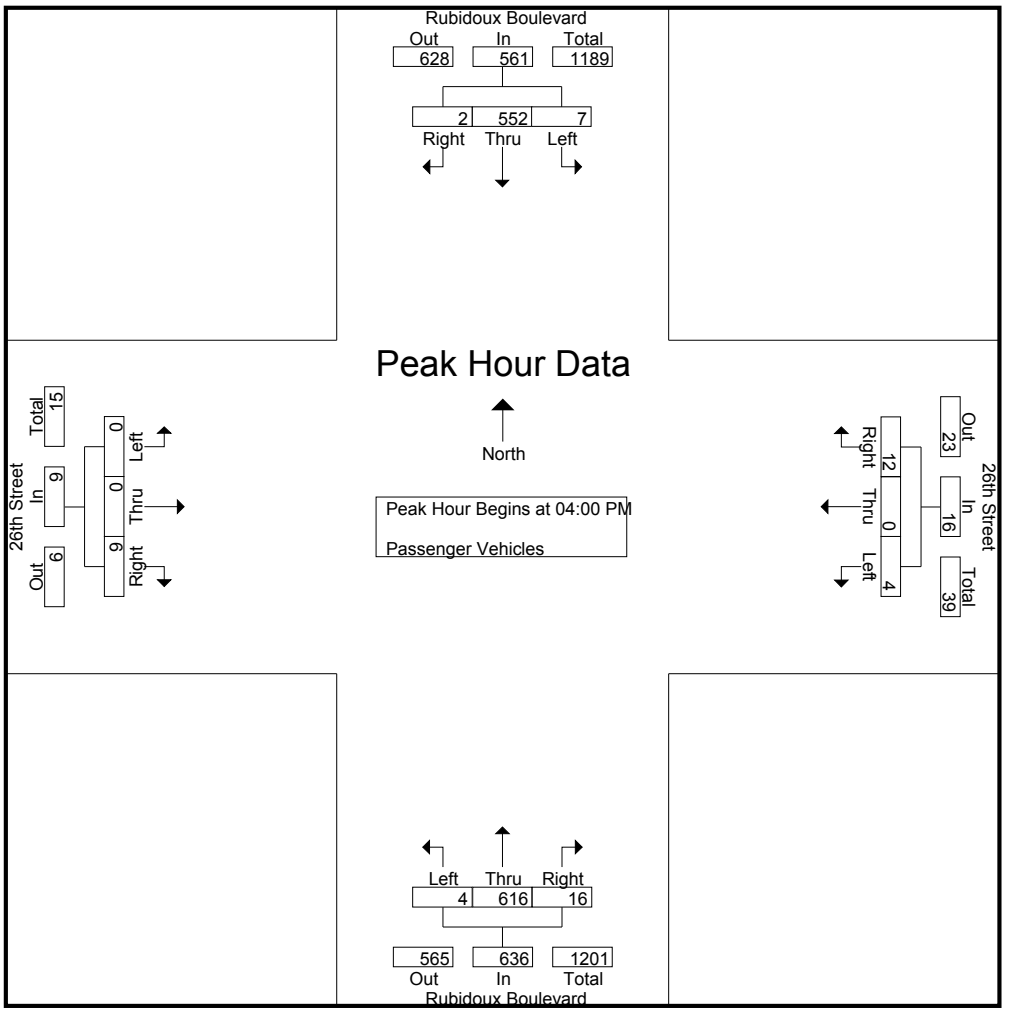
File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	2	144	0	146	0	0	3	3	**3**	**171**	5	**179**	0	0	1	1
+15 mins.	1	**158**	**1**	**160**	1	0	**4**	5	1	142	2	145	0	0	1	1
+30 mins.	**3**	114	1	118	1	0	1	2	0	145	**7**	152	0	0	**4**	**4**
+45 mins.	1	136	0	137	**2**	0	4	**6**	0	158	2	160	0	0	3	3
Total Volume	7	552	2	561	4	0	12	16	4	616	16	636	0	0	9	9
% App. Total	1.2	98.4	0.4		25	0	75		0.6	96.9	2.5		0	0	100	
PHF	.583	.873	.500	.877	.500	.000	.750	.667	.333	.901	.571	.888	.000	.000	.563	.563

Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 26th Street
Weather: Clear

File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	11	0	11	0	0	0	0	0	12	0	12	0	0	1	1	24
03:45 PM	0	8	0	8	0	0	1	1	0	11	1	12	0	0	0	0	21
Total	0	19	0	19	0	0	1	1	0	23	1	24	0	0	1	1	45
04:00 PM	1	9	0	10	1	0	0	1	0	13	0	13	0	0	0	0	24
04:15 PM	0	6	0	6	0	0	1	1	0	9	1	10	0	0	0	0	17
04:30 PM	0	9	0	9	0	0	0	0	0	11	0	11	0	0	0	0	20
04:45 PM	0	2	0	2	0	0	0	0	0	4	1	5	0	0	0	0	7
Total	1	26	0	27	1	0	1	2	0	37	2	39	0	0	0	0	68
05:00 PM	0	3	0	3	0	0	0	0	0	10	0	10	0	0	0	0	13
05:15 PM	0	4	0	4	0	0	0	0	0	7	0	7	0	0	0	0	11
05:30 PM	0	5	0	5	0	0	1	1	0	12	0	12	0	0	0	0	18
05:45 PM	0	5	0	5	0	0	0	0	0	16	0	16	0	0	0	0	21
Total	0	17	0	17	0	0	1	1	0	45	0	45	0	0	0	0	63
06:00 PM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
06:15 PM	0	1	0	1	0	0	0	0	0	8	0	8	0	0	0	0	9
Grand Total	1	66	0	67	1	0	3	4	0	119	3	122	0	0	1	1	194
Apprch %	1.5	98.5	0		25	0	75		0	97.5	2.5		0	0	100		
Total %	0.5	34	0	34.5	0.5	0	1.5	2.1	0	61.3	1.5	62.9	0	0	0.5	0.5	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	**9**	0	**10**	**1**	0	0	**1**	0	**13**	0	**13**	0	0	0	0	**24**
04:15 PM	0	6	0	6	0	0	**1**	1	0	9	**1**	10	0	0	0	0	17
04:30 PM	0	9	0	9	0	0	0	0	0	11	0	11	0	0	0	0	20
04:45 PM	0	2	0	2	0	0	0	0	0	4	1	5	0	0	0	0	7
Total Volume	1	26	0	27	1	0	1	2	0	37	2	39	0	0	0	0	68
% App. Total	3.7	96.3	0		50	0	50		0	94.9	5.1		0	0	0		
PHF	.250	.722	.000	.675	.250	.000	.250	.500	.000	.712	.500	.750	.000	.000	.000	.000	.708

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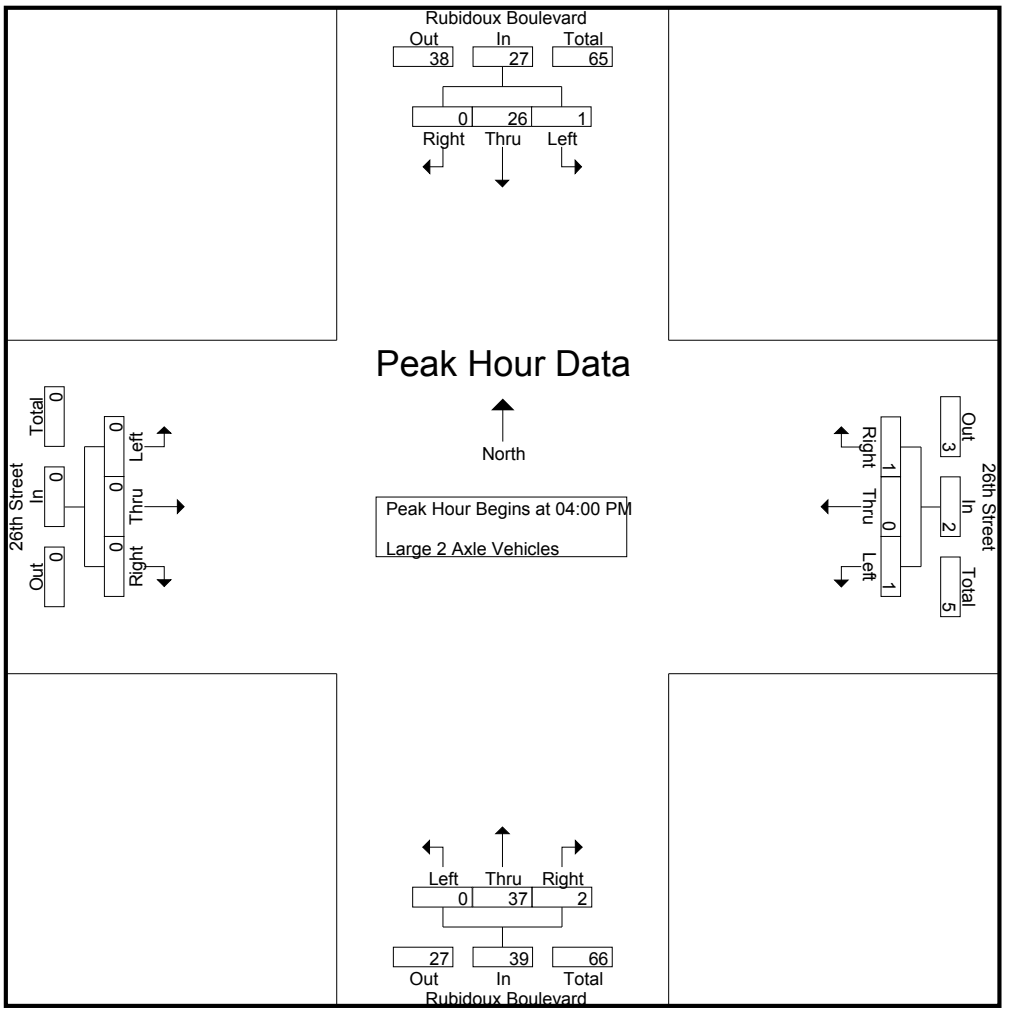
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 26th Street
Weather: Clear

File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	**1**	**9**	0	**10**	**1**	0	0	**1**	0	**13**	0	**13**	0	0	0	0
+15 mins.	0	6	0	6	0	0	**1**	1	0	9	**1**	10	0	0	0	0
+30 mins.	0	9	0	9	0	0	0	0	0	11	0	11	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	4	1	5	0	0	0	0
Total Volume	1	26	0	27	1	0	1	2	0	37	2	39	0	0	0	0
% App. Total	3.7	96.3	0		50	0	50		0	94.9	5.1		0	0	0	
PHF	.250	.722	.000	.675	.250	.000	.250	.500	.000	.712	.500	.750	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 26th Street
Weather: Clear

File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
04:15 PM	2	2	0	4	0	0	0	0	0	9	1	10	0	0	0	0	14
04:30 PM	0	2	0	2	1	0	0	1	0	8	0	8	0	0	0	0	11
04:45 PM	0	0	0	0	0	0	0	0	0	14	1	15	0	0	0	0	15
Total	2	9	0	11	1	0	0	1	0	34	2	36	0	0	0	0	48
05:00 PM	0	2	0	2	0	0	2	2	0	5	0	5	0	0	0	0	9
05:15 PM	0	3	0	3	0	0	0	0	0	5	0	5	0	0	0	0	8
05:30 PM	0	4	0	4	0	0	0	0	0	6	0	6	0	0	0	0	10
05:45 PM	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	8
Total	0	11	0	11	0	0	2	2	0	22	0	22	0	0	0	0	35
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	20	0	22	1	0	2	3	0	56	2	58	0	0	0	0	83
Apprch %	9.1	90.9	0		33.3	0	66.7		0	96.6	3.4		0	0	0		
Total %	2.4	24.1	0	26.5	1.2	0	2.4	3.6	0	67.5	2.4	69.9	0	0	0	0	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**5**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0	8
04:15 PM	**2**	2	0	4	0	0	0	0	0	9	**1**	10	0	0	0	0	14
04:30 PM	0	2	0	2	**1**	0	0	**1**	0	8	0	8	0	0	0	0	11
04:45 PM	0	0	0	0	0	0	0	0	0	**14**	1	**15**	0	0	0	0	**15**
Total Volume	2	9	0	11	1	0	0	1	0	34	2	36	0	0	0	0	48
% App. Total	18.2	81.8	0		100	0	0		0	94.4	5.6		0	0	0		
PHF	.250	.450	.000	.550	.250	.000	.000	.250	.000	.607	.500	.600	.000	.000	.000	.000	.800

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City of Jurupa Valley
N/S: Rubidoux Boulevard
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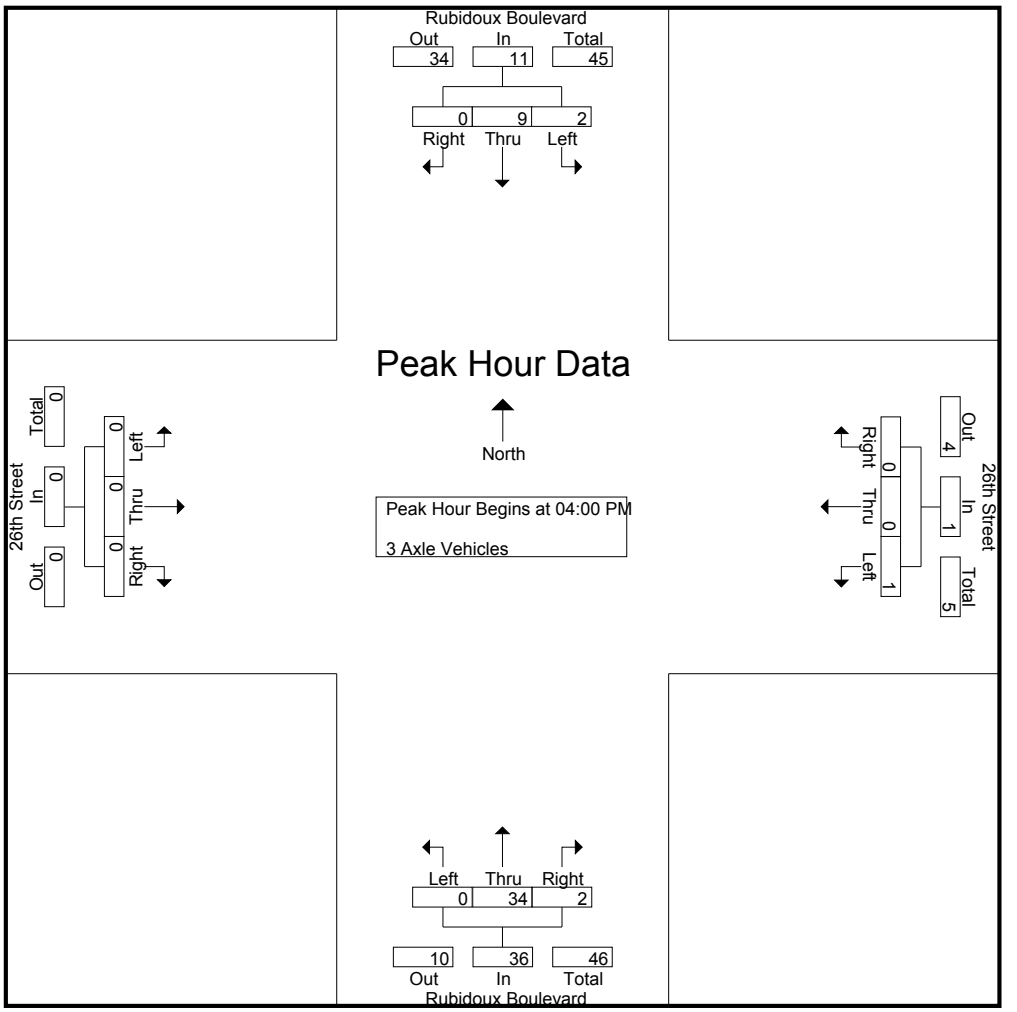
Weather: Clear

File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**5**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	**2**	2	0	4	0	0	0	0	0	9	**1**	10	0	0	0	0
+30 mins.	0	2	0	2	**1**	0	0	**1**	0	8	0	8	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**14**	1	**15**	0	0	0	0
Total Volume	2	9	0	11	1	0	0	1	0	34	2	36	0	0	0	0
% App. Total	18.2	81.8	0		100	0	0		0	94.4	5.6		0	0	0	
PHF	.250	.450	.000	.550	.250	.000	.000	.250	.000	.607	.500	.600	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 26th Street
Weather: Clear

File Name : 19_JVYRU26PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	11	0	11	1	0	0	1	0	14	0	14	0	0	0	0	26
03:45 PM	0	8	0	8	1	0	1	2	0	23	2	25	0	0	0	0	35
Total	0	19	0	19	2	0	1	3	0	37	2	39	0	0	0	0	61
04:00 PM	0	6	0	6	1	0	0	1	0	13	0	13	0	0	0	0	20
04:15 PM	1	6	0	7	0	0	0	0	0	20	1	21	0	0	0	0	28
04:30 PM	0	10	0	10	0	0	0	0	0	14	0	14	0	0	0	0	24
04:45 PM	0	10	0	10	0	0	0	0	0	16	0	16	0	0	0	0	26
Total	1	32	0	33	1	0	0	1	0	63	1	64	0	0	0	0	98
05:00 PM	0	13	0	13	1	0	1	2	0	9	1	10	0	0	0	0	25
05:15 PM	0	5	0	5	0	0	1	1	0	24	1	25	0	0	0	0	31
05:30 PM	0	5	0	5	0	0	0	0	0	15	1	16	0	0	0	0	21
05:45 PM	0	7	0	7	0	0	0	0	0	14	0	14	0	0	0	0	21
Total	0	30	0	30	1	0	2	3	0	62	3	65	0	0	0	0	98
06:00 PM	0	5	0	5	1	0	0	1	0	19	0	19	0	0	0	0	25
06:15 PM	0	11	0	11	0	0	0	0	0	15	1	16	0	0	0	0	27
Grand Total	1	97	0	98	5	0	3	8	0	196	7	203	0	0	0	0	309
Apprch %	1	99	0		62.5	0	37.5		0	96.6	3.4		0	0	0		
Total %	0.3	31.4	0	31.7	1.6	0	1	2.6	0	63.4	2.3	65.7	0	0	0	0	

	Rubidoux Boulevard Southbound				26th Street Westbound				Rubidoux Boulevard Northbound				26th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	6	0	6	**1**	0	0	**1**	0	13	0	13	0	0	0	0	20
04:15 PM	**1**	6	0	7	0	0	0	0	0	**20**	**1**	**21**	0	0	0	0	**28**
04:30 PM	0	**10**	0	**10**	0	0	0	0	0	14	0	14	0	0	0	0	24
04:45 PM	0	10	0	10	0	0	0	0	0	16	0	16	0	0	0	0	26
Total Volume	1	32	0	33	1	0	0	1	0	63	1	64	0	0	0	0	98
% App. Total	3	97	0		100	0	0		0	98.4	1.6		0	0	0		
PHF	.250	.800	.000	.825	.250	.000	.000	.250	.000	.788	.250	.762	.000	.000	.000	.000	.875

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City of Jurupa Valley
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Site Code : 05117022
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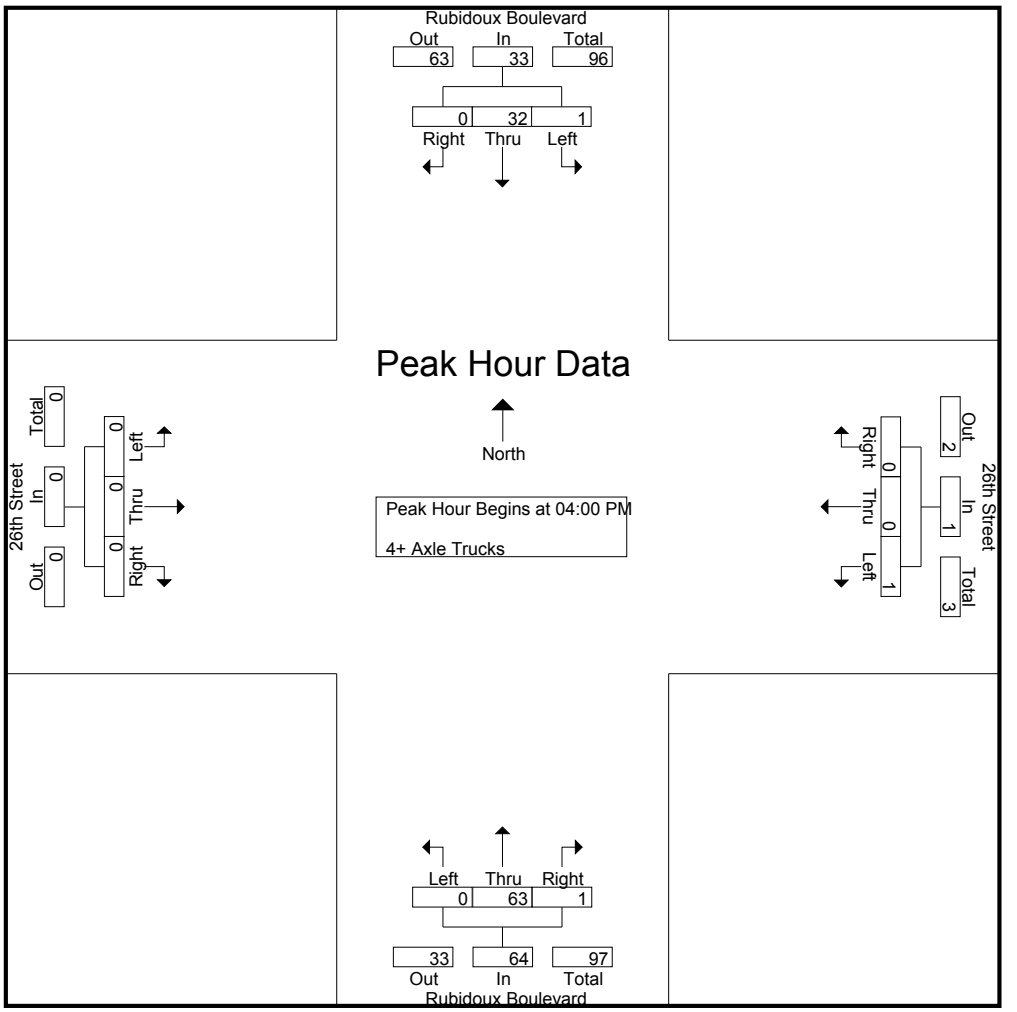
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	6	0	6	**1**	0	0	**1**	0	13	0	13	0	0	0	0
+15 mins.	**1**	6	0	7	0	0	0	0	0	**20**	**1**	**21**	0	0	0	0
+30 mins.	0	**10**	0	**10**	0	0	0	0	0	14	0	14	0	0	0	0
+45 mins.	0	10	0	10	0	0	0	0	0	16	0	16	0	0	0	0
Total Volume	1	32	0	33	1	0	0	1	0	63	1	64	0	0	0	0
% App. Total	3	97	0		100	0	0		0	98.4	1.6		0	0	0	
PHF	.250	.800	.000	.825	.250	.000	.000	.250	.000	.788	.250	.762	.000	.000	.000	.000

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: 26th

PROJECT #: SC1439
LOCATION #: 12
CONTROL: STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	2	105	3	5	97	0	1	0	0	5	0	2	220	0	0	0	0	0
	12:15 PM	1	110	10	3	100	0	0	0	0	1	1	4	230	0	0	0	0	0
	12:30 PM	4	96	4	1	82	1	1	0	2	5	1	6	203	0	0	0	1	1
	12:45 PM	0	89	1	2	89	0	0	0	1	1	0	4	187	0	0	0	0	0
	1:00 PM	0	104	8	2	108	0	0	0	0	0	0	1	223	0	0	0	0	0
	1:15 PM	1	110	6	1	89	0	0	0	2	5	0	0	214	0	0	0	0	0
	1:30 PM	0	108	3	1	114	0	0	0	1	3	0	5	235	0	0	0	0	0
	1:45 PM	1	110	5	2	85	0	0	0	2	0	0	3	208	0	0	0	0	0
	VOLUMES	9	832	40	17	764	1	2	0	8	20	2	25	1,720	0	0	0	1	1
	APPROACH %	1%	94%	5%	2%	98%	0%	20%	0%	80%	43%	4%	53%						
	APP/DEPART	881	/	859	782	/	791	10	/	58	47	/	12	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	2	432	22	6	396	0	0	0	5	8	0	9	880					
	APPROACH %	0%	95%	5%	1%	99%	0%	0%	0%	100%	47%	0%	53%						
	PEAK HR FACTOR		0.974			0.874			0.625			0.531		0.936					
	APP/DEPART	456	/	441	402	/	409	5	/	28	17	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

26th WEST SIDE EAST SIDE **26th**

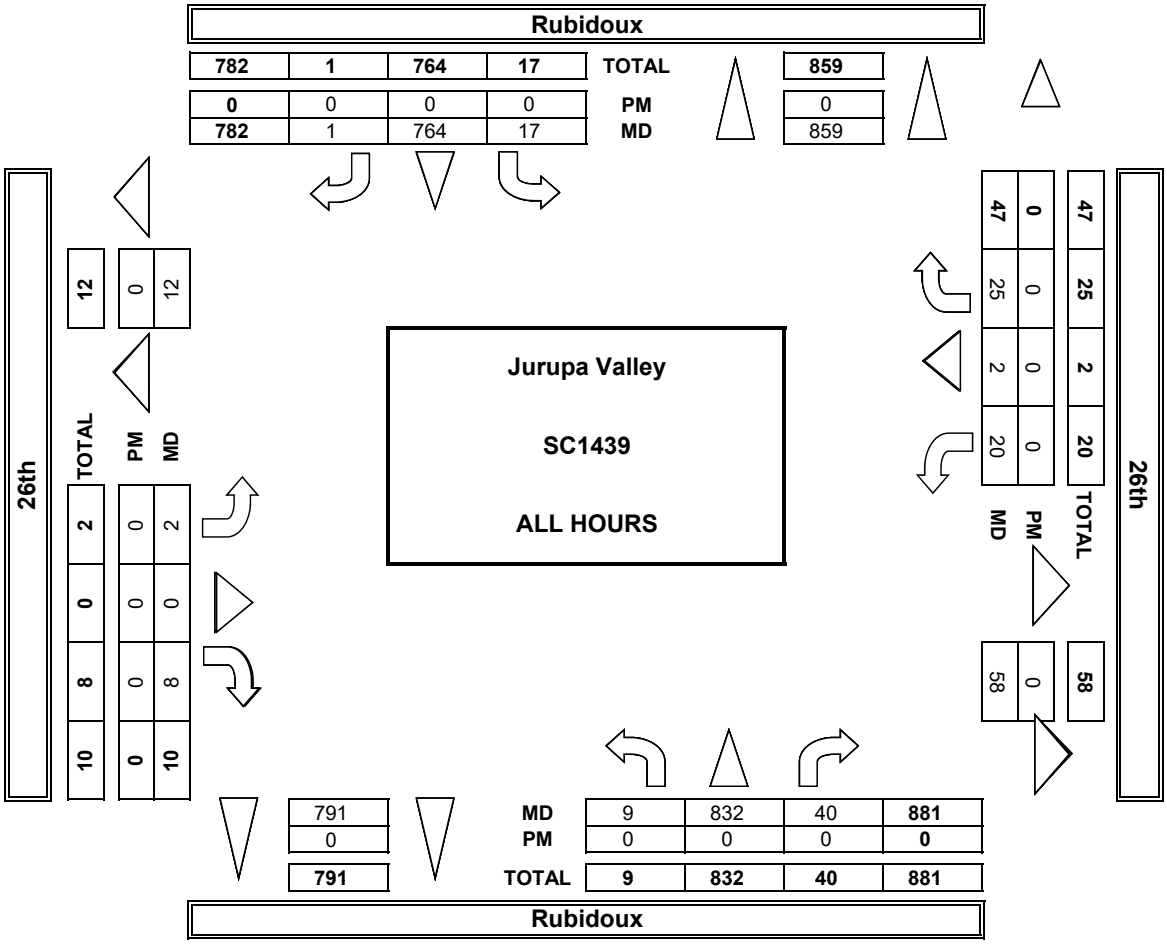
SOUTH SIDE

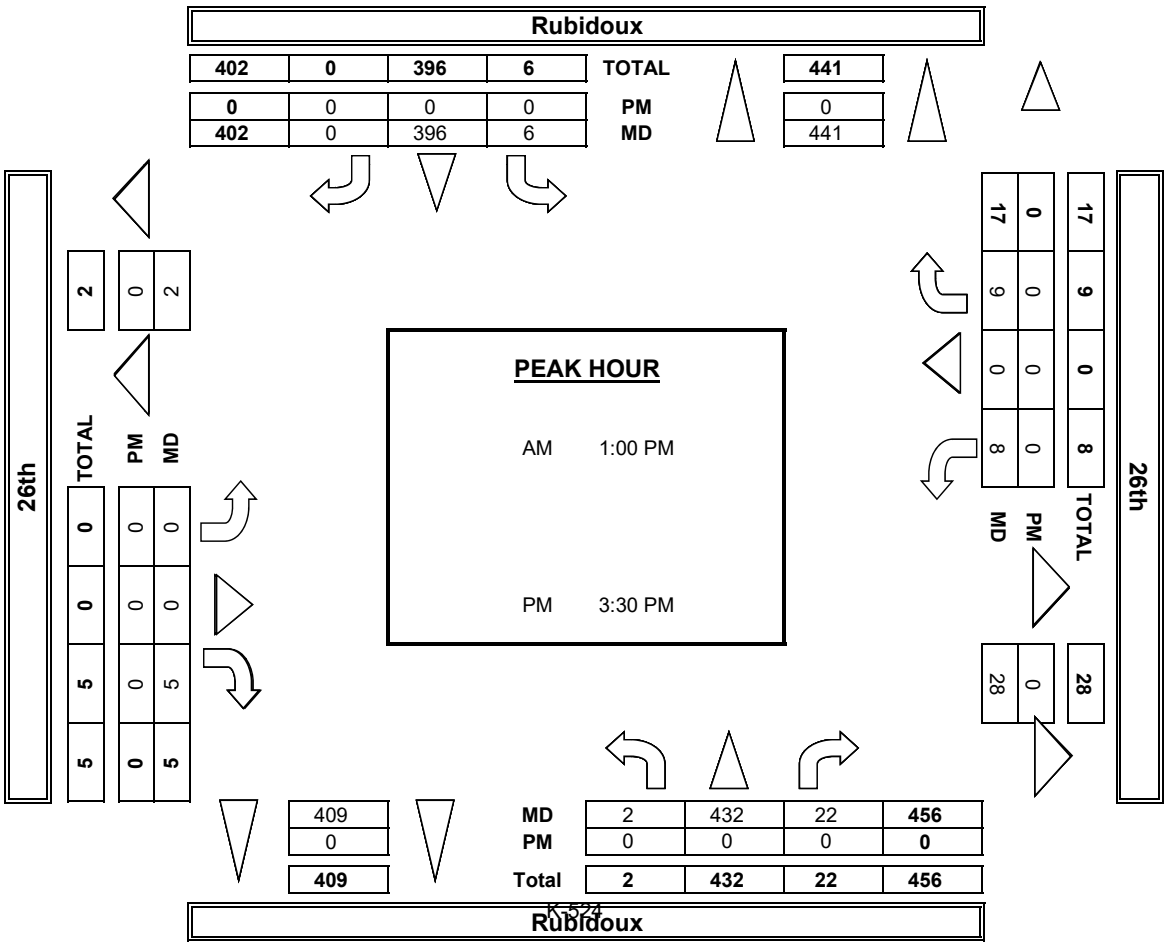
Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





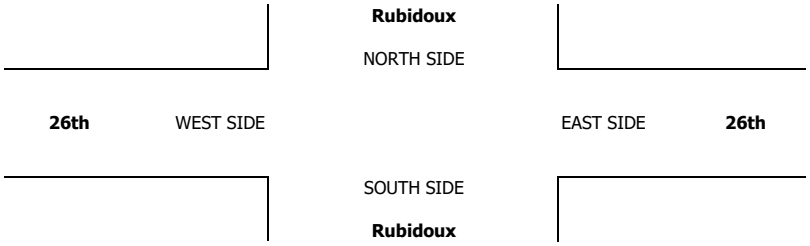
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th			
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	2	149	6	8	135	0	1	0	0	8	0	2	309
	8:15 AM	2	168	18	3	149	0	0	0	0	2	2	7	349
	8:30 AM	4	140	8	1	114	1	1	0	2	6	1	9	286
	8:45 AM	0	123	1	4	122	0	0	0	1	3	0	9	262
	9:00 AM	0	146	14	2	144	0	0	0	0	0	0	1	307
	9:15 AM	3	157	14	2	123	0	0	0	2	9	0	0	309
	9:30 AM	0	149	3	1	172	0	0	0	1	6	0	6	337
	9:45 AM	3	162	7	3	128	0	0	0	2	0	0	5	309
	VOLUMES	14	1,192	70	23	1,086	1	2	0	8	33	3	38	2,468
	APPROACH %	1%	93%	5%	2%	98%	0%	20%	0%	80%	45%	3%	52%	
	APP/DEPART	1,275	/	1,232	1,110	/	1,127	10	/	93	74	/	17	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	6	613	38	8	567	0	0	0	5	15	0	12	1,262
	APPROACH %	1%	93%	6%	1%	99%	0%	0%	0%	100%	56%	0%	44%	
	PEAK HR FACTOR		0.946			0.829			0.625			0.591		0.936
	APP/DEPART	657	/	625	574	/	586	5	/	45	26	/	6	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

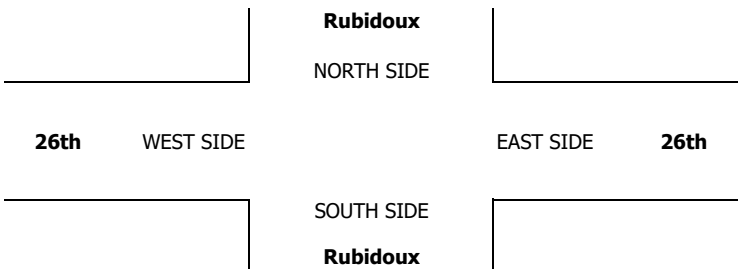
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th				U-TURNS				
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	2	72	1	3	68	0	1	0	0	2	0	2	151	0	0	0	0	0
12:15 PM	0	71	4	3	67	0	0	0	0	0	0	2	147	0	0	0	0	0
12:30 PM	4	64	1	1	64	1	1	0	2	3	1	4	146	0	0	0	1	1
12:45 PM	0	59	1	1	66	0	0	0	1	0	0	1	129	0	0	0	0	0
1:00 PM	0	69	5	2	80	0	0	0	0	0	0	1	157	0	0	0	0	0
1:15 PM	0	75	2	0	64	0	0	0	2	3	0	0	146	0	0	0	0	0
1:30 PM	0	77	3	1	75	0	0	0	1	1	0	4	162	0	0	0	0	0
1:45 PM	0	73	2	1	59	0	0	0	2	0	0	2	139	0	0	0	0	0
VOLUMES	6	560	19	12	543	1	2	0	8	9	1	16	1,177	0	0	0	1	1
APPROACH %	1%	96%	3%	2%	98%	0%	20%	0%	80%	35%	4%	62%						
APP/DEPART	585	/	578	556	/	559	10	/	32	26	/	8	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	0	294	12	4	278	0	0	0	5	4	0	7	604					
APPROACH %	0%	96%	4%	1%	99%	0%	0%	0%	100%	36%	0%	64%						
PEAK HR FACTOR		0.956			0.860			0.625			0.550		0.932					
APP/DEPART	306	/	301	282	/	287	5	/	16	11	/	0	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

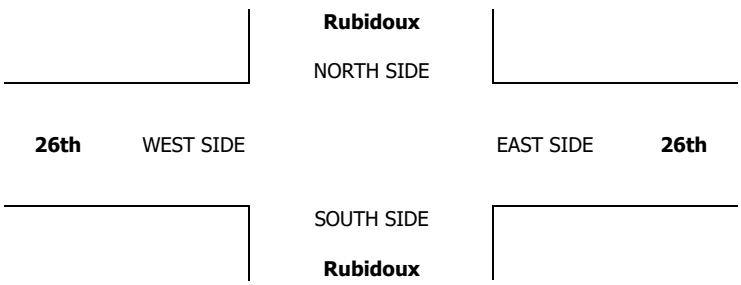
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	11	1	1	9	0	0	0	0	2	0	0	24	0	0	0	0	0
	12:15 PM	1	7	2	0	4	0	0	0	0	1	1	0	16	0	0	0	0	0
	12:30 PM	0	8	1	0	1	0	0	0	0	2	0	0	12	0	0	0	0	0
	12:45 PM	0	13	0	0	6	0	0	0	0	0	0	1	20	0	0	0	0	0
	1:00 PM	0	15	0	0	8	0	0	0	0	0	0	0	23	0	0	0	0	0
	1:15 PM	0	7	0	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0
	1:30 PM	0	10	0	0	4	0	0	0	0	1	0	1	16	0	0	0	0	0
	1:45 PM	0	8	3	1	2	0	0	0	0	0	0	0	14	0	0	0	0	0
	VOLUMES	1	79	7	2	39	0	0	0	0	6	1	2	137	0	0	0	0	0
	APPROACH %	1%	91%	8%	5%	95%	0%	0%	0%	0%	67%	11%	22%						
	APP/DEPART	87	/	81	41	/	45	0	/	9	9	/	2	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	1	39	4	1	20	0	0	0	0	5	1	1	72					
	APPROACH %	2%	89%	9%	5%	95%	0%	0%	0%	0%	71%	14%	14%						
	PEAK HR FACTOR		0.846			0.525			0.000			0.875		0.750					
	APP/DEPART	44	/	40	21	/	25	0	/	5	7	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th			
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	6	0	0	6	0	0	0	0	0	0	0	12
	12:15 PM	0	9	1	0	11	0	0	0	0	0	0	1	22
	12:30 PM	0	7	0	0	3	0	0	0	0	0	0	1	11
	12:45 PM	0	7	0	0	3	0	0	0	0	0	0	0	10
	1:00 PM	0	5	0	0	8	0	0	0	0	0	0	0	13
	1:15 PM	0	13	0	1	9	0	0	0	0	0	0	0	23
	1:30 PM	0	6	0	0	13	0	0	0	0	0	0	0	19
	1:45 PM	0	10	0	0	5	0	0	0	0	0	0	0	15
	VOLUMES	0	63	1	1	58	0	0	0	0	0	0	2	125
	APPROACH %	0%	98%	2%	2%	98%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	64	/	65	59	/	58	0	/	2	2	/	0	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	0	34	0	1	35	0	0	0	0	0	0	0	70
	APPROACH %	0%	100%	0%	3%	97%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.654			0.692			0.000			0.000		0.761
	APP/DEPART	34	/	34	36	/	35	0	/	1	0	/	0	0
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Rubidoux

NORTH SIDE

26th WEST SIDE EAST SIDE **26th**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

CLASS 4: 4 OR MORE AXLE TRUCKS

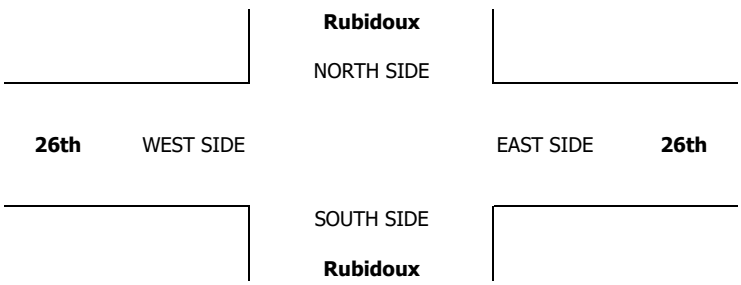
NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD													
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	16	1	1	13	0	0	0	0	1	0	0	32
12:15 PM	0	22	3	0	18	0	0	0	0	0	0	1	44
12:30 PM	0	16	1	0	14	0	0	0	0	0	0	1	32
12:45 PM	0	10	0	1	13	0	0	0	0	1	0	2	27
1:00 PM	0	14	3	0	12	0	0	0	0	0	0	0	29
1:15 PM	1	15	4	0	11	0	0	0	0	2	0	0	33
1:30 PM	0	15	0	0	21	0	0	0	0	1	0	0	37
1:45 PM	1	19	0	0	18	0	0	0	0	0	0	1	39
VOLUMES	2	127	12	2	120	0	0	0	0	5	0	5	273
APPROACH %	1%	90%	9%	2%	98%	0%	0%	0%	0%	50%	0%	50%	
APP/DEPART	141	/	132	122	/	125	0	/	14	10	/	2	0
BEGIN PEAK HR		1:00 PM											
VOLUMES	2	63	7	0	62	0	0	0	0	3	0	1	138
APPROACH %	3%	88%	10%	0%	100%	0%	0%	0%	0%	75%	0%	25%	
PEAK HR FACTOR		0.900			0.738			0.000			0.500		0.885
APP/DEPART	72	/	64	62	/	65	0	/	7	4	/	2	0
PM													
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		3:30 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

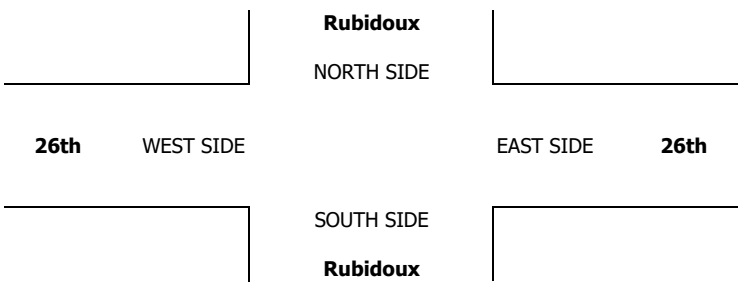
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



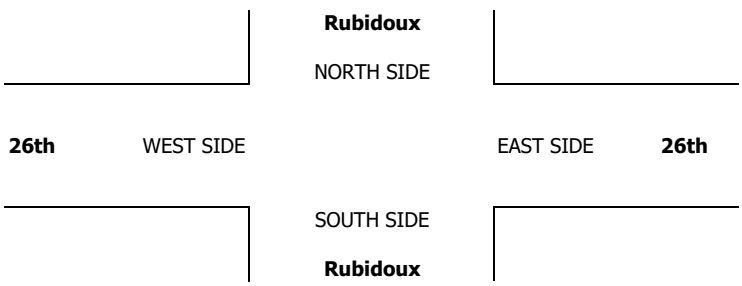
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	12
WEDNESDAY	EAST & WEST:	26th	CONTROL:	STOP E/W

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 26th			WESTBOUND 26th				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	12:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	1:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	1:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	3	1	0	4	0	0	0	0	0	0	0	8	0	0	0	0	0
	APPROACH %	0%	75%	25%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	4	/	3	4	/	4	0	/	1	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	3	1	0	1	0	0	0	0	0	0	0	5					
	APPROACH %	0%	75%	25%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.250			0.000			0.000		0.625					
	APP/DEPART	4	/	3	1	/	1	0	/	1	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 28th Street
Weather: Clear

File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	114	2	116	10	2	0	12	0	116	3	119	1	0	4	5	252
06:45 AM	3	111	1	115	10	4	0	14	7	126	5	138	2	1	5	8	275
Total	3	225	3	231	20	6	0	26	7	242	8	257	3	1	9	13	527
07:00 AM	1	129	2	132	7	1	3	11	3	108	2	113	4	1	6	11	267
07:15 AM	2	163	8	173	12	3	1	16	1	107	2	110	3	2	6	11	310
07:30 AM	1	161	3	165	15	4	0	19	7	106	1	114	2	4	5	11	309
07:45 AM	1	176	7	184	14	7	3	24	5	109	5	119	2	2	3	7	334
Total	5	629	20	654	48	15	7	70	16	430	10	456	11	9	20	40	1220
08:00 AM	1	134	2	137	12	8	2	22	4	102	3	109	5	4	0	9	277
08:15 AM	2	137	2	141	7	4	2	13	5	122	1	128	1	3	2	6	288
08:30 AM	2	116	0	118	9	10	0	19	5	101	10	116	1	2	3	6	259
08:45 AM	2	107	1	110	5	5	2	12	7	106	8	121	4	4	4	12	255
Total	7	494	5	506	33	27	6	66	21	431	22	474	11	13	9	33	1079
09:00 AM	1	95	2	98	5	0	1	6	6	73	3	82	3	3	4	10	196
09:15 AM	0	102	1	103	11	1	1	13	1	71	6	78	2	3	7	12	206
Grand Total	16	1545	31	1592	117	49	15	181	51	1247	49	1347	30	29	49	108	3228
Apprch %	1	97	1.9		64.6	27.1	8.3		3.8	92.6	3.6		27.8	26.9	45.4		
Total %	0.5	47.9	1	49.3	3.6	1.5	0.5	5.6	1.6	38.6	1.5	41.7	0.9	0.9	1.5	3.3	
Passenger Vehicles	12	1175	31	1218	105	49	12	166	46	997	41	1084	30	28	38	96	2564
% Passenger Vehicles	75	76.1	100	76.5	89.7	100	80	91.7	90.2	80	83.7	80.5	100	96.6	77.6	88.9	79.4
Large 2 Axle Vehicles	3	131	0	134	8	0	2	10	2	62	8	72	0	1	4	5	221
% Large 2 Axle Vehicles	18.8	8.5	0	8.4	6.8	0	13.3	5.5	3.9	5	16.3	5.3	0	3.4	8.2	4.6	6.8
3 Axle Vehicles	0	55	0	55	1	0	0	1	0	68	0	68	0	0	1	1	125
% 3 Axle Vehicles	0	3.6	0	3.5	0.9	0	0	0.6	0	5.5	0	5	0	0	2	0.9	3.9
4+ Axle Trucks	1	184	0	185	3	0	1	4	3	120	0	123	0	0	6	6	318
% 4+ Axle Trucks	6.2	11.9	0	11.6	2.6	0	6.7	2.2	5.9	9.6	0	9.1	0	0	12.2	5.6	9.9

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	163	**8**	173	12	3	1	16	1	107	2	110	3	2	**6**	**11**	310
07:30 AM	1	161	3	165	**15**	4	0	19	**7**	106	1	114	2	**4**	5	11	309
07:45 AM	1	**176**	7	**184**	14	7	**3**	**24**	5	**109**	**5**	**119**	2	2	3	7	**334**
08:00 AM	1	134	2	137	12	**8**	2	22	4	102	3	109	**5**	4	0	9	277
Total Volume	5	634	20	659	53	22	6	81	17	424	11	452	12	12	14	38	1230
% App. Total	0.8	96.2	3		65.4	27.2	7.4		3.8	93.8	2.4		31.6	31.6	36.8		
PHF	.625	.901	.625	.895	.883	.688	.500	.844	.607	.972	.550	.950	.600	.750	.583	.864	.921

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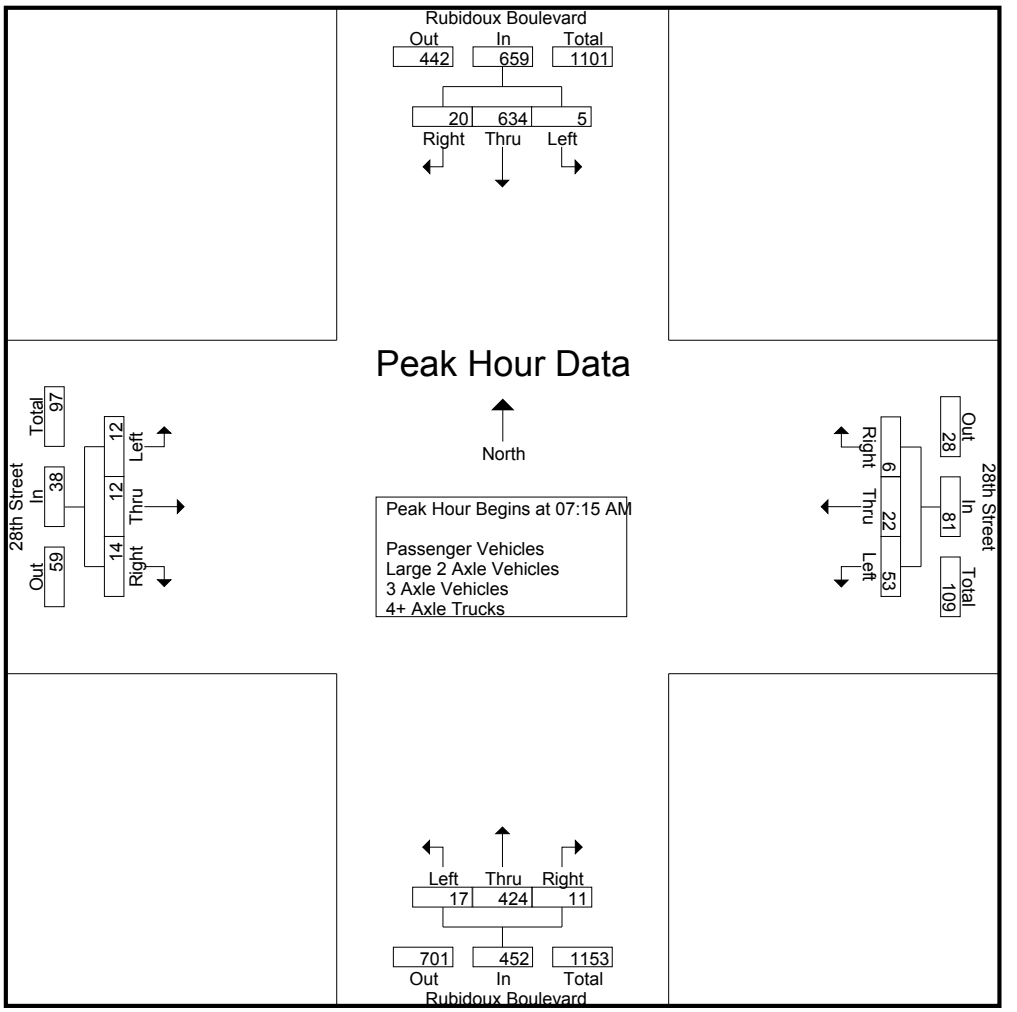
File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				06:30 AM				06:45 AM			
+0 mins.	**2**	163	**8**	173	12	3	1	16	0	116	3	119	2	1	5	8
+15 mins.	1	161	3	165	**15**	4	0	19	**7**	**126**	**5**	**138**	**4**	1	**6**	**11**
+30 mins.	1	**176**	7	**184**	14	7	**3**	**24**	3	108	2	113	3	2	6	11
+45 mins.	1	134	2	137	12	**8**	2	22	1	107	2	110	2	**4**	5	11
Total Volume	5	634	20	659	53	22	6	81	11	457	12	480	11	8	22	41
% App. Total	0.8	96.2	3		65.4	27.2	7.4		2.3	95.2	2.5		26.8	19.5	53.7	
PHF	.625	.901	.625	.895	.883	.688	.500	.844	.393	.907	.600	.870	.688	.500	.917	.932

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File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	85	2	87	8	2	0	10	0	94	3	97	1	0	2	3	197
06:45 AM	3	86	1	90	10	4	0	14	6	113	5	124	2	1	3	6	234
Total	3	171	3	177	18	6	0	24	6	207	8	221	3	1	5	9	431
07:00 AM	0	99	2	101	6	1	3	10	3	87	1	91	4	1	5	10	212
07:15 AM	2	134	8	144	9	3	1	13	0	88	2	90	3	2	4	9	256
07:30 AM	1	137	3	141	14	4	0	18	7	93	1	101	2	3	5	10	270
07:45 AM	1	148	7	156	11	7	2	20	5	91	3	99	2	2	2	6	281
Total	4	518	20	542	40	15	6	61	15	359	7	381	11	8	16	35	1019
08:00 AM	1	105	2	108	11	8	0	19	4	78	3	85	5	4	0	9	221
08:15 AM	1	98	2	101	7	4	2	13	4	89	1	94	1	3	2	6	214
08:30 AM	0	81	0	81	9	10	0	19	4	72	9	85	1	2	3	6	191
08:45 AM	2	70	1	73	5	5	2	12	7	88	7	102	4	4	2	10	197
Total	4	354	5	363	32	27	4	63	19	327	20	366	11	13	7	31	823
09:00 AM	1	65	2	68	5	0	1	6	5	52	3	60	3	3	4	10	144
09:15 AM	0	67	1	68	10	1	1	12	1	52	3	56	2	3	6	11	147
Grand Total	12	1175	31	1218	105	49	12	166	46	997	41	1084	30	28	38	96	2564
Apprch %	1	96.5	2.5		63.3	29.5	7.2		4.2	92	3.8		31.2	29.2	39.6		
Total %	0.5	45.8	1.2	47.5	4.1	1.9	0.5	6.5	1.8	38.9	1.6	42.3	1.2	1.1	1.5	3.7	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	134	**8**	144	9	3	1	13	0	88	2	90	3	2	4	9	256
07:30 AM	1	137	3	141	**14**	4	0	18	**7**	**93**	1	**101**	2	3	**5**	**10**	270
07:45 AM	1	**148**	7	**156**	11	7	**2**	**20**	5	91	**3**	99	2	2	2	6	**281**
08:00 AM	1	105	2	108	11	**8**	0	19	4	78	3	85	**5**	**4**	0	9	221
Total Volume	5	524	20	549	45	22	3	70	16	350	9	375	12	11	11	34	1028
% App. Total	0.9	95.4	3.6		64.3	31.4	4.3		4.3	93.3	2.4		35.3	32.4	32.4		
PHF	.625	.885	.625	.880	.804	.688	.375	.875	.571	.941	.750	.928	.600	.688	.550	.850	.915

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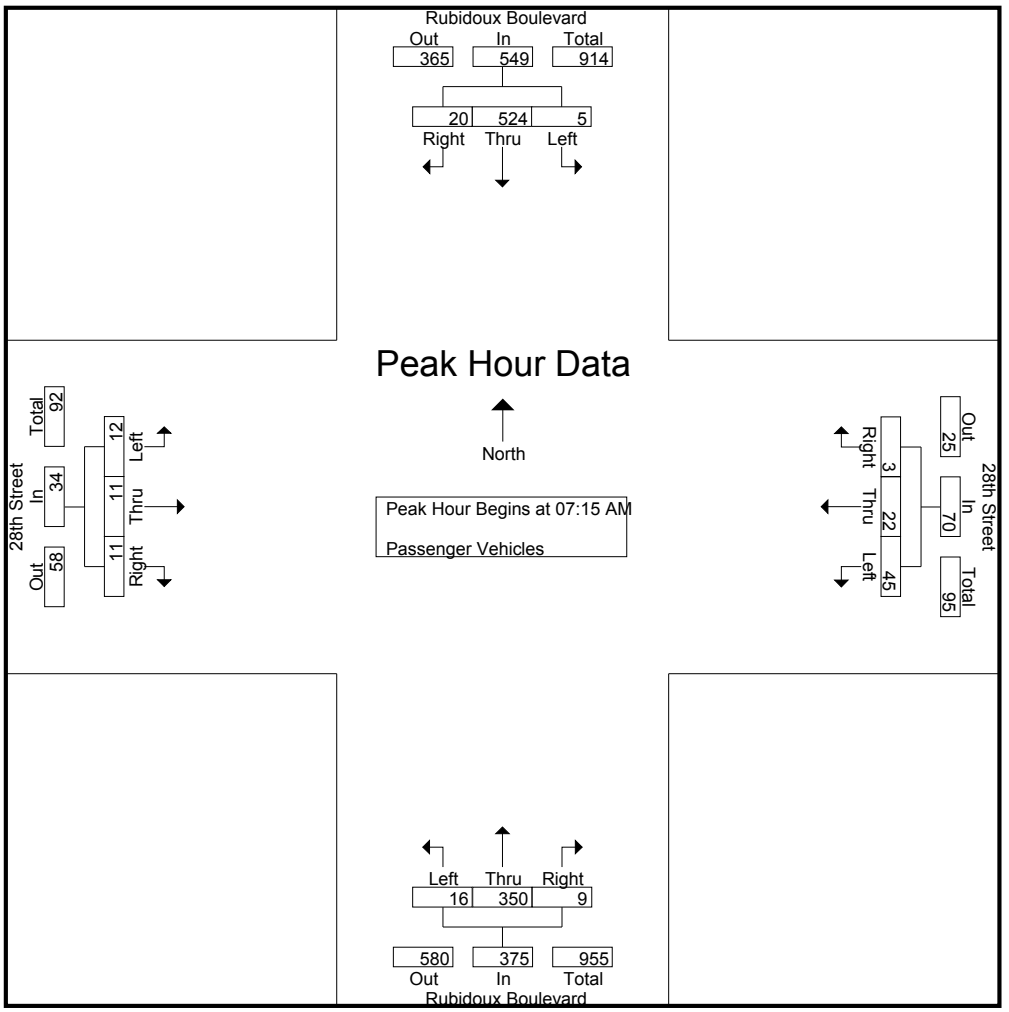
File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**2**	134	**8**	144	9	3	1	13	0	88	2	90	3	2	4	9
+15 mins.	1	137	3	141	**14**	4	0	18	**7**	**93**	1	**101**	2	3	**5**	**10**
+30 mins.	1	**148**	7	**156**	11	7	**2**	**20**	5	91	**3**	99	2	2	2	6
+45 mins.	1	105	2	108	11	**8**	0	19	4	78	3	85	**5**	**4**	0	9
Total Volume	5	524	20	549	45	22	3	70	16	350	9	375	12	11	11	34
% App. Total	0.9	95.4	3.6		64.3	31.4	4.3		4.3	93.3	2.4		35.3	32.4	32.4	
PHF	.625	.885	.625	.880	.804	.688	.375	.875	.571	.941	.750	.928	.600	.688	.550	.850

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File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	8	0	8	2	0	0	2	0	7	0	7	0	0	1	1	18
06:45 AM	0	13	0	13	0	0	0	0	0	5	0	5	0	0	2	2	20
Total	0	21	0	21	2	0	0	2	0	12	0	12	0	0	3	3	38
07:00 AM	0	10	0	10	0	0	0	0	0	7	1	8	0	0	0	0	18
07:15 AM	0	7	0	7	2	0	0	2	1	3	0	4	0	0	0	0	13
07:30 AM	0	7	0	7	1	0	0	1	0	2	0	2	0	1	0	1	11
07:45 AM	0	9	0	9	3	0	1	4	0	4	2	6	0	0	0	0	19
Total	0	33	0	33	6	0	1	7	1	16	3	20	0	1	0	1	61
08:00 AM	0	5	0	5	0	0	1	1	0	9	0	9	0	0	0	0	15
08:15 AM	1	8	0	9	0	0	0	0	0	1	0	1	0	0	0	0	10
08:30 AM	2	14	0	16	0	0	0	0	0	3	1	4	0	0	0	0	20
08:45 AM	0	17	0	17	0	0	0	0	0	2	1	3	0	0	1	1	21
Total	3	44	0	47	0	0	1	1	0	15	2	17	0	0	1	1	66
09:00 AM	0	16	0	16	0	0	0	0	1	10	0	11	0	0	0	0	27
09:15 AM	0	17	0	17	0	0	0	0	0	9	3	12	0	0	0	0	29
Grand Total	3	131	0	134	8	0	2	10	2	62	8	72	0	1	4	5	221
Apprch %	2.2	97.8	0		80	0	20		2.8	86.1	11.1		0	20	80		
Total %	1.4	59.3	0	60.6	3.6	0	0.9	4.5	0.9	28.1	3.6	32.6	0	0.5	1.8	2.3	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	7	0	7	2	0	0	2	**1**	3	0	4	0	0	0	0	13
07:30 AM	0	7	0	7	1	0	0	1	0	2	0	2	0	**1**	0	**1**	11
07:45 AM	0	**9**	0	**9**	**3**	0	**1**	**4**	0	4	**2**	6	0	0	0	0	**19**
08:00 AM	0	5	0	5	0	0	1	1	0	**9**	0	**9**	0	0	0	0	15
Total Volume	0	28	0	28	6	0	2	8	1	18	2	21	0	1	0	1	58
% App. Total	0	100	0		75	0	25		4.8	85.7	9.5		0	100	0		
PHF	.000	.778	.000	.778	.500	.000	.500	.500	.250	.500	.250	.583	.000	.250	.000	.250	.763

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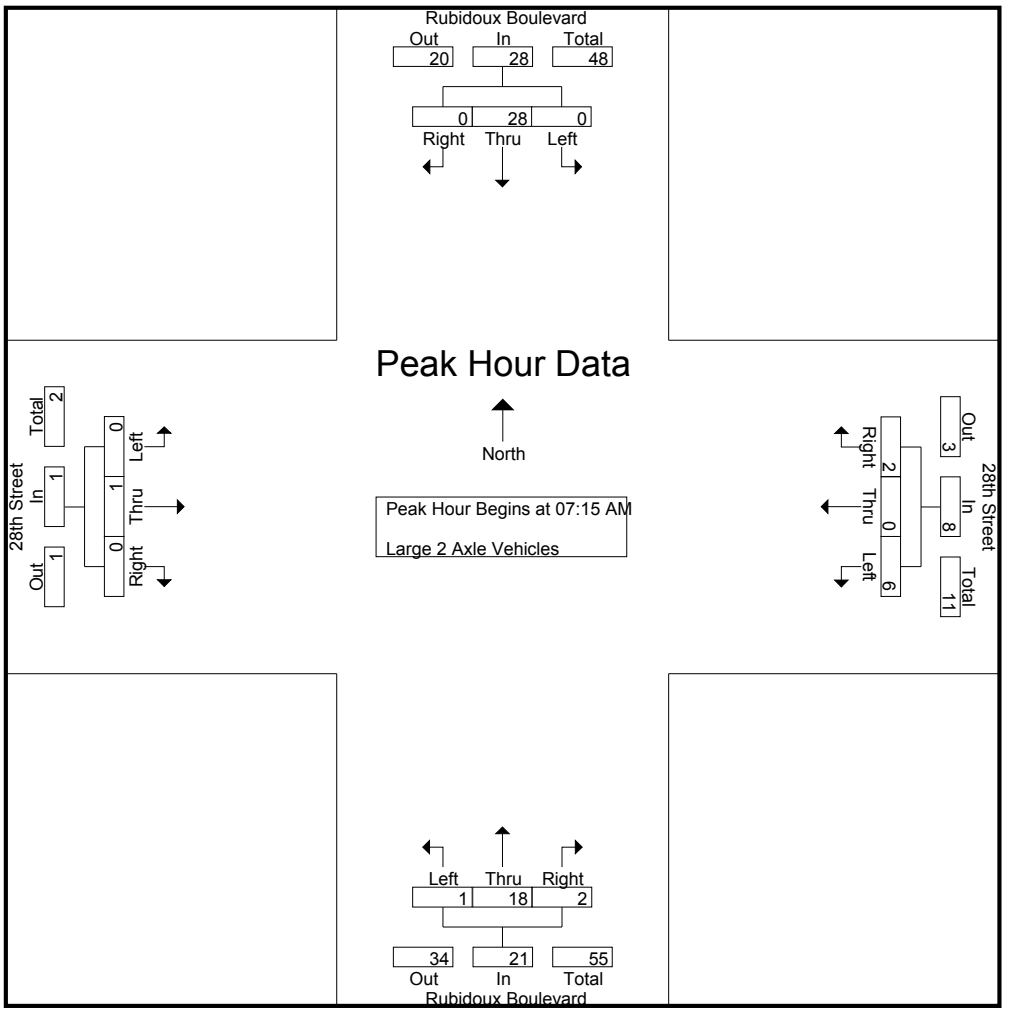
File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	7	0	7	2	0	0	2	**1**	3	0	4	0	0	0	0
+15 mins.	0	7	0	7	1	0	0	1	0	2	0	2	0	**1**	0	**1**
+30 mins.	0	**9**	0	**9**	**3**	0	**1**	**4**	0	4	**2**	6	0	0	0	0
+45 mins.	0	5	0	5	0	0	1	1	0	**9**	0	**9**	0	0	0	0
Total Volume	0	28	0	28	6	0	2	8	1	18	2	21	0	1	0	1
% App. Total	0	100	0		75	0	25		4.8	85.7	9.5		0	100	0	
PHF	.000	.778	.000	.778	.500	.000	.500	.500	.250	.500	.250	.583	.000	.250	.000	.250

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File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
06:45 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
Total	0	11	0	11	0	0	0	0	0	5	0	5	0	0	0	0	16
07:00 AM	0	8	0	8	1	0	0	1	0	3	0	3	0	0	0	0	12
07:15 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
07:30 AM	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
07:45 AM	0	2	0	2	0	0	0	0	0	8	0	8	0	0	1	1	11
Total	0	19	0	19	1	0	0	1	0	18	0	18	0	0	1	1	39
08:00 AM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
08:15 AM	0	8	0	8	0	0	0	0	0	17	0	17	0	0	0	0	25
08:30 AM	0	7	0	7	0	0	0	0	0	12	0	12	0	0	0	0	19
08:45 AM	0	7	0	7	0	0	0	0	0	9	0	9	0	0	0	0	16
Total	0	25	0	25	0	0	0	0	0	45	0	45	0	0	0	0	70
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	55	0	55	1	0	0	1	0	68	0	68	0	0	1	1	125
Apprch %	0	100	0		100	0	0		0	100	0		0	0	100		
Total %	0	44	0	44	0.8	0	0	0.8	0	54.4	0	54.4	0	0	0.8	0.8	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
07:30 AM	0	**6**	0	**6**	0	0	0	0	0	3	0	3	0	0	0	0	9
07:45 AM	0	2	0	2	0	0	0	0	0	**8**	0	**8**	0	0	**1**	**1**	**11**
08:00 AM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
Total Volume	0	14	0	14	0	0	0	0	0	22	0	22	0	0	1	1	37
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.583	.000	.583	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.250	.250	.841

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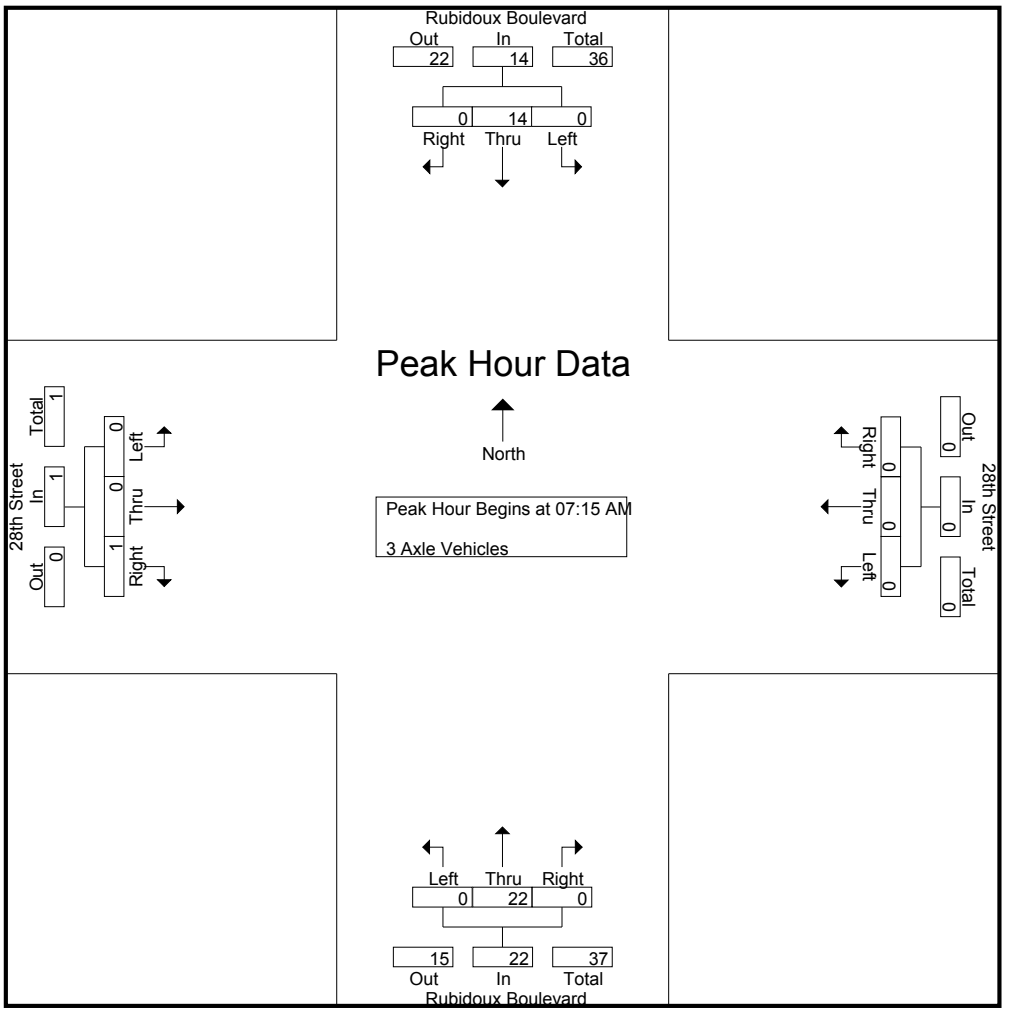
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0
+15 mins.	0	**6**	0	**6**	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	**8**	0	**8**	0	0	**1**	**1**
+45 mins.	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0
Total Volume	0	14	0	14	0	0	0	0	0	22	0	22	0	0	1	1
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.583	.000	.583	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.250	.250

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File Name : 20_JVYRU28AM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	15	0	15	0	0	0	0	0	12	0	12	0	0	1	1	28
06:45 AM	0	7	0	7	0	0	0	0	1	6	0	7	0	0	0	0	14
Total	0	22	0	22	0	0	0	0	1	18	0	19	0	0	1	1	42
07:00 AM	1	12	0	13	0	0	0	0	0	11	0	11	0	0	1	1	25
07:15 AM	0	19	0	19	1	0	0	1	0	12	0	12	0	0	2	2	34
07:30 AM	0	11	0	11	0	0	0	0	0	8	0	8	0	0	0	0	19
07:45 AM	0	17	0	17	0	0	0	0	0	6	0	6	0	0	0	0	23
Total	1	59	0	60	1	0	0	1	0	37	0	37	0	0	3	3	101
08:00 AM	0	21	0	21	1	0	1	2	0	8	0	8	0	0	0	0	31
08:15 AM	0	23	0	23	0	0	0	0	1	15	0	16	0	0	0	0	39
08:30 AM	0	14	0	14	0	0	0	0	1	14	0	15	0	0	0	0	29
08:45 AM	0	13	0	13	0	0	0	0	0	7	0	7	0	0	1	1	21
Total	0	71	0	71	1	0	1	2	2	44	0	46	0	0	1	1	120
09:00 AM	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0	25
09:15 AM	0	18	0	18	1	0	0	1	0	10	0	10	0	0	1	1	30
Grand Total	1	184	0	185	3	0	1	4	3	120	0	123	0	0	6	6	318
Apprch %	0.5	99.5	0		75	0	25		2.4	97.6	0		0	0	100		
Total %	0.3	57.9	0	58.2	0.9	0	0.3	1.3	0.9	37.7	0	38.7	0	0	1.9	1.9	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	19	0	19	**1**	0	0	1	0	**12**	0	**12**	0	0	**2**	**2**	**34**
07:30 AM	0	11	0	11	0	0	0	0	0	8	0	8	0	0	0	0	19
07:45 AM	0	17	0	17	0	0	0	0	0	6	0	6	0	0	0	0	23
08:00 AM	0	**21**	0	**21**	1	0	**1**	**2**	0	8	0	8	0	0	0	0	31
Total Volume	0	68	0	68	2	0	1	3	0	34	0	34	0	0	2	2	107
% App. Total	0	100	0		66.7	0	33.3		0	100	0		0	0	100		
PHF	.000	.810	.000	.810	.500	.000	.250	.375	.000	.708	.000	.708	.000	.000	.250	.250	.787

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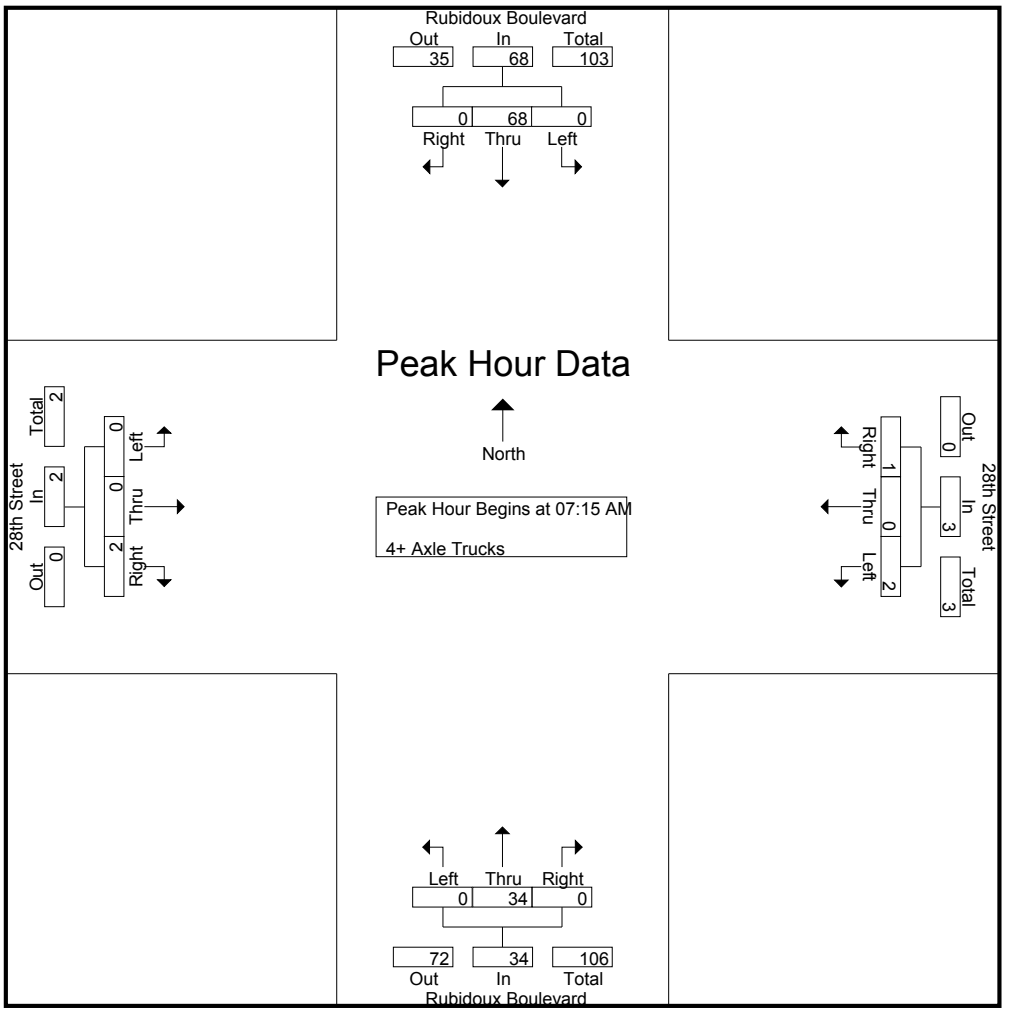
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	19	0	19	**1**	0	0	1	0	**12**	0	**12**	0	0	**2**	**2**
+15 mins.	0	11	0	11	0	0	0	0	0	8	0	8	0	0	0	0
+30 mins.	0	17	0	17	0	0	0	0	0	6	0	6	0	0	0	0
+45 mins.	0	**21**	0	**21**	1	0	**1**	**2**	0	8	0	8	0	0	0	0
Total Volume	0	68	0	68	2	0	1	3	0	34	0	34	0	0	2	2
% App. Total	0	100	0		66.7	0	33.3		0	100	0		0	0	100	
PHF	.000	.810	.000	.810	.500	.000	.250	.375	.000	.708	.000	.708	.000	.000	.250	.250

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File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	3	169	2	174	17	5	0	22	10	162	9	181	5	8	5	18	395
03:45 PM	1	151	4	156	10	4	3	17	4	164	9	177	8	6	7	21	371
Total	4	320	6	330	27	9	3	39	14	326	18	358	13	14	12	39	766
04:00 PM	5	163	2	170	13	5	2	20	6	202	15	223	5	4	7	16	429
04:15 PM	5	162	5	172	21	7	2	30	10	162	6	178	7	4	4	15	395
04:30 PM	2	143	3	148	7	2	4	13	7	176	10	193	8	4	5	17	371
04:45 PM	2	148	5	155	14	1	1	16	7	175	11	193	9	5	4	18	382
Total	14	616	15	645	55	15	9	79	30	715	42	787	29	17	20	66	1577
05:00 PM	1	164	7	172	12	2	3	17	5	176	5	186	12	4	4	20	395
05:15 PM	1	158	2	161	12	0	1	13	11	169	7	187	27	0	4	31	392
05:30 PM	4	155	0	159	9	3	2	14	7	165	14	186	8	5	4	17	376
05:45 PM	0	124	1	125	15	4	2	21	6	161	15	182	9	2	4	15	343
Total	6	601	10	617	48	9	8	65	29	671	41	741	56	11	16	83	1506
06:00 PM	5	128	1	134	4	1	1	6	9	145	10	164	6	1	5	12	316
06:15 PM	0	100	3	103	13	3	1	17	7	112	7	126	5	3	2	10	256
Grand Total	29	1765	35	1829	147	37	22	206	89	1969	118	2176	109	46	55	210	4421
Apprch %	1.6	96.5	1.9		71.4	18	10.7		4.1	90.5	5.4		51.9	21.9	26.2		
Total %	0.7	39.9	0.8	41.4	3.3	0.8	0.5	4.7	2	44.5	2.7	49.2	2.5	1	1.2	4.8	
Passenger Vehicles	25	1581	35	1641	134	36	22	192	73	1610	113	1796	107	44	51	202	3831
% Passenger Vehicles	86.2	89.6	100	89.7	91.2	97.3	100	93.2	82	81.8	95.8	82.5	98.2	95.7	92.7	96.2	86.7
Large 2 Axle Vehicles	2	63	0	65	10	1	0	11	4	104	3	111	1	2	3	6	193
% Large 2 Axle Vehicles	6.9	3.6	0	3.6	6.8	2.7	0	5.3	4.5	5.3	2.5	5.1	0.9	4.3	5.5	2.9	4.4
3 Axle Vehicles	0	23	0	23	0	0	0	0	8	70	1	79	0	0	0	0	102
% 3 Axle Vehicles	0	1.3	0	1.3	0	0	0	0	9	3.6	0.8	3.6	0	0	0	0	2.3
4+ Axle Trucks	2	98	0	100	3	0	0	3	4	185	1	190	1	0	1	2	295
% 4+ Axle Trucks	6.9	5.6	0	5.5	2	0	0	1.5	4.5	9.4	0.8	8.7	0.9	0	1.8	1	6.7

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	3	**169**	2	**174**	17	5	0	22	**10**	162	9	181	5	**8**	5	18	395
03:45 PM	1	151	4	156	10	4	**3**	17	4	164	9	177	**8**	6	**7**	**21**	371
04:00 PM	**5**	163	2	170	13	5	2	20	6	**202**	**15**	**223**	5	4	7	16	**429**
04:15 PM	5	162	**5**	172	**21**	**7**	2	**30**	10	162	6	178	7	4	4	15	395
Total Volume	14	645	13	672	61	21	7	89	30	690	39	759	25	22	23	70	1590
% App. Total	2.1	96	1.9		68.5	23.6	7.9		4	90.9	5.1		35.7	31.4	32.9		
PHF	.700	.954	.650	.966	.726	.750	.583	.742	.750	.854	.650	.851	.781	.688	.821	.833	.927

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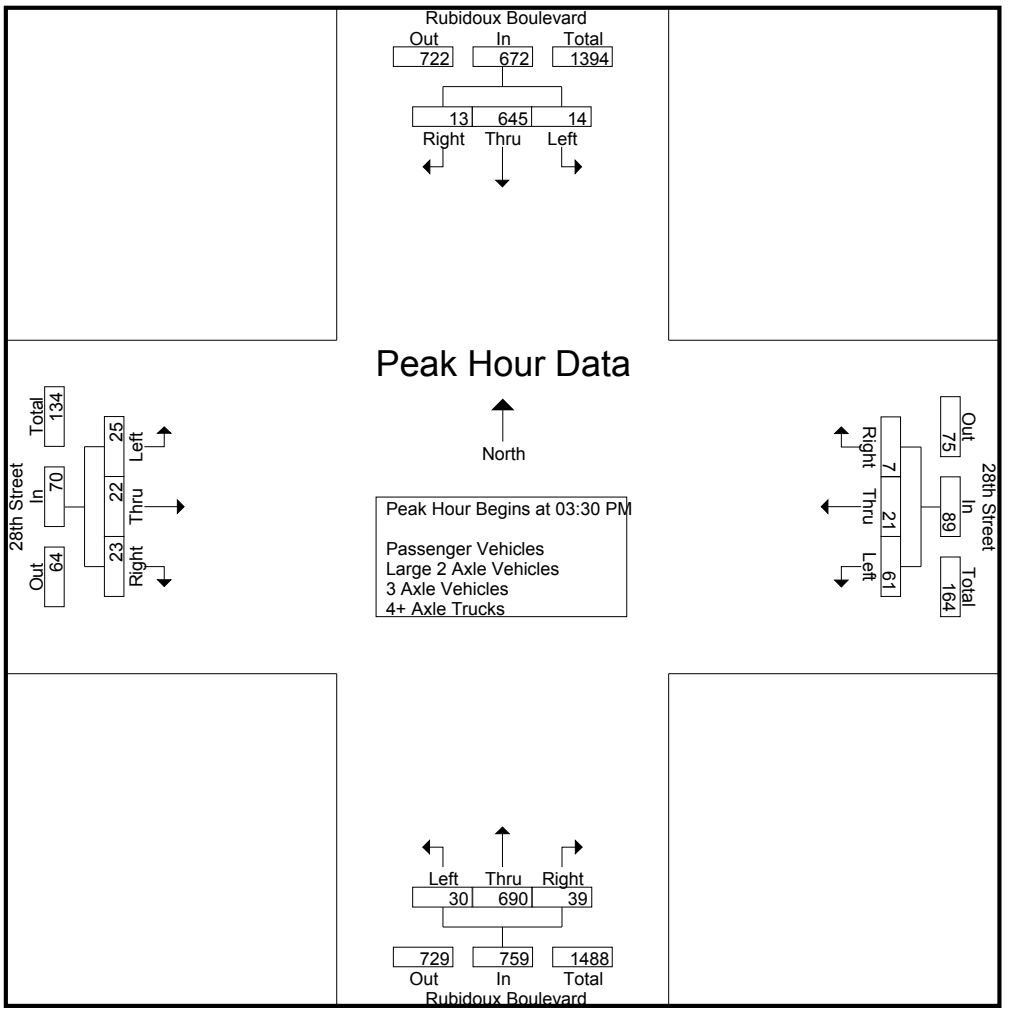
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				04:00 PM				04:30 PM			
+0 mins.	3	**169**	2	**174**	17	5	0	22	6	**202**	**15**	**223**	8	4	**5**	17
+15 mins.	1	151	4	156	10	4	**3**	17	**10**	162	6	178	9	**5**	4	18
+30 mins.	**5**	163	2	170	13	5	2	20	7	176	10	193	12	4	4	20
+45 mins.	5	162	**5**	172	**21**	**7**	2	**30**	7	175	11	193	**27**	0	4	**31**
Total Volume	14	645	13	672	61	21	7	89	30	715	42	787	56	13	17	86
% App. Total	2.1	96	1.9		68.5	23.6	7.9		3.8	90.9	5.3		65.1	15.1	19.8	
PHF	.700	.954	.650	.966	.726	.750	.583	.742	.750	.885	.700	.882	.519	.650	.850	.694

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File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	2	140	2	144	14	5	0	19	7	129	8	144	5	8	4	17	324
03:45 PM	1	129	4	134	7	4	3	14	4	129	8	141	8	4	5	17	306
Total	3	269	6	278	21	9	3	33	11	258	16	285	13	12	9	34	630
04:00 PM	4	145	2	151	13	4	2	19	4	178	15	197	5	4	7	16	383
04:15 PM	5	149	5	159	18	7	2	27	8	124	6	138	6	4	4	14	338
04:30 PM	2	123	3	128	7	2	4	13	6	147	10	163	8	4	5	17	321
04:45 PM	2	138	5	145	13	1	1	15	5	140	11	156	9	5	4	18	334
Total	13	555	15	583	51	14	9	74	23	589	42	654	28	17	20	65	1376
05:00 PM	1	146	7	154	11	2	3	16	4	153	5	162	12	4	4	20	352
05:15 PM	1	147	2	150	12	0	1	13	11	136	6	153	26	0	4	30	346
05:30 PM	4	143	0	147	9	3	2	14	7	134	13	154	8	5	3	16	331
05:45 PM	0	116	1	117	14	4	2	20	6	130	15	151	9	2	4	15	303
Total	6	552	10	568	46	9	8	63	28	553	39	620	55	11	15	81	1332
06:00 PM	3	113	1	117	4	1	1	6	5	113	9	127	6	1	5	12	262
06:15 PM	0	92	3	95	12	3	1	16	6	97	7	110	5	3	2	10	231
Grand Total	25	1581	35	1641	134	36	22	192	73	1610	113	1796	107	44	51	202	3831
Apprch %	1.5	96.3	2.1		69.8	18.8	11.5		4.1	89.6	6.3		53	21.8	25.2		
Total %	0.7	41.3	0.9	42.8	3.5	0.9	0.6	5	1.9	42	2.9	46.9	2.8	1.1	1.3	5.3	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	2	140	2	144	14	5	0	19	7	129	8	144	5	**8**	4	**17**	324
03:45 PM	1	129	4	134	7	4	**3**	14	4	129	8	141	**8**	4	5	17	306
04:00 PM	4	145	2	151	13	4	2	19	4	**178**	**15**	**197**	5	4	**7**	16	**383**
04:15 PM	**5**	**149**	**5**	**159**	**18**	**7**	2	**27**	**8**	124	6	138	6	4	4	14	338
Total Volume	12	563	13	588	52	20	7	79	23	560	37	620	24	20	20	64	1351
% App. Total	2	95.7	2.2		65.8	25.3	8.9		3.7	90.3	6		37.5	31.2	31.2		
PHF	.600	.945	.650	.925	.722	.714	.583	.731	.719	.787	.617	.787	.750	.625	.714	.941	.882

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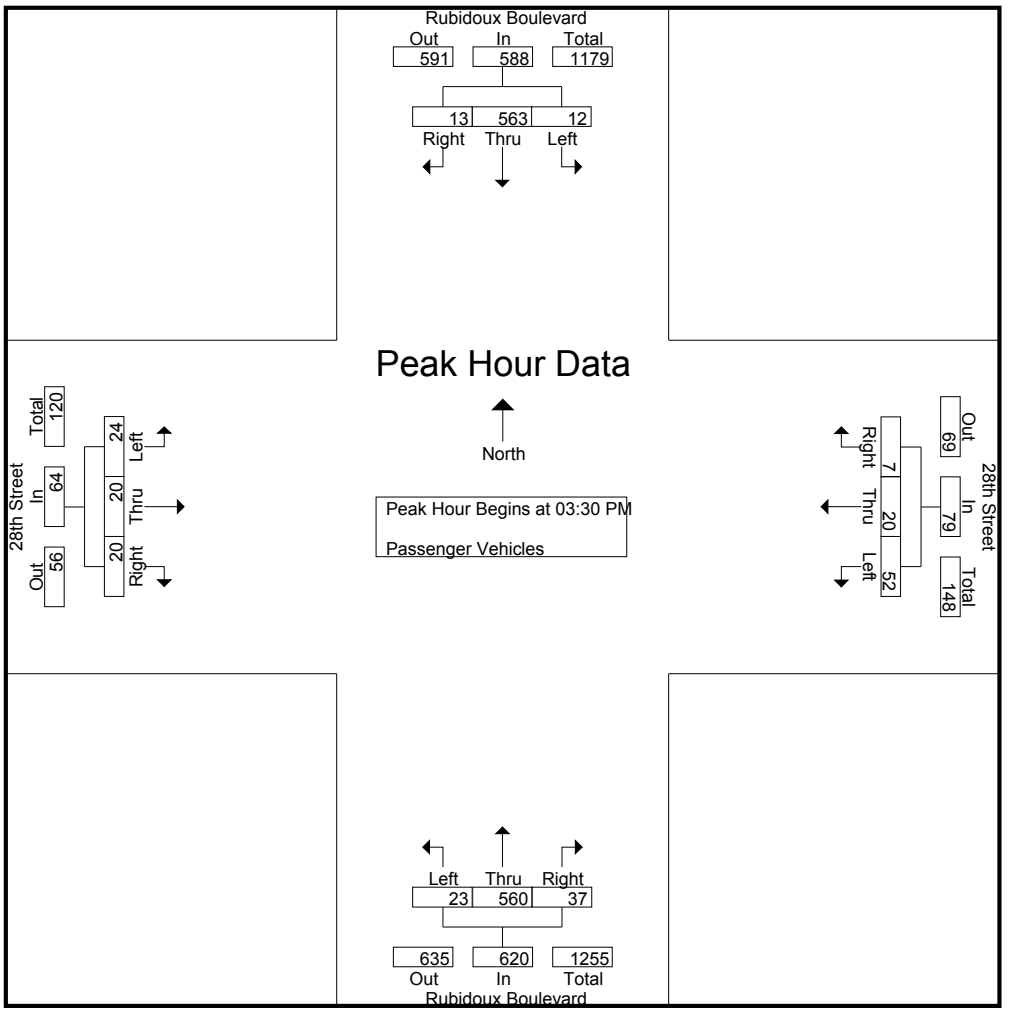
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:30 PM			
+0 mins.	2	140	2	144	14	5	0	19	7	129	8	144	5	**8**	4	**17**
+15 mins.	1	129	4	134	7	4	**3**	14	4	129	8	141	**8**	4	5	17
+30 mins.	4	145	2	151	13	4	2	19	4	**178**	**15**	**197**	5	4	**7**	16
+45 mins.	**5**	**149**	**5**	**159**	**18**	**7**	2	**27**	**8**	124	6	138	6	4	4	14
Total Volume	12	563	13	588	52	20	7	79	23	560	37	620	24	20	20	64
% App. Total	2	95.7	2.2		65.8	25.3	8.9		3.7	90.3	6		37.5	31.2	31.2	
PHF	.600	.945	.650	.925	.722	.714	.583	.731	.719	.787	.617	.787	.750	.625	.714	.941

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File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	1	15	0	16	3	0	0	3	1	17	1	19	0	0	0	0	38
03:45 PM	0	10	0	10	2	0	0	2	0	12	1	13	0	2	2	4	29
Total	1	25	0	26	5	0	0	5	1	29	2	32	0	2	2	4	67
04:00 PM	1	7	0	8	0	1	0	1	0	8	0	8	0	0	0	0	17
04:15 PM	0	6	0	6	2	0	0	2	0	7	0	7	1	0	0	1	16
04:30 PM	0	4	0	4	0	0	0	0	1	8	0	9	0	0	0	0	13
04:45 PM	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	5
Total	1	17	0	18	2	1	0	3	1	28	0	29	1	0	0	1	51
05:00 PM	0	4	0	4	1	0	0	1	0	6	0	6	0	0	0	0	11
05:15 PM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
05:30 PM	0	5	0	5	0	0	0	0	0	8	0	8	0	0	1	1	14
05:45 PM	0	1	0	1	1	0	0	1	0	13	0	13	0	0	0	0	15
Total	0	13	0	13	2	0	0	2	0	33	0	33	0	0	1	1	49
06:00 PM	0	5	0	5	0	0	0	0	2	9	1	12	0	0	0	0	17
06:15 PM	0	3	0	3	1	0	0	1	0	5	0	5	0	0	0	0	9
Grand Total	2	63	0	65	10	1	0	11	4	104	3	111	1	2	3	6	193
Apprch %	3.1	96.9	0		90.9	9.1	0		3.6	93.7	2.7		16.7	33.3	50		
Total %	1	32.6	0	33.7	5.2	0.5	0	5.7	2.1	53.9	1.6	57.5	0.5	1	1.6	3.1	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	**1**	**15**	0	**16**	**3**	0	0	**3**	**1**	**17**	**1**	**19**	0	0	0	0	**38**
03:45 PM	0	10	0	10	2	0	0	2	0	12	1	13	0	**2**	**2**	**4**	29
04:00 PM	1	7	0	8	0	**1**	0	1	0	8	0	8	0	0	0	0	17
04:15 PM	0	6	0	6	2	0	0	2	0	7	0	7	**1**	0	0	1	16
Total Volume	2	38	0	40	7	1	0	8	1	44	2	47	1	2	2	5	100
% App. Total	5	95	0		87.5	12.5	0		2.1	93.6	4.3		20	40	40		
PHF	.500	.633	.000	.625	.583	.250	.000	.667	.250	.647	.500	.618	.250	.250	.250	.313	.658

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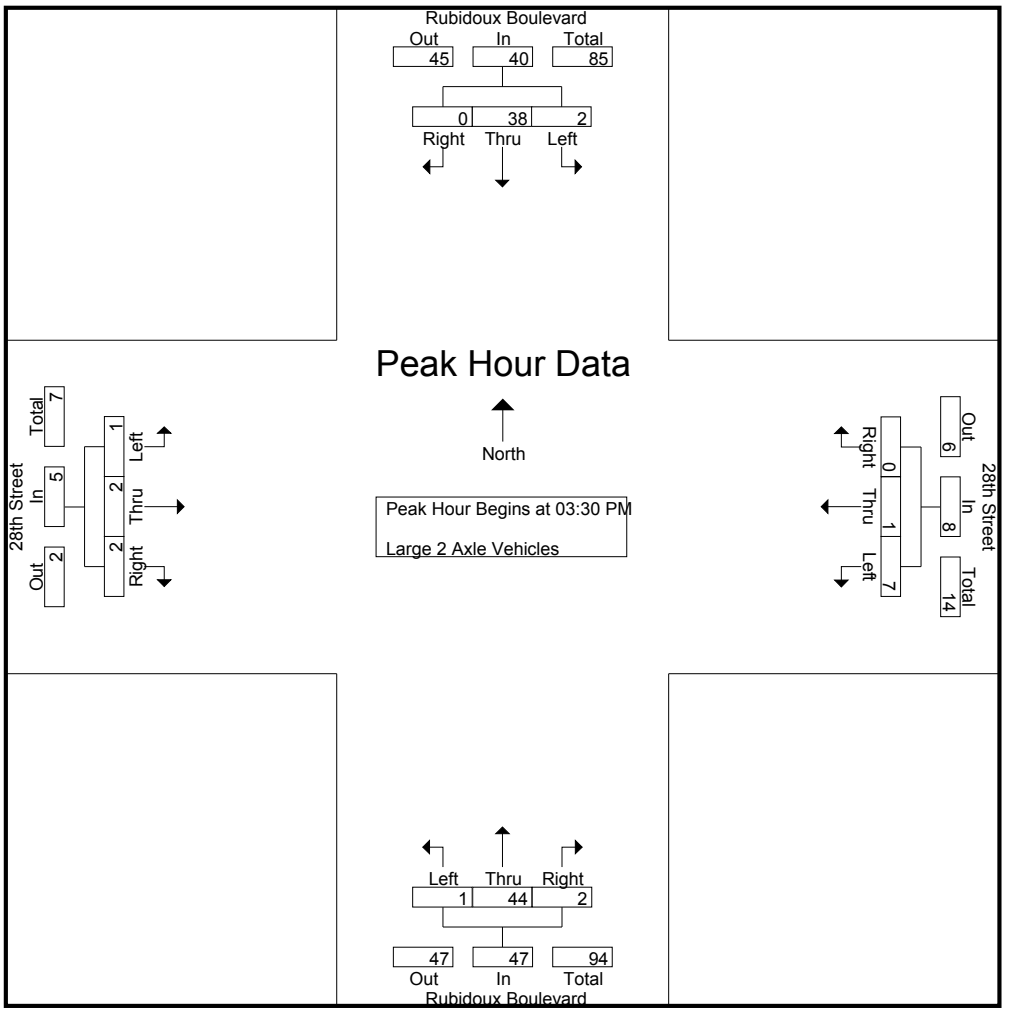
File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:30 PM			
+0 mins.	**1**	**15**	0	**16**	**3**	0	0	**3**	**1**	**17**	**1**	**19**	0	0	0	0
+15 mins.	0	10	0	10	2	0	0	2	0	12	1	13	0	**2**	**2**	**4**
+30 mins.	1	7	0	8	0	**1**	0	1	0	8	0	8	0	0	0	0
+45 mins.	0	6	0	6	2	0	0	2	0	7	0	7	**1**	0	0	1
Total Volume	2	38	0	40	7	1	0	8	1	44	2	47	1	2	2	5
% App. Total	5	95	0		87.5	12.5	0		2.1	93.6	4.3		20	40	40	
PHF	.500	.633	.000	.625	.583	.250	.000	.667	.250	.647	.500	.618	.250	.250	.250	.313

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File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

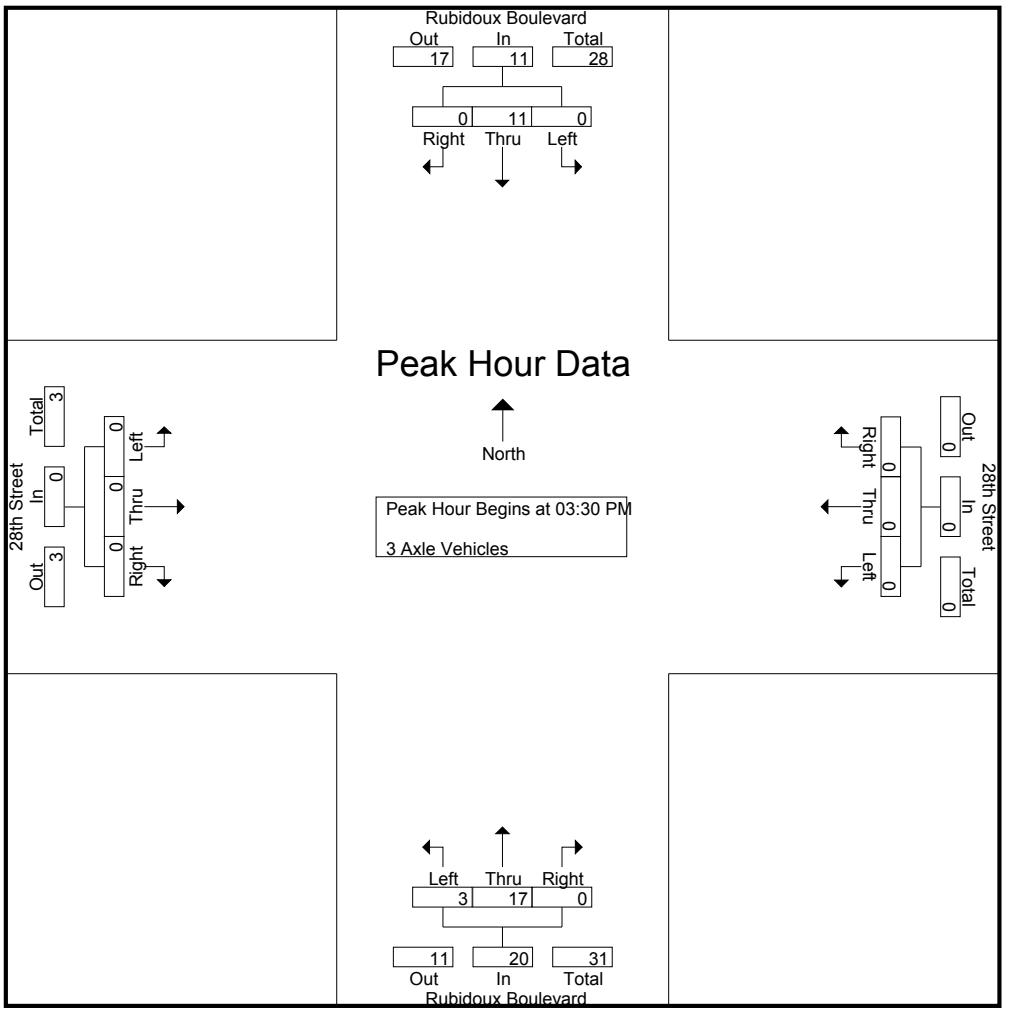
	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
03:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	5	0	5	0	0	0	0	1	3	0	4	0	0	0	0	9
04:00 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
04:15 PM	0	2	0	2	0	0	0	0	2	10	0	12	0	0	0	0	14
04:30 PM	0	3	0	3	0	0	0	0	0	8	0	8	0	0	0	0	11
04:45 PM	0	1	0	1	0	0	0	0	2	14	0	16	0	0	0	0	17
Total	0	10	0	10	0	0	0	0	4	36	0	40	0	0	0	0	50
05:00 PM	0	1	0	1	0	0	0	0	0	6	0	6	0	0	0	0	7
05:15 PM	0	3	0	3	0	0	0	0	0	5	0	5	0	0	0	0	8
05:30 PM	0	2	0	2	0	0	0	0	0	8	1	9	0	0	0	0	11
05:45 PM	0	1	0	1	0	0	0	0	0	6	0	6	0	0	0	0	7
Total	0	7	0	7	0	0	0	0	0	25	1	26	0	0	0	0	33
06:00 PM	0	1	0	1	0	0	0	0	2	4	0	6	0	0	0	0	7
06:15 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	3
Grand Total	0	23	0	23	0	0	0	0	8	70	1	79	0	0	0	0	102
Apprch %	0	100	0		0	0	0		10.1	88.6	1.3		0	0	0		
Total %	0	22.5	0	22.5	0	0	0	0	7.8	68.6	1	77.5	0	0	0	0	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
03:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
04:00 PM	0	**4**	0	**4**	0	0	0	0	0	4	0	4	0	0	0	0	8
04:15 PM	0	2	0	2	0	0	0	0	**2**	**10**	0	**12**	0	0	0	0	**14**
Total Volume	0	11	0	11	0	0	0	0	3	17	0	20	0	0	0	0	31
% App. Total	0	100	0		0	0	0		15	85	0		0	0	0		
PHF	.000	.688	.000	.688	.000	.000	.000	.000	.375	.425	.000	.417	.000	.000	.000	.000	.554

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 28th Street
Weather: Clear

File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:30 PM			
+0 mins.	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	**4**	0	**4**	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	**2**	**10**	0	**12**	0	0	0	0
Total Volume	0	11	0	11	0	0	0	0	3	17	0	20	0	0	0	0
% App. Total	0	100	0		0	0	0		15	85	0		0	0	0	
PHF	.000	.688	.000	.688	.000	.000	.000	.000	.375	.425	.000	.417	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 28th Street
Weather: Clear

File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	12	0	12	0	0	0	0	1	15	0	16	0	0	1	1	29
03:45 PM	0	9	0	9	1	0	0	1	0	21	0	21	0	0	0	0	31
Total	0	21	0	21	1	0	0	1	1	36	0	37	0	0	1	1	60
04:00 PM	0	7	0	7	0	0	0	0	2	12	0	14	0	0	0	0	21
04:15 PM	0	5	0	5	1	0	0	1	0	21	0	21	0	0	0	0	27
04:30 PM	0	13	0	13	0	0	0	0	0	13	0	13	0	0	0	0	26
04:45 PM	0	9	0	9	1	0	0	1	0	16	0	16	0	0	0	0	26
Total	0	34	0	34	2	0	0	2	2	62	0	64	0	0	0	0	100
05:00 PM	0	13	0	13	0	0	0	0	1	11	0	12	0	0	0	0	25
05:15 PM	0	5	0	5	0	0	0	0	0	22	1	23	1	0	0	1	29
05:30 PM	0	5	0	5	0	0	0	0	0	15	0	15	0	0	0	0	20
05:45 PM	0	6	0	6	0	0	0	0	0	12	0	12	0	0	0	0	18
Total	0	29	0	29	0	0	0	0	1	60	1	62	1	0	0	1	92
06:00 PM	2	9	0	11	0	0	0	0	0	19	0	19	0	0	0	0	30
06:15 PM	0	5	0	5	0	0	0	0	0	8	0	8	0	0	0	0	13
Grand Total	2	98	0	100	3	0	0	3	4	185	1	190	1	0	1	2	295
Apprch %	2	98	0		100	0	0		2.1	97.4	0.5		50	0	50		
Total %	0.7	33.2	0	33.9	1	0	0	1	1.4	62.7	0.3	64.4	0.3	0	0.3	0.7	

	Rubidoux Boulevard Southbound				28th Street Westbound				Rubidoux Boulevard Northbound				28th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	0	**12**	0	**12**	0	0	0	0	1	15	0	16	0	0	**1**	**1**	29
03:45 PM	0	9	0	9	**1**	0	0	**1**	0	**21**	0	**21**	0	0	0	0	**31**
04:00 PM	0	7	0	7	0	0	0	0	**2**	12	0	14	0	0	0	0	21
04:15 PM	0	5	0	5	1	0	0	1	0	21	0	21	0	0	0	0	27
Total Volume	0	33	0	33	2	0	0	2	3	69	0	72	0	0	1	1	108
% App. Total	0	100	0		100	0	0		4.2	95.8	0		0	0	100		
PHF	.000	.688	.000	.688	.500	.000	.000	.500	.375	.821	.000	.857	.000	.000	.250	.250	.871

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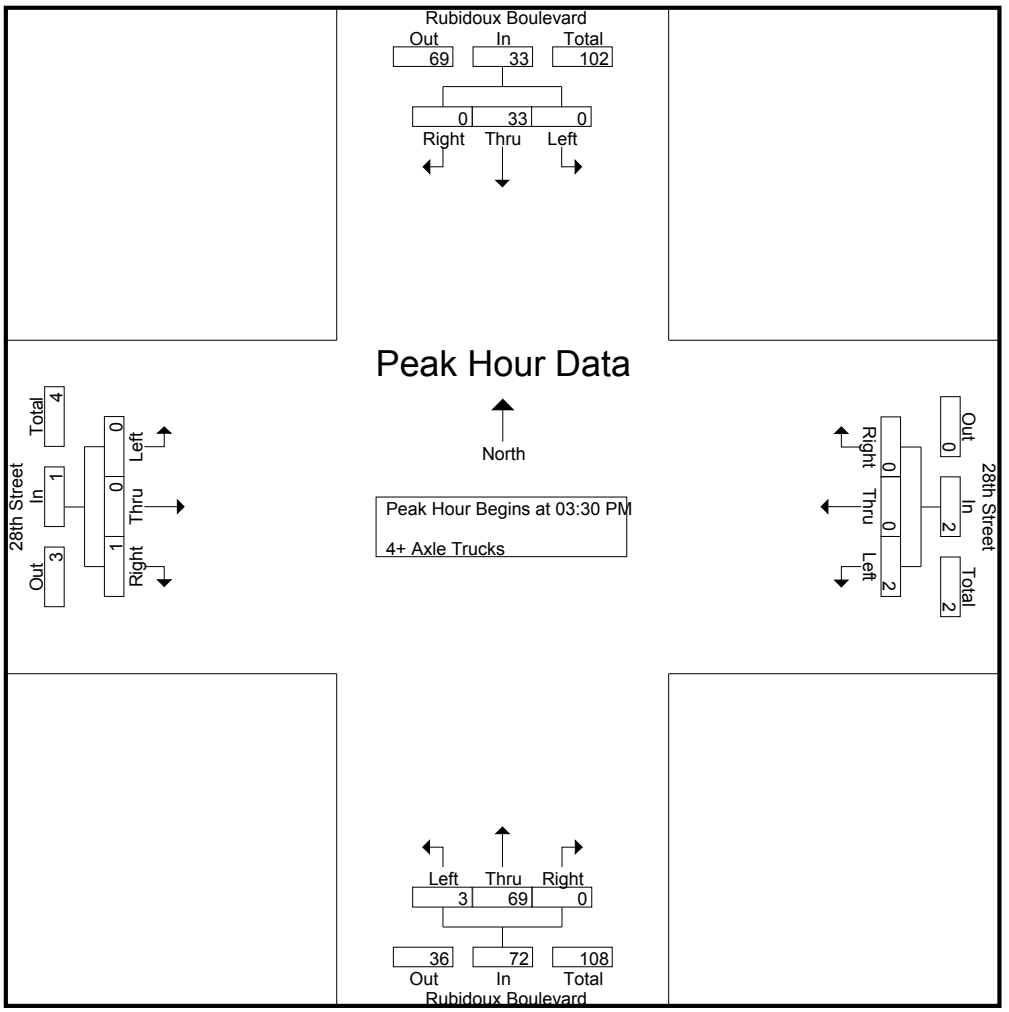
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 28th Street
Weather: Clear

File Name : 20_JVYRU28PM 2-2
Site Code : 05117022
Start Date : 2/2/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:30 PM			
+0 mins.	0	**12**	0	**12**	0	0	0	0	1	15	0	16	0	0	**1**	**1**
+15 mins.	0	9	0	9	**1**	0	0	**1**	0	**21**	0	**21**	0	0	0	0
+30 mins.	0	7	0	7	0	0	0	0	**2**	12	0	14	0	0	0	0
+45 mins.	0	5	0	5	1	0	0	1	0	21	0	21	0	0	0	0
Total Volume	0	33	0	33	2	0	0	2	3	69	0	72	0	0	1	1
% App. Total	0	100	0		100	0	0		4.2	95.8	0		0	0	100	
PHF	.000	.688	.000	.688	.500	.000	.000	.500	.375	.821	.000	.857	.000	.000	.250	.250

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: 28th

PROJECT #: SC1439
LOCATION #: 13
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	7	104	4	2	102	2	4	1	5	9	3	2	245	0	0	0	0	0
	12:15 PM	7	107	5	1	95	1	2	1	5	14	2	0	240	0	0	0	0	0
	12:30 PM	7	108	7	1	98	1	4	5	7	6	1	5	250	0	0	0	0	0
	12:45 PM	3	89	5	0	85	0	2	3	5	17	7	0	216	0	0	0	0	0
	1:00 PM	10	106	2	3	97	4	2	2	9	10	1	2	248	0	0	0	0	0
	1:15 PM	5	105	10	2	95	1	4	4	5	9	5	2	247	0	0	0	0	0
	1:30 PM	4	99	9	3	104	0	1	2	8	8	4	1	243	0	0	0	0	0
	1:45 PM	7	119	9	0	89	3	5	6	2	7	2	3	252	0	0	0	0	0
	VOLUMES	50	837	51	12	765	12	24	24	46	80	25	15	1,941	0	0	0	0	0
	APPROACH %	5%	89%	5%	2%	97%	2%	26%	26%	49%	67%	21%	13%						
	APP/DEPART	938	/	876	789	/	891	94	/	87	120	/	87	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	26	429	30	8	385	8	12	14	24	34	12	8	990					
	APPROACH %	5%	88%	6%	2%	96%	2%	24%	28%	48%	63%	22%	15%						
	PEAK HR FACTOR		0.898			0.937			0.962			0.844		0.982					
	APP/DEPART	485	/	449	401	/	443	50	/	52	54	/	46	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

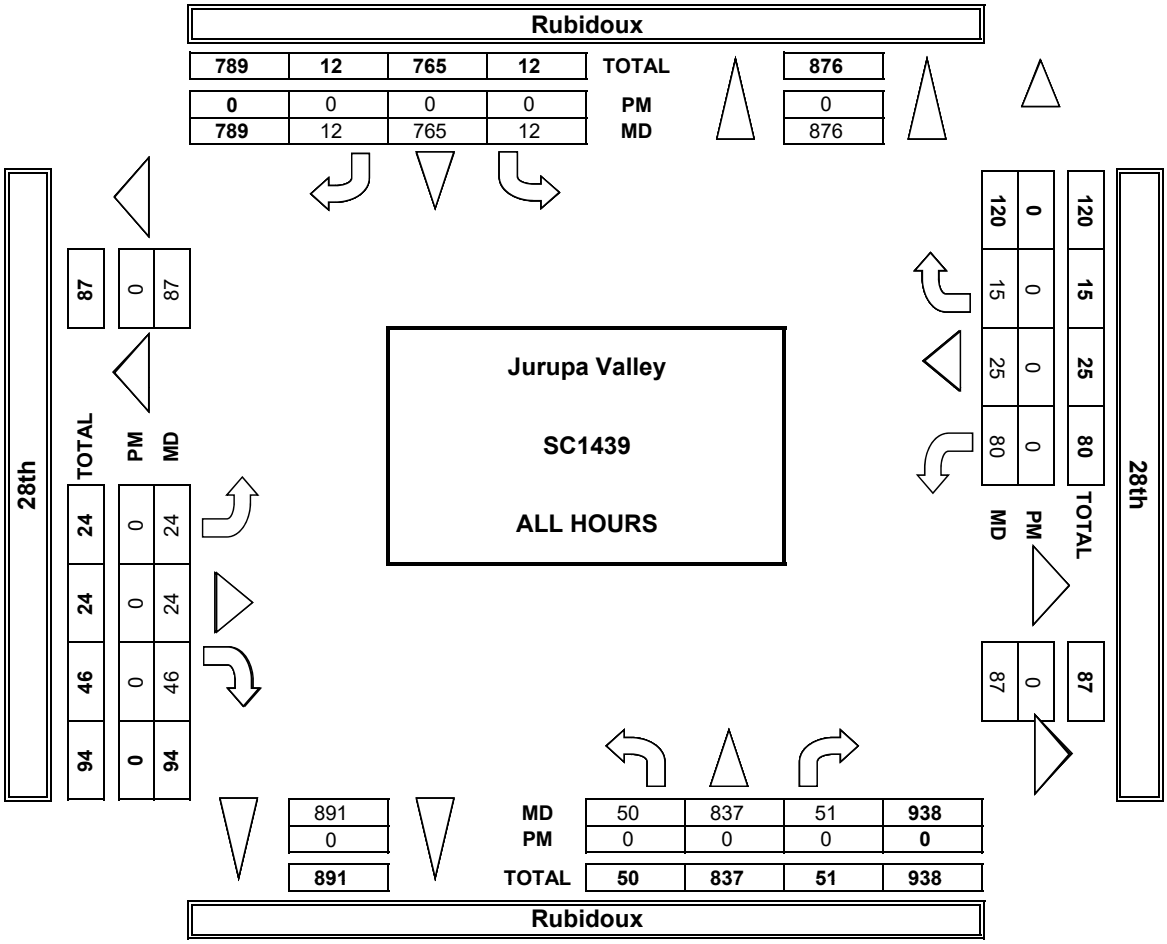
28th WEST SIDE EAST SIDE **28th**

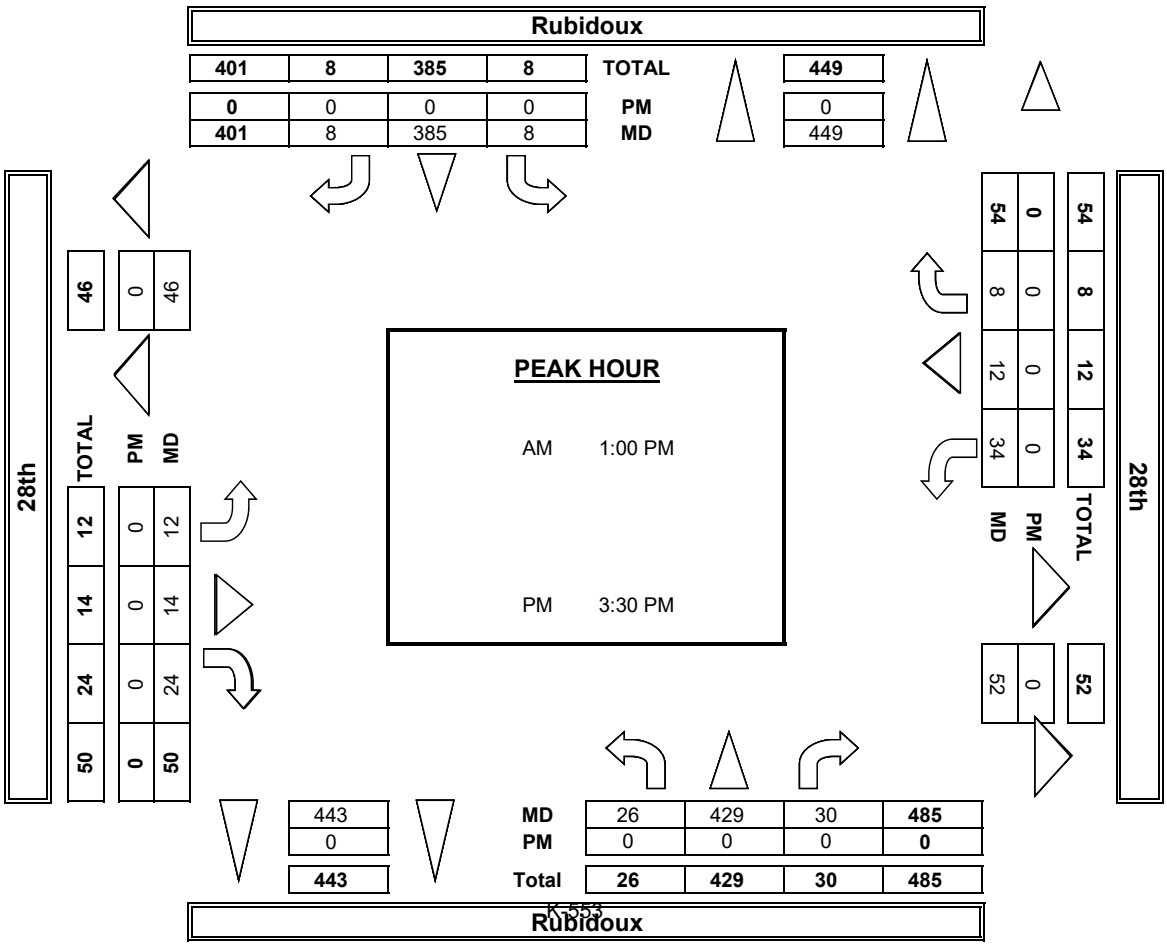
SOUTH SIDE

Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM			
										MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	10	154	4	4	150	2	5	1	6	12	3	4	353
	8:15 AM	8	167	6	2	138	1	3	1	11	18	2	0	357
	8:30 AM	7	174	8	1	144	1	5	5	9	7	1	6	367
	8:45 AM	5	117	6	0	116	0	2	3	6	22	7	0	284
	9:00 AM	10	158	5	3	138	5	3	2	12	11	1	2	348
	9:15 AM	6	158	11	5	136	1	4	5	6	10	5	2	347
	9:30 AM	4	144	12	4	161	0	2	2	11	9	6	1	354
	9:45 AM	10	178	9	0	140	3	6	8	3	11	2	4	372
	VOLUMES	59	1,249	60	19	1,121	13	28	27	63	98	27	19	2,780
	APPROACH %	4%	91%	4%	2%	97%	1%	23%	23%	54%	68%	19%	13%	
	APP/DEPART	1,368	/	1,296	1,152	/	1,282	118	/	106	143	/	98	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	29	638	36	12	574	9	14	17	32	39	14	9	1,421
	APPROACH %	4%	91%	5%	2%	97%	1%	22%	27%	50%	63%	22%	15%	
	PEAK HR FACTOR		0.896			0.900			0.919			0.932		0.955
	APP/DEPART	703	/	661	594	/	645	63	/	65	62	/	51	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Rubidoux

NORTH SIDE

28th WEST SIDE EAST SIDE **28th**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	5	66	4	1	67	2	3	1	4	7	3	1	164	0	0	0	0	0
12:15 PM	6	63	3	0	65	1	1	1	0	12	2	0	154	0	0	0	0	0
12:30 PM	7	66	5	1	73	1	3	5	5	5	1	3	175	0	0	0	0	0
12:45 PM	2	66	4	0	63	0	2	3	4	14	7	0	165	0	0	0	0	0
1:00 PM	10	67	0	3	67	3	1	2	7	9	1	2	172	0	0	0	0	0
1:15 PM	4	70	9	0	65	1	4	3	4	8	5	2	175	0	0	0	0	0
1:30 PM	4	62	5	1	69	0	0	2	6	7	2	1	159	0	0	0	0	0
1:45 PM	5	77	9	0	58	3	3	4	1	4	2	2	168	0	0	0	0	0
VOLUMES	43	537	39	6	527	11	17	21	31	66	23	11	1,332	0	0	0	0	0
APPROACH %	7%	87%	6%	1%	97%	2%	25%	30%	45%	66%	23%	11%						
APP/DEPART	619	/	565	544	/	624	69	/	66	100	/	77	0					
BEGIN PEAK HR		12:30 PM																
VOLUMES	23	269	18	4	268	5	10	13	20	36	14	7	687					
APPROACH %	7%	87%	6%	1%	97%	2%	23%	30%	47%	63%	25%	12%						
PEAK HR FACTOR		0.934			0.923			0.827			0.679		0.981					
APP/DEPART	310	/	286	277	/	324	43	/	35	57	/	42	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

28th WEST SIDE EAST SIDE **28th**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

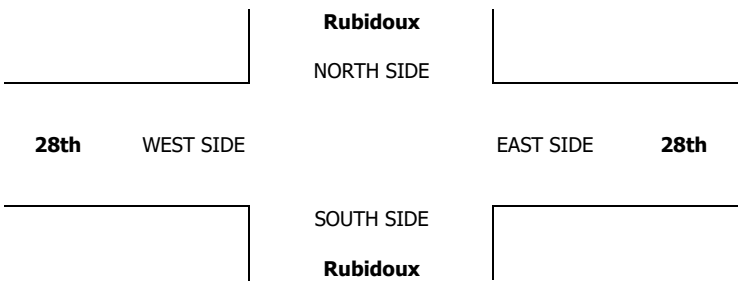
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	11	0	0	10	0	1	0	1	1	0	0	25	0	0	0	0	0
	12:15 PM	0	14	2	0	4	0	1	0	2	0	0	0	23	0	0	0	0	0
	12:30 PM	0	6	2	0	1	0	1	0	0	0	0	2	12	0	0	0	0	0
	12:45 PM	0	6	0	0	5	0	0	0	0	0	0	0	11	0	0	0	0	0
	1:00 PM	0	12	1	0	8	1	1	0	0	1	0	0	24	0	0	0	0	0
	1:15 PM	1	6	0	1	5	0	0	0	0	1	0	0	14	0	0	0	0	0
	1:30 PM	0	14	3	2	4	0	1	0	1	1	1	0	27	0	0	0	0	0
	1:45 PM	1	9	0	0	3	0	2	0	0	1	0	0	16	0	0	0	0	0
	VOLUMES	3	78	8	3	40	1	7	0	4	5	1	2	152	0	0	0	0	0
	APPROACH %	3%	88%	9%	7%	91%	2%	64%	0%	36%	63%	13%	25%						
	APP/DEPART	89	/	87	44	/	49	11	/	11	8	/	5	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	2	41	4	3	20	1	4	0	1	4	1	0	81					
	APPROACH %	4%	87%	9%	13%	83%	4%	80%	0%	20%	80%	20%	0%						
	PEAK HR FACTOR		0.691			0.667			0.625			0.625		0.750					
	APP/DEPART	47	/	45	24	/	25	5	/	7	5	/	4	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

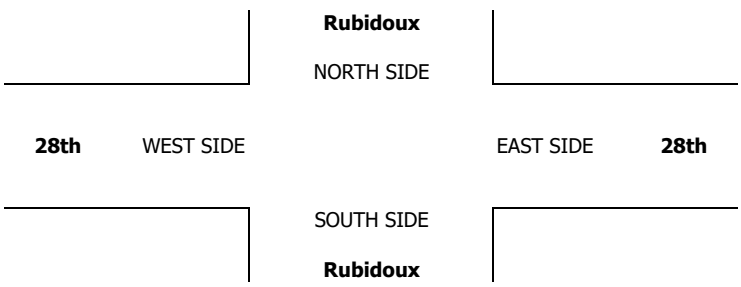
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	9	0	0	5	0	0	0	0	0	0	0	14	0	0	0	0	0
	12:15 PM	0	6	0	1	11	0	0	0	0	0	0	0	18	0	0	0	0	0
	12:30 PM	0	8	0	0	3	0	0	0	1	0	0	0	12	0	0	0	0	0
	12:45 PM	0	9	0	0	5	0	0	0	1	0	0	0	15	0	0	0	0	0
	1:00 PM	0	8	0	0	7	0	0	0	0	0	0	0	15	0	0	0	0	0
	1:15 PM	0	7	0	0	11	0	0	0	0	0	0	0	18	0	0	0	0	0
	1:30 PM	0	8	1	0	7	0	0	0	0	0	0	0	16	0	0	0	0	0
	1:45 PM	0	12	0	0	6	0	0	0	1	0	0	1	20	0	0	0	0	0
	VOLUMES	0	67	1	1	55	0	0	0	3	0	0	1	128	0	0	0	0	0
	APPROACH %	0%	99%	1%	2%	98%	0%	0%	0%	100%	0%	0%	100%						
	APP/DEPART	68	/	68	56	/	58	3	/	2	1	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	35	1	0	31	0	0	0	1	0	0	1	69					
	APPROACH %	0%	97%	3%	0%	100%	0%	0%	0%	100%	0%	0%	100%						
	PEAK HR FACTOR		0.750			0.705			0.250			0.250		0.863					
	APP/DEPART	36	/	36	31	/	32	1	/	1	1	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

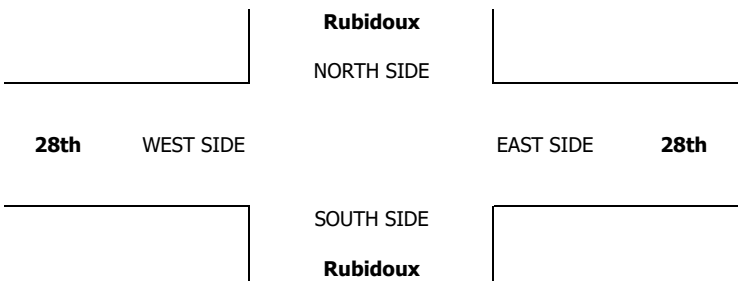
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	17	0	1	18	0	0	0	0	1	0	1	39	0	0	0	0	0
12:15 PM	0	23	0	0	15	0	0	0	2	2	0	0	42	0	0	0	0	0
12:30 PM	0	27	0	0	21	0	0	0	0	0	0	0	48	0	0	0	0	0
12:45 PM	1	8	0	0	11	0	0	0	0	2	0	0	22	0	0	0	0	0
1:00 PM	0	19	1	0	15	0	0	0	1	0	0	0	36	0	0	0	0	0
1:15 PM	0	21	0	1	13	0	0	0	0	0	0	0	35	0	0	0	0	0
1:30 PM	0	15	0	0	24	0	0	0	1	0	0	0	40	0	0	0	0	0
1:45 PM	1	21	0	0	21	0	0	0	0	1	0	0	44	0	0	0	0	0
VOLUMES	3	151	1	2	138	0	0	0	4	6	0	1	306	0	0	0	0	0
APPROACH %	2%	97%	1%	1%	99%	0%	0%	0%	100%	86%	0%	14%						
APP/DEPART	155	/	152	140	/	148	4	/	3	7	/	3	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	1	76	1	1	73	0	0	0	2	1	0	0	155					
APPROACH %	1%	97%	1%	1%	99%	0%	0%	0%	100%	100%	0%	0%						
PEAK HR FACTOR		0.886			0.771			0.500			0.250		0.881					
APP/DEPART	78	/	76	74	/	76	2	/	2	1	/	1	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

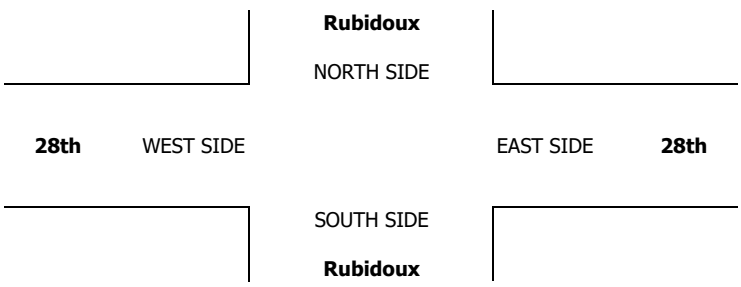
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:30 PM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



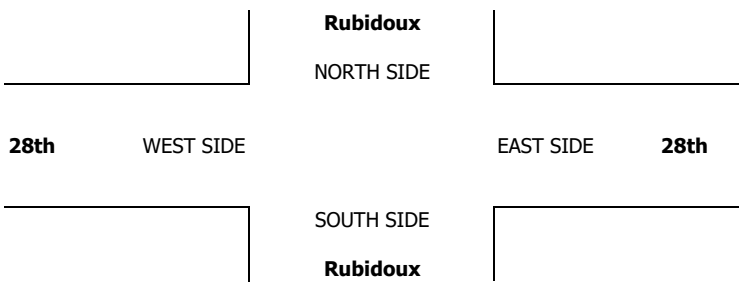
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	13
WEDNESDAY	EAST & WEST:	28th	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 28th			WESTBOUND 28th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
	12:15 PM	1	1	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0
	12:30 PM	0	1	0	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0
	12:45 PM	0	0	1	0	1	0	0	0	0	1	0	0	3	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	1:15 PM	0	1	1	0	0	0	0	1	1	0	0	0	4	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:45 PM	0	0	0	0	1	0	0	2	0	1	0	0	4	0	0	0	0	0
	VOLUMES	1	4	2	0	4	0	0	3	4	3	1	0	22	0	0	0	0	0
	APPROACH %	14%	57%	29%	0%	100%	0%	0%	43%	57%	75%	25%	0%						
	APP/DEPART	7	/	4	4	/	11	7	/	5	4	/	2	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	1	3	1	0	3	0	0	0	2	2	0	0	12					
	APPROACH %	20%	60%	20%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	PEAK HR FACTOR		0.625			0.375			0.500			0.500		1.000					
	APP/DEPART	5	/	3	3	/	7	2	/	1	2	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

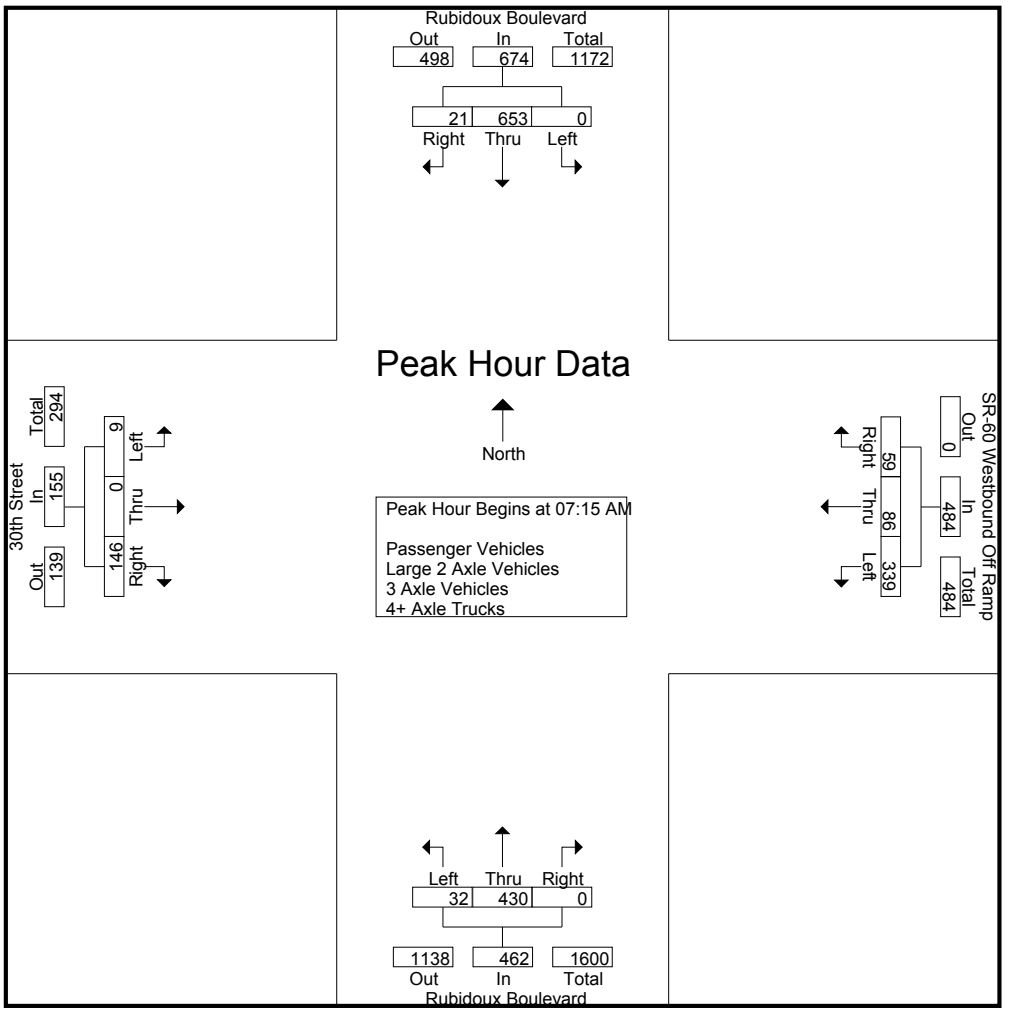
	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	124	2	126	64	11	13	88	10	110	0	120	4	0	34	38	372
06:45 AM	0	153	1	154	73	18	25	116	12	119	0	131	5	0	25	30	431
Total	0	277	3	280	137	29	38	204	22	229	0	251	9	0	59	68	803
07:00 AM	0	122	10	132	57	19	19	95	13	103	0	116	4	0	47	51	394
07:15 AM	0	147	8	155	64	23	15	102	8	111	0	119	4	0	41	45	421
07:30 AM	0	169	7	176	88	18	14	120	6	86	0	92	3	0	42	45	433
07:45 AM	0	197	2	199	91	22	13	126	7	136	0	143	1	0	32	33	501
Total	0	635	27	662	300	82	61	443	34	436	0	470	12	0	162	174	1749
08:00 AM	0	140	4	144	96	23	17	136	11	97	0	108	1	0	31	32	420
08:15 AM	0	111	2	113	70	16	16	102	16	93	0	109	6	0	29	35	359
08:30 AM	0	112	3	115	55	13	10	78	12	89	0	101	6	0	35	41	335
08:45 AM	0	109	3	112	64	20	16	100	9	73	0	82	1	0	35	36	330
Total	0	472	12	484	285	72	59	416	48	352	0	400	14	0	130	144	1444
09:00 AM	0	118	1	119	71	15	12	98	16	85	0	101	3	0	39	42	360
09:15 AM	0	123	2	125	82	24	15	121	12	69	0	81	3	0	27	30	357
Grand Total	0	1625	45	1670	875	222	185	1282	132	1171	0	1303	41	0	417	458	4713
Apprch %	0	97.3	2.7		68.3	17.3	14.4		10.1	89.9	0		9	0	91		
Total %	0	34.5	1	35.4	18.6	4.7	3.9	27.2	2.8	24.8	0	27.6	0.9	0	8.8	9.7	
Passenger Vehicles	0	1279	42	1321	825	212	166	1203	124	950	0	1074	38	0	383	421	4019
% Passenger Vehicles	0	78.7	93.3	79.1	94.3	95.5	89.7	93.8	93.9	81.1	0	82.4	92.7	0	91.8	91.9	85.3
Large 2 Axle Vehicles	0	120	2	122	34	7	9	50	7	61	0	68	2	0	18	20	260
% Large 2 Axle Vehicles	0	7.4	4.4	7.3	3.9	3.2	4.9	3.9	5.3	5.2	0	5.2	4.9	0	4.3	4.4	5.5
3 Axle Vehicles	0	64	0	64	11	2	1	14	0	44	0	44	0	0	5	5	127
% 3 Axle Vehicles	0	3.9	0	3.8	1.3	0.9	0.5	1.1	0	3.8	0	3.4	0	0	1.2	1.1	2.7
4+ Axle Trucks	0	162	1	163	5	1	9	15	1	116	0	117	1	0	11	12	307
% 4+ Axle Trucks	0	10	2.2	9.8	0.6	0.5	4.9	1.2	0.8	9.9	0	9	2.4	0	2.6	2.6	6.5

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	147	**8**	155	64	**23**	15	102	8	111	0	119	**4**	0	41	**45**	421
07:30 AM	0	169	7	176	88	18	14	120	6	86	0	92	3	0	**42**	45	433
07:45 AM	0	**197**	2	**199**	91	22	13	126	7	**136**	0	**143**	1	0	32	33	**501**
08:00 AM	0	140	4	144	**96**	23	**17**	**136**	**11**	97	0	108	1	0	31	32	420
Total Volume	0	653	21	674	339	86	59	484	32	430	0	462	9	0	146	155	1775
% App. Total	0	96.9	3.1		70	17.8	12.2		6.9	93.1	0		5.8	0	94.2		
PHF	.000	.829	.656	.847	.883	.935	.868	.890	.727	.790	.000	.808	.563	.000	.869	.861	.886

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				06:30 AM				07:00 AM			
+0 mins.	0	147	**8**	155	64	**23**	15	102	10	110	0	120	**4**	0	**47**	**51**
+15 mins.	0	169	7	176	88	18	14	120	12	**119**	0	**131**	4	0	41	45
+30 mins.	0	**197**	2	**199**	91	22	13	126	**13**	103	0	116	3	0	42	45
+45 mins.	0	140	4	144	**96**	23	**17**	**136**	8	111	0	119	1	0	32	33
Total Volume	0	653	21	674	339	86	59	484	43	443	0	486	12	0	162	174
% App. Total	0	96.9	3.1		70	17.8	12.2		8.8	91.2	0		6.9	0	93.1	
PHF	.000	.829	.656	.847	.883	.935	.868	.890	.827	.931	.000	.927	.750	.000	.862	.853

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
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Groups Printed- Passenger Vehicles

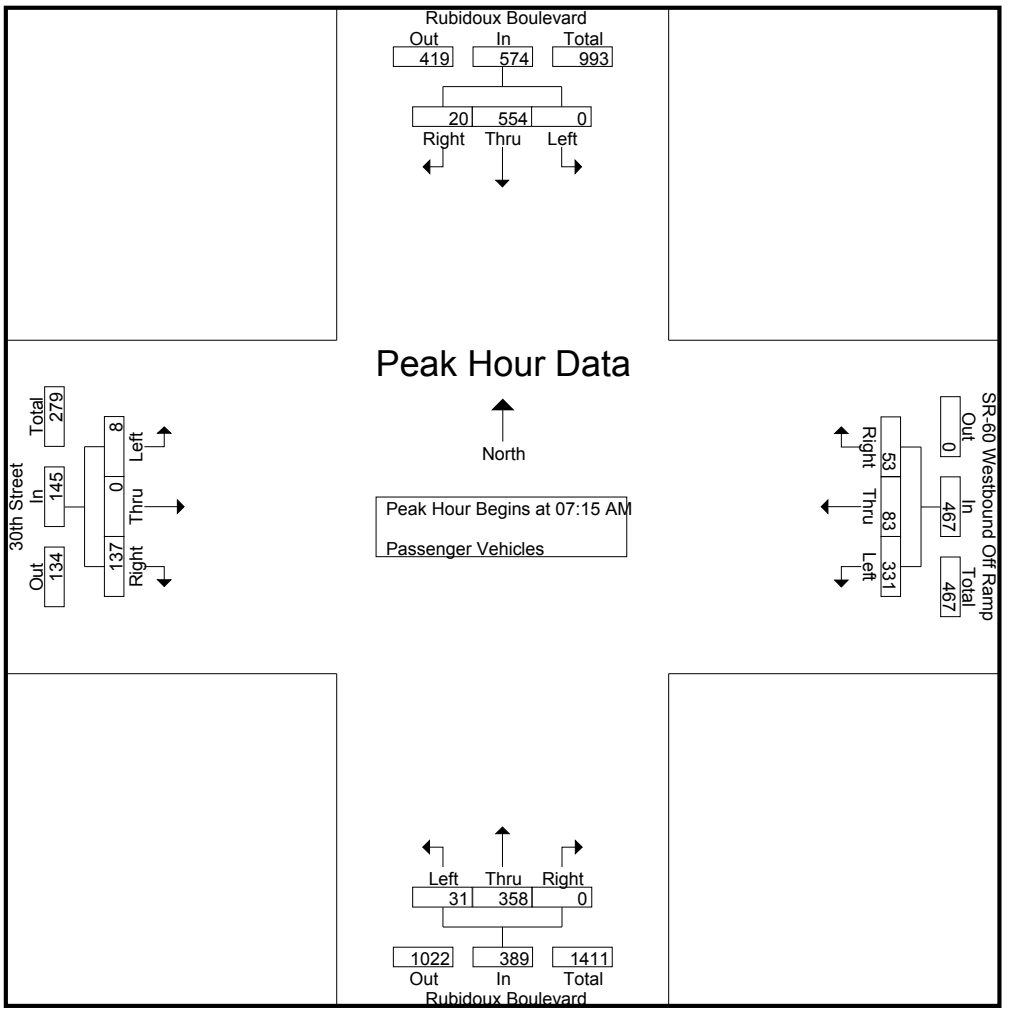
	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	98	2	100	59	10	12	81	8	88	0	96	3	0	30	33	310
06:45 AM	0	112	1	113	71	18	23	112	10	103	0	113	5	0	23	28	366
Total	0	210	3	213	130	28	35	193	18	191	0	209	8	0	53	61	676
07:00 AM	0	101	8	109	56	19	18	93	13	92	0	105	3	0	45	48	355
07:15 AM	0	120	8	128	62	22	12	96	8	87	0	95	3	0	39	42	361
07:30 AM	0	140	7	147	86	18	13	117	6	75	0	81	3	0	40	43	388
07:45 AM	0	169	2	171	89	22	12	123	6	119	0	125	1	0	29	30	449
Total	0	530	25	555	293	81	55	429	33	373	0	406	10	0	153	163	1553
08:00 AM	0	125	3	128	94	21	16	131	11	77	0	88	1	0	29	30	377
08:15 AM	0	87	2	89	65	16	14	95	15	68	0	83	6	0	26	32	299
08:30 AM	0	83	3	86	52	13	9	74	12	74	0	86	6	0	34	40	286
08:45 AM	0	78	3	81	62	18	15	95	8	59	0	67	1	0	31	32	275
Total	0	373	11	384	273	68	54	395	46	278	0	324	14	0	120	134	1237
09:00 AM	0	84	1	85	61	14	10	85	16	58	0	74	3	0	35	38	282
09:15 AM	0	82	2	84	68	21	12	101	11	50	0	61	3	0	22	25	271
Grand Total	0	1279	42	1321	825	212	166	1203	124	950	0	1074	38	0	383	421	4019
Apprch %	0	96.8	3.2		68.6	17.6	13.8		11.5	88.5	0		9	0	91		
Total %	0	31.8	1	32.9	20.5	5.3	4.1	29.9	3.1	23.6	0	26.7	0.9	0	9.5	10.5	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	120	**8**	128	62	**22**	12	96	8	87	0	95	**3**	0	39	42	361
07:30 AM	0	140	7	147	86	18	13	117	6	75	0	81	3	0	**40**	**43**	388
07:45 AM	0	**169**	2	**171**	89	22	12	123	6	**119**	0	**125**	1	0	29	30	**449**
08:00 AM	0	125	3	128	**94**	21	**16**	**131**	**11**	77	0	88	1	0	29	30	377
Total Volume	0	554	20	574	331	83	53	467	31	358	0	389	8	0	137	145	1575
% App. Total	0	96.5	3.5		70.9	17.8	11.3		8	92	0		5.5	0	94.5		
PHF	.000	.820	.625	.839	.880	.943	.828	.891	.705	.752	.000	.778	.667	.000	.856	.843	.877

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	120	**8**	128	62	**22**	12	96	8	87	0	95	**3**	0	39	42
+15 mins.	0	140	7	147	86	18	13	117	6	75	0	81	3	0	**40**	**43**
+30 mins.	0	**169**	2	**171**	89	22	12	123	6	**119**	0	**125**	1	0	29	30
+45 mins.	0	125	3	128	**94**	21	**16**	**131**	**11**	77	0	88	1	0	29	30
Total Volume	0	554	20	574	331	83	53	467	31	358	0	389	8	0	137	145
% App. Total	0	96.5	3.5		70.9	17.8	11.3		8	92	0		5.5	0	94.5	
PHF	.000	.820	.625	.839	.880	.943	.828	.891	.705	.752	.000	.778	.667	.000	.856	.843

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Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	10	0	10	3	1	0	4	2	6	0	8	1	0	3	4	26
06:45 AM	0	14	0	14	2	0	0	2	2	6	0	8	0	0	0	0	24
Total	0	24	0	24	5	1	0	6	4	12	0	16	1	0	3	4	50
07:00 AM	0	7	1	8	1	0	1	2	0	4	0	4	0	0	1	1	15
07:15 AM	0	8	0	8	2	1	1	4	0	5	0	5	1	0	1	2	19
07:30 AM	0	6	0	6	2	0	0	2	0	4	0	4	0	0	1	1	13
07:45 AM	0	12	0	12	2	0	1	3	1	9	0	10	0	0	2	2	27
Total	0	33	1	34	7	1	3	11	1	22	0	23	1	0	5	6	74
08:00 AM	0	7	1	8	2	2	1	5	0	6	0	6	0	0	1	1	20
08:15 AM	0	7	0	7	5	0	1	6	1	2	0	3	0	0	2	2	18
08:30 AM	0	8	0	8	1	0	0	1	0	2	0	2	0	0	1	1	12
08:45 AM	0	12	0	12	2	1	1	4	1	4	0	5	0	0	3	3	24
Total	0	34	1	35	10	3	3	16	2	14	0	16	0	0	7	7	74
09:00 AM	0	14	0	14	3	1	1	5	0	7	0	7	0	0	0	0	26
09:15 AM	0	15	0	15	9	1	2	12	0	6	0	6	0	0	3	3	36
Grand Total	0	120	2	122	34	7	9	50	7	61	0	68	2	0	18	20	260
Apprch %	0	98.4	1.6		68	14	18		10.3	89.7	0		10	0	90		
Total %	0	46.2	0.8	46.9	13.1	2.7	3.5	19.2	2.7	23.5	0	26.2	0.8	0	6.9	7.7	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	8	0	8	**2**	1	**1**	4	0	5	0	5	**1**	0	1	**2**	19
07:30 AM	0	6	0	6	2	0	0	2	0	4	0	4	0	0	1	1	13
07:45 AM	0	**12**	0	**12**	2	0	1	3	**1**	**9**	0	**10**	0	0	**2**	2	**27**
08:00 AM	0	7	**1**	8	2	**2**	1	**5**	0	6	0	6	0	0	1	1	20
Total Volume	0	33	1	34	8	3	3	14	1	24	0	25	1	0	5	6	79
% App. Total	0	97.1	2.9		57.1	21.4	21.4		4	96	0		16.7	0	83.3		
PHF	.000	.688	.250	.708	1.00	.375	.750	.700	.250	.667	.000	.625	.250	.000	.625	.750	.731

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Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
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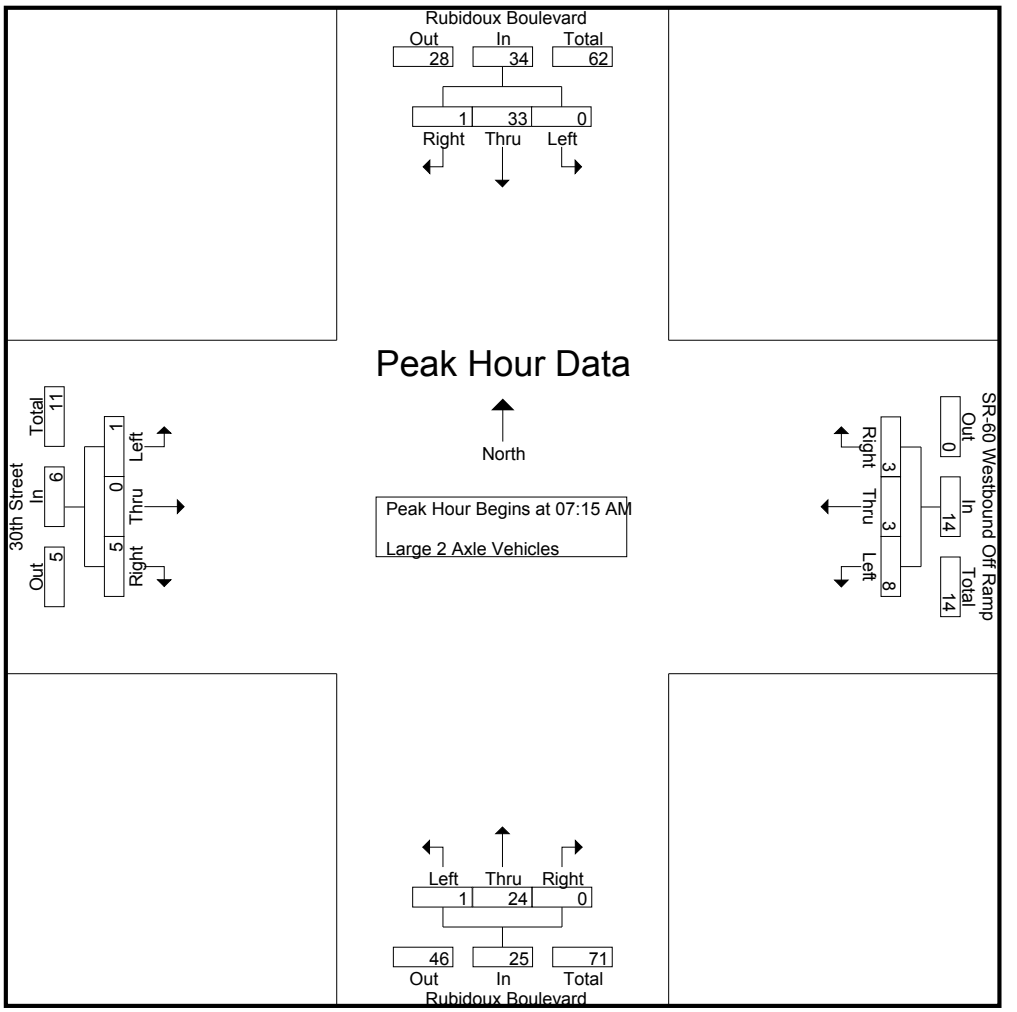
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	8	0	8	**2**	1	**1**	4	0	5	0	5	**1**	0	1	**2**
+15 mins.	0	6	0	6	2	0	0	2	0	4	0	4	0	0	1	1
+30 mins.	0	**12**	0	**12**	2	0	1	3	**1**	**9**	0	**10**	0	0	**2**	2
+45 mins.	0	7	**1**	8	2	**2**	1	**5**	0	6	0	6	0	0	1	1
Total Volume	0	33	1	34	8	3	3	14	1	24	0	25	1	0	5	6
% App. Total	0	97.1	2.9		57.1	21.4	21.4		4	96	0		16.7	0	83.3	
PHF	.000	.688	.250	.708	1.000	.375	.750	.700	.250	.667	.000	.625	.250	.000	.625	.750

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City of Jurupa Valley
N/S: Rubidoux Boulevard
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Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	1	1	11
06:45 AM	0	15	0	15	0	0	0	0	0	3	0	3	0	0	2	2	20
Total	0	20	0	20	0	0	0	0	0	8	0	8	0	0	3	3	31
07:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	9	0	9	0	0	0	0	0	6	0	6	0	0	1	1	16
07:30 AM	0	2	0	2	0	0	1	1	0	2	0	2	0	0	0	0	5
07:45 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	17	0	17	0	0	1	1	0	9	0	9	0	0	1	1	28
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	4	0	4	0	0	0	0	0	7	0	7	0	0	0	0	11
08:30 AM	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
08:45 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	17	0	17	0	0	0	0	0	13	0	13	0	0	0	0	30
09:00 AM	0	3	0	3	7	0	0	7	0	8	0	8	0	0	1	1	19
09:15 AM	0	7	0	7	4	2	0	6	0	6	0	6	0	0	0	0	19
Grand Total	0	64	0	64	11	2	1	14	0	44	0	44	0	0	5	5	127
Apprch %	0	100	0		78.6	14.3	7.1		0	100	0		0	0	100		
Total %	0	50.4	0	50.4	8.7	1.6	0.8	11	0	34.6	0	34.6	0	0	3.9	3.9	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**9**	0	**9**	0	0	0	0	0	**6**	0	**6**	0	0	**1**	**1**	**16**
07:30 AM	0	2	0	2	0	0	**1**	**1**	0	2	0	2	0	0	0	0	5
07:45 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total Volume	0	17	0	17	0	0	1	1	0	11	0	11	0	0	1	1	30
% App. Total	0	100	0		0	0	100		0	100	0		0	0	100		
PHF	.000	.472	.000	.472	.000	.000	.250	.250	.000	.458	.000	.458	.000	.000	.250	.250	.469

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City of Jurupa Valley
N/S: Rubidoux Boulevard
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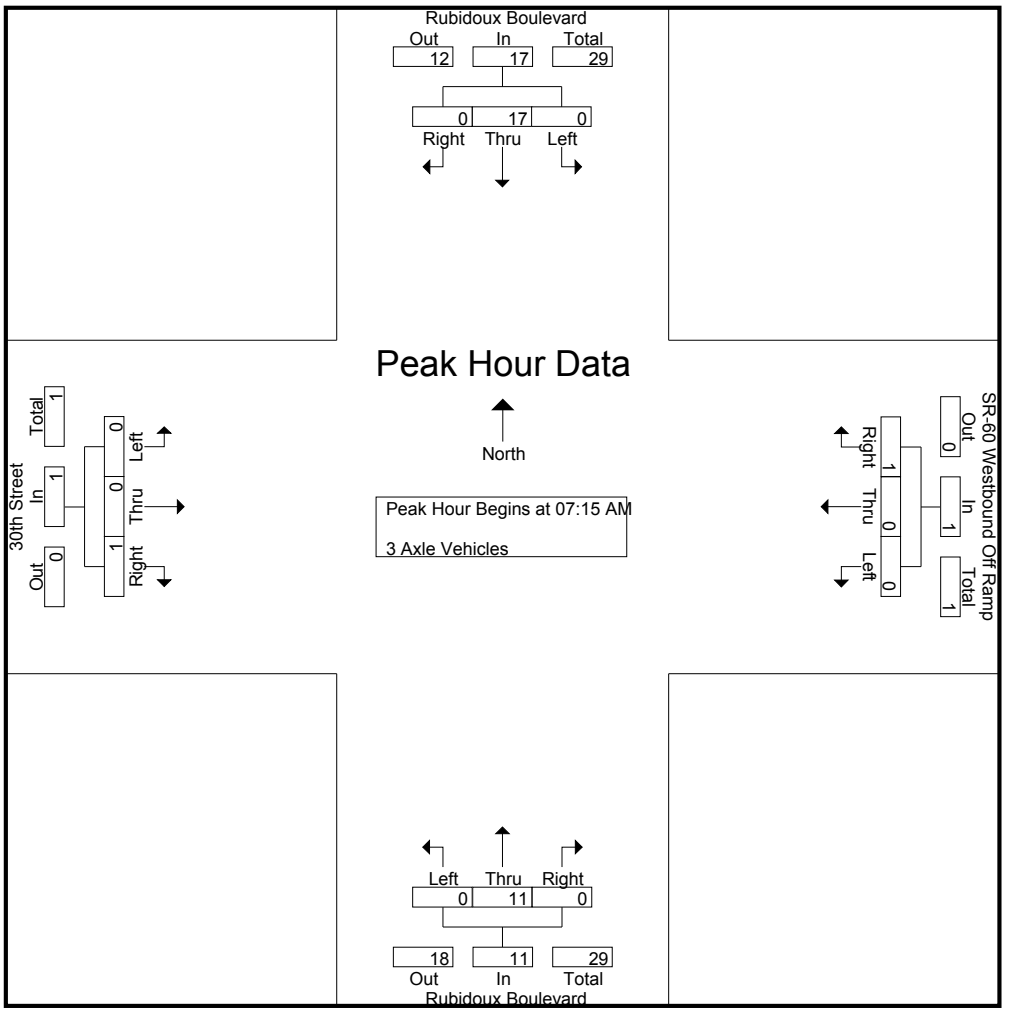
Weather: Clear

File Name : 02_JVYRU30AM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**9**	0	**9**	0	0	0	0	0	**6**	0	**6**	0	0	**1**	**1**
+15 mins.	0	2	0	2	0	0	**1**	**1**	0	2	0	2	0	0	0	0
+30 mins.	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	17	0	17	0	0	1	1	0	11	0	11	0	0	1	1
% App. Total	0	100	0		0	0	100		0	100	0		0	0	100	
PHF	.000	.472	.000	.472	.000	.000	.250	.250	.000	.458	.000	.458	.000	.000	.250	.250

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City of Jurupa Valley
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File Name : 02_JVYRU30AM
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Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	0	11	0	11	2	0	1	3	0	11	0	11	0	0	0	0	25
06:45 AM	0	12	0	12	0	0	2	2	0	7	0	7	0	0	0	0	21
Total	0	23	0	23	2	0	3	5	0	18	0	18	0	0	0	0	46
07:00 AM	0	12	1	13	0	0	0	0	0	7	0	7	1	0	1	2	22
07:15 AM	0	10	0	10	0	0	2	2	0	13	0	13	0	0	0	0	25
07:30 AM	0	21	0	21	0	0	0	0	0	5	0	5	0	0	1	1	27
07:45 AM	0	12	0	12	0	0	0	0	0	7	0	7	0	0	1	1	20
Total	0	55	1	56	0	0	2	2	0	32	0	32	1	0	3	4	94
08:00 AM	0	6	0	6	0	0	0	0	0	12	0	12	0	0	1	1	19
08:15 AM	0	13	0	13	0	0	1	1	0	16	0	16	0	0	1	1	31
08:30 AM	0	14	0	14	2	0	1	3	0	10	0	10	0	0	0	0	27
08:45 AM	0	15	0	15	0	1	0	1	0	9	0	9	0	0	1	1	26
Total	0	48	0	48	2	1	2	5	0	47	0	47	0	0	3	3	103
09:00 AM	0	17	0	17	0	0	1	1	0	12	0	12	0	0	3	3	33
09:15 AM	0	19	0	19	1	0	1	2	1	7	0	8	0	0	2	2	31
Grand Total	0	162	1	163	5	1	9	15	1	116	0	117	1	0	11	12	307
Apprch %	0	99.4	0.6		33.3	6.7	60		0.9	99.1	0		8.3	0	91.7		
Total %	0	52.8	0.3	53.1	1.6	0.3	2.9	4.9	0.3	37.8	0	38.1	0.3	0	3.6	3.9	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	10	0	10	0	0	**2**	**2**	0	**13**	0	**13**	0	0	0	0	25
07:30 AM	0	**21**	0	**21**	0	0	0	0	0	5	0	5	0	0	**1**	**1**	**27**
07:45 AM	0	12	0	12	0	0	0	0	0	7	0	7	0	0	1	1	20
08:00 AM	0	6	0	6	0	0	0	0	0	12	0	12	0	0	1	1	19
Total Volume	0	49	0	49	0	0	2	2	0	37	0	37	0	0	3	3	91
% App. Total	0	100	0		0	0	100		0	100	0		0	0	100		
PHF	.000	.583	.000	.583	.000	.000	.250	.250	.000	.712	.000	.712	.000	.000	.750	.750	.843

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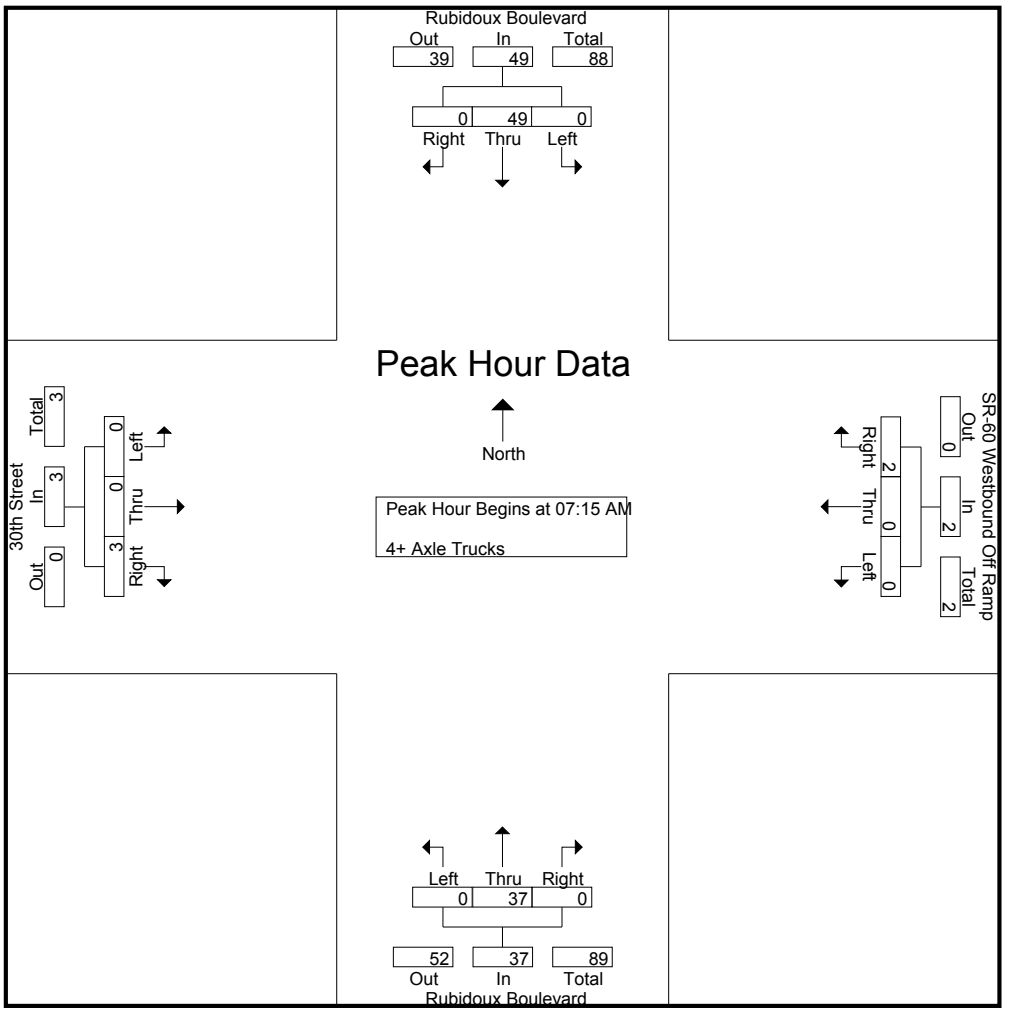
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	10	0	10	0	0	**2**	**2**	0	**13**	0	**13**	0	0	0	0
+15 mins.	0	**21**	0	**21**	0	0	0	0	0	5	0	5	0	0	**1**	**1**
+30 mins.	0	12	0	12	0	0	0	0	0	7	0	7	0	0	1	1
+45 mins.	0	6	0	6	0	0	0	0	0	12	0	12	0	0	1	1
Total Volume	0	49	0	49	0	0	2	2	0	37	0	37	0	0	3	3
% App. Total	0	100	0		0	0	100		0	100	0		0	0	100	
PHF	.000	.583	.000	.583	.000	.000	.250	.250	.000	.712	.000	.712	.000	.000	.750	.750

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City of Jurupa Valley
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Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	176	2	178	101	20	19	140	15	172	0	187	3	0	39	42	547
03:45 PM	0	181	3	184	133	23	17	173	15	186	0	201	6	0	44	50	608
Total	0	357	5	362	234	43	36	313	30	358	0	388	9	0	83	92	1155
04:00 PM	0	152	12	164	98	16	26	140	9	165	0	174	5	0	32	37	515
04:15 PM	0	200	4	204	111	17	14	142	18	162	0	180	5	0	39	44	570
04:30 PM	0	153	6	159	129	23	7	159	14	185	0	199	6	0	26	32	549
04:45 PM	0	196	2	198	111	24	7	142	16	204	0	220	6	0	35	41	601
Total	0	701	24	725	449	80	54	583	57	716	0	773	22	0	132	154	2235
05:00 PM	0	159	4	163	93	30	18	141	17	175	0	192	9	0	32	41	537
05:15 PM	0	163	2	165	98	17	11	126	16	177	0	193	8	0	41	49	533
05:30 PM	0	184	8	192	126	25	9	160	20	162	0	182	8	0	40	48	582
05:45 PM	0	143	1	144	93	19	15	127	11	157	0	168	11	1	29	41	480
Total	0	649	15	664	410	91	53	554	64	671	0	735	36	1	142	179	2132
06:00 PM	0	151	2	153	84	12	17	113	14	158	0	172	3	0	33	36	474
06:15 PM	0	118	1	119	101	8	11	120	19	120	0	139	1	0	26	27	405
Grand Total	0	1976	47	2023	1278	234	171	1683	184	2023	0	2207	71	1	416	488	6401
Apprch %	0	97.7	2.3		75.9	13.9	10.2		8.3	91.7	0		14.5	0.2	85.2		
Total %	0	30.9	0.7	31.6	20	3.7	2.7	26.3	2.9	31.6	0	34.5	1.1	0	6.5	7.6	
Passenger Vehicles	0	1778	34	1812	1263	228	154	1645	176	1691	0	1867	65	1	392	458	5782
% Passenger Vehicles	0	90	72.3	89.6	98.8	97.4	90.1	97.7	95.7	83.6	0	84.6	91.5	100	94.2	93.9	90.3
Large 2 Axle Vehicles	0	55	1	56	7	4	4	15	5	87	0	92	3	0	17	20	183
% Large 2 Axle Vehicles	0	2.8	2.1	2.8	0.5	1.7	2.3	0.9	2.7	4.3	0	4.2	4.2	0	4.1	4.1	2.9
3 Axle Vehicles	0	45	6	51	3	1	4	8	0	72	0	72	0	0	2	2	133
% 3 Axle Vehicles	0	2.3	12.8	2.5	0.2	0.4	2.3	0.5	0	3.6	0	3.3	0	0	0.5	0.4	2.1
4+ Axle Trucks	0	98	6	104	5	1	9	15	3	173	0	176	3	0	5	8	303
% 4+ Axle Trucks	0	5	12.8	5.1	0.4	0.4	5.3	0.9	1.6	8.6	0	8	4.2	0	1.2	1.6	4.7

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**200**	4	**204**	111	17	14	142	**18**	162	0	180	5	0	**39**	**44**	570
04:30 PM	0	153	**6**	159	**129**	23	7	**159**	14	185	0	199	6	0	26	32	549
04:45 PM	0	196	2	198	111	24	7	142	16	**204**	0	**220**	6	0	35	41	**601**
05:00 PM	0	159	4	163	93	**30**	**18**	141	17	175	0	192	**9**	0	32	41	537
Total Volume	0	708	16	724	444	94	46	584	65	726	0	791	26	0	132	158	2257
% App. Total	0	97.8	2.2		76	16.1	7.9		8.2	91.8	0		16.5	0	83.5		
PHF	.000	.885	.667	.887	.860	.783	.639	.918	.903	.890	.000	.899	.722	.000	.846	.898	.939

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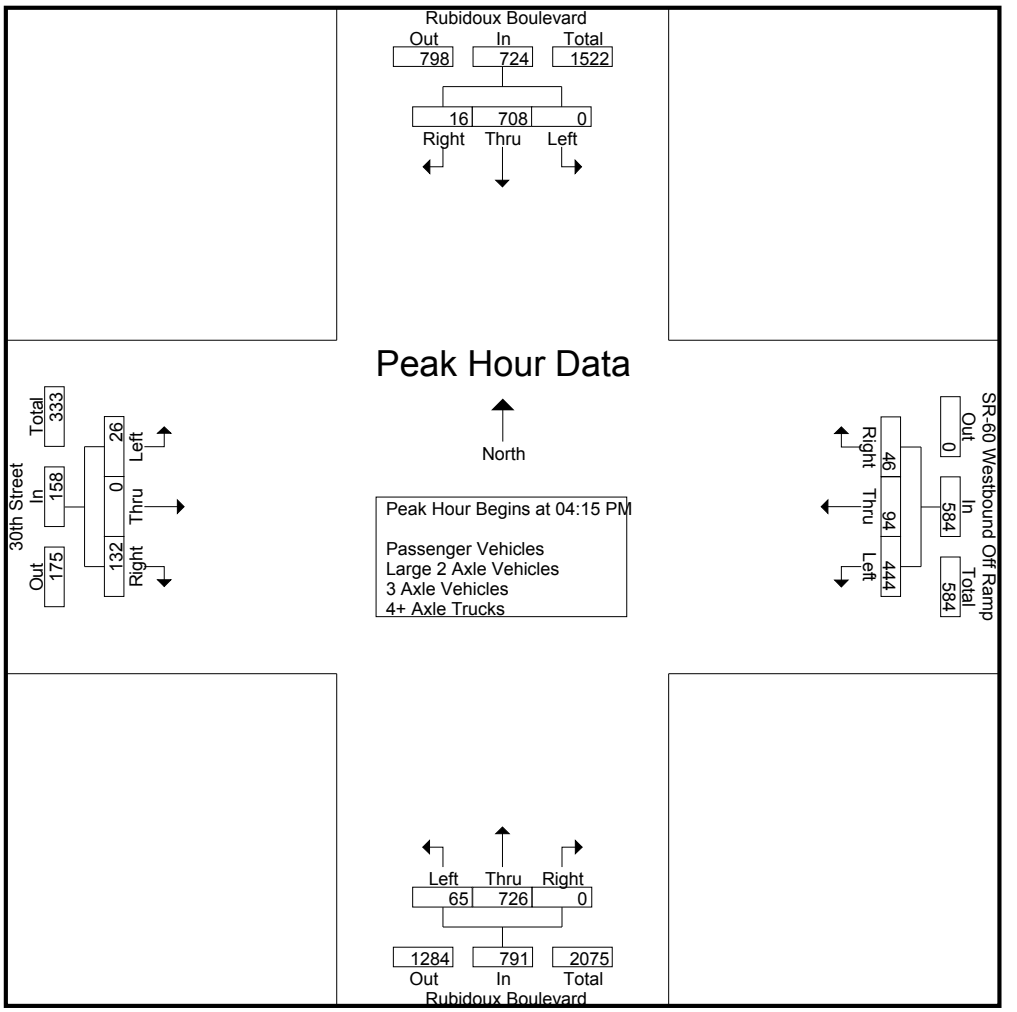
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:45 PM				04:30 PM				04:45 PM			
+0 mins.	0	176	2	178	**133**	**23**	17	**173**	14	185	0	199	6	0	35	41
+15 mins.	0	181	3	184	98	16	**26**	140	16	**204**	0	**220**	**9**	0	32	41
+30 mins.	0	152	**12**	164	111	17	14	142	**17**	175	0	192	8	0	**41**	**49**
+45 mins.	0	**200**	4	**204**	129	23	7	159	16	177	0	193	8	0	40	48
Total Volume	0	709	21	730	471	79	64	614	63	741	0	804	31	0	148	179
% App. Total	0	97.1	2.9		76.7	12.9	10.4		7.8	92.2	0		17.3	0	82.7	
PHF	.000	.886	.438	.895	.885	.859	.615	.887	.926	.908	.000	.914	.861	.000	.902	.913

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	148	2	150	100	18	15	133	10	137	0	147	2	0	33	35	465
03:45 PM	0	150	2	152	130	22	15	167	13	142	0	155	6	0	40	46	520
Total	0	298	4	302	230	40	30	300	23	279	0	302	8	0	73	81	985
04:00 PM	0	144	6	150	98	15	24	137	9	137	0	146	5	0	30	35	468
04:15 PM	0	178	1	179	109	17	13	139	18	138	0	156	3	0	38	41	515
04:30 PM	0	136	3	139	129	23	7	159	14	156	0	170	6	0	24	30	498
04:45 PM	0	184	2	186	111	24	5	140	16	184	0	200	5	0	35	40	566
Total	0	642	12	654	447	79	49	575	57	615	0	672	19	0	127	146	2047
05:00 PM	0	145	4	149	89	29	17	135	16	147	0	163	9	0	32	41	488
05:15 PM	0	152	2	154	95	16	10	121	16	152	0	168	7	0	38	45	488
05:30 PM	0	172	8	180	126	25	8	159	20	136	0	156	7	0	39	46	541
05:45 PM	0	128	1	129	92	19	13	124	11	135	0	146	11	1	28	40	439
Total	0	597	15	612	402	89	48	539	63	570	0	633	34	1	137	172	1956
06:00 PM	0	131	2	133	84	12	16	112	14	124	0	138	3	0	29	32	415
06:15 PM	0	110	1	111	100	8	11	119	19	103	0	122	1	0	26	27	379
Grand Total	0	1778	34	1812	1263	228	154	1645	176	1691	0	1867	65	1	392	458	5782
Apprch %	0	98.1	1.9		76.8	13.9	9.4		9.4	90.6	0		14.2	0.2	85.6		
Total %	0	30.8	0.6	31.3	21.8	3.9	2.7	28.5	3	29.2	0	32.3	1.1	0	6.8	7.9	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	178	1	179	109	17	13	139	**18**	138	0	156	3	0	**38**	**41**	515
04:30 PM	0	136	3	139	**129**	23	7	**159**	14	156	0	170	6	0	24	30	498
04:45 PM	0	**184**	2	**186**	111	24	5	140	16	**184**	0	**200**	5	0	35	40	**566**
05:00 PM	0	145	**4**	149	89	**29**	**17**	135	16	147	0	163	**9**	0	32	41	488
Total Volume	0	643	10	653	438	93	42	573	64	625	0	689	23	0	129	152	2067
% App. Total	0	98.5	1.5		76.4	16.2	7.3		9.3	90.7	0		15.1	0	84.9		
PHF	.000	.874	.625	.878	.849	.802	.618	.901	.889	.849	.000	.861	.639	.000	.849	.927	.913

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City of Jurupa Valley
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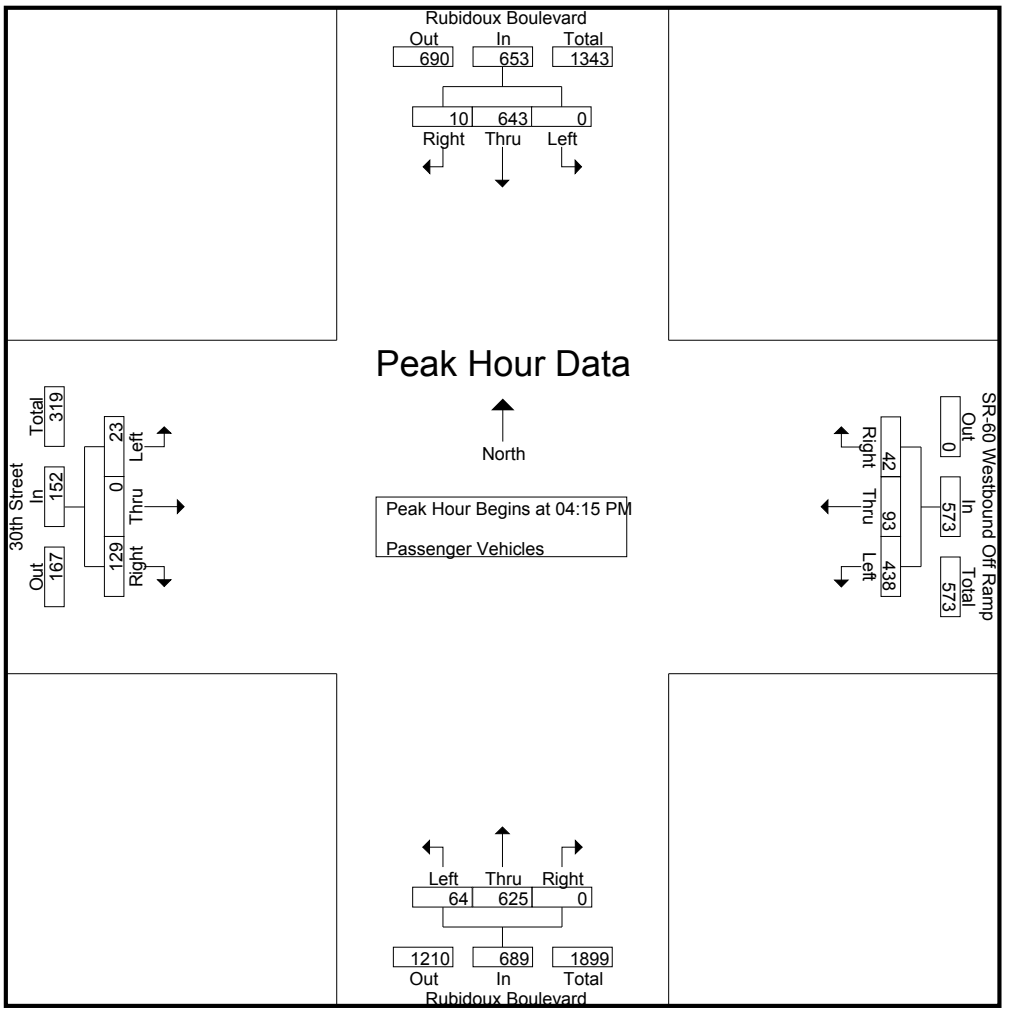
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	178	1	179	109	17	13	139	**18**	138	0	156	3	0	**38**	**41**
+15 mins.	0	136	3	139	**129**	23	7	**159**	14	156	0	170	6	0	24	30
+30 mins.	0	**184**	2	**186**	111	24	5	140	16	**184**	0	**200**	5	0	35	40
+45 mins.	0	145	**4**	149	89	**29**	**17**	135	16	147	0	163	**9**	0	32	41
Total Volume	0	643	10	653	438	93	42	573	64	625	0	689	23	0	129	152
% App. Total	0	98.5	1.5		76.4	16.2	7.3		9.3	90.7	0		15.1	0	84.9	
PHF	.000	.874	.625	.878	.849	.802	.618	.901	.889	.849	.000	.861	.639	.000	.849	.927

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City of Jurupa Valley
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E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	12	0	12	0	2	1	3	3	12	0	15	1	0	6	7	37
03:45 PM	0	9	0	9	1	1	1	3	2	10	0	12	0	0	4	4	28
Total	0	21	0	21	1	3	2	6	5	22	0	27	1	0	10	11	65
04:00 PM	0	1	1	2	0	0	1	1	0	6	0	6	0	0	1	1	10
04:15 PM	0	9	0	9	1	0	0	1	0	8	0	8	2	0	1	3	21
04:30 PM	0	1	0	1	0	0	0	0	0	7	0	7	0	0	1	1	9
04:45 PM	0	2	0	2	0	0	1	1	0	5	0	5	0	0	0	0	8
Total	0	13	1	14	1	0	2	3	0	26	0	26	2	0	3	5	48
05:00 PM	0	4	0	4	2	0	0	2	0	5	0	5	0	0	0	0	11
05:15 PM	0	3	0	3	3	1	0	4	0	9	0	9	0	0	2	2	18
05:30 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
05:45 PM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total	0	13	0	13	5	1	0	6	0	22	0	22	0	0	2	2	43
06:00 PM	0	6	0	6	0	0	0	0	0	12	0	12	0	0	2	2	20
06:15 PM	0	2	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7
Grand Total	0	55	1	56	7	4	4	15	5	87	0	92	3	0	17	20	183
Apprch %	0	98.2	1.8		46.7	26.7	26.7		5.4	94.6	0		15	0	85		
Total %	0	30.1	0.5	30.6	3.8	2.2	2.2	8.2	2.7	47.5	0	50.3	1.6	0	9.3	10.9	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**9**	0	**9**	1	0	0	1	0	**8**	0	**8**	**2**	0	**1**	**3**	**21**
04:30 PM	0	1	0	1	0	0	0	0	0	7	0	7	0	0	1	1	9
04:45 PM	0	2	0	2	0	0	**1**	1	0	5	0	5	0	0	0	0	8
05:00 PM	0	4	0	4	**2**	0	0	**2**	0	5	0	5	0	0	0	0	11
Total Volume	0	16	0	16	3	0	1	4	0	25	0	25	2	0	2	4	49
% App. Total	0	100	0		75	0	25		0	100	0		50	0	50		
PHF	.000	.444	.000	.444	.375	.000	.250	.500	.000	.781	.000	.781	.250	.000	.500	.333	.583

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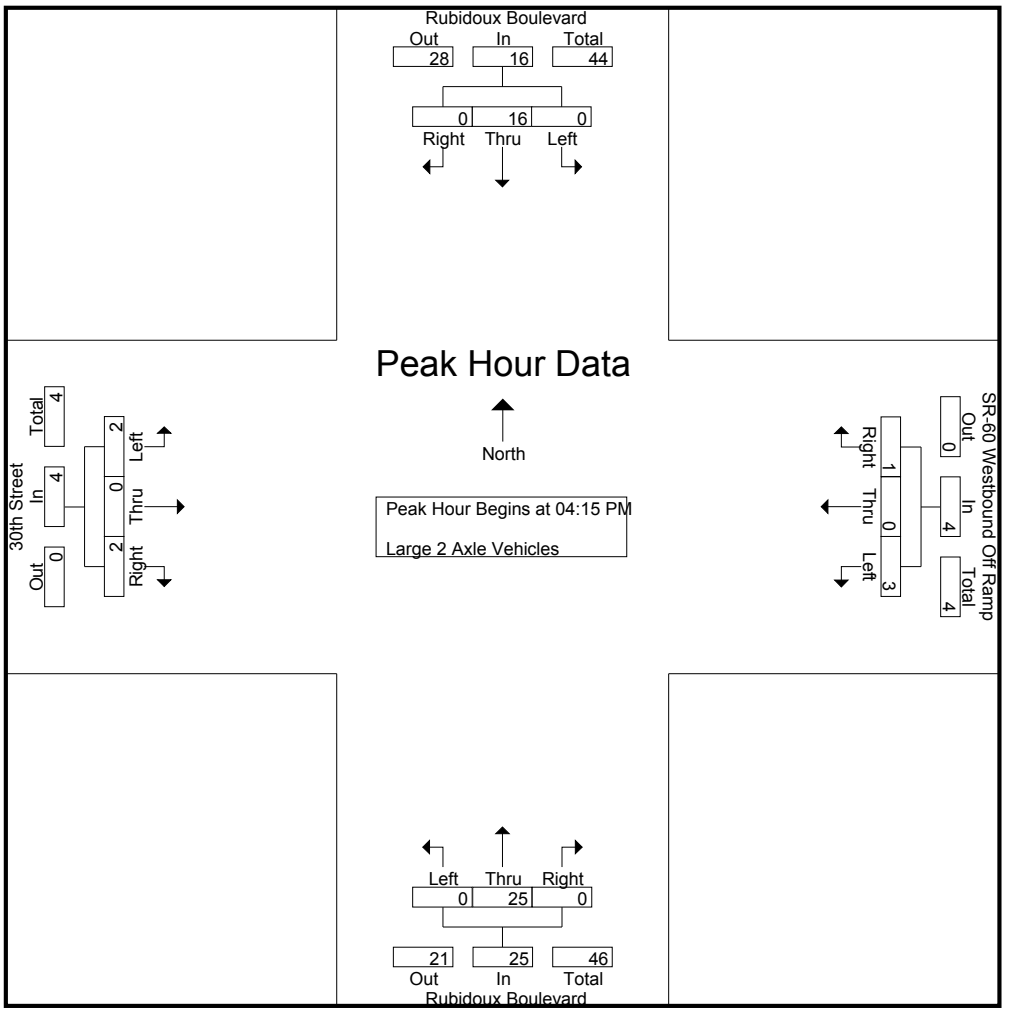
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	**9**	0	**9**	1	0	0	1	0	**8**	0	**8**	**2**	0	**1**	**3**
+15 mins.	0	1	0	1	0	0	0	0	0	7	0	7	0	0	1	1
+30 mins.	0	2	0	2	0	0	**1**	1	0	5	0	5	0	0	0	0
+45 mins.	0	4	0	4	**2**	0	0	**2**	0	5	0	5	0	0	0	0
Total Volume	0	16	0	16	3	0	1	4	0	25	0	25	2	0	2	4
% App. Total	0	100	0		75	0	25		0	100	0		50	0	50	
PHF	.000	.444	.000	.444	.375	.000	.250	.500	.000	.781	.000	.781	.250	.000	.500	.333

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City of Jurupa Valley
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E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	5	0	5	1	0	2	3	0	6	0	6	0	0	0	0	14
03:45 PM	0	11	0	11	1	0	0	1	0	11	0	11	0	0	0	0	23
Total	0	16	0	16	2	0	2	4	0	17	0	17	0	0	0	0	37
04:00 PM	0	3	3	6	0	1	0	1	0	6	0	6	0	0	1	1	14
04:15 PM	0	1	1	2	0	0	0	0	0	5	0	5	0	0	0	0	7
04:30 PM	0	6	2	8	0	0	0	0	0	12	0	12	0	0	1	1	21
04:45 PM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
Total	0	13	6	19	0	1	0	1	0	30	0	30	0	0	2	2	52
05:00 PM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
05:15 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
05:45 PM	0	1	0	1	0	0	1	1	0	6	0	6	0	0	0	0	8
Total	0	8	0	8	0	0	1	1	0	17	0	17	0	0	0	0	26
06:00 PM	0	6	0	6	0	0	1	1	0	4	0	4	0	0	0	0	11
06:15 PM	0	2	0	2	1	0	0	1	0	4	0	4	0	0	0	0	7
Grand Total	0	45	6	51	3	1	4	8	0	72	0	72	0	0	2	2	133
Apprch %	0	88.2	11.8		37.5	12.5	50		0	100	0		0	0	100		
Total %	0	33.8	4.5	38.3	2.3	0.8	3	6	0	54.1	0	54.1	0	0	1.5	1.5	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	1	1	2	0	0	0	0	0	5	0	5	0	0	0	0	7
04:30 PM	0	**6**	**2**	**8**	0	0	0	0	0	**12**	0	**12**	0	0	**1**	**1**	**21**
04:45 PM	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0	10
05:00 PM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total Volume	0	14	3	17	0	0	0	0	0	29	0	29	0	0	1	1	47
% App. Total	0	82.4	17.6		0	0	0		0	100	0		0	0	100		
PHF	.000	.583	.375	.531	.000	.000	.000	.000	.000	.604	.000	.604	.000	.000	.250	.250	.560

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City of Jurupa Valley
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Weather: Clear

File Name : 02_JVYRU30PM
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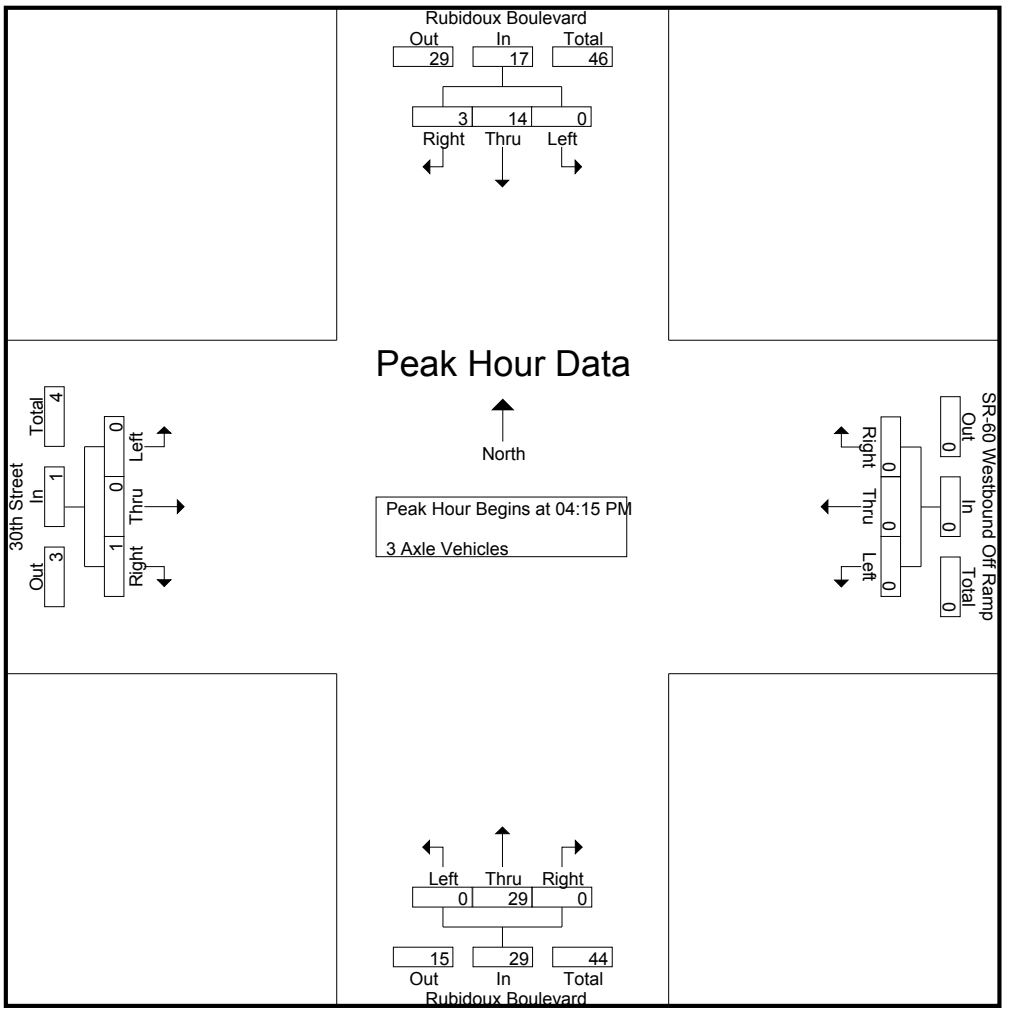
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	1	1	2	0	0	0	0	0	5	0	5	0	0	0	0
+15 mins.	0	**6**	**2**	**8**	0	0	0	0	0	**12**	0	**12**	0	0	**1**	**1**
+30 mins.	0	3	0	3	0	0	0	0	0	7	0	7	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0
Total Volume	0	14	3	17	0	0	0	0	0	29	0	29	0	0	1	1
% App. Total	0	82.4	17.6		0	0	0		0	100	0		0	0	100	
PHF	.000	.583	.375	.531	.000	.000	.000	.000	.000	.604	.000	.604	.000	.000	.250	.250

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City of Jurupa Valley
N/S: Rubidoux Boulevard
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Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

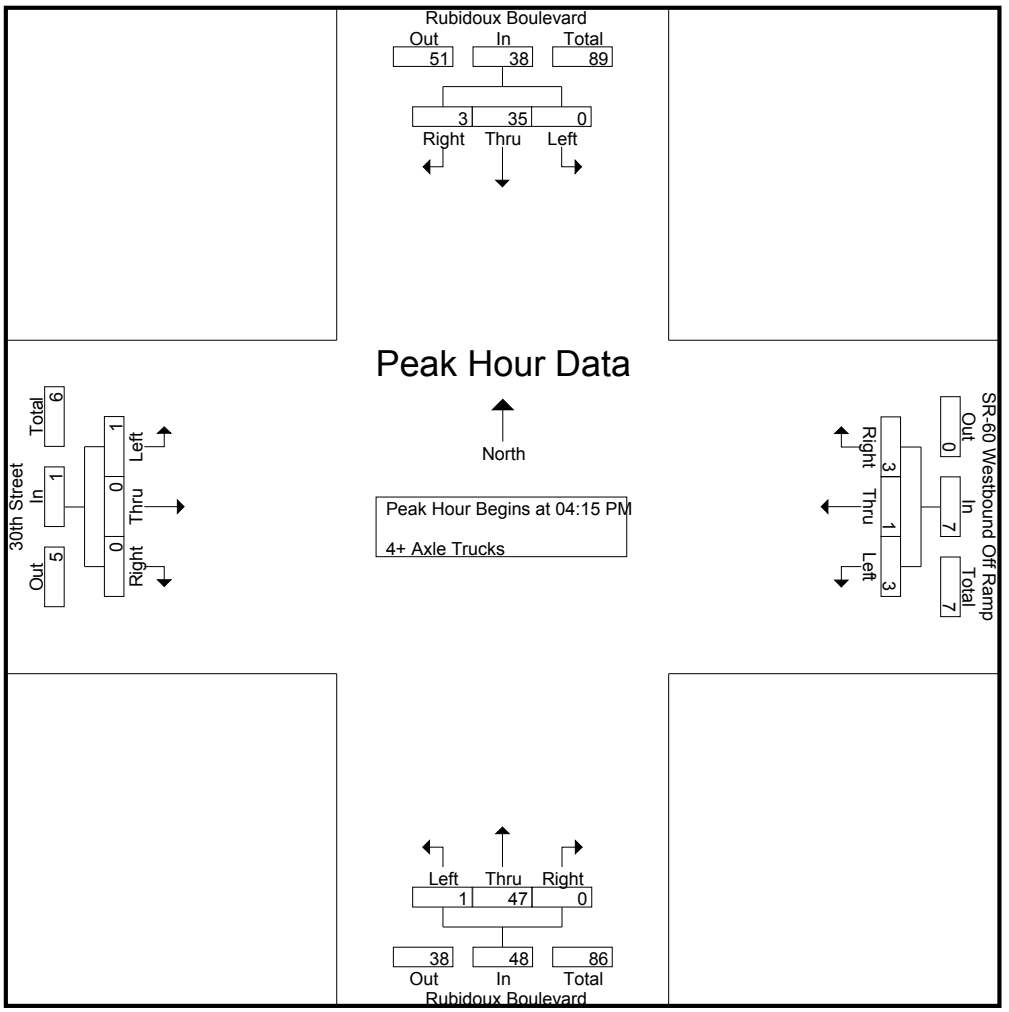
	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	0	11	0	11	0	0	1	1	2	17	0	19	0	0	0	0	31
03:45 PM	0	11	1	12	1	0	1	2	0	23	0	23	0	0	0	0	37
Total	0	22	1	23	1	0	2	3	2	40	0	42	0	0	0	0	68
04:00 PM	0	4	2	6	0	0	1	1	0	16	0	16	0	0	0	0	23
04:15 PM	0	12	2	14	1	0	1	2	0	11	0	11	0	0	0	0	27
04:30 PM	0	10	1	11	0	0	0	0	0	10	0	10	0	0	0	0	21
04:45 PM	0	7	0	7	0	0	1	1	0	8	0	8	1	0	0	1	17
Total	0	33	5	38	1	0	3	4	0	45	0	45	1	0	0	1	88
05:00 PM	0	6	0	6	2	1	1	4	1	18	0	19	0	0	0	0	29
05:15 PM	0	6	0	6	0	0	1	1	0	13	0	13	1	0	1	2	22
05:30 PM	0	9	0	9	0	0	1	1	0	20	0	20	1	0	1	2	32
05:45 PM	0	10	0	10	1	0	1	2	0	11	0	11	0	0	1	1	24
Total	0	31	0	31	3	1	4	8	1	62	0	63	2	0	3	5	107
06:00 PM	0	8	0	8	0	0	0	0	0	18	0	18	0	0	2	2	28
06:15 PM	0	4	0	4	0	0	0	0	0	8	0	8	0	0	0	0	12
Grand Total	0	98	6	104	5	1	9	15	3	173	0	176	3	0	5	8	303
Apprch %	0	94.2	5.8		33.3	6.7	60		1.7	98.3	0		37.5	0	62.5		
Total %	0	32.3	2	34.3	1.7	0.3	3	5	1	57.1	0	58.1	1	0	1.7	2.6	

	Rubidoux Boulevard Southbound				SR-60 Westbound Off Ramp Westbound				Rubidoux Boulevard Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**12**	**2**	**14**	1	0	**1**	2	0	11	0	11	0	0	0	0	27
04:30 PM	0	10	1	11	0	0	0	0	0	10	0	10	0	0	0	0	21
04:45 PM	0	7	0	7	0	0	1	1	0	8	0	8	**1**	0	0	**1**	17
05:00 PM	0	6	0	6	**2**	**1**	1	**4**	**1**	**18**	0	**19**	0	0	0	0	**29**
Total Volume	0	35	3	38	3	1	3	7	1	47	0	48	1	0	0	1	94
% App. Total	0	92.1	7.9		42.9	14.3	42.9		2.1	97.9	0		100	0	0		
PHF	.000	.729	.375	.679	.375	.250	.750	.438	.250	.653	.000	.632	.250	.000	.000	.250	.810

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: 30th Street/SR-60 WB Off Ramp
Weather: Clear

File Name : 02_JVYRU30PM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	**12**	**2**	**14**	1	0	**1**	2	0	11	0	11	0	0	0	0
+15 mins.	0	10	1	11	0	0	0	0	0	10	0	10	0	0	0	0
+30 mins.	0	7	0	7	0	0	1	1	0	8	0	8	**1**	0	0	**1**
+45 mins.	0	6	0	6	**2**	**1**	1	**4**	**1**	**18**	0	**19**	0	0	0	0
Total Volume	0	35	3	38	3	1	3	7	1	47	0	48	1	0	0	1
% App. Total	0	92.1	7.9		42.9	14.3	42.9		2.1	97.9	0		100	0	0	
PHF	.000	.729	.375	.679	.375	.250	.750	.438	.250	.653	.000	.632	.250	.000	.000	.250

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

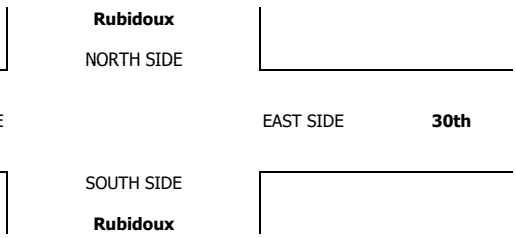
LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: 30th

PROJECT #: SC1439
LOCATION #: 14
CONTROL: SIGNAL

NOTES:

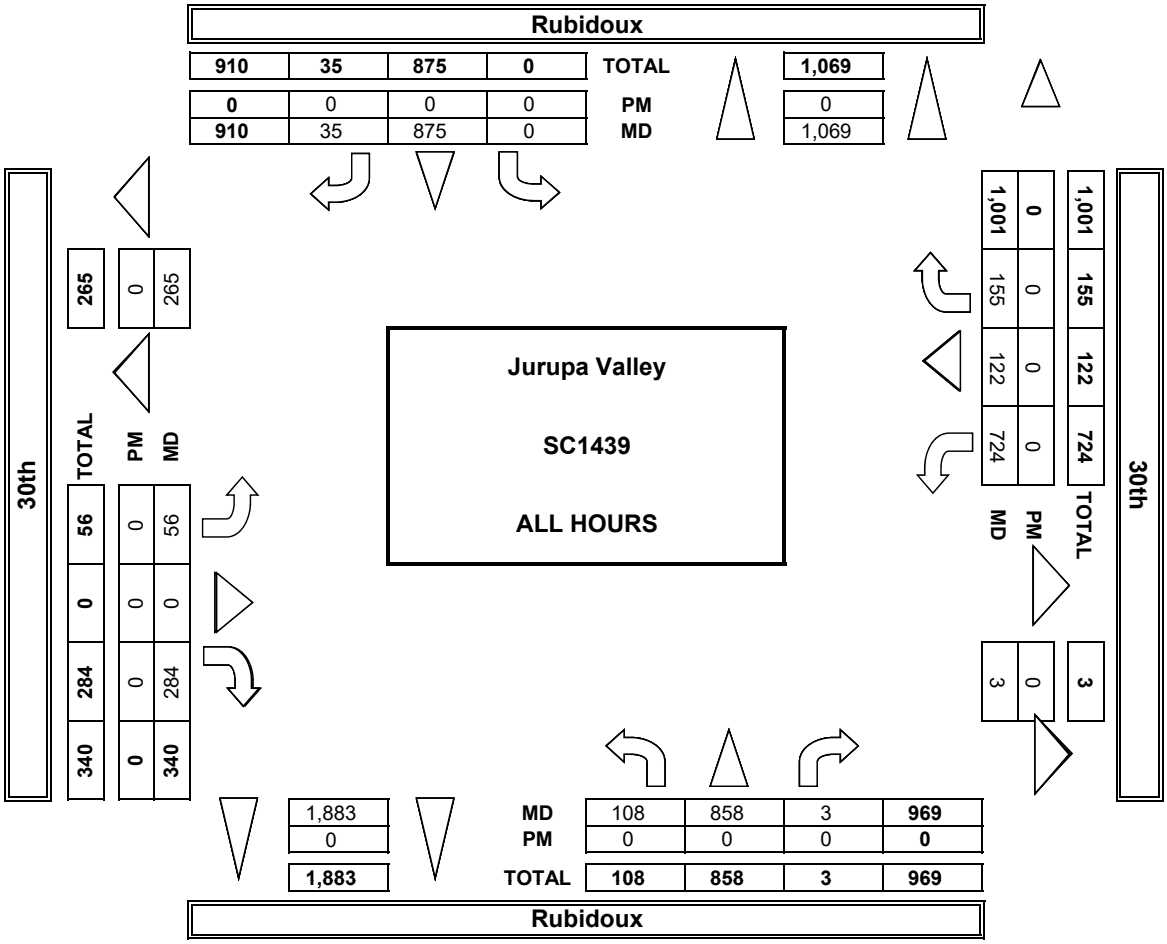
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

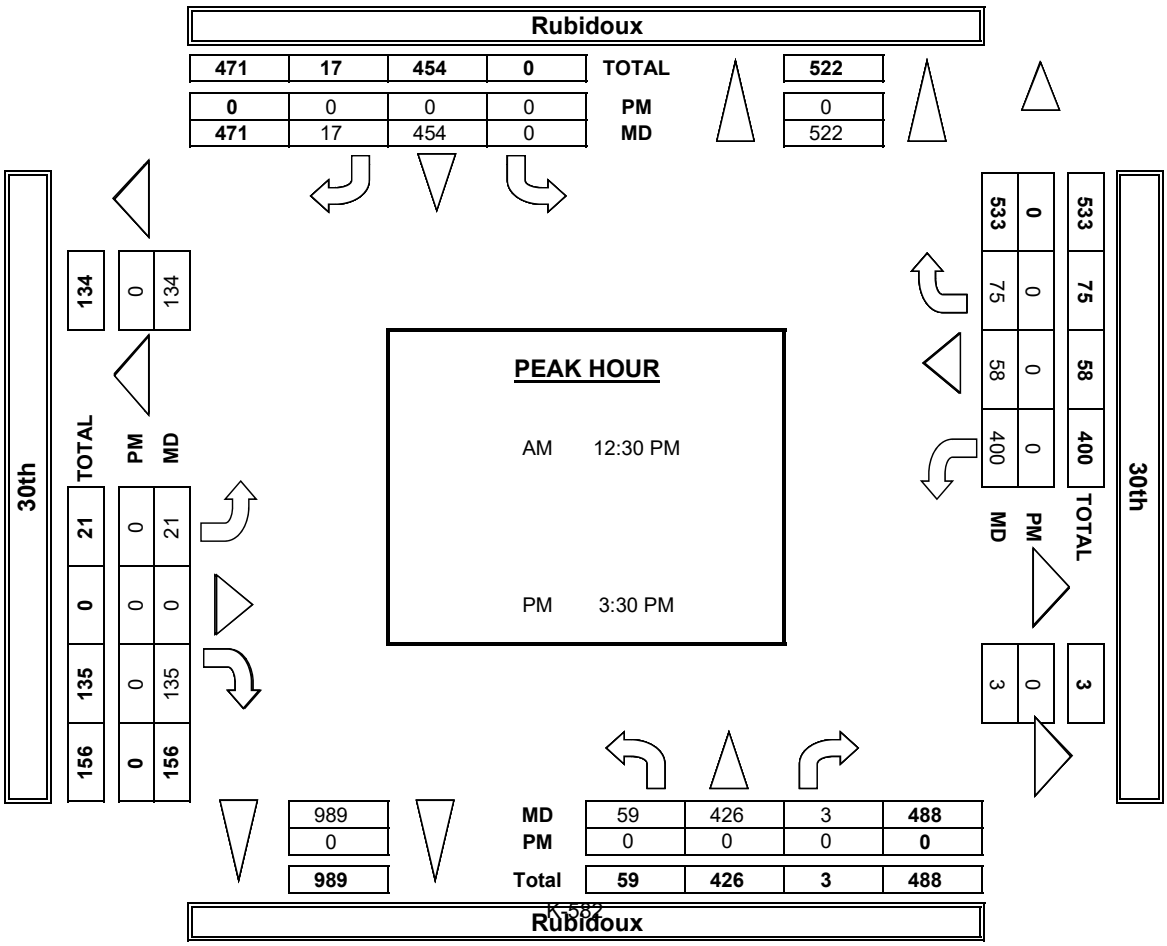
		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	15	105	0	0	106	7	8	0	40	50	21	30	382	0	0	0	0	0
	12:15 PM	14	102	0	0	109	4	11	0	30	92	17	15	394	0	0	0	0	0
	12:30 PM	17	109	0	0	121	3	6	0	35	89	22	16	418	0	0	0	0	0
	12:45 PM	12	86	3	0	109	5	6	0	35	119	12	23	410	0	0	0	0	0
	1:00 PM	14	115	0	0	119	6	7	0	30	92	11	21	415	0	0	0	0	0
	1:15 PM	16	116	0	0	105	3	2	0	35	100	13	15	405	0	0	0	0	0
	1:30 PM	10	103	0	0	104	6	11	0	35	91	13	17	390	0	0	0	0	0
	1:45 PM	10	122	0	0	102	1	5	0	44	91	13	18	406	0	0	0	0	0
	VOLUMES	108	858	3	0	875	35	56	0	284	724	122	155	3,220	0	0	0	0	0
	APPROACH %	11%	89%	0%	0%	96%	4%	16%	0%	84%	72%	12%	15%						
	APP/DEPART	969	/	1,069	910	/	1,883	340	/	3	1,001	/	265	0					
	BEGIN PEAK HR		12:30 PM																
	VOLUMES	59	426	3	0	454	17	21	0	135	400	58	75	1,648					
	APPROACH %	12%	87%	1%	0%	96%	4%	13%	0%	87%	75%	11%	14%						
	PEAK HR FACTOR		0.924			0.942			0.951			0.865		0.986					
	APP/DEPART	488	/	522	471	/	989	156	/	3	533	/	134	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





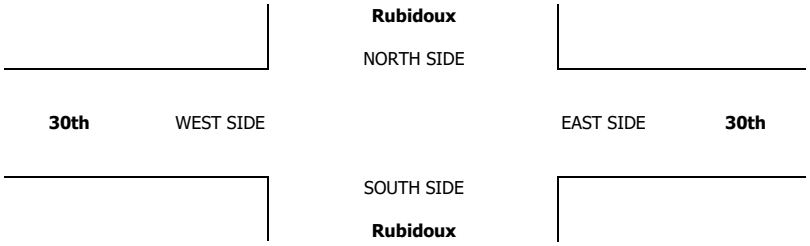
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th			
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	17	153	0	0	152	8	10	0	41	53	24	38	493
	8:15 AM	15	168	0	0	155	4	14	0	36	95	18	16	520
	8:30 AM	17	162	0	0	164	3	7	0	38	94	23	18	525
	8:45 AM	12	115	4	0	146	5	8	0	40	125	13	26	493
	9:00 AM	15	161	0	0	163	8	11	0	33	96	11	25	521
	9:15 AM	17	169	0	0	146	3	3	0	36	110	14	22	517
	9:30 AM	10	141	0	0	148	7	11	0	38	94	13	26	488
	9:45 AM	11	188	0	0	161	1	5	0	48	96	14	20	543
	VOLUMES	113	1,255	4	0	1,234	39	68	0	309	761	128	190	4,098
	APPROACH %	8%	91%	0%	0%	97%	3%	18%	0%	82%	71%	12%	18%	
	APP/DEPART	1,372	/	1,512	1,273	/	2,303	376	/	4	1,078	/	280	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	53	657	0	0	618	19	30	0	155	395	51	93	2,068
	APPROACH %	7%	93%	0%	0%	97%	3%	16%	0%	84%	73%	9%	17%	
	PEAK HR FACTOR		0.894			0.933			0.868			0.931		0.953
	APP/DEPART	710	/	779	637	/	1,167	184	/	0	538	/	123	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12	67	0	0	74	5	5	0	38	48	17	25	291	0	0	0	0	0
12:15 PM	13	62	0	0	73	4	5	0	26	89	15	14	301	0	0	0	0	0
12:30 PM	17	71	0	0	87	3	5	0	32	86	20	13	334	0	0	0	0	0
12:45 PM	12	61	2	0	88	5	5	0	32	113	11	21	350	0	0	0	0	0
1:00 PM	13	81	0	0	85	5	5	0	27	89	11	19	335	0	0	0	0	0
1:15 PM	15	78	0	0	76	3	1	0	34	92	12	11	322	0	0	0	0	0
1:30 PM	10	78	0	0	77	5	11	0	33	88	13	10	325	0	0	0	0	0
1:45 PM	8	77	0	0	65	1	5	0	42	88	12	15	313	0	0	0	0	0
VOLUMES	100	575	2	0	625	31	42	0	264	693	111	128	2,571	0	0	0	0	0
APPROACH %	15%	85%	0%	0%	95%	5%	14%	0%	86%	74%	12%	14%						
APP/DEPART	677	/	745	656	/	1,582	306	/	2	932	/	242	0					
BEGIN PEAK HR		12:30 PM																
VOLUMES	57	291	2	0	336	16	16	0	125	380	54	64	1,341					
APPROACH %	16%	83%	1%	0%	95%	5%	11%	0%	89%	76%	11%	13%						
PEAK HR FACTOR		0.931			0.946			0.953			0.859		0.958					
APP/DEPART	350	/	371	352	/	841	141	/	2	498	/	127	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

30th WEST SIDE EAST SIDE **30th**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

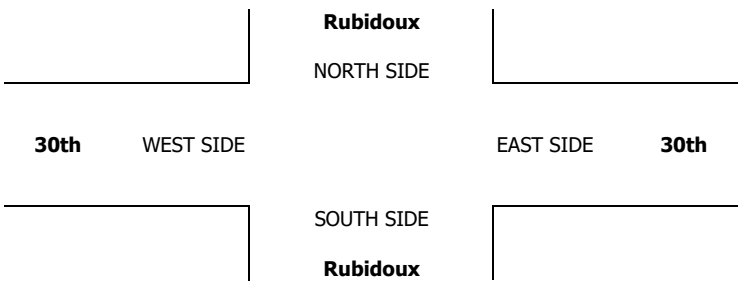
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	3	9	0	0	6	2	3	0	2	1	3	1	30	0	0	0	0	0
	12:15 PM	0	6	0	0	9	0	6	0	1	2	2	0	26	0	0	0	0	0
	12:30 PM	0	8	0	0	11	0	1	0	2	1	2	2	27	0	0	0	0	0
	12:45 PM	0	8	0	0	0	0	0	0	1	2	1	1	13	0	0	0	0	0
	1:00 PM	1	9	0	0	11	0	0	0	2	1	0	0	24	0	0	0	0	0
	1:15 PM	0	7	0	0	4	0	1	0	1	1	1	1	16	0	0	0	0	0
	1:30 PM	0	5	0	0	2	0	0	0	0	2	0	2	11	0	0	0	0	0
	1:45 PM	2	9	0	0	4	0	0	0	0	1	1	2	19	0	0	0	0	0
	VOLUMES	6	61	0	0	47	2	11	0	9	11	10	9	166	0	0	0	0	0
	APPROACH %	9%	91%	0%	0%	96%	4%	55%	0%	45%	37%	33%	30%						
	APP/DEPART	67	/	81	49	/	67	20	/	0	30	/	18	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	3	31	0	0	26	2	10	0	6	6	8	4	96					
	APPROACH %	9%	91%	0%	0%	93%	7%	63%	0%	38%	33%	44%	22%						
	PEAK HR FACTOR		0.708			0.636			0.571			0.900		0.800					
	APP/DEPART	34	/	45	28	/	38	16	/	0	18	/	13	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

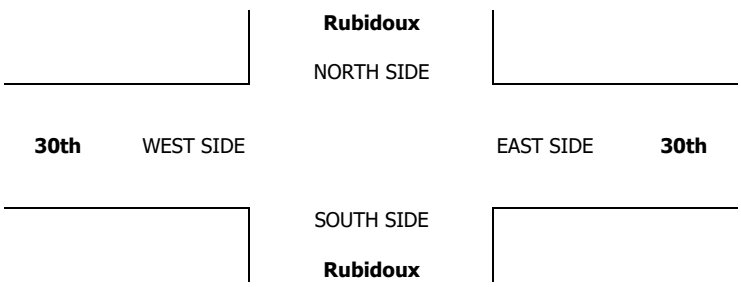
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	15	0	0	7	0	0	0	0	0	1	1	24	0	0	0	0	0
	12:15 PM	0	3	0	0	12	0	0	0	1	0	0	1	17	0	0	0	0	0
	12:30 PM	0	10	0	0	7	0	0	0	0	0	0	1	18	0	0	0	0	0
	12:45 PM	0	8	0	0	3	0	0	0	0	2	0	0	13	0	0	0	0	0
	1:00 PM	0	8	0	0	7	0	0	0	0	1	0	0	16	0	0	0	0	0
	1:15 PM	1	11	0	0	9	0	0	0	0	3	0	0	24	0	0	0	0	0
	1:30 PM	0	5	0	0	6	1	0	0	1	0	0	2	15	0	0	0	0	0
	1:45 PM	0	10	0	0	8	0	0	0	0	0	0	1	19	0	0	0	0	0
	VOLUMES	1	70	0	0	59	1	0	0	2	6	1	6	146	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	98%	2%	0%	0%	100%	46%	8%	46%						
	APP/DEPART	71	/	76	60	/	67	2	/	0	13	/	3	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	34	0	0	30	1	0	0	1	4	0	3	74					
	APPROACH %	3%	97%	0%	0%	97%	3%	0%	0%	100%	57%	0%	43%						
	PEAK HR FACTOR		0.729			0.861			0.250			0.583		0.771					
	APP/DEPART	35	/	37	31	/	35	1	/	0	7	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

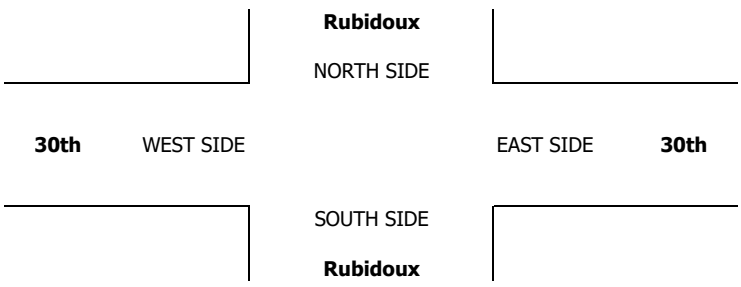
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	14	0	0	17	0	0	0	0	1	0	3	35	0	0	0	0	0
12:15 PM	0	29	0	0	14	0	0	0	2	1	0	0	46	0	0	0	0	0
12:30 PM	0	19	0	0	14	0	0	0	1	2	0	0	36	0	0	0	0	0
12:45 PM	0	8	0	0	16	0	1	0	2	1	0	1	29	0	0	0	0	0
1:00 PM	0	16	0	0	15	1	2	0	1	1	0	2	38	0	0	0	0	0
1:15 PM	0	18	0	0	14	0	0	0	0	2	0	3	37	0	0	0	0	0
1:30 PM	0	15	0	0	18	0	0	0	1	1	0	3	38	0	0	0	0	0
1:45 PM	0	25	0	0	24	0	0	0	2	2	0	0	53	0	0	0	0	0
VOLUMES	0	144	0	0	132	1	3	0	9	11	0	12	312	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	99%	1%	25%	0%	75%	48%	0%	52%						
APP/DEPART	144	/	159	133	/	152	12	/	0	23	/	1	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	0	74	0	0	71	1	2	0	4	6	0	8	166					
APPROACH %	0%	100%	0%	0%	99%	1%	33%	0%	67%	43%	0%	57%						
PEAK HR FACTOR		0.740			0.750			0.500			0.700		0.783					
APP/DEPART	74	/	84	72	/	81	6	/	0	14	/	1	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

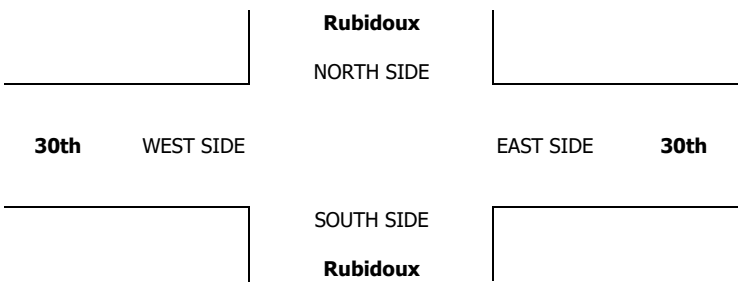
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Rubidoux)			SOUTHBOUND (Rubidoux)			EASTBOUND (30th)			WESTBOUND (30th)				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	APP/DEPART	0	/	0	1	/	2	0	/	0	1	/	0	0					
	BEGIN PEAK HR		12:30 PM																
	VOLUMES	0	0	0	0	1	0	0	0	0	1	0	0	2					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.250		0.500					
	APP/DEPART	0	/	0	1	/	2	0	/	0	1	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	14
WEDNESDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 30th			WESTBOUND 30th			
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	12:15 PM	1	2	0	0	1	0	0	0	0	0	0	0	4
	12:30 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
	12:45 PM	0	1	1	0	2	0	0	0	0	0	0	0	4
	1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	1:15 PM	0	2	0	0	1	0	0	0	0	2	0	0	5
	1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	1:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	VOLUMES	1	8	1	0	11	0	0	0	0	2	0	0	23
	APPROACH %	10%	80%	10%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	10	/	8	11	/	13	0	/	1	2	/	1	0
	BEGIN PEAK HR		12:30 PM											
	VOLUMES	0	5	1	0	6	0	0	0	0	2	0	0	14
	APPROACH %	0%	83%	17%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.750			0.750			0.000			0.250		0.700
	APP/DEPART	6	/	5	6	/	8	0	/	1	2	/	0	0
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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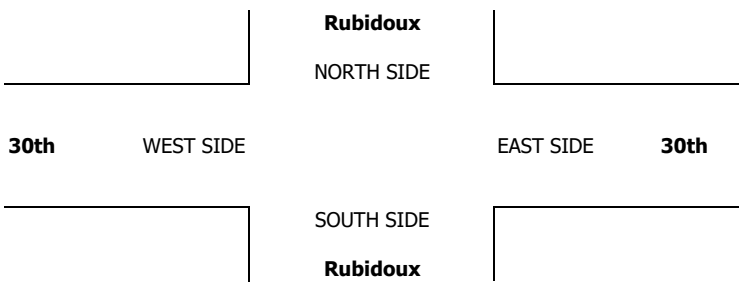

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	128	92	220	82	126	208	0	0	0	428
06:45 AM	149	104	253	75	125	200	0	0	0	453
Total	277	196	473	157	251	408	0	0	0	881
07:00 AM	136	94	230	78	123	201	0	0	0	431
07:15 AM	149	103	252	65	120	185	0	0	0	437
07:30 AM	185	118	303	97	96	193	0	0	0	496
07:45 AM	207	119	326	89	142	231	0	0	0	557
Total	677	434	1111	329	481	810	0	0	0	1921
08:00 AM	190	79	269	65	121	186	0	0	0	455
08:15 AM	142	74	216	63	111	174	0	0	0	390
08:30 AM	118	82	200	50	103	153	0	0	0	353
08:45 AM	146	61	207	47	92	139	0	0	0	346
Total	596	296	892	225	427	652	0	0	0	1544
09:00 AM	156	71	227	43	100	143	0	0	0	370
09:15 AM	159	77	236	40	84	124	0	0	0	360
Grand Total	1865	1074	2939	794	1343	2137	0	0	0	5076
Apprch %	63.5	36.5		37.2	62.8		0	0		
Total %	36.7	21.2	57.9	15.6	26.5	42.1	0	0	0	
Passenger Vehicles	1697	775	2472	767	1087	1854	0	0	0	4326
% Passenger Vehicles	91	72.2	84.1	96.6	80.9	86.8	0	0	0	85.2
Large 2 Axle Vehicles	103	103	206	15	92	107	0	0	0	313
% Large 2 Axle Vehicles	5.5	9.6	7	1.9	6.9	5	0	0	0	6.2
3 Axle Vehicles	33	60	93	6	47	53	0	0	0	146
% 3 Axle Vehicles	1.8	5.6	3.2	0.8	3.5	2.5	0	0	0	2.9
4+ Axle Trucks	32	136	168	6	117	123	0	0	0	291
% 4+ Axle Trucks	1.7	12.7	5.7	0.8	8.7	5.8	0	0	0	5.7

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	149	103	252	65	120	185	0	0	0	437
07:30 AM	185	118	303	**97**	96	193	0	0	0	496
07:45 AM	**207**	**119**	**326**	89	**142**	**231**	0	0	0	**557**
08:00 AM	190	79	269	65	121	186	0	0	0	455
Total Volume	731	419	1150	316	479	795	0	0	0	1945
% App. Total	63.6	36.4		39.7	60.3		0	0		
PHF	.883	.880	.882	.814	.843	.860	.000	.000	.000	.873

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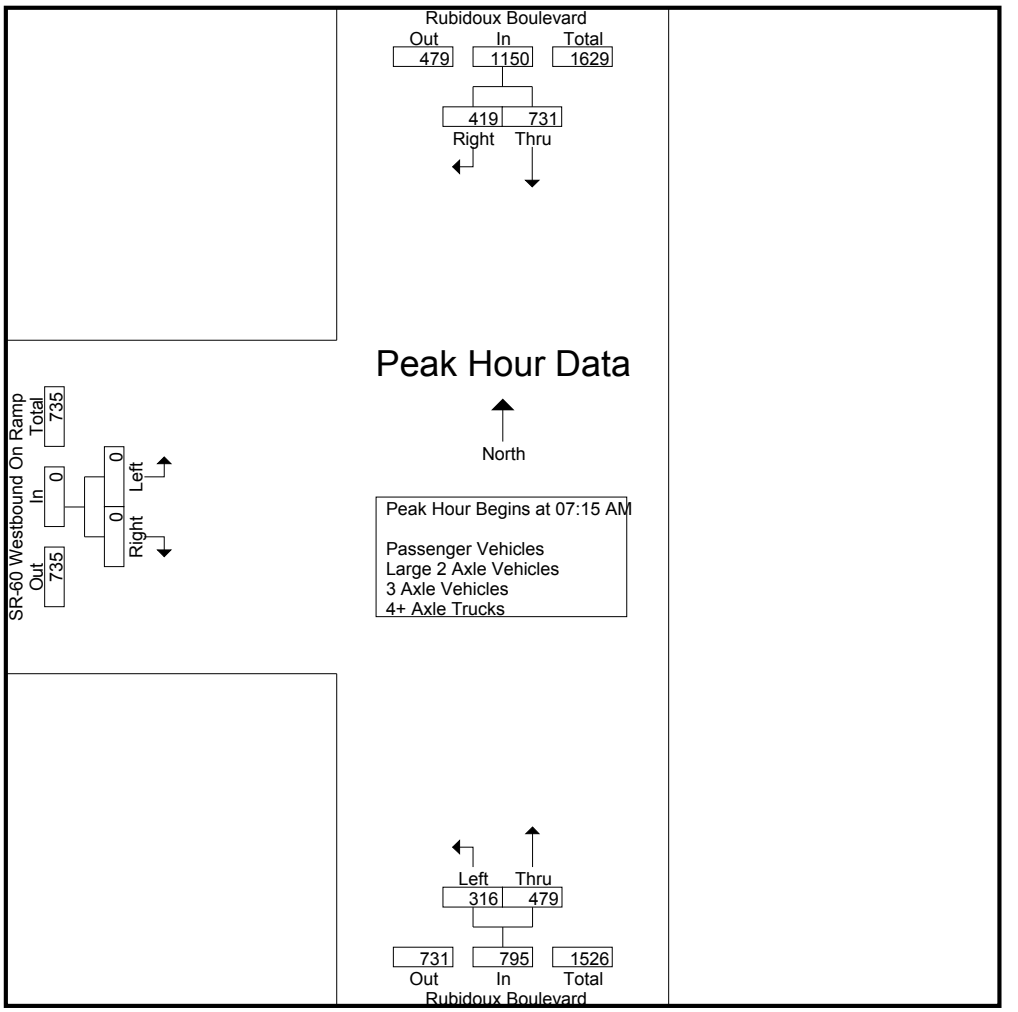
File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			06:30 AM		
+0 mins.	149	103	252	78	123	201	0	0	0
+15 mins.	185	118	303	65	120	185	0	0	0
+30 mins.	**207**	**119**	**326**	**97**	96	193	0	0	0
+45 mins.	190	79	269	89	**142**	**231**	0	0	0
Total Volume	731	419	1150	329	481	810	0	0	0
% App. Total	63.6	36.4		40.6	59.4		0	0	
PHF	.883	.880	.882	.848	.847	.877	.000	.000	.000

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File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	116	70	186	78	100	178	0	0	0	364
06:45 AM	131	76	207	75	106	181	0	0	0	388
Total	247	146	393	153	206	359	0	0	0	752
07:00 AM	121	73	194	76	108	184	0	0	0	378
07:15 AM	138	82	220	63	97	160	0	0	0	380
07:30 AM	172	92	264	92	80	172	0	0	0	436
07:45 AM	194	98	292	85	123	208	0	0	0	500
Total	625	345	970	316	408	724	0	0	0	1694
08:00 AM	179	61	240	61	96	157	0	0	0	397
08:15 AM	131	54	185	60	85	145	0	0	0	330
08:30 AM	108	53	161	48	83	131	0	0	0	292
08:45 AM	132	39	171	47	74	121	0	0	0	292
Total	550	207	757	216	338	554	0	0	0	1311
09:00 AM	138	39	177	43	72	115	0	0	0	292
09:15 AM	137	38	175	39	63	102	0	0	0	277
Grand Total	1697	775	2472	767	1087	1854	0	0	0	4326
Apprch %	68.6	31.4		41.4	58.6		0	0		
Total %	39.2	17.9	57.1	17.7	25.1	42.9	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	138	82	220	63	97	160	0	0	0	380
07:30 AM	172	92	264	**92**	80	172	0	0	0	436
07:45 AM	**194**	**98**	**292**	85	**123**	**208**	0	0	0	**500**
08:00 AM	179	61	240	61	96	157	0	0	0	397
Total Volume	683	333	1016	301	396	697	0	0	0	1713
% App. Total	67.2	32.8		43.2	56.8		0	0		
PHF	.880	.849	.870	.818	.805	.838	.000	.000	.000	.857

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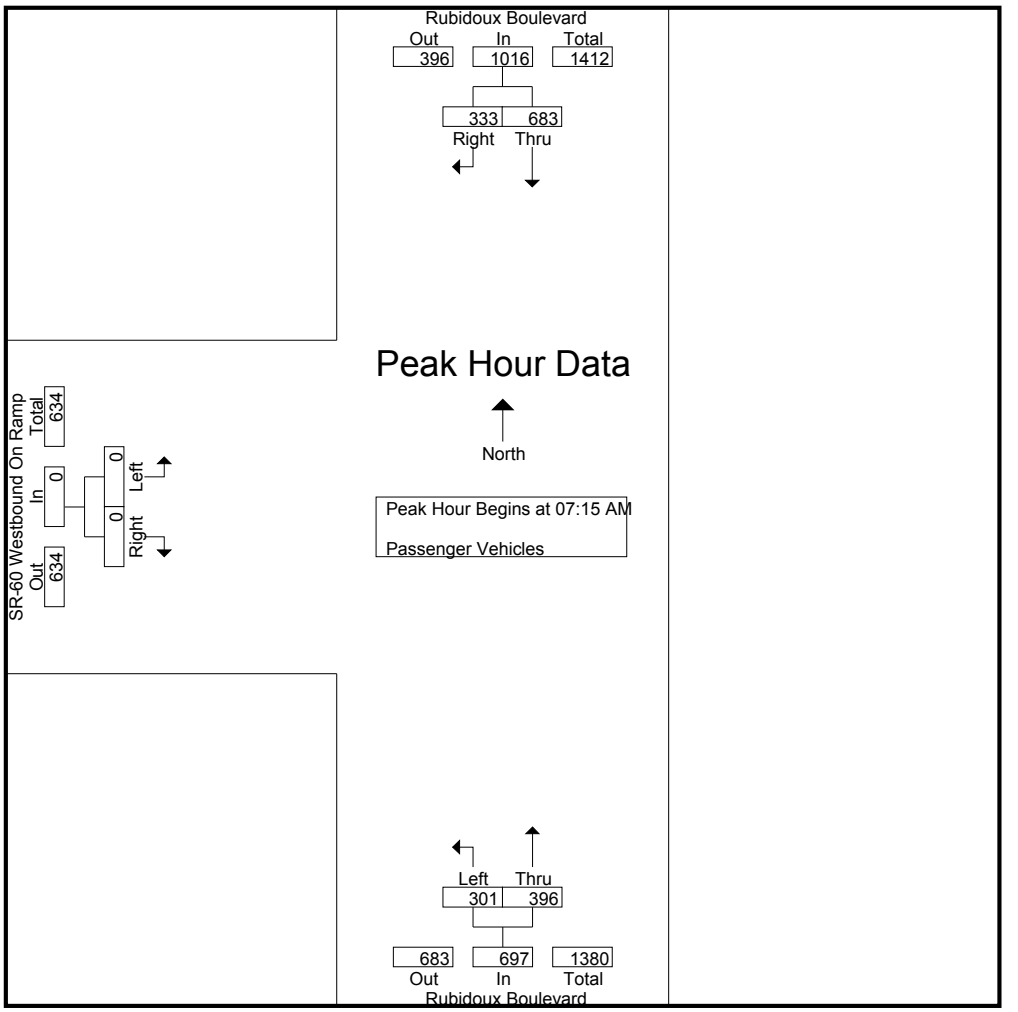
File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	138	82	220	63	97	160	0	0	0
+15 mins.	172	92	264	**92**	80	172	0	0	0
+30 mins.	**194**	**98**	**292**	85	**123**	**208**	0	0	0
+45 mins.	179	61	240	61	96	157	0	0	0
Total Volume	683	333	1016	301	396	697	0	0	0
% App. Total	67.2	32.8		43.2	56.8		0	0	
PHF	.880	.849	.870	.818	.805	.838	.000	.000	.000

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Weather: Clear

File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	6	9	15	2	10	12	0	0	0	27
06:45 AM	14	3	17	0	9	9	0	0	0	26
Total	20	12	32	2	19	21	0	0	0	53
07:00 AM	9	8	17	1	8	9	0	0	0	26
07:15 AM	9	6	15	1	8	9	0	0	0	24
07:30 AM	8	4	12	2	5	7	0	0	0	19
07:45 AM	10	9	19	1	12	13	0	0	0	32
Total	36	27	63	5	33	38	0	0	0	101
08:00 AM	10	8	18	3	10	13	0	0	0	31
08:15 AM	8	9	17	3	6	9	0	0	0	26
08:30 AM	5	9	14	2	3	5	0	0	0	19
08:45 AM	7	8	15	0	8	8	0	0	0	23
Total	30	34	64	8	27	35	0	0	0	99
09:00 AM	4	15	19	0	8	8	0	0	0	27
09:15 AM	13	15	28	0	5	5	0	0	0	33
Grand Total	103	103	206	15	92	107	0	0	0	313
Apprch %	50	50		14	86		0	0		
Total %	32.9	32.9	65.8	4.8	29.4	34.2	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	9	6	15	1	8	9	0	0	0	24
07:30 AM	8	4	12	2	5	7	0	0	0	19
07:45 AM	**10**	**9**	**19**	1	**12**	**13**	0	0	0	**32**
08:00 AM	10	8	18	**3**	10	13	0	0	0	31
Total Volume	37	27	64	7	35	42	0	0	0	106
% App. Total	57.8	42.2		16.7	83.3		0	0		
PHF	.925	.750	.842	.583	.729	.808	.000	.000	.000	.828

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Weather: Clear

File Name : 03_JVYRU60WAM
Site Code : 05117022
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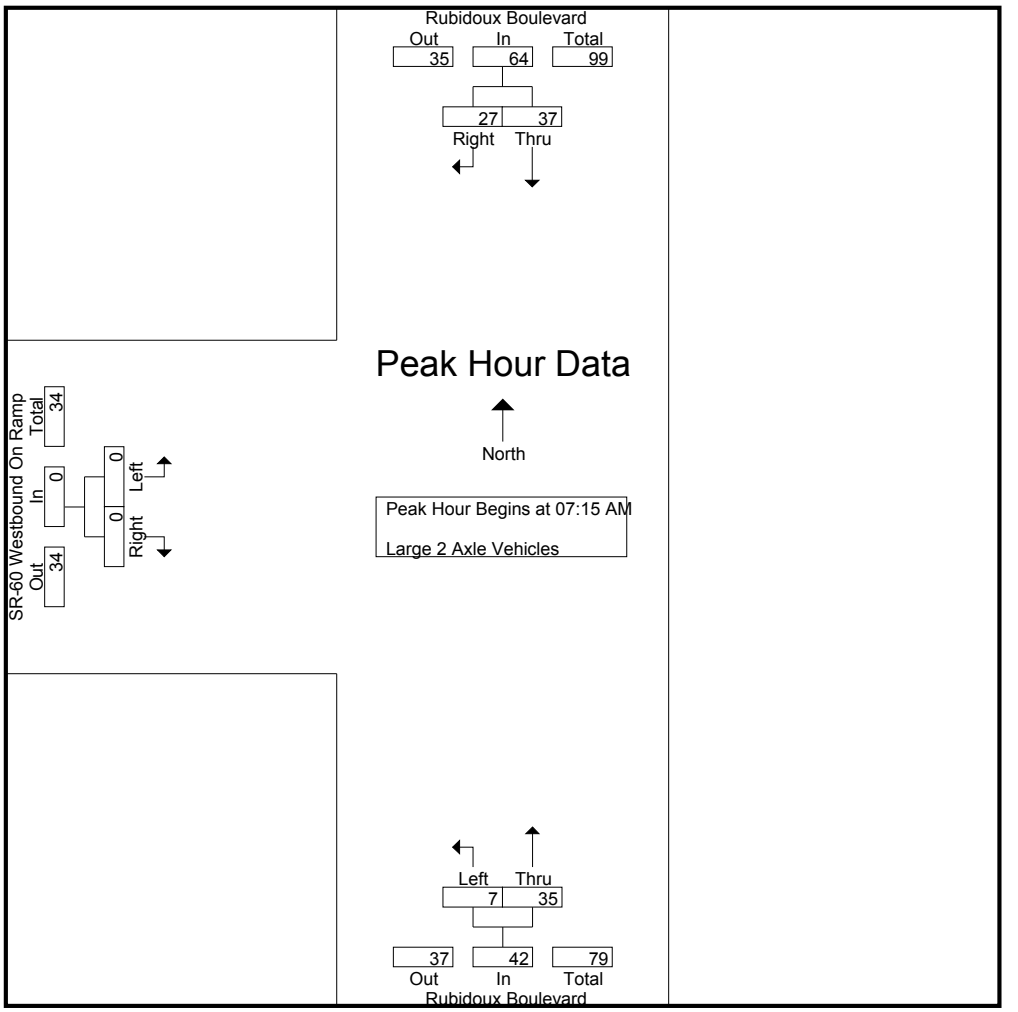
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	9	6	15	1	8	9	0	0	0
+15 mins.	8	4	12	2	5	7	0	0	0
+30 mins.	**10**	**9**	**19**	1	**12**	**13**	0	0	0
+45 mins.	10	8	18	**3**	10	13	0	0	0
Total Volume	37	27	64	7	35	42	0	0	0
% App. Total	57.8	42.2		16.7	83.3		0	0	
PHF	.925	.750	.842	.583	.729	.808	.000	.000	.000

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City of Jurupa Valley
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E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	3	1	4	1	5	6	0	0	0	10
06:45 AM	3	14	17	0	3	3	0	0	0	20
Total	6	15	21	1	8	9	0	0	0	30
07:00 AM	2	4	6	1	1	2	0	0	0	8
07:15 AM	1	8	9	1	5	6	0	0	0	15
07:30 AM	2	5	7	1	4	5	0	0	0	12
07:45 AM	1	3	4	0	2	2	0	0	0	6
Total	6	20	26	3	12	15	0	0	0	41
08:00 AM	0	3	3	1	2	3	0	0	0	6
08:15 AM	1	4	5	0	6	6	0	0	0	11
08:30 AM	3	7	10	0	5	5	0	0	0	15
08:45 AM	3	3	6	0	1	1	0	0	0	7
Total	7	17	24	1	14	15	0	0	0	39
09:00 AM	9	2	11	0	8	8	0	0	0	19
09:15 AM	5	6	11	1	5	6	0	0	0	17
Grand Total	33	60	93	6	47	53	0	0	0	146
Apprch %	35.5	64.5		11.3	88.7		0	0		
Total %	22.6	41.1	63.7	4.1	32.2	36.3	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	1	**8**	**9**	**1**	**5**	**6**	0	0	0	**15**
07:30 AM	**2**	5	7	1	4	5	0	0	0	12
07:45 AM	1	3	4	0	2	2	0	0	0	6
08:00 AM	0	3	3	1	2	3	0	0	0	6
Total Volume	4	19	23	3	13	16	0	0	0	39
% App. Total	17.4	82.6		18.8	81.2		0	0		
PHF	.500	.594	.639	.750	.650	.667	.000	.000	.000	.650

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E/W: SR-60 Westbound On Ramp
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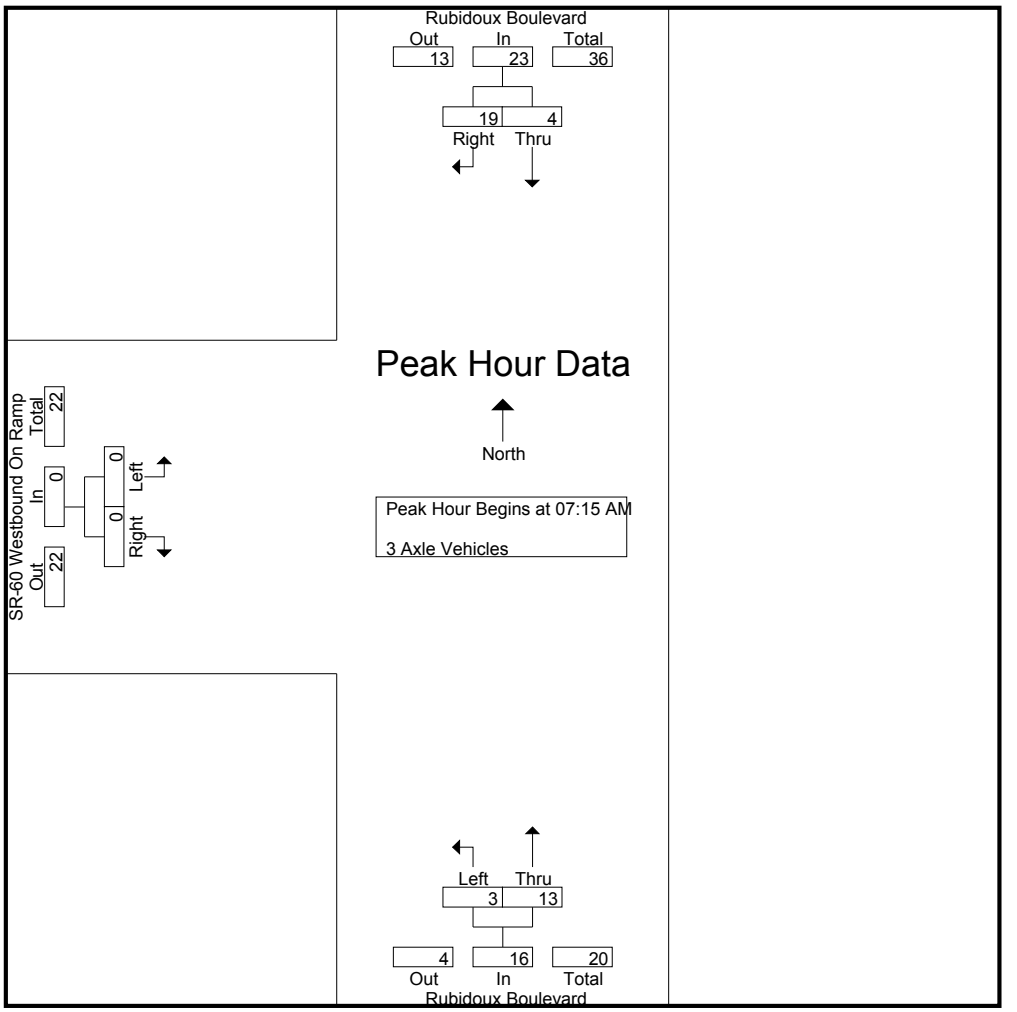
File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	1	**8**	**9**	**1**	**5**	**6**	0	0	0
+15 mins.	**2**	5	7	1	4	5	0	0	0
+30 mins.	1	3	4	0	2	2	0	0	0
+45 mins.	0	3	3	1	2	3	0	0	0
Total Volume	4	19	23	3	13	16	0	0	0
% App. Total	17.4	82.6		18.8	81.2		0	0	
PHF	.500	.594	.639	.750	.650	.667	.000	.000	.000

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City of Jurupa Valley
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File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	3	12	15	1	11	12	0	0	0	27
06:45 AM	1	11	12	0	7	7	0	0	0	19
Total	4	23	27	1	18	19	0	0	0	46
07:00 AM	4	9	13	0	6	6	0	0	0	19
07:15 AM	1	7	8	0	10	10	0	0	0	18
07:30 AM	3	17	20	2	7	9	0	0	0	29
07:45 AM	2	9	11	3	5	8	0	0	0	19
Total	10	42	52	5	28	33	0	0	0	85
08:00 AM	1	7	8	0	13	13	0	0	0	21
08:15 AM	2	7	9	0	14	14	0	0	0	23
08:30 AM	2	13	15	0	12	12	0	0	0	27
08:45 AM	4	11	15	0	9	9	0	0	0	24
Total	9	38	47	0	48	48	0	0	0	95
09:00 AM	5	15	20	0	12	12	0	0	0	32
09:15 AM	4	18	22	0	11	11	0	0	0	33
Grand Total	32	136	168	6	117	123	0	0	0	291
Apprch %	19	81		4.9	95.1		0	0		
Total %	11	46.7	57.7	2.1	40.2	42.3	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	1	7	8	0	10	10	0	0	0	18
07:30 AM	**3**	**17**	**20**	2	7	9	0	0	0	**29**
07:45 AM	2	9	11	**3**	5	8	0	0	0	19
08:00 AM	1	7	8	0	**13**	**13**	0	0	0	21
Total Volume	7	40	47	5	35	40	0	0	0	87
% App. Total	14.9	85.1		12.5	87.5		0	0		
PHF	.583	.588	.588	.417	.673	.769	.000	.000	.000	.750

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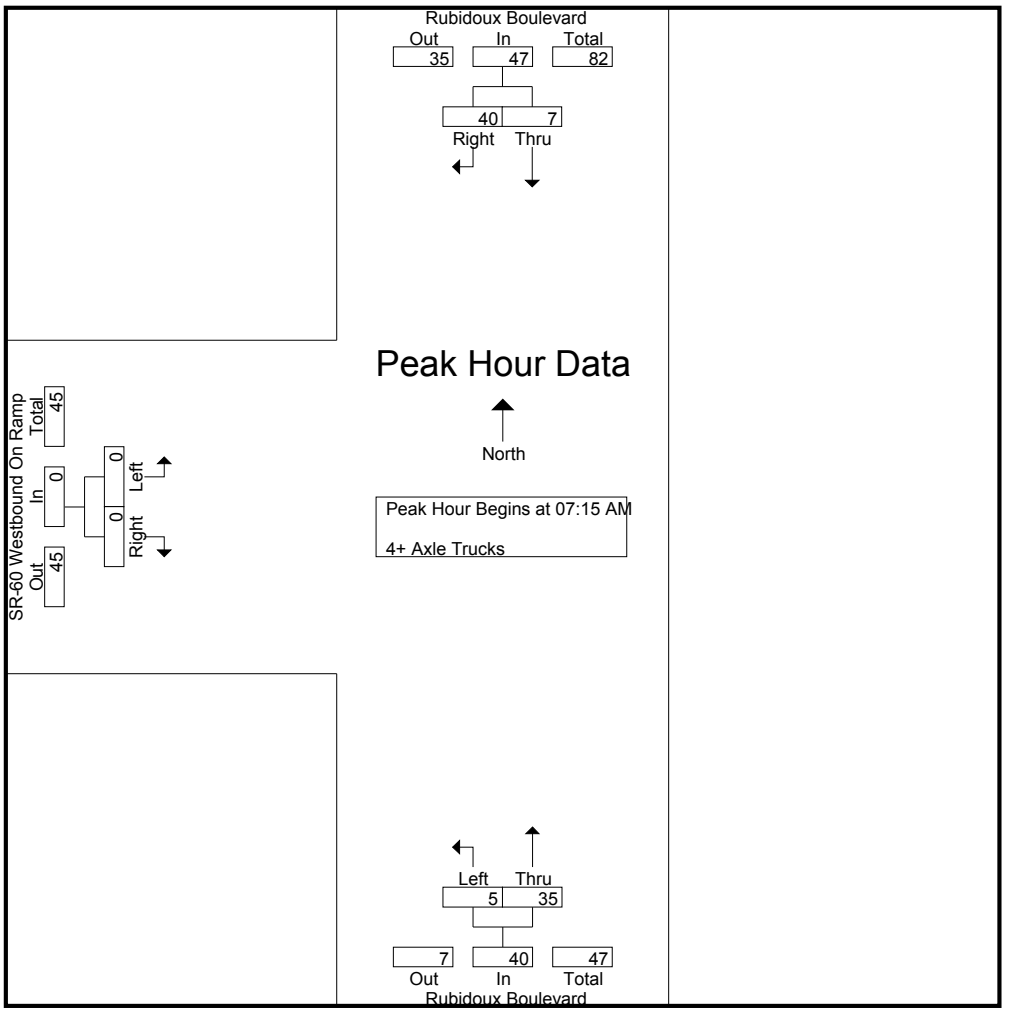
E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	1	7	8	0	10	10	0	0	0
+15 mins.	**3**	**17**	**20**	2	7	9	0	0	0
+30 mins.	2	9	11	**3**	5	8	0	0	0
+45 mins.	1	7	8	0	**13**	**13**	0	0	0
Total Volume	7	40	47	5	35	40	0	0	0
% App. Total	14.9	85.1		12.5	87.5		0	0	
PHF	.583	.588	.588	.417	.673	.769	.000	.000	.000

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File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	217	108	325	44	196	240	0	0	0	565
03:45 PM	255	106	361	51	197	248	0	0	0	609
Total	472	214	686	95	393	488	0	0	0	1174
04:00 PM	202	80	282	56	173	229	0	0	0	511
04:15 PM	234	116	350	36	174	210	0	0	0	560
04:30 PM	229	84	313	64	201	265	0	0	0	578
04:45 PM	250	91	341	49	216	265	0	0	0	606
Total	915	371	1286	205	764	969	0	0	0	2255
05:00 PM	209	80	289	54	192	246	0	0	0	535
05:15 PM	208	104	312	58	204	262	0	0	0	574
05:30 PM	257	95	352	48	182	230	0	0	0	582
05:45 PM	189	84	273	33	177	210	0	0	0	483
Total	863	363	1226	193	755	948	0	0	0	2174
06:00 PM	189	80	269	63	175	238	0	0	0	507
06:15 PM	194	51	245	33	144	177	0	0	0	422
Grand Total	2633	1079	3712	589	2231	2820	0	0	0	6532
Apprch %	70.9	29.1		20.9	79.1		0	0		
Total %	40.3	16.5	56.8	9	34.2	43.2	0	0	0	
Passenger Vehicles	2561	880	3441	576	1855	2431	0	0	0	5872
% Passenger Vehicles	97.3	81.6	92.7	97.8	83.1	86.2	0	0	0	89.9
Large 2 Axle Vehicles	50	58	108	10	127	137	0	0	0	245
% Large 2 Axle Vehicles	1.9	5.4	2.9	1.7	5.7	4.9	0	0	0	3.8
3 Axle Vehicles	9	55	64	2	86	88	0	0	0	152
% 3 Axle Vehicles	0.3	5.1	1.7	0.3	3.9	3.1	0	0	0	2.3
4+ Axle Trucks	13	86	99	1	163	164	0	0	0	263
% 4+ Axle Trucks	0.5	8	2.7	0.2	7.3	5.8	0	0	0	4

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	250	91	341	49	**216**	**265**	0	0	0	**606**
05:00 PM	209	80	289	54	192	246	0	0	0	535
05:15 PM	208	**104**	312	**58**	204	262	0	0	0	574
05:30 PM	**257**	95	**352**	48	182	230	0	0	0	582
Total Volume	924	370	1294	209	794	1003	0	0	0	2297
% App. Total	71.4	28.6		20.8	79.2		0	0		
PHF	.899	.889	.919	.901	.919	.946	.000	.000	.000	.948

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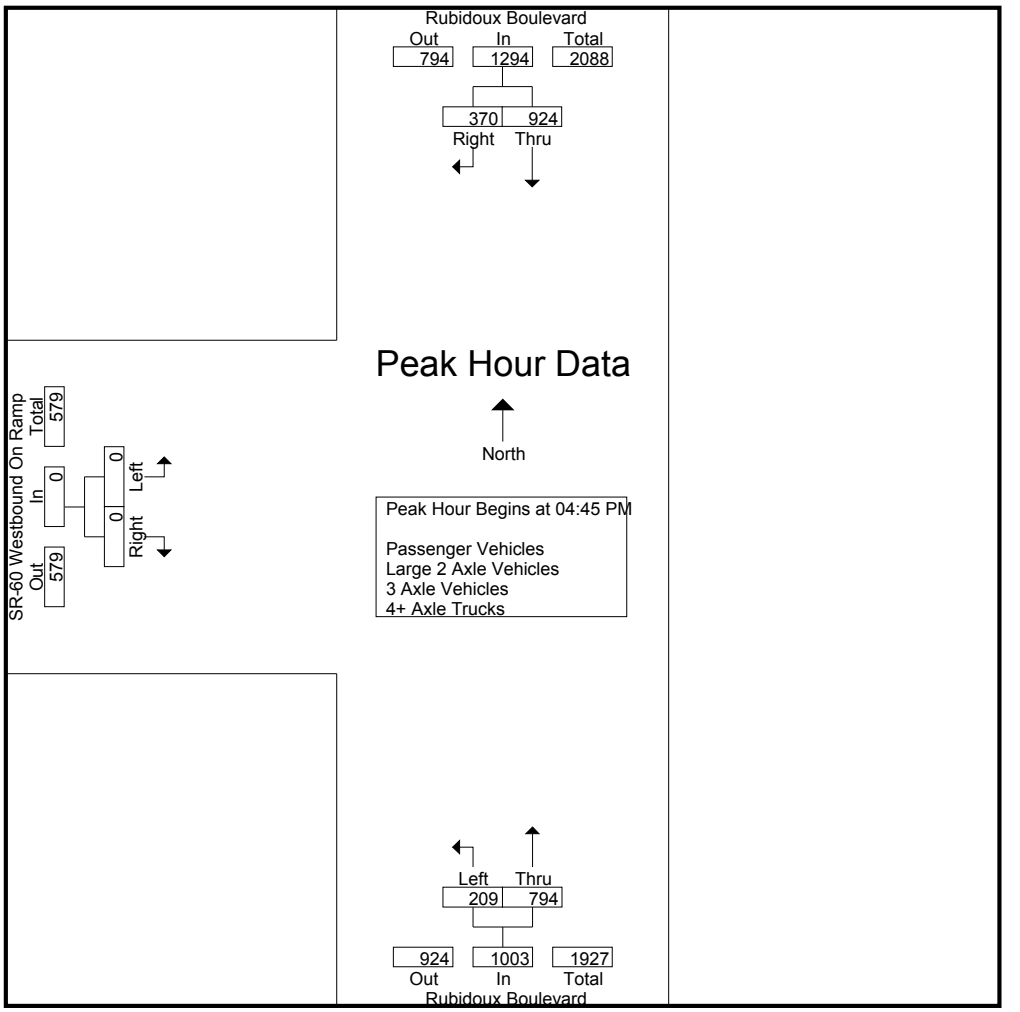
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			04:30 PM			03:30 PM		
+0 mins.	217	108	325	**64**	201	**265**	0	0	0
+15 mins.	**255**	106	**361**	49	**216**	265	0	0	0
+30 mins.	202	80	282	54	192	246	0	0	0
+45 mins.	234	**116**	350	58	204	262	0	0	0
Total Volume	908	410	1318	225	813	1038	0	0	0
% App. Total	68.9	31.1		21.7	78.3		0	0	
PHF	.890	.884	.913	.879	.941	.979	.000	.000	.000

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Weather: Clear

File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	207	82	289	44	152	196	0	0	0	485
03:45 PM	236	87	323	51	151	202	0	0	0	525
Total	443	169	612	95	303	398	0	0	0	1010
04:00 PM	199	64	263	54	141	195	0	0	0	458
04:15 PM	226	93	319	34	149	183	0	0	0	502
04:30 PM	228	61	289	62	164	226	0	0	0	515
04:45 PM	246	80	326	47	193	240	0	0	0	566
Total	899	298	1197	197	647	844	0	0	0	2041
05:00 PM	201	64	265	54	156	210	0	0	0	475
05:15 PM	204	90	294	58	176	234	0	0	0	528
05:30 PM	253	82	335	46	154	200	0	0	0	535
05:45 PM	184	73	257	31	151	182	0	0	0	439
Total	842	309	1151	189	637	826	0	0	0	1977
06:00 PM	185	60	245	63	142	205	0	0	0	450
06:15 PM	192	44	236	32	126	158	0	0	0	394
Grand Total	2561	880	3441	576	1855	2431	0	0	0	5872
Apprch %	74.4	25.6		23.7	76.3		0	0		
Total %	43.6	15	58.6	9.8	31.6	41.4	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	246	80	326	47	**193**	**240**	0	0	0	**566**
05:00 PM	201	64	265	54	156	210	0	0	0	475
05:15 PM	204	**90**	294	**58**	176	234	0	0	0	528
05:30 PM	**253**	82	**335**	46	154	200	0	0	0	535
Total Volume	904	316	1220	205	679	884	0	0	0	2104
% App. Total	74.1	25.9		23.2	76.8		0	0		
PHF	.893	.878	.910	.884	.880	.921	.000	.000	.000	.929

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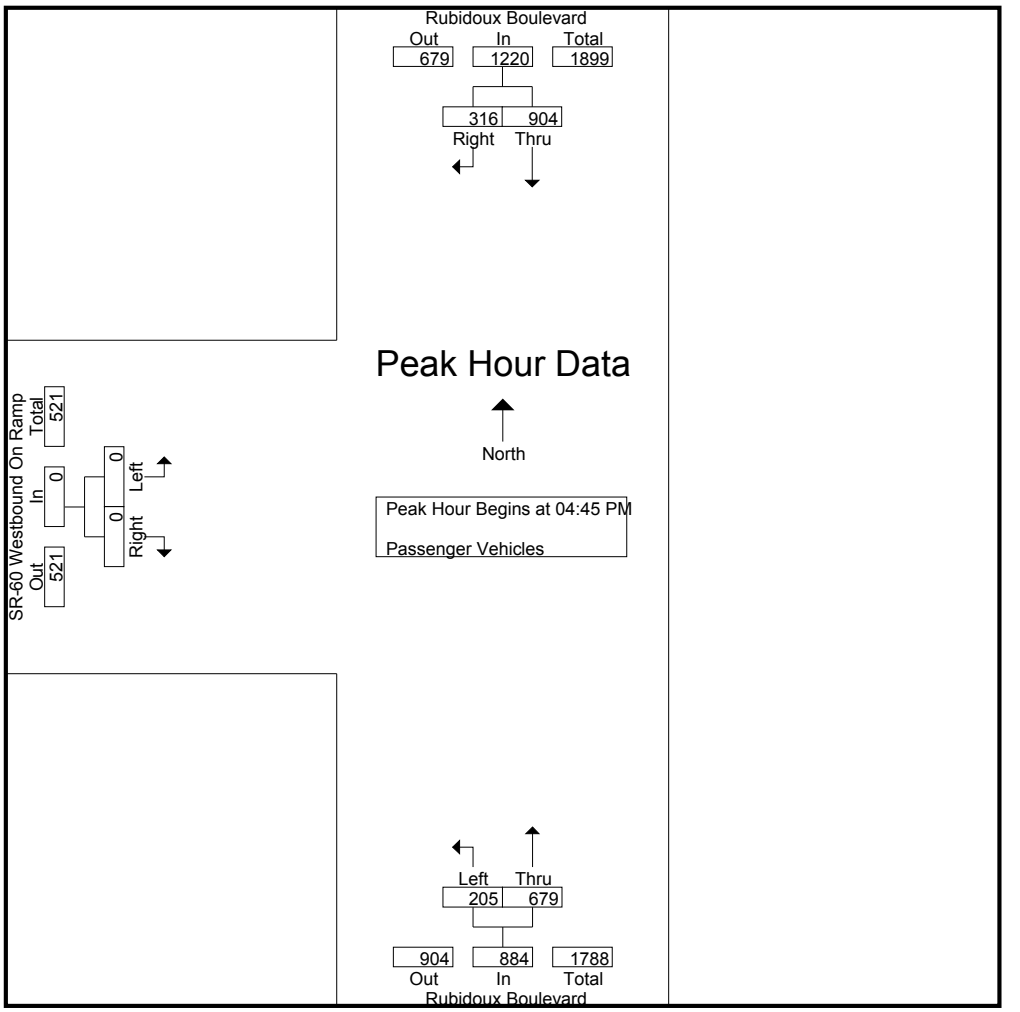
File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	246	80	326	47	**193**	**240**	0	0	0
+15 mins.	201	64	265	54	156	210	0	0	0
+30 mins.	204	**90**	294	**58**	176	234	0	0	0
+45 mins.	**253**	82	**335**	46	154	200	0	0	0
Total Volume	904	316	1220	205	679	884	0	0	0
% App. Total	74.1	25.9		23.2	76.8		0	0	
PHF	.893	.878	.910	.884	.880	.921	.000	.000	.000

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Weather: Clear

File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	7	11	18	0	17	17	0	0	0	35
03:45 PM	12	4	16	0	13	13	0	0	0	29
Total	19	15	34	0	30	30	0	0	0	64
04:00 PM	2	5	7	1	10	11	0	0	0	18
04:15 PM	5	10	15	1	11	12	0	0	0	27
04:30 PM	1	3	4	2	15	17	0	0	0	21
04:45 PM	3	2	5	2	9	11	0	0	0	16
Total	11	20	31	6	45	51	0	0	0	82
05:00 PM	6	7	13	0	10	10	0	0	0	23
05:15 PM	4	5	9	0	11	11	0	0	0	20
05:30 PM	2	3	5	1	8	9	0	0	0	14
05:45 PM	4	3	7	2	6	8	0	0	0	15
Total	16	18	34	3	35	38	0	0	0	72
06:00 PM	3	4	7	0	11	11	0	0	0	18
06:15 PM	1	1	2	1	6	7	0	0	0	9
Grand Total	50	58	108	10	127	137	0	0	0	245
Apprch %	46.3	53.7		7.3	92.7		0	0		
Total %	20.4	23.7	44.1	4.1	51.8	55.9	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	3	2	5	**2**	9	**11**	0	0	0	16
05:00 PM	**6**	**7**	**13**	0	10	10	0	0	0	**23**
05:15 PM	4	5	9	0	**11**	11	0	0	0	20
05:30 PM	2	3	5	1	8	9	0	0	0	14
Total Volume	15	17	32	3	38	41	0	0	0	73
% App. Total	46.9	53.1		7.3	92.7		0	0		
PHF	.625	.607	.615	.375	.864	.932	.000	.000	.000	.793

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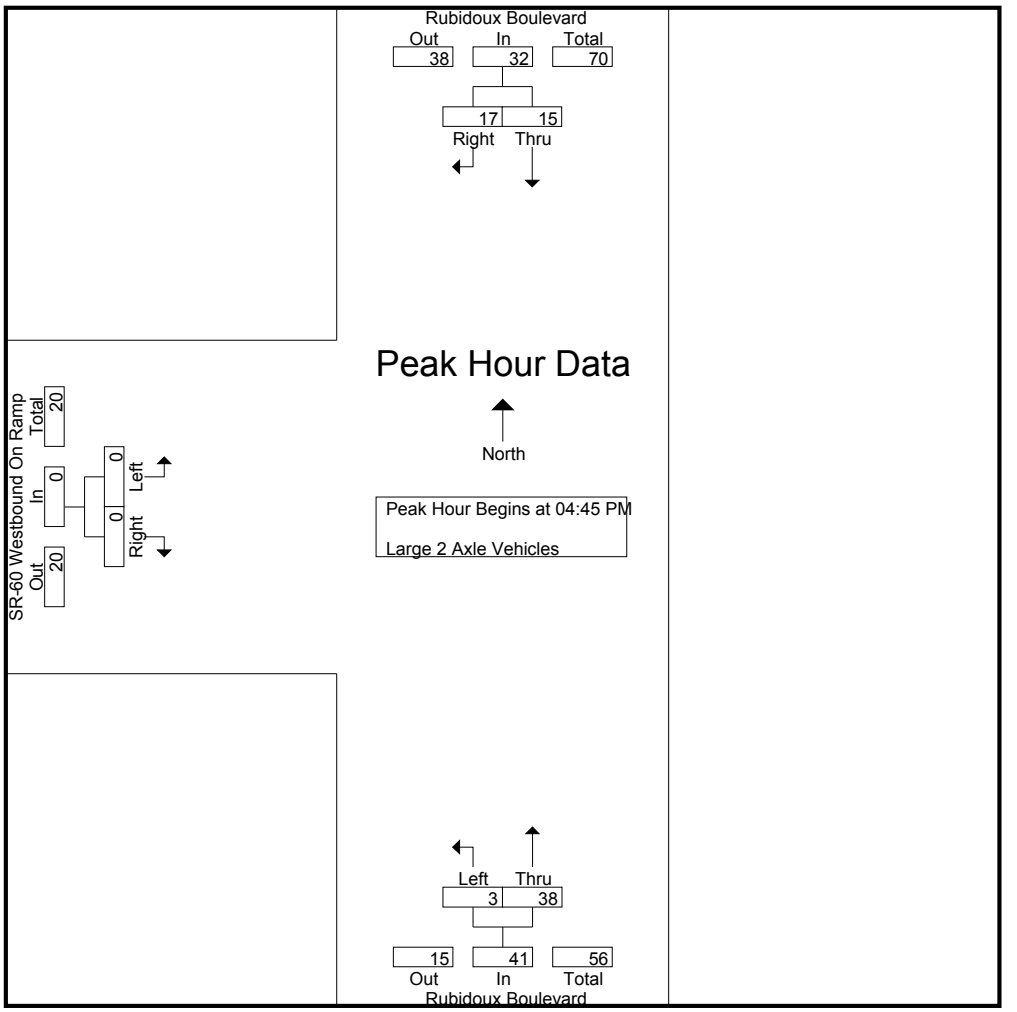
File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	3	2	5	**2**	9	**11**	0	0	0
+15 mins.	**6**	**7**	**13**	0	10	10	0	0	0
+30 mins.	4	5	9	0	**11**	11	0	0	0
+45 mins.	2	3	5	1	8	9	0	0	0
Total Volume	15	17	32	3	38	41	0	0	0
% App. Total	46.9	53.1		7.3	92.7		0	0	
PHF	.625	.607	.615	.375	.864	.932	.000	.000	.000

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E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	2	4	6	0	7	7	0	0	0	13
03:45 PM	4	7	11	0	11	11	0	0	0	22
Total	6	11	17	0	18	18	0	0	0	35
04:00 PM	1	6	7	1	11	12	0	0	0	19
04:15 PM	0	5	5	0	6	6	0	0	0	11
04:30 PM	0	11	11	0	10	10	0	0	0	21
04:45 PM	1	2	3	0	7	7	0	0	0	10
Total	2	24	26	1	34	35	0	0	0	61
05:00 PM	0	5	5	0	9	9	0	0	0	14
05:15 PM	0	2	2	0	5	5	0	0	0	7
05:30 PM	0	4	4	1	5	6	0	0	0	10
05:45 PM	0	1	1	0	8	8	0	0	0	9
Total	0	12	12	1	27	28	0	0	0	40
06:00 PM	0	6	6	0	3	3	0	0	0	9
06:15 PM	1	2	3	0	4	4	0	0	0	7
Grand Total	9	55	64	2	86	88	0	0	0	152
Apprch %	14.1	85.9		2.3	97.7		0	0		
Total %	5.9	36.2	42.1	1.3	56.6	57.9	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**1**	2	3	0	7	7	0	0	0	10
05:00 PM	0	**5**	**5**	0	**9**	**9**	0	0	0	**14**
05:15 PM	0	2	2	0	5	5	0	0	0	7
05:30 PM	0	4	4	**1**	5	6	0	0	0	10
Total Volume	1	13	14	1	26	27	0	0	0	41
% App. Total	7.1	92.9		3.7	96.3		0	0		
PHF	.250	.650	.700	.250	.722	.750	.000	.000	.000	.732

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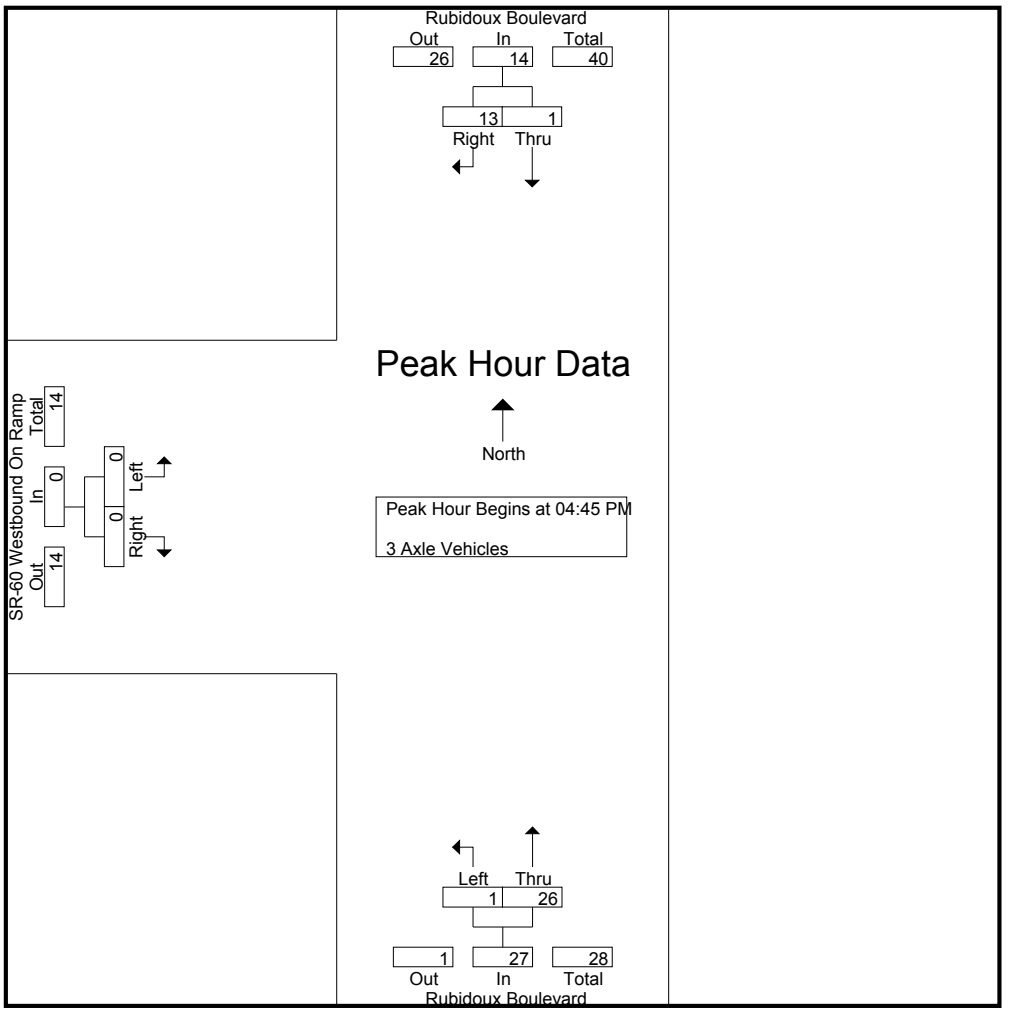
E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	**1**	2	3	0	7	7	0	0	0
+15 mins.	0	**5**	**5**	0	**9**	**9**	0	0	0
+30 mins.	0	2	2	0	5	5	0	0	0
+45 mins.	0	4	4	**1**	5	6	0	0	0
Total Volume	1	13	14	1	26	27	0	0	0
% App. Total	7.1	92.9		3.7	96.3		0	0	
PHF	.250	.650	.700	.250	.722	.750	.000	.000	.000

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	1	11	12	0	20	20	0	0	0	32
03:45 PM	3	8	11	0	22	22	0	0	0	33
Total	4	19	23	0	42	42	0	0	0	65
04:00 PM	0	5	5	0	11	11	0	0	0	16
04:15 PM	3	8	11	1	8	9	0	0	0	20
04:30 PM	0	9	9	0	12	12	0	0	0	21
04:45 PM	0	7	7	0	7	7	0	0	0	14
Total	3	29	32	1	38	39	0	0	0	71
05:00 PM	2	4	6	0	17	17	0	0	0	23
05:15 PM	0	7	7	0	12	12	0	0	0	19
05:30 PM	2	6	8	0	15	15	0	0	0	23
05:45 PM	1	7	8	0	12	12	0	0	0	20
Total	5	24	29	0	56	56	0	0	0	85
06:00 PM	1	10	11	0	19	19	0	0	0	30
06:15 PM	0	4	4	0	8	8	0	0	0	12
Grand Total	13	86	99	1	163	164	0	0	0	263
Apprch %	13.1	86.9		0.6	99.4		0	0		
Total %	4.9	32.7	37.6	0.4	62	62.4	0	0	0	

	Rubidoux Boulevard Southbound			Rubidoux Boulevard Northbound			SR-60 Westbound On Ramp Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	**7**	7	0	7	7	0	0	0	14
05:00 PM	**2**	4	6	0	**17**	**17**	0	0	0	**23**
05:15 PM	0	7	7	0	12	12	0	0	0	19
05:30 PM	2	6	**8**	0	15	15	0	0	0	23
Total Volume	4	24	28	0	51	51	0	0	0	79
% App. Total	14.3	85.7		0	100		0	0		
PHF	.500	.857	.875	.000	.750	.750	.000	.000	.000	.859

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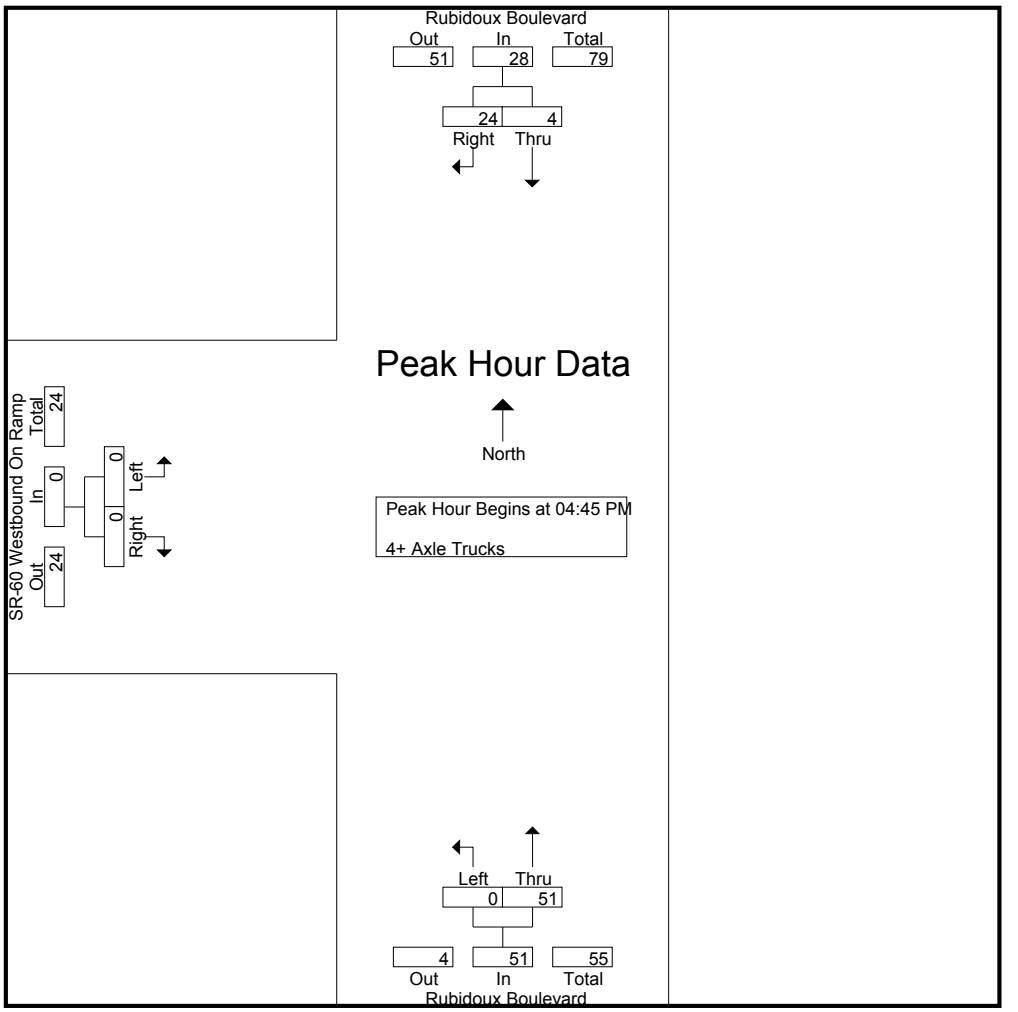
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 Westbound On Ramp
Weather: Clear

File Name : 03_JVYRU60WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	**7**	7	0	7	7	0	0	0
+15 mins.	**2**	4	6	0	**17**	**17**	0	0	0
+30 mins.	0	7	7	0	12	12	0	0	0
+45 mins.	2	6	**8**	0	15	15	0	0	0
Total Volume	4	24	28	0	51	51	0	0	0
% App. Total	14.3	85.7		0	100		0	0	
PHF	.500	.857	.875	.000	.750	.750	.000	.000	.000

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 EB Off Ramp/Frontage Road
Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	35	87	0	122	1	0	0	1	0	146	107	253	66	3	27	96	472
06:45 AM	36	103	0	139	1	0	0	1	0	122	105	227	81	3	21	105	472
Total	71	190	0	261	2	0	0	2	0	268	212	480	147	6	48	201	944
07:00 AM	40	98	0	138	1	0	0	1	0	139	77	216	64	3	21	88	443
07:15 AM	38	108	0	146	0	0	0	0	0	116	122	238	65	0	48	113	497
07:30 AM	43	145	0	188	5	0	3	8	0	131	139	270	54	5	53	112	578
07:45 AM	28	173	0	201	5	0	0	5	0	156	136	292	68	12	72	152	650
Total	149	524	0	673	11	0	3	14	0	542	474	1016	251	20	194	465	2168
08:00 AM	20	164	0	184	1	0	0	1	0	117	116	233	68	7	57	132	550
08:15 AM	19	120	0	139	1	0	2	3	0	115	96	211	65	4	42	111	464
08:30 AM	24	92	0	116	0	0	0	0	0	100	103	203	48	5	21	74	393
08:45 AM	31	117	0	148	1	0	0	1	0	90	92	182	50	1	25	76	407
Total	94	493	0	587	3	0	2	5	0	422	407	829	231	17	145	393	1814
09:00 AM	28	114	0	142	0	0	0	0	0	84	104	188	56	3	31	90	420
09:15 AM	34	112	0	146	3	0	1	4	0	82	91	173	42	5	31	78	401
Grand Total	376	1433	0	1809	19	0	6	25	0	1398	1288	2686	727	51	449	1227	5747
Apprch %	20.8	79.2	0		76	0	24		0	52	48		59.3	4.2	36.6		
Total %	6.5	24.9	0	31.5	0.3	0	0.1	0.4	0	24.3	22.4	46.7	12.7	0.9	7.8	21.4	
Passenger Vehicles	314	1350	0	1664	19	0	4	23	0	1329	1258	2587	527	47	425	999	5273
% Passenger Vehicles	83.5	94.2	0	92	100	0	66.7	92	0	95.1	97.7	96.3	72.5	92.2	94.7	81.4	91.8
Large 2 Axle Vehicles	29	58	0	87	0	0	2	2	0	46	27	73	49	2	20	71	233
% Large 2 Axle Vehicles	7.7	4	0	4.8	0	0	33.3	8	0	3.3	2.1	2.7	6.7	3.9	4.5	5.8	4.1
3 Axle Vehicles	12	15	0	27	0	0	0	0	0	15	3	18	40	0	1	41	86
% 3 Axle Vehicles	3.2	1	0	1.5	0	0	0	0	0	1.1	0.2	0.7	5.5	0	0.2	3.3	1.5
4+ Axle Trucks	21	10	0	31	0	0	0	0	0	8	0	8	111	2	3	116	155
% 4+ Axle Trucks	5.6	0.7	0	1.7	0	0	0	0	0	0.6	0	0.3	15.3	3.9	0.7	9.5	2.7

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	38	108	0	146	0	0	0	0	0	116	122	238	65	0	48	113	497
07:30 AM	**43**	145	0	188	**5**	0	**3**	**8**	0	131	**139**	270	54	5	53	112	578
07:45 AM	28	**173**	0	**201**	5	0	0	5	0	**156**	136	**292**	**68**	**12**	**72**	**152**	**650**
08:00 AM	20	164	0	184	1	0	0	1	0	117	116	233	68	7	57	132	550
Total Volume	129	590	0	719	11	0	3	14	0	520	513	1033	255	24	230	509	2275
% App. Total	17.9	82.1	0		78.6	0	21.4		0	50.3	49.7		50.1	4.7	45.2		
PHF	.750	.853	.000	.894	.550	.000	.250	.438	.000	.833	.923	.884	.938	.500	.799	.837	.875

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City of Jurupa Valley
N/S: Rubidoux Boulevard
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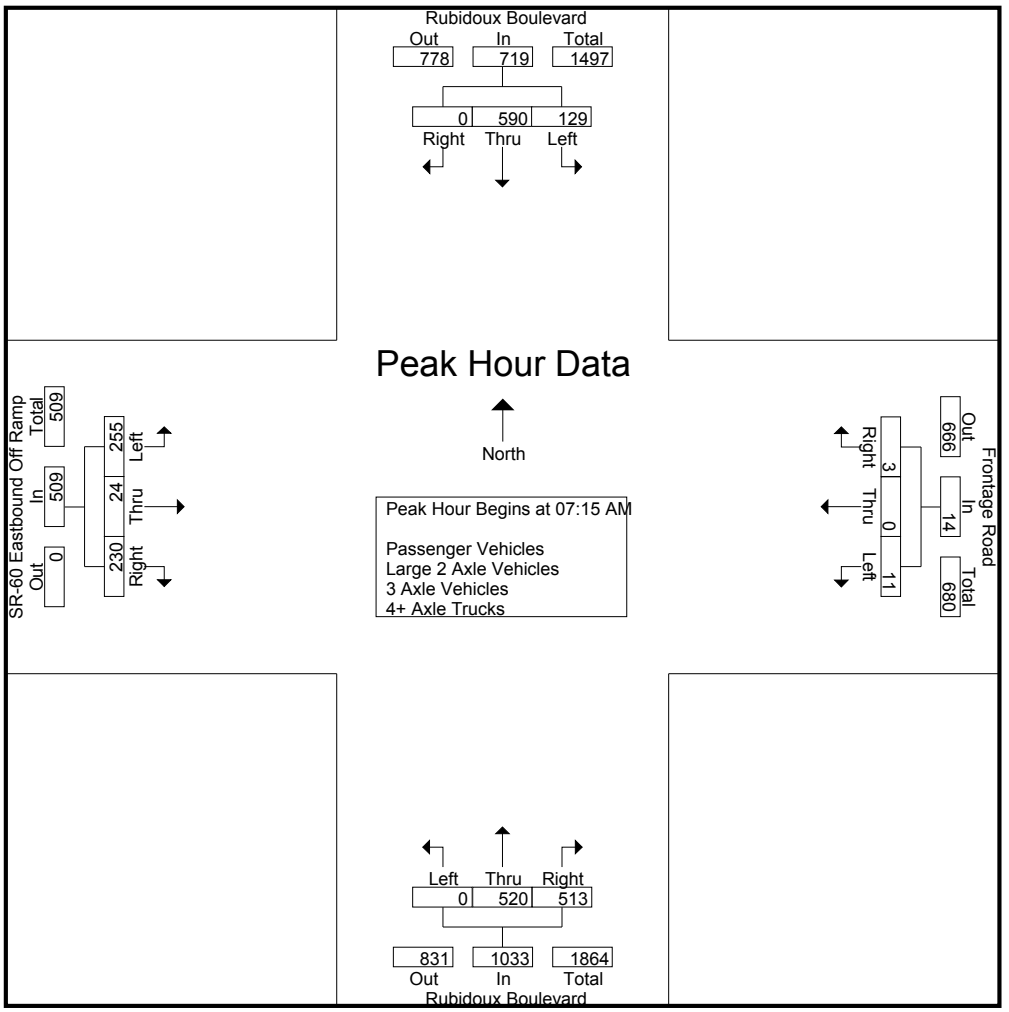
Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	38	108	0	146	**5**	0	**3**	**8**	0	116	122	238	65	0	48	113
+15 mins.	**43**	145	0	188	5	0	0	5	0	131	**139**	270	54	5	53	112
+30 mins.	28	**173**	0	**201**	1	0	0	1	0	**156**	136	**292**	**68**	**12**	**72**	**152**
+45 mins.	20	164	0	184	1	0	2	3	0	117	116	233	68	7	57	132
Total Volume	129	590	0	719	12	0	5	17	0	520	513	1033	255	24	230	509
% App. Total	17.9	82.1	0		70.6	0	29.4		0	50.3	49.7		50.1	4.7	45.2	
PHF	.750	.853	.000	.894	.600	.000	.417	.531	.000	.833	.923	.884	.938	.500	.799	.837

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City of Jurupa Valley
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Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	30	81	0	111	1	0	0	1	0	134	106	240	51	3	24	78	430
06:45 AM	29	99	0	128	1	0	0	1	0	119	102	221	68	3	20	91	441
Total	59	180	0	239	2	0	0	2	0	253	208	461	119	6	44	169	871
07:00 AM	33	94	0	127	1	0	0	1	0	134	76	210	50	2	21	73	411
07:15 AM	35	100	0	135	0	0	0	0	0	111	119	230	44	0	45	89	454
07:30 AM	34	140	0	174	5	0	3	8	0	126	135	261	42	5	50	97	540
07:45 AM	25	162	0	187	5	0	0	5	0	146	132	278	56	12	70	138	608
Total	127	496	0	623	11	0	3	14	0	517	462	979	192	19	186	397	2013
08:00 AM	20	157	0	177	1	0	0	1	0	109	115	224	46	6	53	105	507
08:15 AM	16	111	0	127	1	0	0	1	0	112	96	208	40	4	39	83	419
08:30 AM	17	88	0	105	0	0	0	0	0	95	96	191	35	5	19	59	355
08:45 AM	24	108	0	132	1	0	0	1	0	87	92	179	34	1	25	60	372
Total	77	464	0	541	3	0	0	3	0	403	399	802	155	16	136	307	1653
09:00 AM	23	108	0	131	0	0	0	0	0	79	102	181	35	3	29	67	379
09:15 AM	28	102	0	130	3	0	1	4	0	77	87	164	26	3	30	59	357
Grand Total	314	1350	0	1664	19	0	4	23	0	1329	1258	2587	527	47	425	999	5273
Apprch %	18.9	81.1	0		82.6	0	17.4		0	51.4	48.6		52.8	4.7	42.5		
Total %	6	25.6	0	31.6	0.4	0	0.1	0.4	0	25.2	23.9	49.1	10	0.9	8.1	18.9	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**35**	100	0	135	0	0	0	0	0	111	119	230	44	0	45	89	454
07:30 AM	34	140	0	174	**5**	0	**3**	**8**	0	126	**135**	261	42	5	50	97	540
07:45 AM	25	**162**	0	**187**	5	0	0	5	0	**146**	132	**278**	**56**	**12**	**70**	**138**	**608**
08:00 AM	20	157	0	177	1	0	0	1	0	109	115	224	46	6	53	105	507
Total Volume	114	559	0	673	11	0	3	14	0	492	501	993	188	23	218	429	2109
% App. Total	16.9	83.1	0		78.6	0	21.4		0	49.5	50.5		43.8	5.4	50.8		
PHF	.814	.863	.000	.900	.550	.000	.250	.438	.000	.842	.928	.893	.839	.479	.779	.777	.867

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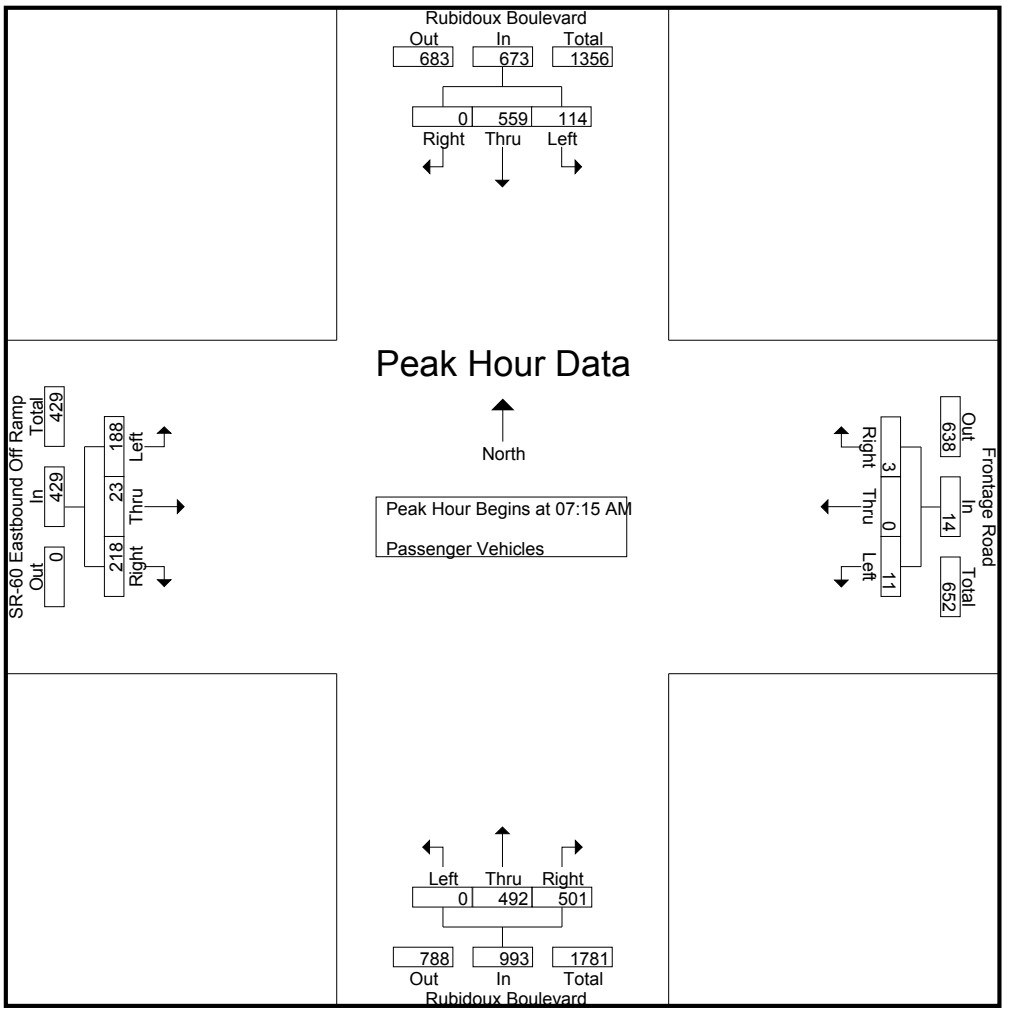
Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**35**	100	0	135	0	0	0	0	0	111	119	230	44	0	45	89
+15 mins.	34	140	0	174	**5**	0	**3**	**8**	0	126	**135**	261	42	5	50	97
+30 mins.	25	**162**	0	**187**	5	0	0	5	0	**146**	132	**278**	**56**	**12**	**70**	**138**
+45 mins.	20	157	0	177	1	0	0	1	0	109	115	224	46	6	53	105
Total Volume	114	559	0	673	11	0	3	14	0	492	501	993	188	23	218	429
% App. Total	16.9	83.1	0		78.6	0	21.4		0	49.5	50.5		43.8	5.4	50.8	
PHF	.814	.863	.000	.900	.550	.000	.250	.438	.000	.842	.928	.893	.839	.479	.779	.777

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City of Jurupa Valley
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Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	1	4	0	5	0	0	0	0	0	6	1	7	3	0	2	5	17
06:45 AM	4	3	0	7	0	0	0	0	0	2	3	5	5	0	1	6	18
Total	5	7	0	12	0	0	0	0	0	8	4	12	8	0	3	11	35
07:00 AM	4	4	0	8	0	0	0	0	0	3	1	4	5	1	0	6	18
07:15 AM	2	7	0	9	0	0	0	0	0	5	3	8	4	0	2	6	23
07:30 AM	5	4	0	9	0	0	0	0	0	4	4	8	4	0	3	7	24
07:45 AM	2	9	0	11	0	0	0	0	0	7	4	11	5	0	2	7	29
Total	13	24	0	37	0	0	0	0	0	19	12	31	18	1	7	26	94
08:00 AM	0	6	0	6	0	0	0	0	0	6	1	7	6	0	3	9	22
08:15 AM	0	9	0	9	0	0	2	2	0	3	0	3	4	0	3	7	21
08:30 AM	3	2	0	5	0	0	0	0	0	3	6	9	1	0	2	3	17
08:45 AM	4	5	0	9	0	0	0	0	0	3	0	3	6	0	0	6	18
Total	7	22	0	29	0	0	2	2	0	15	7	22	17	0	8	25	78
09:00 AM	0	0	0	0	0	0	0	0	0	1	2	3	4	0	2	6	9
09:15 AM	4	5	0	9	0	0	0	0	0	3	2	5	2	1	0	3	17
Grand Total	29	58	0	87	0	0	2	2	0	46	27	73	49	2	20	71	233
Apprch %	33.3	66.7	0		0	0	100		0	63	37		69	2.8	28.2		
Total %	12.4	24.9	0	37.3	0	0	0.9	0.9	0	19.7	11.6	31.3	21	0.9	8.6	30.5	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	7	0	9	0	0	0	0	0	5	3	8	4	0	2	6	23
07:30 AM	**5**	4	0	9	0	0	0	0	0	4	**4**	8	4	0	**3**	7	24
07:45 AM	2	**9**	0	**11**	0	0	0	0	0	**7**	4	**11**	5	0	2	7	**29**
08:00 AM	0	6	0	6	0	0	0	0	0	6	1	7	**6**	0	3	**9**	22
Total Volume	9	26	0	35	0	0	0	0	0	22	12	34	19	0	10	29	98
% App. Total	25.7	74.3	0		0	0	0		0	64.7	35.3		65.5	0	34.5		
PHF	.450	.722	.000	.795	.000	.000	.000	.000	.000	.786	.750	.773	.792	.000	.833	.806	.845

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City of Jurupa Valley
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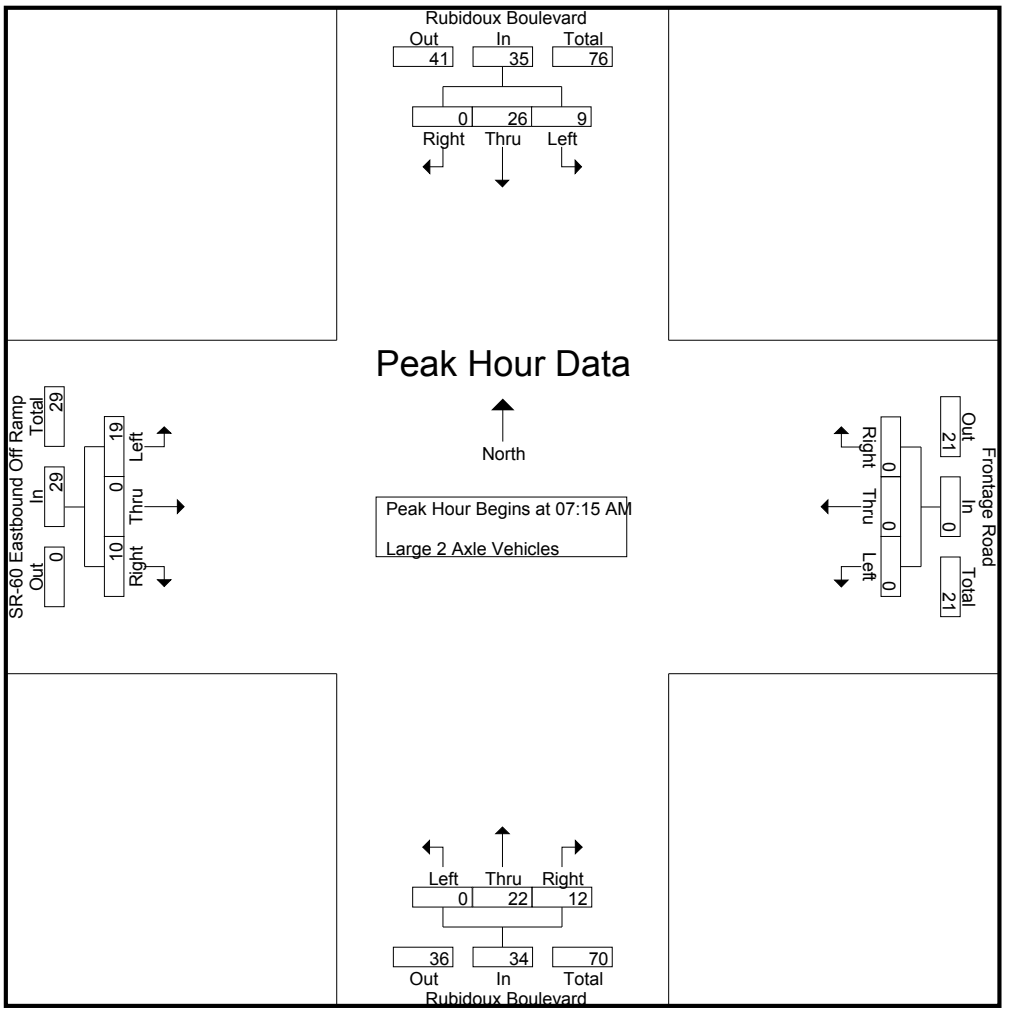
Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	2	7	0	9	0	0	0	0	0	5	3	8	4	0	2	6
+15 mins.	**5**	4	0	9	0	0	0	0	0	4	**4**	8	4	0	**3**	7
+30 mins.	2	**9**	0	**11**	0	0	0	0	0	**7**	4	**11**	5	0	2	7
+45 mins.	0	6	0	6	0	0	0	0	0	6	1	7	**6**	0	3	**9**
Total Volume	9	26	0	35	0	0	0	0	0	22	12	34	19	0	10	29
% App. Total	25.7	74.3	0		0	0	0		0	64.7	35.3		65.5	0	34.5	
PHF	.450	.722	.000	.795	.000	.000	.000	.000	.000	.786	.750	.773	.792	.000	.833	.806

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City of Jurupa Valley
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Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	2	0	0	2	0	0	0	0	0	2	0	2	4	0	1	5	9
06:45 AM	2	1	0	3	0	0	0	0	0	1	0	1	2	0	0	2	6
Total	4	1	0	5	0	0	0	0	0	3	0	3	6	0	1	7	15
07:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	3	0	0	3	6
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	5	0	0	5	6
07:30 AM	2	0	0	2	0	0	0	0	0	1	0	1	3	0	0	3	6
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	3	2	0	5	0	0	0	0	0	3	0	3	12	0	0	12	20
08:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	2	4
08:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	9
08:30 AM	2	2	0	4	0	0	0	0	0	1	1	2	3	0	0	3	9
08:45 AM	1	2	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
Total	5	4	0	9	0	0	0	0	0	3	1	4	14	0	0	14	27
09:00 AM	0	5	0	5	0	0	0	0	0	4	0	4	4	0	0	4	13
09:15 AM	0	3	0	3	0	0	0	0	0	2	2	4	4	0	0	4	11
Grand Total	12	15	0	27	0	0	0	0	0	15	3	18	40	0	1	41	86
Apprch %	44.4	55.6	0		0	0	0		0	83.3	16.7		97.6	0	2.4		
Total %	14	17.4	0	31.4	0	0	0	0	0	17.4	3.5	20.9	46.5	0	1.2	47.7	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	**5**	0	0	**5**	**6**
07:30 AM	**2**	0	0	**2**	0	0	0	0	0	1	0	1	3	0	0	3	6
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2	0	0	2	4
Total Volume	2	2	0	4	0	0	0	0	0	3	0	3	11	0	0	11	18
% App. Total	50	50	0		0	0	0		0	100	0		100	0	0		
PHF	.250	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.550	.000	.000	.550	.750

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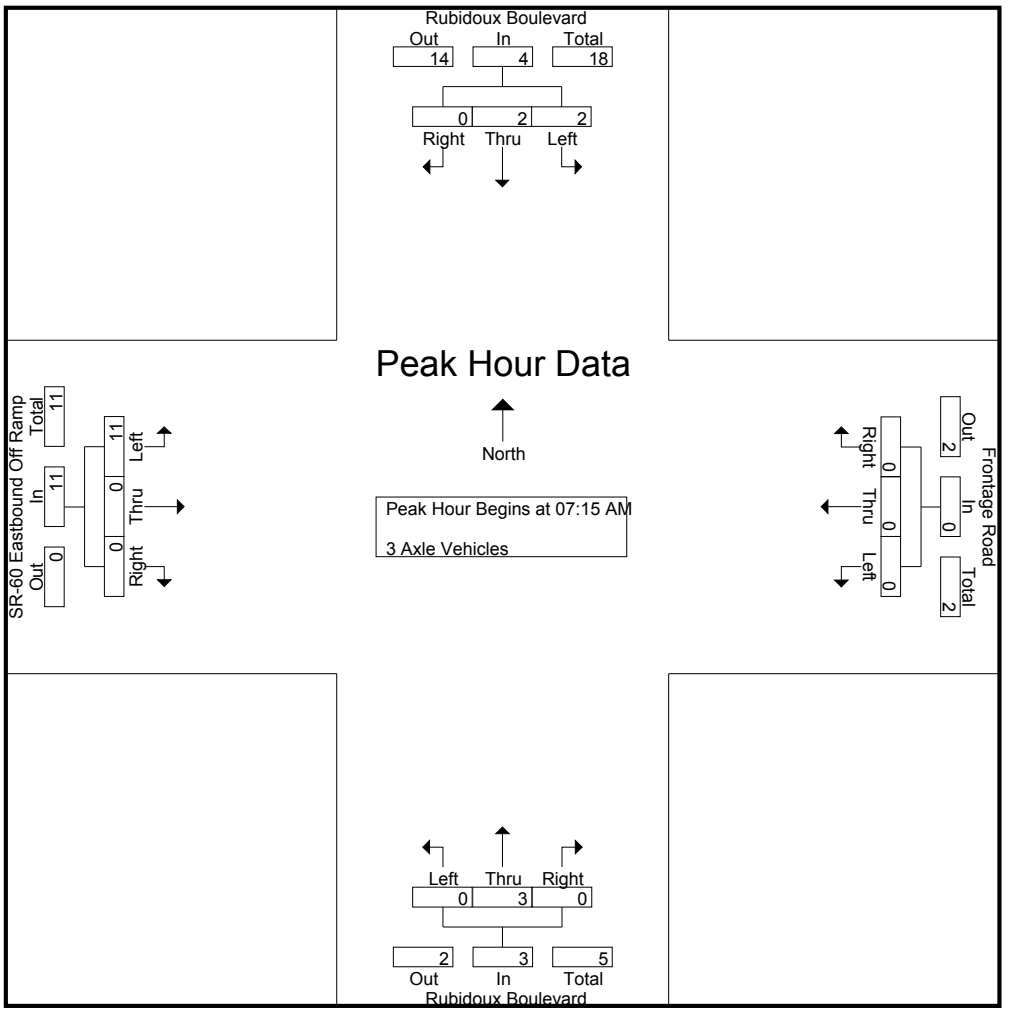
Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	**5**	0	0	**5**
+15 mins.	**2**	0	0	**2**	0	0	0	0	0	1	0	1	3	0	0	3
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2	0	0	2
Total Volume	2	2	0	4	0	0	0	0	0	3	0	3	11	0	0	11
% App. Total	50	50	0		0	0	0		0	100	0		100	0	0	
PHF	.250	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.550	.000	.000	.550

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File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	2	2	0	4	0	0	0	0	0	4	0	4	8	0	0	8	16
06:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	6	0	0	6	7
Total	3	2	0	5	0	0	0	0	0	4	0	4	14	0	0	14	23
07:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	8
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	12	0	1	13	14
07:30 AM	2	1	0	3	0	0	0	0	0	0	0	0	5	0	0	5	8
07:45 AM	1	1	0	2	0	0	0	0	0	3	0	3	6	0	0	6	11
Total	6	2	0	8	0	0	0	0	0	3	0	3	29	0	1	30	41
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	14	1	1	16	17
08:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	14	0	0	14	15
08:30 AM	2	0	0	2	0	0	0	0	0	1	0	1	9	0	0	9	12
08:45 AM	2	2	0	4	0	0	0	0	0	0	0	0	8	0	0	8	12
Total	5	3	0	8	0	0	0	0	0	1	0	1	45	1	1	47	56
09:00 AM	5	1	0	6	0	0	0	0	0	0	0	0	13	0	0	13	19
09:15 AM	2	2	0	4	0	0	0	0	0	0	0	0	10	1	1	12	16
Grand Total	21	10	0	31	0	0	0	0	0	8	0	8	111	2	3	116	155
Apprch %	67.7	32.3	0		0	0	0		0	100	0		95.7	1.7	2.6		
Total %	13.5	6.5	0	20	0	0	0	0	0	5.2	0	5.2	71.6	1.3	1.9	74.8	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	12	0	**1**	13	14
07:30 AM	**2**	**1**	0	**3**	0	0	0	0	0	0	0	0	5	0	0	5	8
07:45 AM	1	1	0	2	0	0	0	0	0	**3**	0	**3**	6	0	0	6	11
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	**14**	**1**	1	**16**	**17**
Total Volume	4	3	0	7	0	0	0	0	0	3	0	3	37	1	2	40	50
% App. Total	57.1	42.9	0		0	0	0		0	100	0		92.5	2.5	5		
PHF	.500	.750	.000	.583	.000	.000	.000	.000	.000	.250	.000	.250	.661	.250	.500	.625	.735

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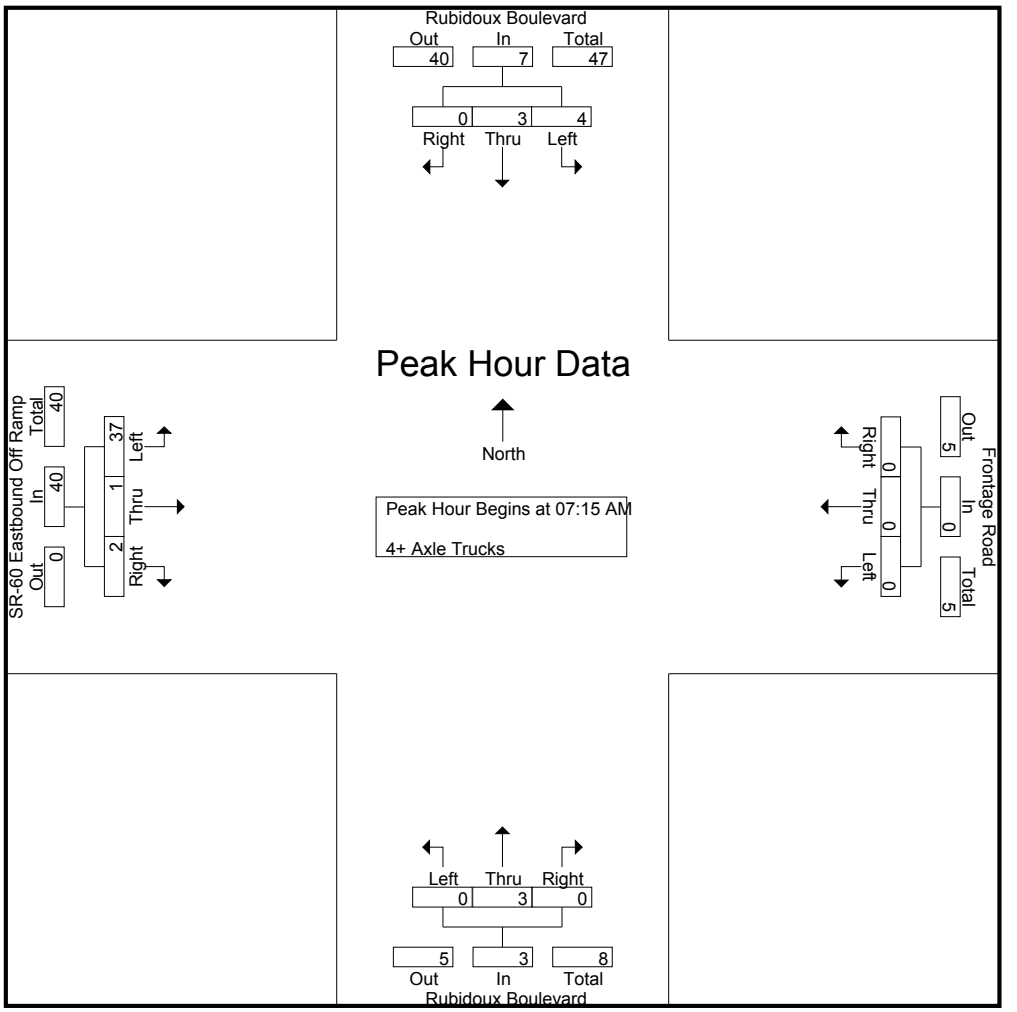
Weather: Clear

File Name : 04_JVYRUFRAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	12	0	**1**	13
+15 mins.	**2**	**1**	0	**3**	0	0	0	0	0	0	0	0	5	0	0	5
+30 mins.	1	1	0	2	0	0	0	0	0	**3**	0	**3**	6	0	0	6
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	**14**	**1**	1	**16**
Total Volume	4	3	0	7	0	0	0	0	0	3	0	3	37	1	2	40
% App. Total	57.1	42.9	0		0	0	0		0	100	0		92.5	2.5	5	
PHF	.500	.750	.000	.583	.000	.000	.000	.000	.000	.250	.000	.250	.661	.250	.500	.625

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File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	33	172	0	205	3	0	1	4	0	146	73	219	86	7	58	151	579
03:45 PM	33	218	0	251	7	0	0	7	0	151	72	223	101	6	73	180	661
Total	66	390	0	456	10	0	1	11	0	297	145	442	187	13	131	331	1240
04:00 PM	22	186	0	208	5	0	2	7	0	130	65	195	91	10	72	173	583
04:15 PM	24	203	0	227	9	0	0	9	0	113	57	170	88	7	74	169	575
04:30 PM	21	209	0	230	7	0	0	7	0	151	70	221	114	8	86	208	666
04:45 PM	24	224	0	248	1	0	1	2	0	144	71	215	118	10	108	236	701
Total	91	822	0	913	22	0	3	25	0	538	263	801	411	35	340	786	2525
05:00 PM	22	183	0	205	3	0	2	5	0	129	79	208	119	10	89	218	636
05:15 PM	15	191	0	206	2	0	1	3	0	152	66	218	115	6	83	204	631
05:30 PM	26	237	0	263	5	0	0	5	0	131	67	198	100	5	75	180	646
05:45 PM	16	171	0	187	4	0	0	4	0	127	62	189	95	3	82	180	560
Total	79	782	0	861	14	0	3	17	0	539	274	813	429	24	329	782	2473
06:00 PM	19	164	0	183	3	0	1	4	0	129	69	198	107	5	64	176	561
06:15 PM	18	173	0	191	5	0	1	6	0	97	83	180	72	6	62	140	517
Grand Total	273	2331	0	2604	54	0	9	63	0	1600	834	2434	1206	83	926	2215	7316
Apprch %	10.5	89.5	0		85.7	0	14.3		0	65.7	34.3		54.4	3.7	41.8		
Total %	3.7	31.9	0	35.6	0.7	0	0.1	0.9	0	21.9	11.4	33.3	16.5	1.1	12.7	30.3	
Passenger Vehicles	257	2283	0	2540	54	0	9	63	0	1539	819	2358	882	73	912	1867	6828
% Passenger Vehicles	94.1	97.9	0	97.5	100	0	100	100	0	96.2	98.2	96.9	73.1	88	98.5	84.3	93.3
Large 2 Axle Vehicles	6	38	0	44	0	0	0	0	0	37	11	48	95	5	7	107	199
% Large 2 Axle Vehicles	2.2	1.6	0	1.7	0	0	0	0	0	2.3	1.3	2	7.9	6	0.8	4.8	2.7
3 Axle Vehicles	2	5	0	7	0	0	0	0	0	13	1	14	65	0	5	70	91
% 3 Axle Vehicles	0.7	0.2	0	0.3	0	0	0	0	0	0.8	0.1	0.6	5.4	0	0.5	3.2	1.2
4+ Axle Trucks	8	5	0	13	0	0	0	0	0	11	3	14	164	5	2	171	198
% 4+ Axle Trucks	2.9	0.2	0	0.5	0	0	0	0	0	0.7	0.4	0.6	13.6	6	0.2	7.7	2.7

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	21	209	0	230	**7**	0	0	**7**	0	151	70	**221**	114	8	86	208	666
04:45 PM	**24**	**224**	0	**248**	1	0	1	2	0	144	71	215	118	**10**	**108**	**236**	**701**
05:00 PM	22	183	0	205	3	0	**2**	5	0	129	**79**	208	**119**	10	89	218	636
05:15 PM	15	191	0	206	2	0	1	3	0	**152**	66	218	115	6	83	204	631
Total Volume	82	807	0	889	13	0	4	17	0	576	286	862	466	34	366	866	2634
% App. Total	9.2	90.8	0		76.5	0	23.5		0	66.8	33.2		53.8	3.9	42.3		
PHF	.854	.901	.000	.896	.464	.000	.500	.607	.000	.947	.905	.975	.979	.850	.847	.917	.939

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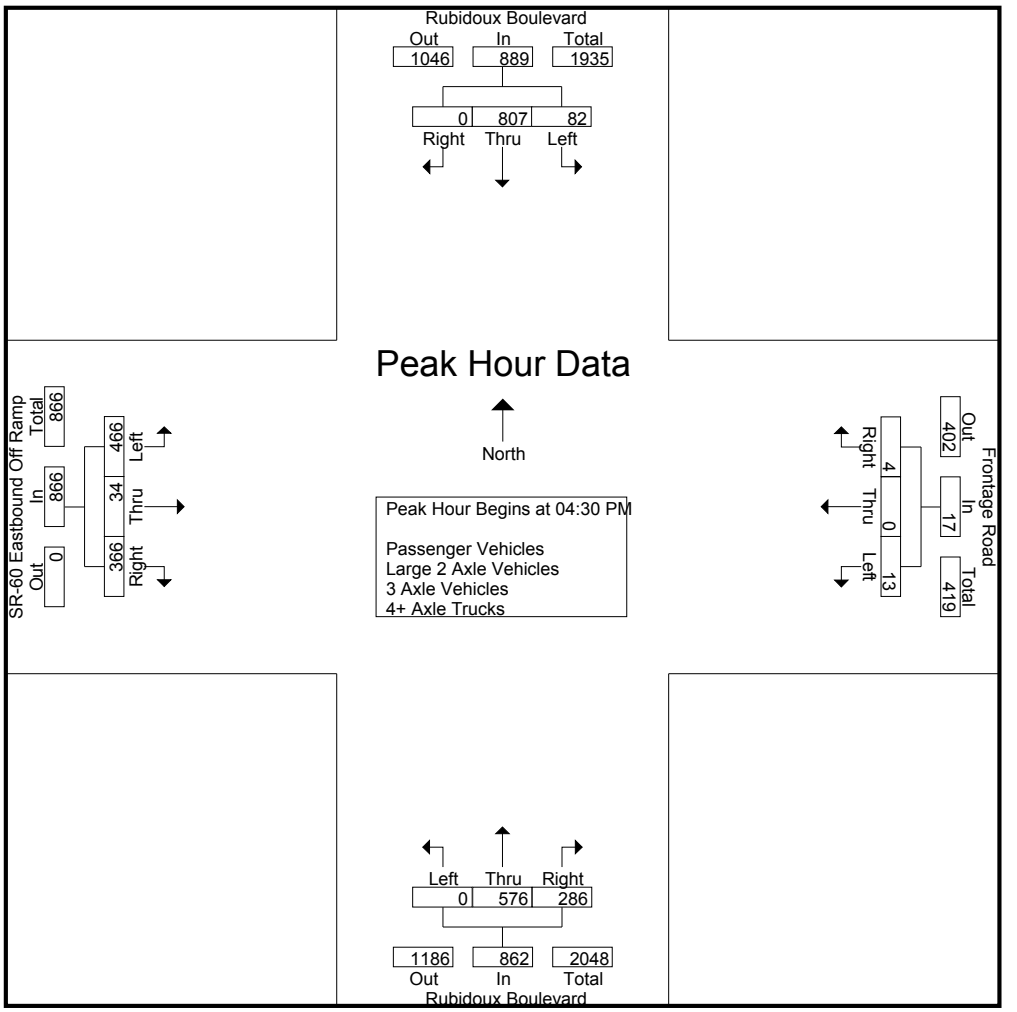
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				03:45 PM				04:30 PM				04:30 PM			
+0 mins.	24	224	0	248	7	0	0	7	0	151	70	**221**	114	8	86	208
+15 mins.	22	183	0	205	5	0	**2**	7	0	144	71	215	118	**10**	**108**	**236**
+30 mins.	15	191	0	206	**9**	0	0	**9**	0	129	**79**	208	**119**	10	89	218
+45 mins.	**26**	**237**	0	**263**	7	0	0	7	0	**152**	66	218	115	6	83	204
Total Volume	87	835	0	922	28	0	2	30	0	576	286	862	466	34	366	866
% App. Total	9.4	90.6	0		93.3	0	6.7		0	66.8	33.2		53.8	3.9	42.3	
PHF	.837	.881	.000	.876	.778	.000	.250	.833	.000	.947	.905	.975	.979	.850	.847	.917

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Weather: Clear

File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	29	169	0	198	3	0	1	4	0	138	73	211	50	6	58	114	527
03:45 PM	28	207	0	235	7	0	0	7	0	145	70	215	66	6	73	145	602
Total	57	376	0	433	10	0	1	11	0	283	143	426	116	12	131	259	1129
04:00 PM	22	185	0	207	5	0	2	7	0	123	64	187	62	6	71	139	540
04:15 PM	22	198	0	220	9	0	0	9	0	108	54	162	67	6	71	144	535
04:30 PM	21	208	0	229	7	0	0	7	0	144	68	212	82	8	83	173	621
04:45 PM	23	221	0	244	1	0	1	2	0	141	71	212	96	10	107	213	671
Total	88	812	0	900	22	0	3	25	0	516	257	773	307	30	332	669	2367
05:00 PM	22	176	0	198	3	0	2	5	0	125	79	204	89	8	87	184	591
05:15 PM	15	187	0	202	2	0	1	3	0	149	65	214	89	6	83	178	597
05:30 PM	24	233	0	257	5	0	0	5	0	125	64	189	75	5	75	155	606
05:45 PM	16	165	0	181	4	0	0	4	0	121	61	182	70	2	80	152	519
Total	77	761	0	838	14	0	3	17	0	520	269	789	323	21	325	669	2313
06:00 PM	17	163	0	180	3	0	1	4	0	125	69	194	79	5	63	147	525
06:15 PM	18	171	0	189	5	0	1	6	0	95	81	176	57	5	61	123	494
Grand Total	257	2283	0	2540	54	0	9	63	0	1539	819	2358	882	73	912	1867	6828
Apprch %	10.1	89.9	0		85.7	0	14.3		0	65.3	34.7		47.2	3.9	48.8		
Total %	3.8	33.4	0	37.2	0.8	0	0.1	0.9	0	22.5	12	34.5	12.9	1.1	13.4	27.3	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	21	208	0	229	**7**	0	0	**7**	0	144	68	212	82	8	83	173	621
04:45 PM	**23**	**221**	0	**244**	1	0	1	2	0	141	71	212	**96**	**10**	**107**	**213**	**671**
05:00 PM	22	176	0	198	3	0	**2**	5	0	125	**79**	204	89	8	87	184	591
05:15 PM	15	187	0	202	2	0	1	3	0	**149**	65	**214**	89	6	83	178	597
Total Volume	81	792	0	873	13	0	4	17	0	559	283	842	356	32	360	748	2480
% App. Total	9.3	90.7	0		76.5	0	23.5		0	66.4	33.6		47.6	4.3	48.1		
PHF	.880	.896	.000	.894	.464	.000	.500	.607	.000	.938	.896	.984	.927	.800	.841	.878	.924

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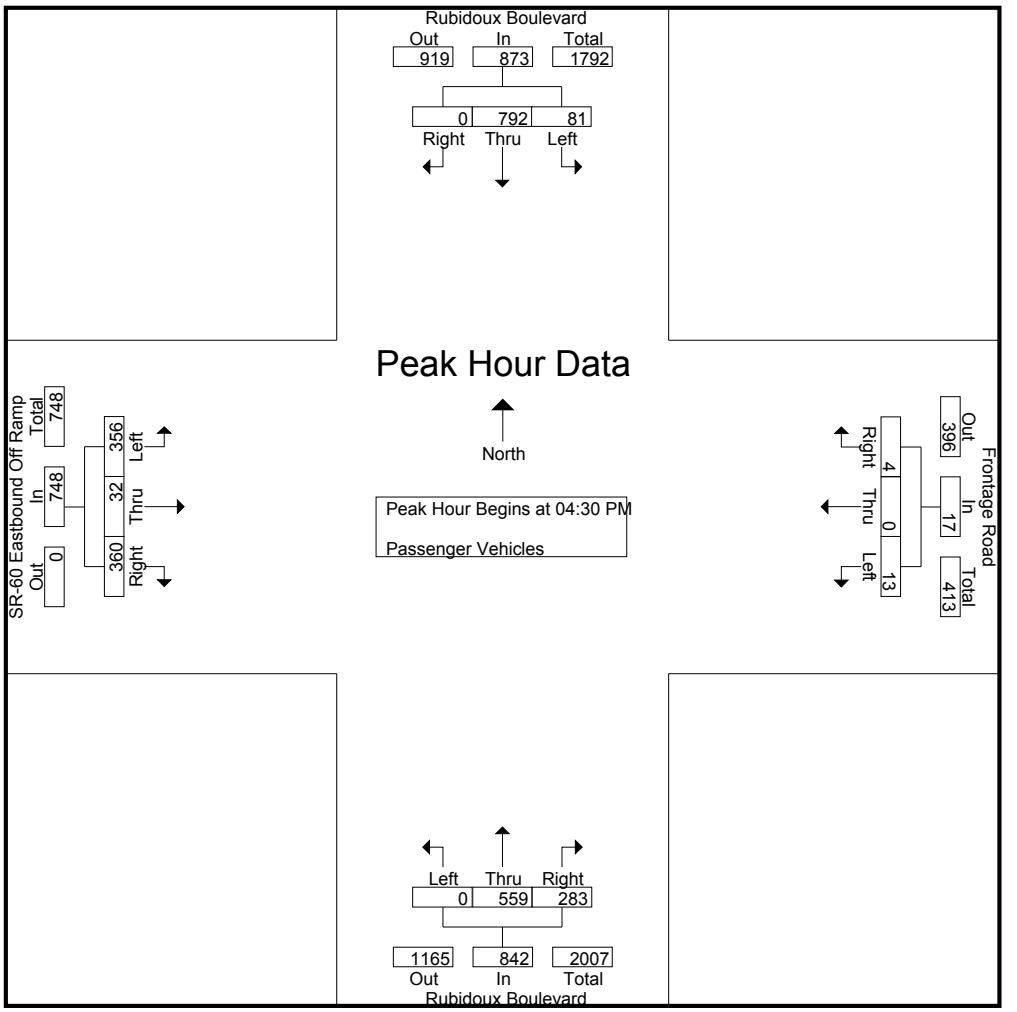
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	21	208	0	229	**7**	0	0	**7**	0	144	68	212	82	8	83	173
+15 mins.	**23**	**221**	0	**244**	1	0	1	2	0	141	71	212	**96**	**10**	**107**	**213**
+30 mins.	22	176	0	198	3	0	**2**	5	0	125	**79**	204	89	8	87	184
+45 mins.	15	187	0	202	2	0	1	3	0	**149**	65	**214**	89	6	83	178
Total Volume	81	792	0	873	13	0	4	17	0	559	283	842	356	32	360	748
% App. Total	9.3	90.7	0		76.5	0	23.5		0	66.4	33.6		47.6	4.3	48.1	
PHF	.880	.896	.000	.894	.464	.000	.500	.607	.000	.938	.896	.984	.927	.800	.841	.878

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File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	2	2	0	4	0	0	0	0	0	5	0	5	11	0	0	11	20
03:45 PM	3	7	0	10	0	0	0	0	0	2	2	4	7	0	0	7	21
Total	5	9	0	14	0	0	0	0	0	7	2	9	18	0	0	18	41
04:00 PM	0	1	0	1	0	0	0	0	0	5	1	6	8	2	0	10	17
04:15 PM	0	4	0	4	0	0	0	0	0	3	2	5	9	1	1	11	20
04:30 PM	0	1	0	1	0	0	0	0	0	4	2	6	11	0	2	13	20
04:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	9	0	1	10	16
Total	0	9	0	9	0	0	0	0	0	15	5	20	37	3	4	44	73
05:00 PM	0	5	0	5	0	0	0	0	0	2	0	2	6	2	2	10	17
05:15 PM	0	4	0	4	0	0	0	0	0	3	1	4	8	0	0	8	16
05:30 PM	0	4	0	4	0	0	0	0	0	3	3	6	8	0	0	8	18
05:45 PM	0	5	0	5	0	0	0	0	0	3	0	3	8	0	0	8	16
Total	0	18	0	18	0	0	0	0	0	11	4	15	30	2	2	34	67
06:00 PM	1	1	0	2	0	0	0	0	0	3	0	3	8	0	0	8	13
06:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2	0	1	3	5
Grand Total	6	38	0	44	0	0	0	0	0	37	11	48	95	5	7	107	199
Apprch %	13.6	86.4	0		0	0	0		0	77.1	22.9		88.8	4.7	6.5		
Total %	3	19.1	0	22.1	0	0	0	0	0	18.6	5.5	24.1	47.7	2.5	3.5	53.8	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	0	0	0	0	**4**	**2**	**6**	**11**	0	**2**	**13**	**20**
04:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	9	0	1	10	16
05:00 PM	0	**5**	0	**5**	0	0	0	0	0	2	0	2	6	**2**	2	10	17
05:15 PM	0	4	0	4	0	0	0	0	0	3	1	4	8	0	0	8	16
Total Volume	0	13	0	13	0	0	0	0	0	12	3	15	34	2	5	41	69
% App. Total	0	100	0		0	0	0		0	80	20		82.9	4.9	12.2		
PHF	.000	.650	.000	.650	.000	.000	.000	.000	.000	.750	.375	.625	.773	.250	.625	.788	.863

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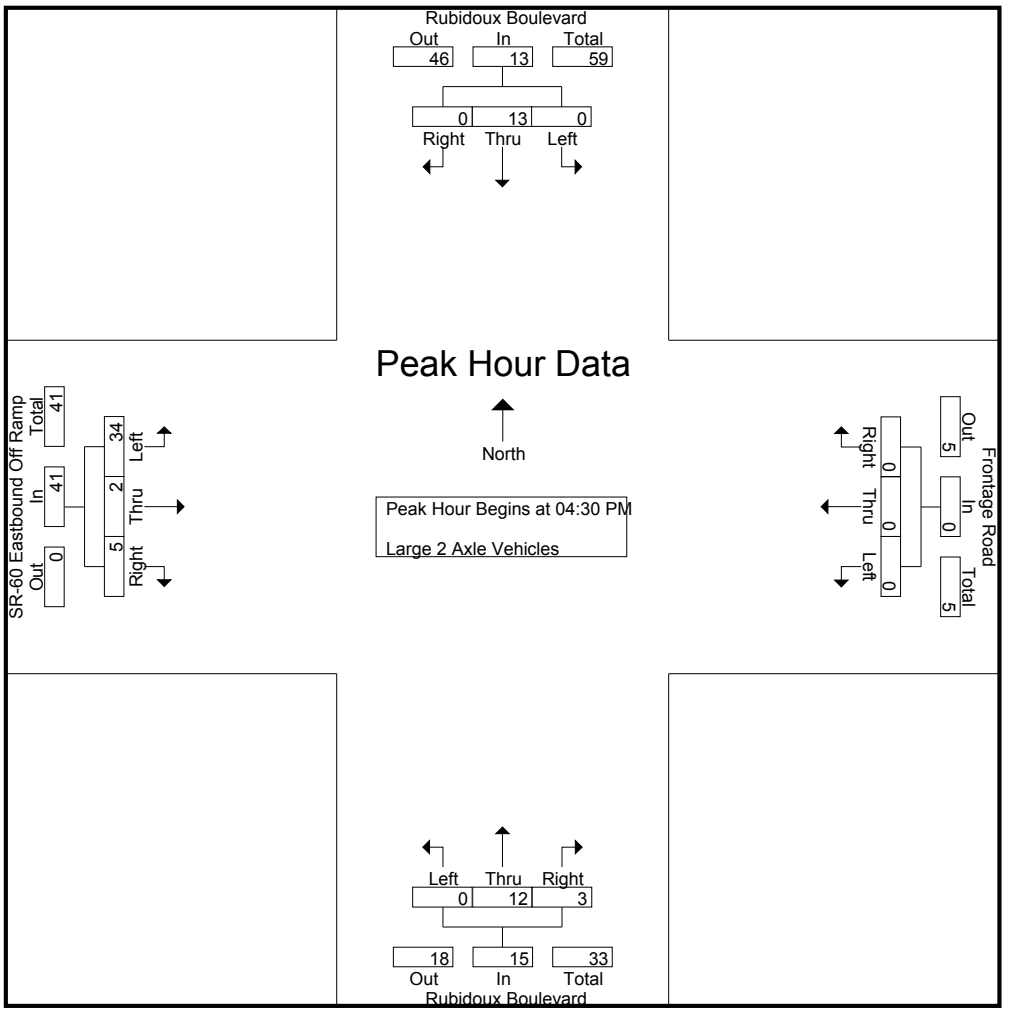
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 EB Off Ramp/Frontage Road
Weather: Clear

File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	**4**	**2**	**6**	**11**	0	**2**	**13**
+15 mins.	0	3	0	3	0	0	0	0	0	3	0	3	9	0	1	10
+30 mins.	0	**5**	0	**5**	0	0	0	0	0	2	0	2	6	**2**	2	10
+45 mins.	0	4	0	4	0	0	0	0	0	3	1	4	8	0	0	8
Total Volume	0	13	0	13	0	0	0	0	0	12	3	15	34	2	5	41
% App. Total	0	100	0		0	0	0		0	80	20		82.9	4.9	12.2	
PHF	.000	.650	.000	.650	.000	.000	.000	.000	.000	.750	.375	.625	.773	.250	.625	.788

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 EB Off Ramp/Frontage Road
Weather: Clear

File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	1	1	0	2	0	0	0	0	0	2	0	2	5	0	0	5	9
03:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	4	0	0	4	10
Total	1	4	0	5	0	0	0	0	0	5	0	5	9	0	0	9	19
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	10	0	1	11	12
04:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	3	0	2	5	7
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	10	0	1	11	13
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	8	0	0	8	9
Total	1	0	0	1	0	0	0	0	0	4	1	5	31	0	4	35	41
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	8	0	0	8	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	2	4
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	7	0	1	8	9
Total	0	0	0	0	0	0	0	0	0	4	0	4	22	0	1	23	27
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Grand Total	2	5	0	7	0	0	0	0	0	13	1	14	65	0	5	70	91
Apprch %	28.6	71.4	0		0	0	0		0	92.9	7.1		92.9	0	7.1		
Total %	2.2	5.5	0	7.7	0	0	0	0	0	14.3	1.1	15.4	71.4	0	5.5	76.9	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**10**	0	**1**	**11**	**13**
04:45 PM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	8	0	0	8	9
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	8	0	0	8	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
Total Volume	1	0	0	1	0	0	0	0	0	3	0	3	31	0	1	32	36
% App. Total	100	0	0		0	0	0		0	100	0		96.9	0	3.1		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.775	.000	.250	.727	.692

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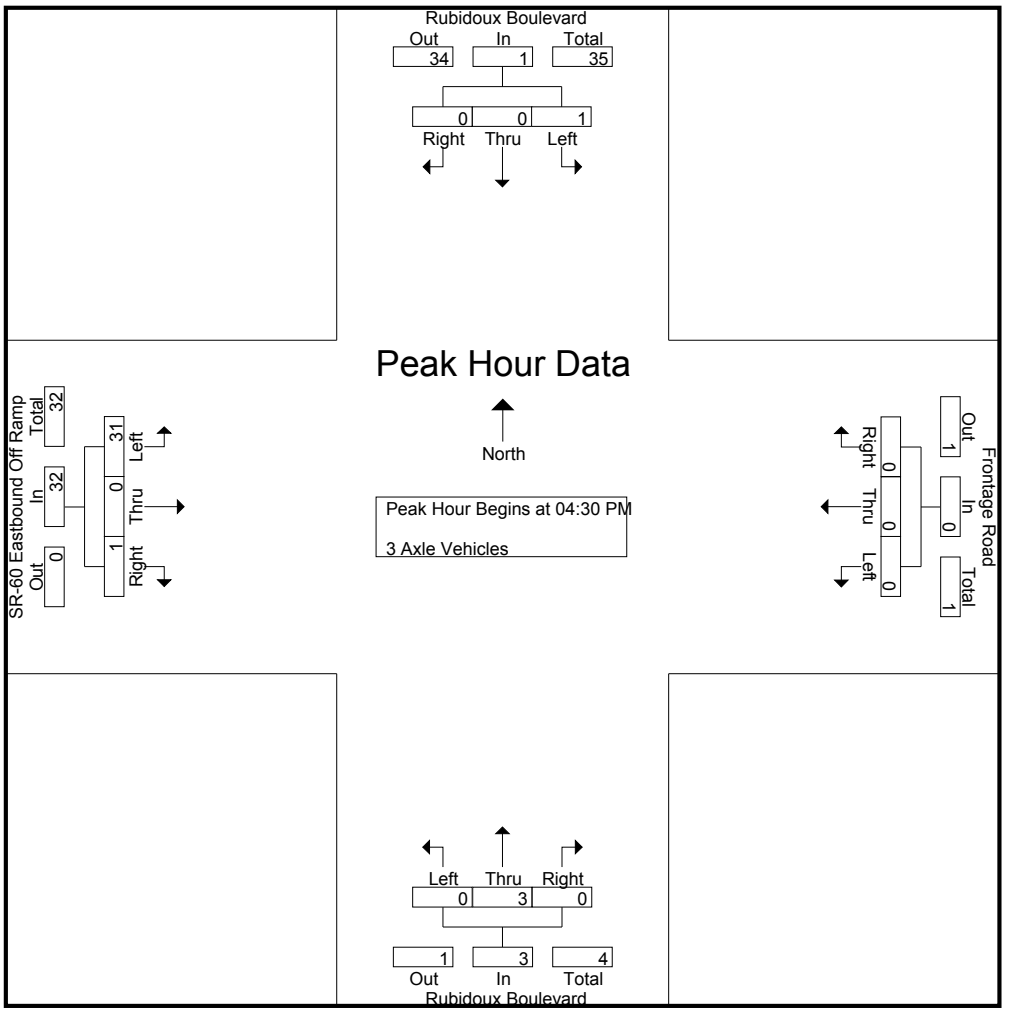
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 EB Off Ramp/Frontage Road
Weather: Clear

File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**10**	0	**1**	**11**
+15 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	8	0	0	8
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	8	0	0	8
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
Total Volume	1	0	0	1	0	0	0	0	0	3	0	3	31	0	1	32
% App. Total	100	0	0		0	0	0		0	100	0		96.9	0	3.1	
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.775	.000	.250	.727

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City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 EB Off Ramp/Frontage Road
Weather: Clear

File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	20	1	0	21	23
03:45 PM	2	1	0	3	0	0	0	0	0	1	0	1	24	0	0	24	28
Total	3	1	0	4	0	0	0	0	0	2	0	2	44	1	0	45	51
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	11	2	0	13	14
04:15 PM	2	1	0	3	0	0	0	0	0	1	0	1	9	0	0	9	13
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	11	0	0	11	12
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
Total	2	1	0	3	0	0	0	0	0	3	0	3	36	2	0	38	44
05:00 PM	0	2	0	2	0	0	0	0	0	1	0	1	16	0	0	16	19
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	13
05:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	15	0	0	15	18
05:45 PM	0	1	0	1	0	0	0	0	0	2	1	3	10	1	1	12	16
Total	2	3	0	5	0	0	0	0	0	4	1	5	54	1	1	56	66
06:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	18	0	1	19	21
06:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	12	1	0	13	16
Grand Total	8	5	0	13	0	0	0	0	0	11	3	14	164	5	2	171	198
Apprch %	61.5	38.5	0		0	0	0		0	78.6	21.4		95.9	2.9	1.2		
Total %	4	2.5	0	6.6	0	0	0	0	0	5.6	1.5	7.1	82.8	2.5	1	86.4	

	Rubidoux Boulevard Southbound				Frontage Road Westbound				Rubidoux Boulevard Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	11	0	0	11	12
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
05:00 PM	0	**2**	0	**2**	0	0	0	0	0	1	0	1	**16**	0	0	**16**	**19**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	13
Total Volume	0	2	0	2	0	0	0	0	0	2	0	2	45	0	0	45	49
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.703	.000	.000	.703	.645

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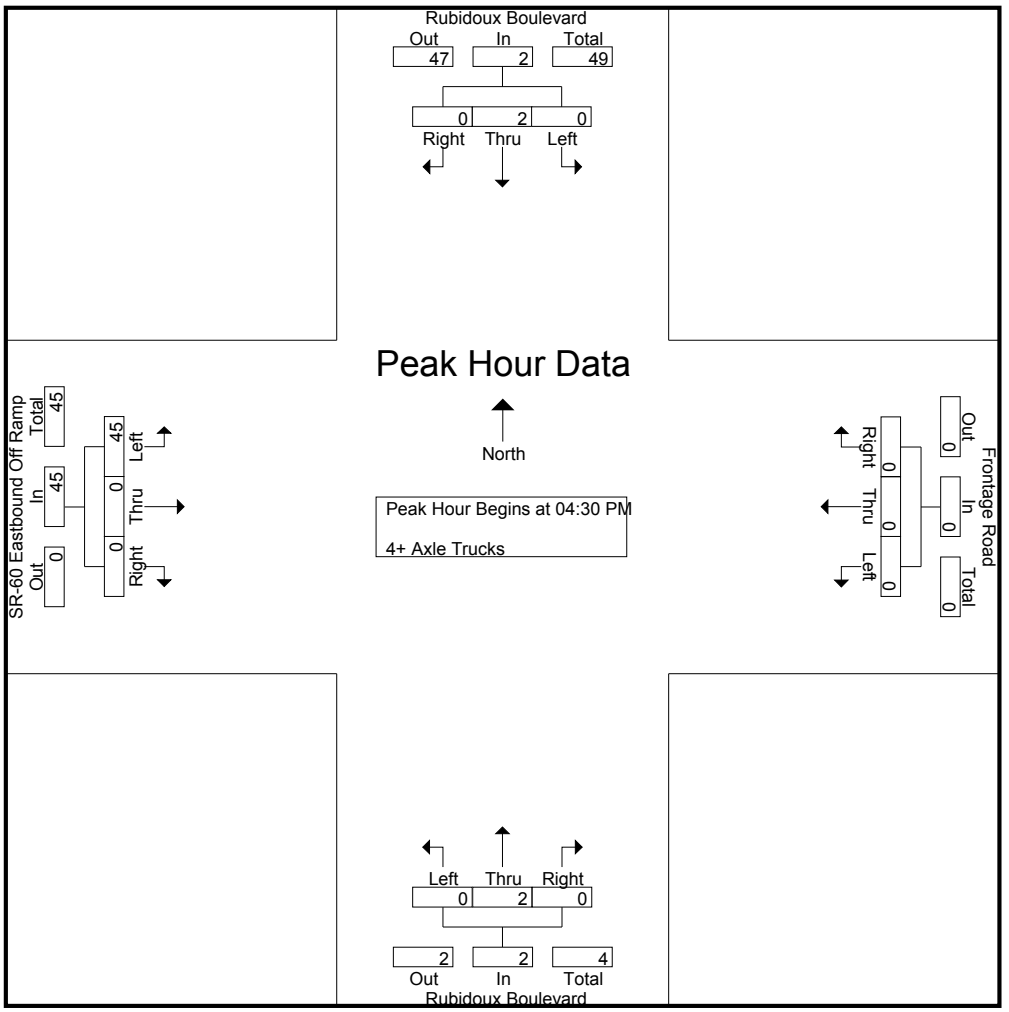
City of Jurupa Valley
N/S: Rubidoux Boulevard
E/W: SR-60 EB Off Ramp/Frontage Road
Weather: Clear

File Name : 04_JVYRUFRPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	11	0	0	11
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
+30 mins.	0	**2**	0	**2**	0	0	0	0	0	1	0	1	**16**	0	0	**16**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13
Total Volume	0	2	0	2	0	0	0	0	0	2	0	2	45	0	0	45
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.703	.000	.000	.703

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: Frontage

PROJECT #: SC1439
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	105	110	34	96	0	67	2	27	3	0	0	444	0	0	0	0	0
	12:15 PM	0	105	86	32	121	0	75	2	32	0	0	0	453	0	0	0	0	0
	12:30 PM	0	122	85	30	161	0	55	3	31	3	0	0	490	0	0	0	0	0
	12:45 PM	0	109	99	33	160	0	42	3	34	2	0	3	485	0	0	0	0	0
	1:00 PM	0	120	97	39	139	0	65	2	41	4	0	1	508	0	0	0	0	0
	1:15 PM	0	125	98	36	141	0	62	4	27	3	0	0	496	0	0	0	0	0
	1:30 PM	0	98	107	25	134	0	61	9	49	2	0	0	485	0	0	0	0	0
	1:45 PM	0	115	86	41	141	0	71	3	60	4	0	0	521	0	0	0	0	0
	VOLUMES	0	899	768	270	1,093	0	498	28	301	21	0	4	3,882	0	0	0	0	0
	APPROACH %	0%	54%	46%	20%	80%	0%	60%	3%	36%	84%	0%	16%						
	APP/DEPART	1,667	/	1,401	1,363	/	1,415	827	/	1,066	25	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	458	388	141	555	0	259	18	177	13	0	1	2,010					
	APPROACH %	0%	54%	46%	20%	80%	0%	57%	4%	39%	93%	0%	7%						
	PEAK HR FACTOR		0.948			0.956			0.847			0.700		0.964					
	APP/DEPART	846	/	718	696	/	745	454	/	547	14	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

Frontage WEST SIDE EAST SIDE **Frontage**

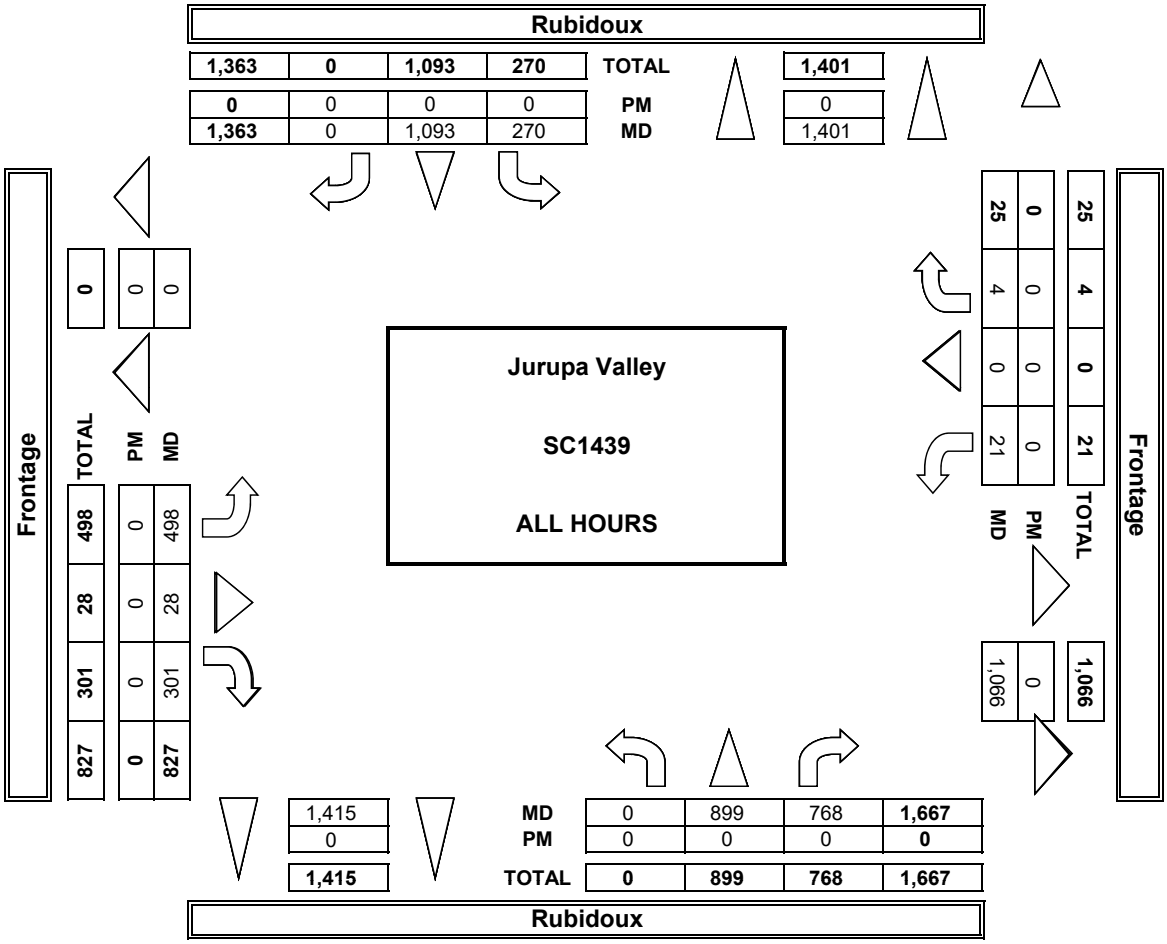
SOUTH SIDE

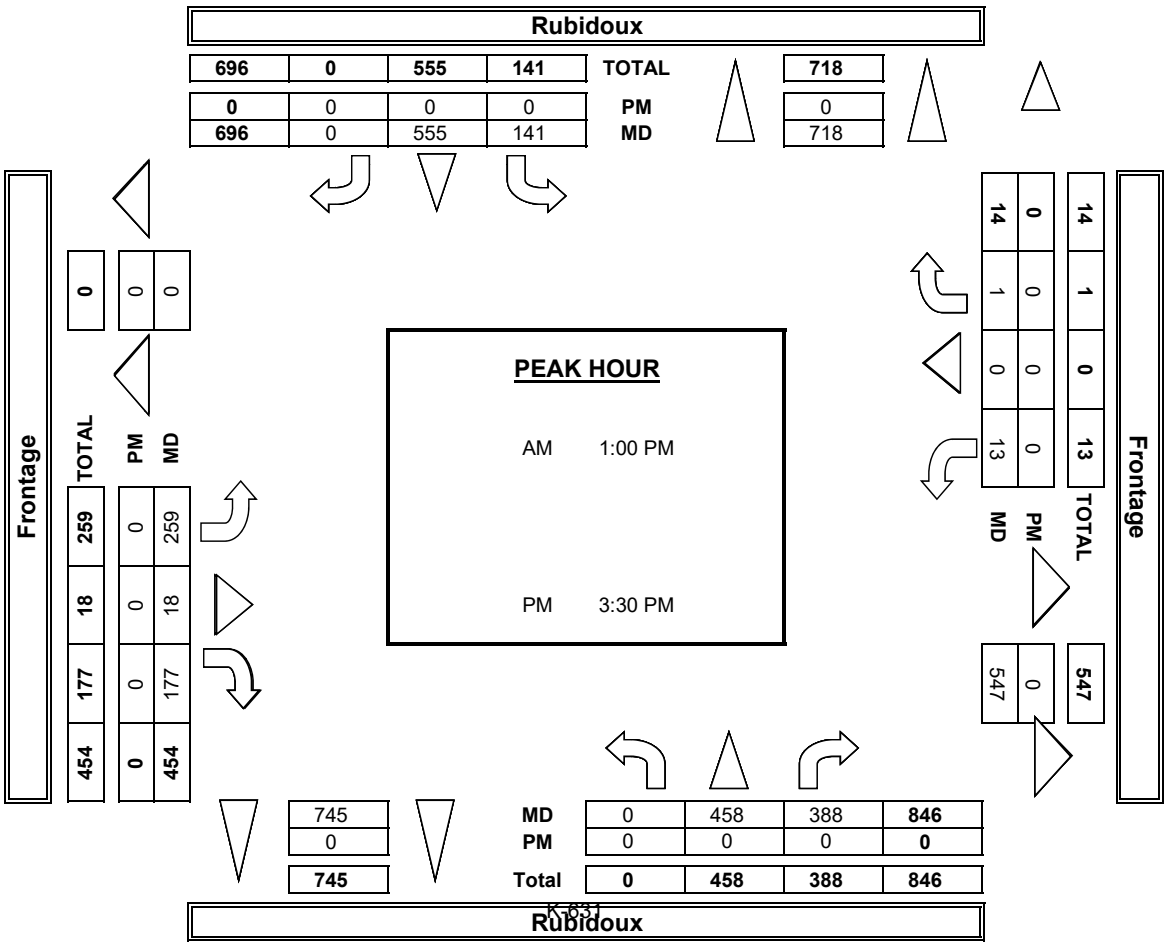
Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND (Rubidoux)			SOUTHBOUND (Rubidoux)			EASTBOUND (Frontage)			WESTBOUND (Frontage)			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	116	119	37	103	0	122	4	28	3	0	0	531
	8:15 AM	0	111	93	39	130	0	140	4	33	0	0	0	548
	8:30 AM	0	130	86	35	169	0	98	3	34	3	0	0	557
	8:45 AM	0	115	101	38	165	0	62	5	38	2	0	3	527
	9:00 AM	0	127	100	42	144	0	101	6	44	4	0	1	568
	9:15 AM	0	136	100	40	150	0	113	4	31	3	0	0	575
	9:30 AM	0	103	114	34	143	0	93	11	53	2	0	0	551
	9:45 AM	0	128	88	45	148	0	123	3	63	5	0	0	602
	VOLUMES	0	965	799	308	1,150	0	851	40	321	22	0	4	4,457
	APPROACH %	0%	55%	45%	21%	79%	0%	70%	3%	26%	84%	0%	16%	
	APP/DEPART	1,763	/	1,820	1,457	/	1,492	1,212	/	1,146	26	/	0	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	0	494	401	160	584	0	430	24	190	14	0	1	2,295
	APPROACH %	0%	55%	45%	22%	78%	0%	67%	4%	29%	93%	0%	7%	
	PEAK HR FACTOR		0.951			0.964			0.852			0.725		0.954
	APP/DEPART	894	/	924	744	/	787	643	/	584	15	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Rubidoux

NORTH SIDE

Frontage WEST SIDE EAST SIDE **Frontage**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

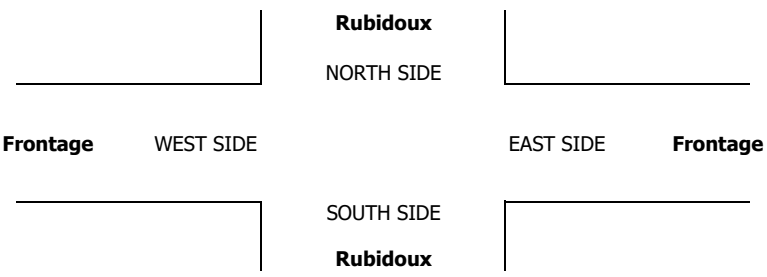
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	95	103	32	88	0	29	1	26	3	0	0	377	0	0	0	0	0
	12:15 PM	0	97	80	27	111	0	37	1	31	0	0	0	384	0	0	0	0	0
	12:30 PM	0	112	83	25	151	0	30	3	26	3	0	0	433	0	0	0	0	0
	12:45 PM	0	102	96	30	153	0	24	2	29	2	0	3	441	0	0	0	0	0
	1:00 PM	0	112	94	37	134	0	44	0	38	4	0	1	464	0	0	0	0	0
	1:15 PM	0	114	96	32	131	0	29	4	22	3	0	0	431	0	0	0	0	0
	1:30 PM	0	90	101	20	124	0	39	6	46	2	0	0	428	0	0	0	0	0
	1:45 PM	0	104	84	38	132	0	36	3	58	3	0	0	458	0	0	0	0	0
	VOLUMES	0	826	737	241	1,024	0	268	20	276	20	0	4	3,416	0	0	0	0	0
	APPROACH %	0%	53%	47%	19%	81%	0%	48%	4%	49%	83%	0%	17%						
	APP/DEPART	1,563	/	1,098	1,265	/	1,320	564	/	998	24	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	420	375	127	521	0	148	13	164	12	0	1	1,781					
	APPROACH %	0%	53%	47%	20%	80%	0%	46%	4%	50%	92%	0%	8%						
	PEAK HR FACTOR		0.946			0.947			0.838			0.650		0.960					
	APP/DEPART	795	/	569	648	/	697	325	/	515	13	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

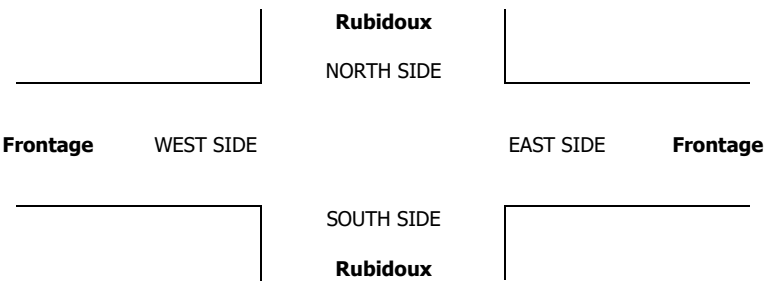
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	5	2	0	4	0	7	0	0	0	0	0	18	0	0	0	0	0
	12:15 PM	0	4	3	1	5	0	2	0	1	0	0	0	16	0	0	0	0	0
	12:30 PM	0	6	2	3	7	0	0	0	5	0	0	0	23	0	0	0	0	0
	12:45 PM	0	3	3	1	5	0	6	0	3	0	0	0	21	0	0	0	0	0
	1:00 PM	0	4	2	0	3	0	3	0	2	0	0	0	14	0	0	0	0	0
	1:15 PM	0	5	1	3	5	0	2	0	3	0	0	0	19	0	0	0	0	0
	1:30 PM	0	6	3	1	6	0	4	3	1	0	0	0	24	0	0	0	0	0
	1:45 PM	0	4	1	0	4	0	6	0	1	1	0	0	17	0	0	0	0	0
	VOLUMES	0	37	17	9	39	0	30	3	16	1	0	0	152	0	0	0	0	0
	APPROACH %	0%	69%	31%	19%	81%	0%	61%	6%	33%	100%	0%	0%						
	APP/DEPART	54	/	67	48	/	56	49	/	29	1	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	18	9	5	19	0	15	3	9	0	0	0	78					
	APPROACH %	0%	67%	33%	21%	79%	0%	56%	11%	33%	0%	0%	0%						
	PEAK HR FACTOR		0.750			0.600			0.750			0.000		0.813					
	APP/DEPART	27	/	33	24	/	28	27	/	17	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

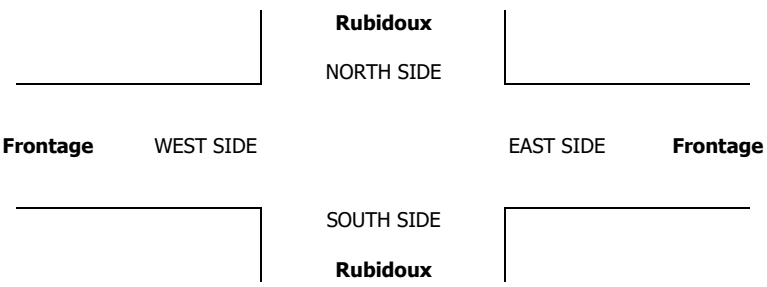
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	2	2	1	2	0	11	0	1	0	0	0	19	0	0	0	0	0
	12:15 PM	0	2	1	2	4	0	7	0	0	0	0	0	16	0	0	0	0	0
	12:30 PM	0	2	0	1	1	0	7	0	0	0	0	0	11	0	0	0	0	0
	12:45 PM	0	2	0	0	1	0	7	0	1	0	0	0	11	0	0	0	0	0
	1:00 PM	0	2	0	1	0	0	2	0	0	0	0	0	5	0	0	0	0	0
	1:15 PM	0	1	1	0	2	0	12	0	0	0	0	0	16	0	0	0	0	0
	1:30 PM	0	2	1	0	1	0	6	0	1	0	0	0	11	0	0	0	0	0
	1:45 PM	0	2	0	2	2	0	9	0	0	0	0	0	15	0	0	0	0	0
	VOLUMES	0	15	5	7	13	0	61	0	3	0	0	0	104	0	0	0	0	0
	APPROACH %	0%	75%	25%	35%	65%	0%	95%	0%	5%	0%	0%	0%						
	APP/DEPART	20	/	76	20	/	16	64	/	12	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	8	3	4	8	0	32	0	2	0	0	0	57					
	APPROACH %	0%	73%	27%	33%	67%	0%	94%	0%	6%	0%	0%	0%						
	PEAK HR FACTOR		0.688			0.500			0.708			0.000		0.750					
	APP/DEPART	11	/	40	12	/	10	34	/	7	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

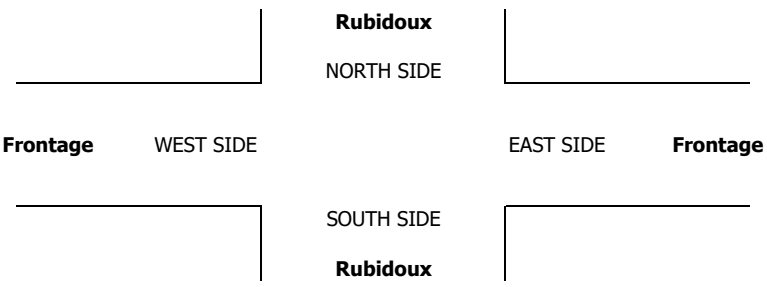
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	3	3	1	1	0	20	1	0	0	0	0	29	0	0	0	0	0
12:15 PM	0	0	2	2	1	0	28	1	0	0	0	0	34	0	0	0	0	0
12:30 PM	0	1	0	1	1	0	18	0	0	0	0	0	21	0	0	0	0	0
12:45 PM	0	0	0	2	0	0	5	1	0	0	0	0	8	0	0	0	0	0
1:00 PM	0	1	1	1	1	0	16	2	1	0	0	0	23	0	0	0	0	0
1:15 PM	0	2	0	1	1	0	19	0	0	0	0	0	23	0	0	0	0	0
1:30 PM	0	0	2	4	2	0	12	0	1	0	0	0	21	0	0	0	0	0
1:45 PM	0	4	0	1	0	0	20	0	1	0	0	0	26	0	0	0	0	0
VOLUMES	0	11	8	13	7	0	138	5	3	0	0	0	185	0	0	0	0	0
APPROACH %	0%	58%	42%	65%	35%	0%	95%	3%	2%	0%	0%	0%						
APP/DEPART	19	/	149	20	/	10	146	/	26	0	/	0	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	0	7	3	7	4	0	67	2	3	0	0	0	93					
APPROACH %	0%	70%	30%	64%	36%	0%	93%	3%	4%	0%	0%	0%						
PEAK HR FACTOR		0.625			0.458			0.857			0.000		0.894					
APP/DEPART	10	/	74	11	/	7	72	/	12	0	/	0	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

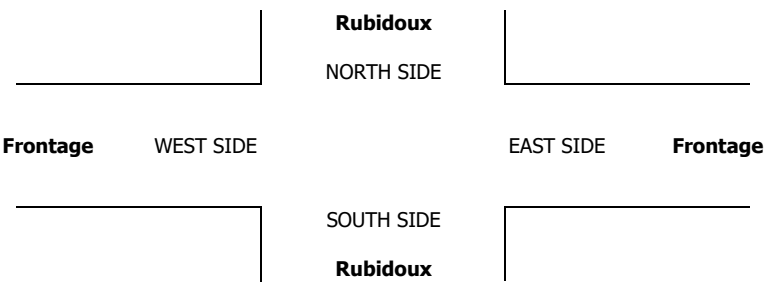
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

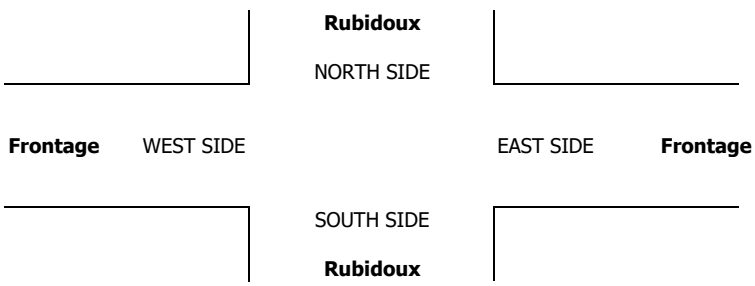
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	15
WEDNESDAY	EAST & WEST:	Frontage	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Frontage			WESTBOUND Frontage				U-TURNS				
LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
12:15 PM	0	2	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
12:45 PM	0	2	0	0	1	0	0	0	1	0	0	0	4	0	0	0	0	0
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
1:15 PM	0	3	0	0	2	0	0	0	2	0	0	0	7	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
1:45 PM	0	1	1	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0
VOLUMES	0	10	1	0	10	0	1	0	3	0	0	0	25	0	0	0	0	0
APPROACH %	0%	91%	9%	0%	100%	0%	25%	0%	75%	0%	0%	0%						
APP/DEPART	11	/	11	10	/	13	4	/	1	0	/	0	0					
BEGIN PEAK HR	12:30 PM																	
VOLUMES	0	5	1	0	7	0	0	0	2	0	0	0	15					
APPROACH %	0%	83%	17%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
PEAK HR FACTOR	0.500			0.583			0.250			0.000			0.536					
APP/DEPART	6	/	5	7	/	9	2	/	1	0	/	0	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR	3:30 PM																	
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: 34th

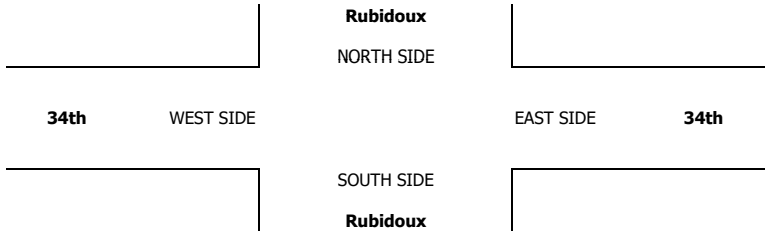
PROJECT #: SC1321
LOCATION #: 28
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ | ◄ W | E ► | S ▼

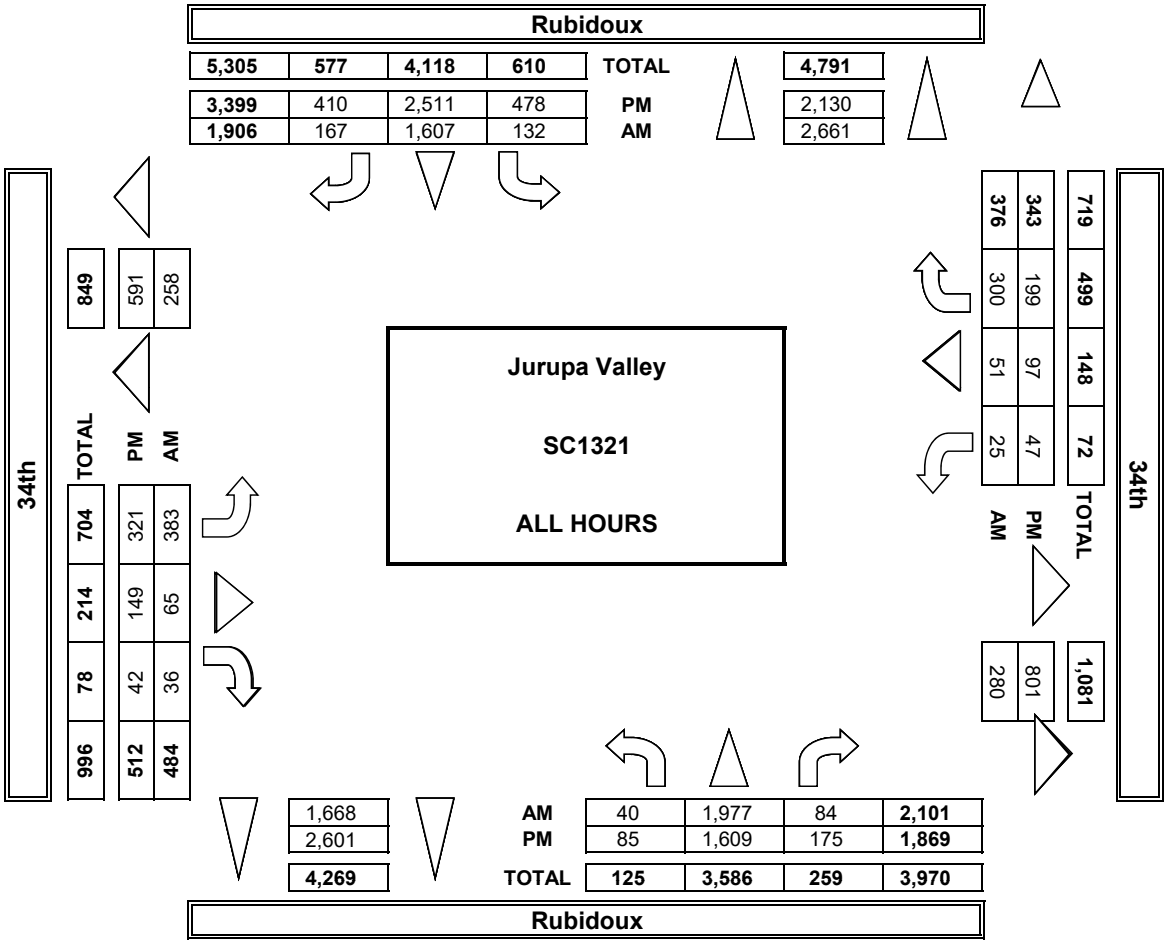
		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	1	191	0	8	102	7	44	3	0	1	4	35	396	0	0	0	0	0
	6:45 AM	0	157	5	12	158	10	32	6	1	6	8	22	417	0	0	0	0	0
	7:00 AM	0	166	4	6	129	12	40	5	0	2	4	35	403	0	0	0	0	0
	7:15 AM	1	197	6	9	147	7	39	4	2	0	4	29	445	0	0	0	0	0
	7:30 AM	5	197	6	11	135	19	43	5	2	5	4	28	460	0	0	0	0	0
	7:45 AM	9	161	17	17	189	23	32	13	6	2	6	17	492	0	1	0	0	1
	8:00 AM	10	152	17	11	132	20	35	9	9	3	4	26	428	0	0	0	0	0
	8:15 AM	1	145	7	17	136	13	23	2	2	0	7	14	367	0	0	0	0	0
	8:30 AM	5	163	7	17	112	13	22	5	1	2	3	20	370	0	0	0	0	0
	8:45 AM	4	165	4	13	128	16	26	4	1	4	3	23	391	0	0	0	0	0
	9:00 AM	2	129	5	7	123	11	31	5	9	0	0	26	348	0	0	0	0	0
	9:15 AM	2	154	6	4	116	16	16	4	3	0	4	25	350	0	0	0	0	0
	VOLUMES	40	1,977	84	132	1,607	167	383	65	36	25	51	300	4,867	0	1	0	0	1
	APPROACH %	2%	94%	4%	7%	84%	9%	79%	13%	7%	7%	14%	80%						
	APP/DEPART	2,101	/	2,661	1,906	/	1,668	484	/	280	376	/	258	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	25	707	46	48	603	69	149	31	19	10	18	100	1,825					
	APPROACH %	3%	91%	6%	7%	84%	10%	75%	16%	10%	8%	14%	78%						
	PEAK HR FACTOR		0.935			0.786			0.939			0.865		0.927					
	APP/DEPART	778	/	957	720	/	632	199	/	124	128	/	112	0					
PM	03:30 PM	10	132	17	31	175	25	35	20	8	3	24	18	498	0	0	0	0	0
	3:45 PM	10	150	12	30	225	35	33	17	5	2	7	9	535	0	0	0	0	0
	4:00 PM	3	138	11	40	207	31	23	11	4	3	5	14	490	0	0	0	0	0
	4:15 PM	8	129	16	43	208	29	20	6	1	3	9	14	486	0	0	0	0	0
	4:30 PM	8	142	17	41	202	41	26	11	3	6	6	20	523	0	0	0	0	0
	4:45 PM	3	146	14	47	241	38	39	12	3	7	6	18	574	0	0	0	0	0
	5:00 PM	6	123	17	43	198	30	27	10	4	6	4	16	484	0	0	0	0	0
	5:15 PM	10	146	21	46	194	33	23	19	2	5	9	12	520	0	1	0	0	1
	5:30 PM	3	130	8	50	239	37	16	9	6	1	11	17	527	0	0	0	0	0
	5:45 PM	8	113	18	47	254	42	31	12	1	2	6	20	554	0	0	0	0	0
	6:00 PM	9	146	13	28	202	40	30	14	3	4	8	21	518	0	0	0	0	0
	6:15 PM	7	114	11	32	166	29	18	8	2	5	2	20	414	1	0	0	0	1
	VOLUMES	85	1,609	175	478	2,511	410	321	149	42	47	97	199	6,123	1	1	0	0	2
	APPROACH %	5%	86%	9%	14%	74%	12%	63%	29%	8%	14%	28%	58%						
	APP/DEPART	1,869	/	2,130	3,399	/	2,601	512	/	801	343	/	591	0					
	BEGIN PEAK HR		5:15 PM																
	VOLUMES	30	535	60	171	889	152	100	54	12	12	34	70	2,119					
	APPROACH %	5%	86%	10%	14%	73%	13%	60%	33%	7%	10%	29%	60%						
	PEAK HR FACTOR		0.883			0.883			0.883			0.879		0.956					
	APP/DEPART	625	/	706	1,212	/	913	166	/	284	116	/	216	0					

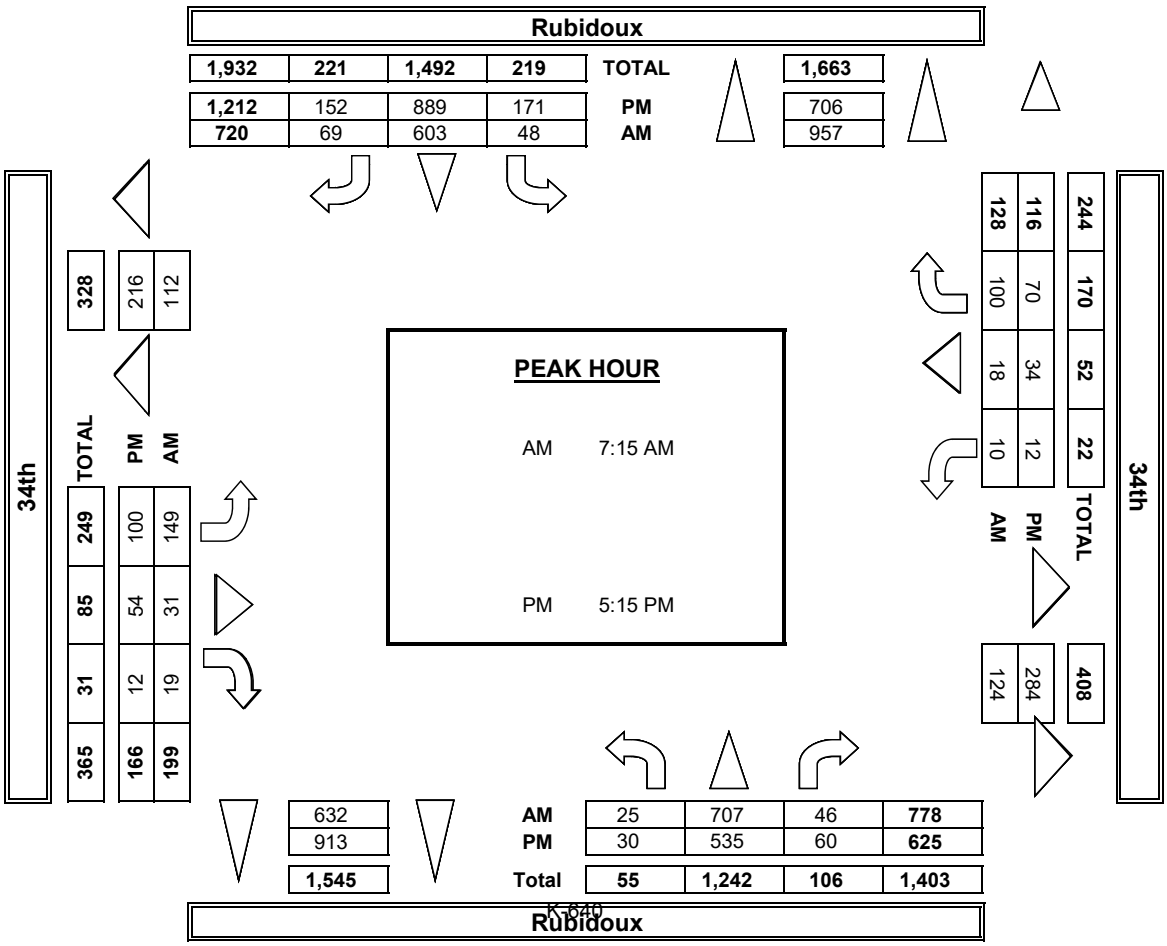


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





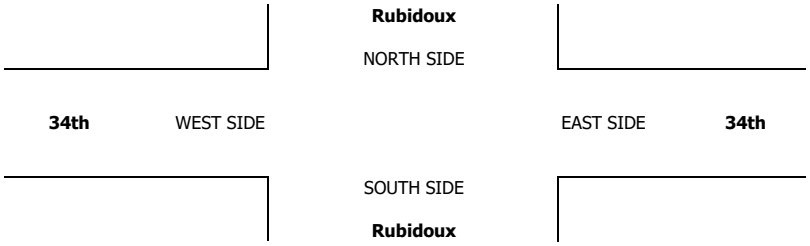
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	6:30 AM	2	199	0	8	117	7	45	3	0	1	4	35	420
	6:45 AM	0	167	5	15	170	11	33	6	1	6	9	23	445
	7:00 AM	0	175	4	7	134	13	41	5	0	2	4	35	419
	7:15 AM	1	205	6	9	155	8	40	4	2	0	5	29	463
	7:30 AM	5	205	6	11	143	20	44	6	2	5	4	28	478
	7:45 AM	9	169	17	18	198	24	33	13	6	2	6	17	511
	8:00 AM	11	158	18	11	143	20	39	9	9	3	4	26	450
	8:15 AM	1	154	7	17	147	13	24	2	2	0	7	14	387
	8:30 AM	5	171	7	19	121	13	22	5	1	2	3	21	389
	8:45 AM	4	173	4	13	137	16	27	4	1	4	3	24	409
	9:00 AM	2	140	5	7	138	11	32	5	9	0	0	27	374
	9:15 AM	2	168	6	4	125	16	17	4	3	0	4	25	373
	VOLUMES	42	2,082	85	138	1,723	171	394	66	36	25	53	303	5,117
	APPROACH %	2%	94%	4%	7%	85%	8%	79%	13%	7%	7%	14%	80%	
	APP/DEPART	2,209	/	2,779	2,032	/	1,784	496	/	289	381	/	266	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	26	737	47	49	637	72	155	32	19	10	19	100	1,902
	APPROACH %	3%	91%	6%	6%	84%	9%	75%	16%	9%	8%	15%	78%	
	PEAK HR FACTOR		0.937			0.792			0.912			0.872		0.930
	APP/DEPART	810	/	992	757	/	666	206	/	128	129	/	117	0
PM	03:30 PM	12	144	17	32	181	26	36	20	8	3	24	18	521
	3:45 PM	10	166	12	30	238	36	35	17	5	2	7	9	566
	4:00 PM	3	146	11	40	213	32	23	11	4	3	6	14	506
	4:15 PM	8	140	16	45	211	30	21	6	1	3	10	15	505
	4:30 PM	9	151	17	42	208	43	27	12	3	6	6	20	541
	4:45 PM	3	150	14	47	251	40	41	13	3	7	7	19	593
	5:00 PM	7	129	17	43	212	31	27	10	4	6	4	16	505
	5:15 PM	10	152	21	47	200	34	24	19	2	5	9	12	533
	5:30 PM	3	135	8	51	245	37	16	10	6	1	11	17	538
	5:45 PM	8	115	18	48	260	43	31	12	1	2	6	20	563
	6:00 PM	10	154	14	29	211	40	32	14	3	4	8	21	539
	6:15 PM	7	121	11	32	171	30	18	8	2	5	2	21	426
	VOLUMES	89	1,701	176	484	2,598	419	328	151	42	47	100	201	6,333
	APPROACH %	5%	87%	9%	14%	74%	12%	63%	29%	8%	14%	29%	58%	
	APP/DEPART	1,965	/	2,229	3,500	/	2,687	521	/	810	347	/	607	0
	BEGIN PEAK HR		5:15 PM											
	VOLUMES	31	555	61	174	915	153	102	55	12	12	34	70	2,172
	APPROACH %	5%	86%	9%	14%	74%	12%	61%	32%	7%	10%	29%	60%	
	PEAK HR FACTOR		0.886			0.888			0.869			0.879		0.965
	APP/DEPART	647	/	727	1,241	/	939	169	/	289	116	/	218	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM													
6:30 AM	0	180	0	8	87	7	43	3	0	1	4	35	368
6:45 AM	0	148	5	9	144	9	31	6	1	6	7	21	387
7:00 AM	0	155	4	5	122	11	38	5	0	2	4	35	381
7:15 AM	1	186	6	9	138	6	37	4	2	0	3	29	421
7:30 AM	5	188	6	11	127	18	42	4	2	5	4	28	440
7:45 AM	9	152	17	16	181	22	30	13	6	2	6	17	471
8:00 AM	9	144	16	11	120	20	31	9	9	3	4	26	402
8:15 AM	1	134	7	17	122	13	22	2	2	0	7	14	341
8:30 AM	5	153	7	15	102	13	22	5	1	2	3	19	347
8:45 AM	4	155	4	13	115	16	25	4	1	4	3	22	366
9:00 AM	2	118	5	7	110	11	30	5	9	0	0	25	322
9:15 AM	2	138	6	4	103	16	15	4	3	0	4	25	320
VOLUMES	38	1,851	83	125	1,471	162	366	64	36	25	49	296	4,566
APPROACH %	2%	94%	4%	7%	84%	9%	79%	14%	8%	7%	13%	80%	
APP/DEPART	1,972	/	2,514	1,758	/	1,532	466	/	271	370	/	249	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	24	670	45	46	566	66	140	30	19	10	17	100	1,734
APPROACH %	3%	91%	6%	7%	83%	10%	74%	16%	10%	8%	13%	79%	
PEAK HR FACTOR		0.928			0.775			0.964			0.858		0.920
APP/DEPART	739	/	911	679	/	595	189	/	121	127	/	107	0
PM													
03:30 PM	8	119	17	30	169	24	33	20	8	3	24	18	473
3:45 PM	10	132	12	30	210	34	31	17	5	2	7	9	499
4:00 PM	3	128	11	40	197	29	23	11	4	3	4	14	467
4:15 PM	8	114	16	39	203	27	19	6	1	3	8	13	457
4:30 PM	7	132	17	40	192	39	25	10	3	6	6	20	497
4:45 PM	3	140	14	47	229	35	36	10	3	7	4	17	545
5:00 PM	5	113	17	43	188	29	27	10	4	6	4	16	462
5:15 PM	10	140	21	45	186	32	22	19	2	5	9	12	503
5:30 PM	3	125	8	49	232	37	16	8	6	1	11	17	513
5:45 PM	8	110	18	46	246	41	31	12	1	2	6	20	541
6:00 PM	8	136	12	26	194	40	27	14	3	4	8	21	493
6:15 PM	7	104	11	32	159	28	18	8	2	5	2	19	395
VOLUMES	80	1,493	174	467	2,405	395	308	145	42	47	93	196	5,845
APPROACH %	5%	85%	10%	14%	74%	12%	62%	29%	8%	14%	28%	58%	
APP/DEPART	1,747	/	1,998	3,267	/	2,495	495	/	785	336	/	567	0
BEGIN PEAK HR		5:15 PM											
VOLUMES	29	511	59	165	858	150	96	53	12	12	34	70	2,050
APPROACH %	5%	85%	10%	14%	73%	13%	60%	33%	7%	10%	29%	60%	
PEAK HR FACTOR		0.876			0.881			0.915			0.879		0.947
APP/DEPART	599	/	678	1,174	/	882	161	/	277	116	/	213	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
1	1	0	0	2

Rubidoux

NORTH SIDE

34th WEST SIDE EAST SIDE **34th**

SOUTH SIDE

Rubidoux

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

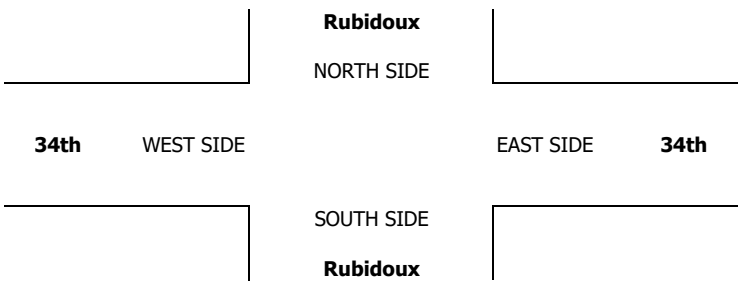
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	9	0	0	7	0	0	0	0	0	0	0	16	0	0	0	0	0
	6:45 AM	0	2	0	2	8	0	1	0	0	0	1	0	14	0	0	0	0	0
	7:00 AM	0	6	0	1	4	1	2	0	0	0	0	0	14	0	0	0	0	0
	7:15 AM	0	9	0	0	7	1	2	0	0	0	0	0	19	0	0	0	0	0
	7:30 AM	0	4	0	0	3	0	1	0	0	0	0	0	8	0	0	0	0	0
	7:45 AM	0	4	0	1	3	0	2	0	0	0	0	0	10	0	0	0	0	0
	8:00 AM	0	4	0	0	7	0	3	0	0	0	0	0	14	0	0	0	0	0
	8:15 AM	0	6	0	0	9	0	1	0	0	0	0	0	16	0	0	0	0	0
	8:30 AM	0	5	0	1	5	0	0	0	0	0	0	0	11	0	0	0	0	0
	8:45 AM	0	6	0	0	9	0	0	0	0	0	0	1	16	0	0	0	0	0
	9:00 AM	0	5	0	0	5	0	1	0	0	0	0	1	12	0	0	0	0	0
	9:15 AM	0	9	0	0	11	0	1	0	0	0	0	0	21	0	0	0	0	0
	VOLUMES	0	69	0	5	78	2	14	0	0	0	1	2	171	0	0	0	0	0
	APPROACH %	0%	100%	0%	6%	92%	2%	100%	0%	0%	0%	33%	67%						
	APP/DEPART	69	/	85	85	/	78	14	/	5	3	/	3	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	26	0	3	26	2	5	0	0	0	1	0	63					
	APPROACH %	0%	100%	0%	10%	84%	6%	100%	0%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.722			0.775			0.625			0.250		0.829					
	APP/DEPART	26	/	31	31	/	26	5	/	3	1	/	3	0					
PM	03:30 PM	0	6	0	1	2	0	2	0	0	0	0	0	11	0	0	0	0	0
	3:45 PM	0	10	0	0	10	1	1	0	0	0	0	0	22	0	0	0	0	0
	4:00 PM	0	6	0	0	8	2	0	0	0	0	1	0	17	0	0	0	0	0
	4:15 PM	0	9	0	4	4	2	1	0	0	0	0	1	21	0	0	0	0	0
	4:30 PM	1	4	0	1	9	1	1	1	0	0	0	0	18	0	0	0	0	0
	4:45 PM	0	5	0	0	7	3	3	2	0	0	2	1	23	0	0	0	0	0
	5:00 PM	1	8	0	0	1	1	0	0	0	0	0	0	11	0	0	0	0	0
	5:15 PM	0	3	0	1	5	1	1	0	0	0	0	0	11	0	0	0	0	0
	5:30 PM	0	3	0	1	5	0	0	1	0	0	0	0	10	0	0	0	0	0
	5:45 PM	0	2	0	1	5	1	0	0	0	0	0	0	9	0	0	0	0	0
	6:00 PM	0	6	1	2	4	0	3	0	0	0	0	0	16	0	0	0	0	0
	6:15 PM	0	7	0	0	5	1	0	0	0	0	0	1	14	0	0	0	0	0
	VOLUMES	2	69	1	11	65	13	12	4	0	0	3	3	183	0	0	0	0	0
	APPROACH %	3%	96%	1%	12%	73%	15%	75%	25%	0%	0%	50%	50%						
	APP/DEPART	72	/	84	89	/	65	16	/	16	6	/	18	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	1	24	0	5	28	8	5	3	0	0	3	2	79					
	APPROACH %	4%	96%	0%	12%	68%	20%	63%	38%	0%	0%	60%	40%						
	PEAK HR FACTOR		0.694			0.932			0.400			0.417		0.859					
	APP/DEPART	25	/	31	41	/	28	8	/	8	5	/	12	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

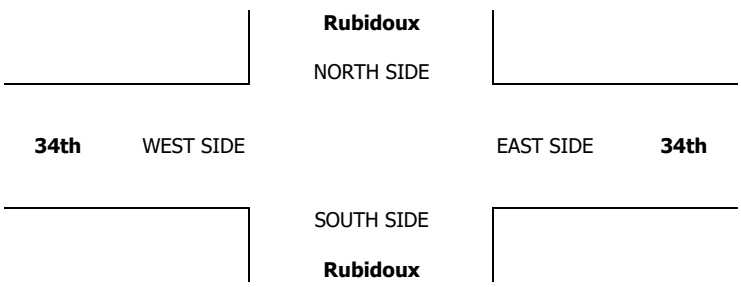
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	6:45 AM	0	2	0	0	3	1	0	0	0	0	0	1	7	0	0	0	0	0
	7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	7:45 AM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:15 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:30 AM	0	3	0	0	4	0	0	0	0	0	0	0	7	0	0	0	0	0
	8:45 AM	0	2	0	0	3	0	1	0	0	0	0	0	6	0	0	0	0	0
	9:00 AM	0	3	0	0	3	0	0	0	0	0	0	0	6	0	0	0	0	0
	9:15 AM	0	4	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	VOLUMES	0	26	1	0	23	1	1	0	0	0	0	1	53	0	0	0	0	0
	APPROACH %	0%	96%	4%	0%	96%	4%	100%	0%	0%	0%	0%	100%						
	APP/DEPART	27	/	28	24	/	23	1	/	1	1	/	1	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	0	12	0	0	11	0	1	0	0	0	0	0	24					
	APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.750			0.688			0.250			0.000		0.857					
	APP/DEPART	12	/	13	11	/	11	1	/	0	0	/	0	0					
PM	03:30 PM	0	4	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	3:45 PM	0	4	0	0	1	0	1	0	0	0	0	0	6	0	0	0	0	0
	4:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	4:15 PM	0	3	0	0	1	0	0	0	0	0	1	0	5	0	0	0	0	0
	4:30 PM	0	5	0	0	1	1	0	0	0	0	0	0	7	0	0	0	0	0
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:00 PM	0	2	0	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0
	5:15 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:45 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	6:00 PM	1	3	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
	6:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	VOLUMES	1	30	0	0	17	1	1	0	0	0	1	0	51	0	0	0	0	0
	APPROACH %	3%	97%	0%	0%	94%	6%	100%	0%	0%	0%	100%	0%						
	APP/DEPART	31	/	31	18	/	17	1	/	0	1	/	3	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	0	15	0	0	4	1	1	0	0	0	1	0	22					
	APPROACH %	0%	100%	0%	0%	80%	20%	100%	0%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.750			0.625			0.250			0.250		0.786					
	APP/DEPART	15	/	16	5	/	4	1	/	0	1	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

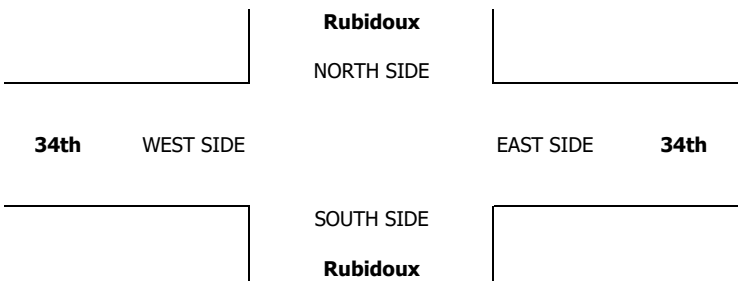
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	6:45 AM	0	2	0	1	2	0	0	0	0	0	0	0	5	0	0	0	0	0
	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:15 AM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
	7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:00 AM	0	0	0	0	2	0	1	0	0	0	0	0	3	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	9:00 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	9:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	VOLUMES	0	13	0	1	19	0	1	0	0	0	0	0	34	0	0	0	0	0
	APPROACH %	0%	100%	0%	5%	95%	0%	100%	0%	0%	0%	0%	0%						
	APP/DEPART	13	/	14	20	/	19	1	/	1	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	5	0	1	7	0	0	0	0	0	0	0	13					
	APPROACH %	0%	100%	0%	13%	88%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.625			0.667			0.000			0.000		0.650					
	APP/DEPART	5	/	5	8	/	7	0	/	1	0	/	0	0					
PM	03:30 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	3:45 PM	0	3	0	0	3	0	0	0	0	0	0	0	6	0	0	0	0	0
	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	0	0	0
	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	10	0	0	13	0	0	0	0	0	0	0	23	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	10	/	10	13	/	13	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	6	0	0	4	0	0	0	0	0	0	0	10					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.333			0.000			0.000		0.417					
	APP/DEPART	6	/	6	4	/	4	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

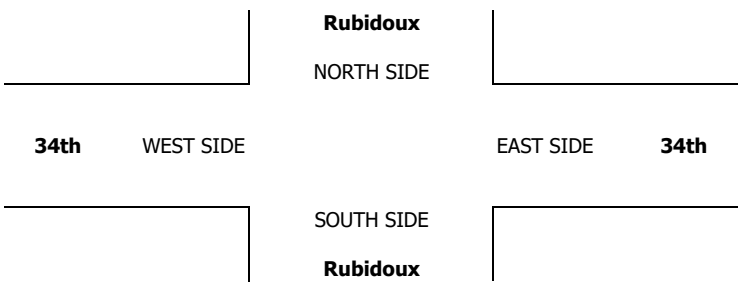
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2					
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.500			0.000			0.000			0.000		0.500					
APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
BEGIN PEAK HR		5:30 PM																
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					



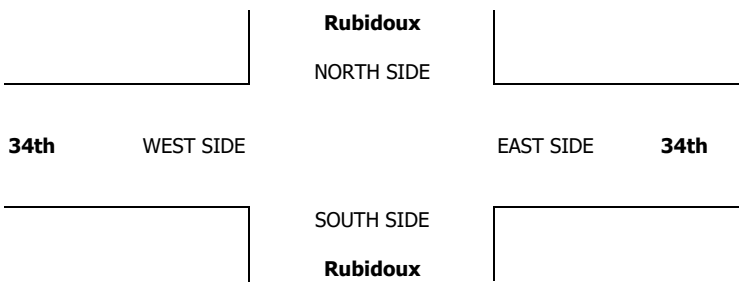
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	28
THURSDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	1	0	0	0	2	0	1	0	0	0	0	0	4	0	0	0	0	0
	6:45 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	7:00 AM	0	3	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	7:30 AM	0	2	0	0	2	1	0	1	0	0	0	0	6	0	0	0	0	0
	7:45 AM	0	2	0	0	2	1	0	0	0	0	0	0	5	0	0	0	0	0
	8:00 AM	1	1	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:15 AM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:30 AM	0	2	0	1	0	0	0	0	0	0	0	1	4	0	0	0	0	0
	8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	9:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	9:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	2	16	0	1	16	2	1	1	0	0	1	1	41	0	0	0	0	0
	APPROACH %	11%	89%	0%	5%	84%	11%	50%	50%	0%	0%	50%	50%						
	APP/DEPART	18	/	18	19	/	16	2	/	2	2	/	5	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	1	6	0	0	9	2	0	1	0	0	0	0	19					
	APPROACH %	14%	86%	0%	0%	82%	18%	0%	100%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.875			0.917			0.250			0.000		0.792					
	APP/DEPART	7	/	6	11	/	9	1	/	1	0	/	3	0					
PM	03:30 PM	2	1	0	0	2	1	0	0	0	0	0	0	6	0	0	0	0	0
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
	5:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	6:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	2	7	0	0	10	1	0	0	0	0	0	0	20	0	0	0	0	0
	APPROACH %	22%	78%	0%	0%	91%	9%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	9	/	7	11	/	10	0	/	0	0	/	3	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	2	5	0	0	4	1	0	0	0	0	0	0	12					
	APPROACH %	29%	71%	0%	0%	80%	20%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.583			0.417			0.000			0.000		0.500					
	APP/DEPART	7	/	5	5	/	4	0	/	0	0	/	3	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Rubidoux
EAST & WEST: 34th

PROJECT #: SC1439
LOCATION #: 16
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	6	163	12	21	112	10	26	9	2	1	3	15	380	0	1	0	0	1
	12:15 PM	7	153	7	13	136	14	21	5	7	2	3	16	384	0	1	0	0	1
	12:30 PM	7	147	8	13	131	34	19	5	8	1	6	22	401	0	0	0	0	0
	12:45 PM	6	146	7	23	152	16	25	5	6	7	5	18	416	0	2	0	0	2
	1:00 PM	8	168	19	21	135	17	20	6	9	5	3	37	448	0	0	0	0	0
	1:15 PM	8	151	19	16	136	22	28	5	5	5	5	18	418	1	2	0	0	3
	1:30 PM	2	166	8	21	160	18	24	9	3	0	6	22	439	0	0	0	0	0
	1:45 PM	2	154	15	27	130	36	17	7	3	2	7	15	415	0	0	0	0	0
	VOLUMES	46	1,248	95	155	1,092	167	180	51	43	23	38	163	3,301	1	6	0	0	7
	APPROACH %	3%	90%	7%	11%	77%	12%	66%	19%	16%	10%	17%	73%						
	APP/DEPART	1,389	/	1,597	1,414	/	1,159	274	/	295	224	/	250	0					
	BEGIN PEAK HR		12:45 PM																
	VOLUMES	24	631	53	81	583	73	97	25	23	17	19	95	1,721					
	APPROACH %	3%	89%	7%	11%	79%	10%	67%	17%	16%	13%	15%	73%						
	PEAK HR FACTOR		0.908			0.926			0.954			0.728		0.960					
	APP/DEPART	708	/	827	737	/	624	145	/	155	131	/	115	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Rubidoux

NORTH SIDE

34th WEST SIDE EAST SIDE **34th**

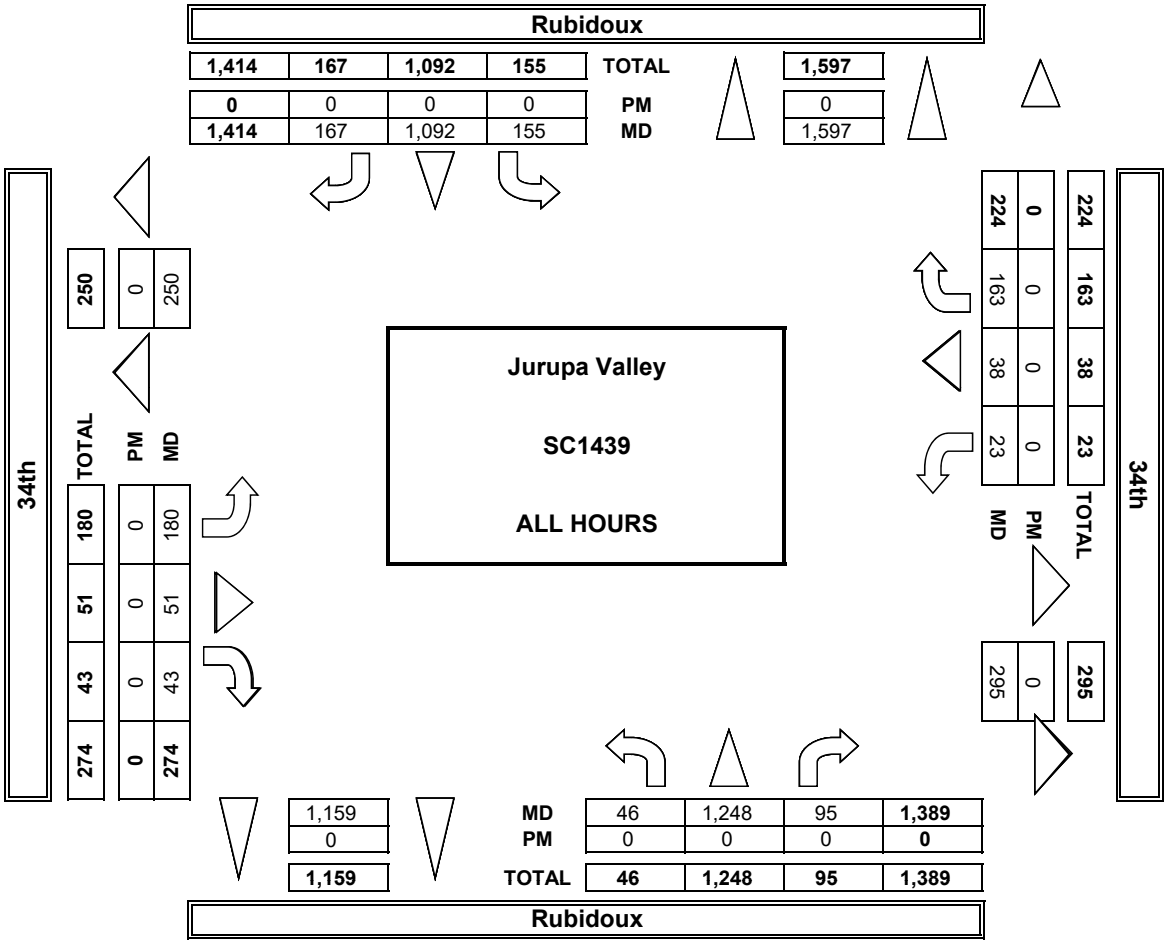
SOUTH SIDE

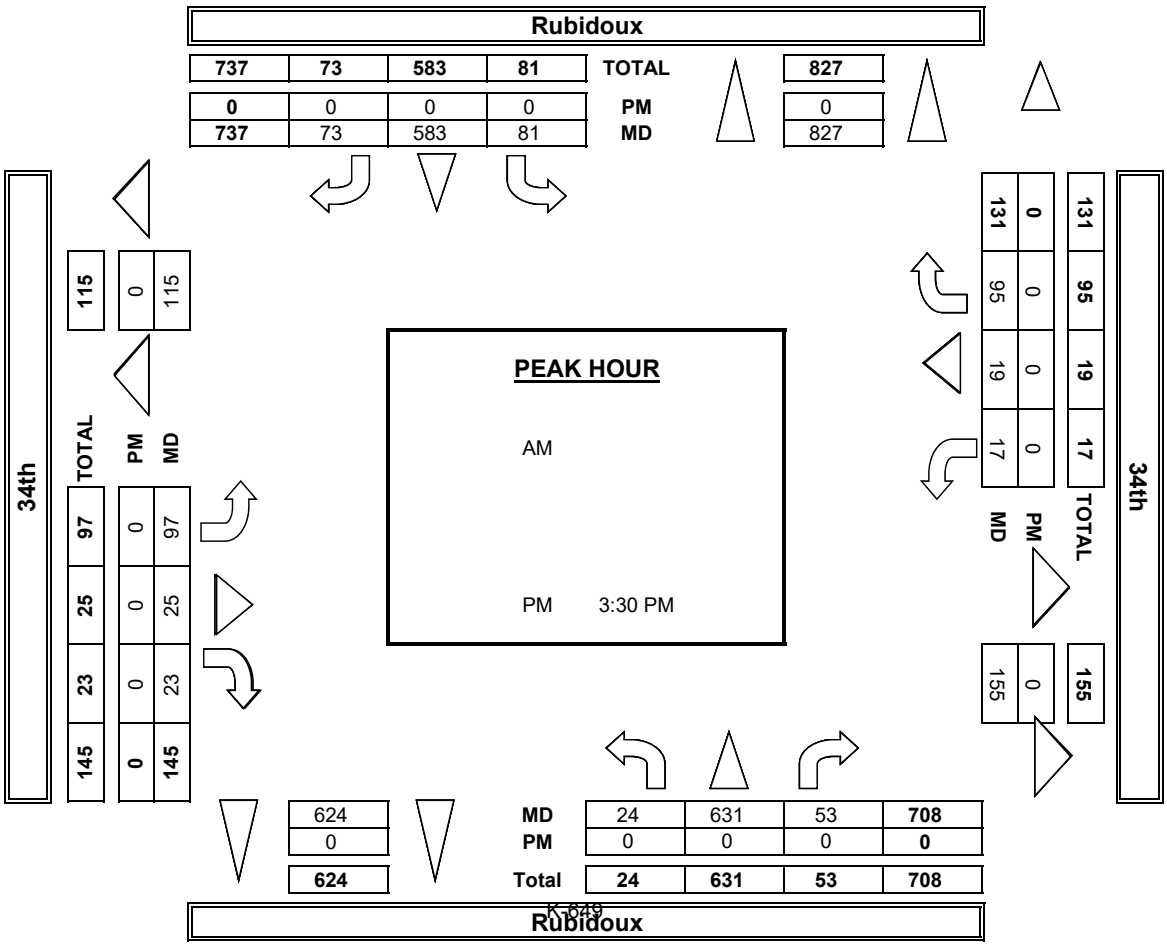
Rubidoux

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





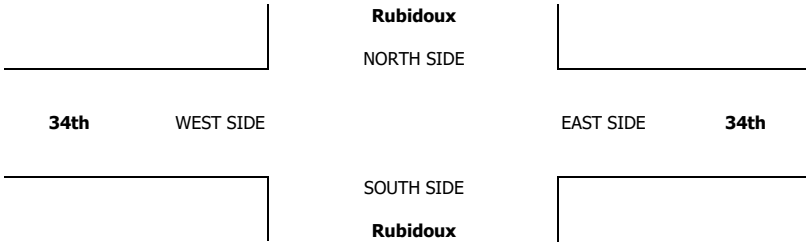
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	7	172	12	23	115	10	27	9	2	1	3	15	395
	8:15 AM	7	164	8	14	145	14	25	5	8	2	3	16	410
	8:30 AM	7	151	9	14	138	36	20	5	8	1	6	23	417
	8:45 AM	7	153	8	24	157	17	25	5	6	7	5	19	431
	9:00 AM	8	179	19	21	148	17	21	6	10	5	4	38	475
	9:15 AM	8	163	19	17	146	23	28	5	5	5	5	21	444
	9:30 AM	2	179	8	21	172	19	25	9	4	0	6	23	467
	9:45 AM	2	168	15	30	136	39	18	7	4	2	7	16	442
	VOLUMES	47	1,327	98	163	1,156	174	188	51	46	23	39	170	3,479
	APPROACH %	3%	90%	7%	11%	77%	12%	66%	18%	16%	10%	17%	73%	
	APP/DEPART	1,472	/	1,685	1,492	/	1,224	285	/	311	232	/	260	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	20	688	61	89	601	97	92	27	22	12	22	97	1,827
	APPROACH %	3%	89%	8%	11%	76%	12%	65%	19%	15%	9%	17%	74%	
	PEAK HR FACTOR		0.933			0.930			0.921			0.697		0.961
	APP/DEPART	769	/	877	787	/	635	140	/	177	131	/	139	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

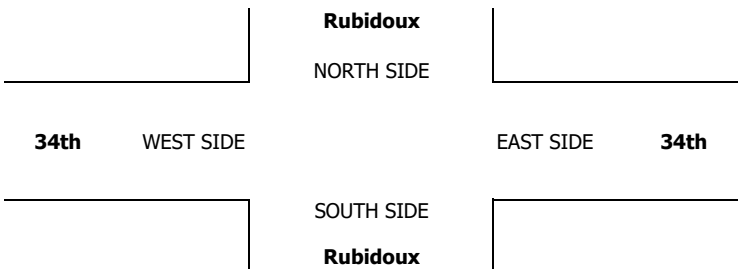
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	5	154	12	18	107	10	24	9	2	1	3	15	360	0	1	0	0	1
12:15 PM	7	140	6	11	125	14	18	5	6	2	3	16	353	0	0	0	0	0
12:30 PM	7	141	7	12	120	32	18	5	8	1	6	20	377	0	0	0	0	0
12:45 PM	5	137	6	22	145	14	25	5	6	7	5	17	394	0	2	0	0	2
1:00 PM	8	156	19	21	123	17	19	6	8	5	2	35	419	0	0	0	0	0
1:15 PM	8	139	19	14	126	21	28	5	5	5	5	15	390	1	2	0	0	3
1:30 PM	2	155	8	21	149	17	22	9	2	0	6	21	412	0	0	0	0	0
1:45 PM	2	142	15	25	123	32	16	7	2	2	7	14	387	0	0	0	0	0
VOLUMES	44	1,164	92	144	1,018	157	170	51	39	23	37	153	3,092	1	5	0	0	6
APPROACH %	3%	90%	7%	11%	77%	12%	65%	20%	15%	11%	17%	72%						
APP/DEPART	1,300	/	1,492	1,319	/	1,081	260	/	282	213	/	237	0					
BEGIN PEAK HR		12:45 PM																
VOLUMES	22	587	52	74	543	69	94	25	21	17	18	88	1,615					
APPROACH %	3%	89%	8%	11%	79%	10%	67%	18%	15%	14%	15%	72%						
PEAK HR FACTOR		0.904			0.922			0.921			0.732		0.964					
APP/DEPART	662	/	773	690	/	582	140	/	151	123	/	109	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

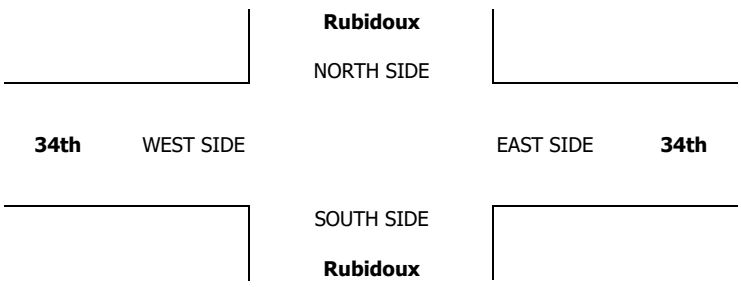
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	5	0	2	4	0	2	0	0	0	0	0	14	0	0	0	0	0
	12:15 PM	0	8	1	2	6	0	1	0	0	0	0	0	18	0	1	0	0	1
	12:30 PM	0	4	0	1	9	1	0	0	0	0	0	2	17	0	0	0	0	0
	12:45 PM	1	5	0	1	4	2	0	0	0	0	0	1	14	0	0	0	0	0
	1:00 PM	0	6	0	0	4	0	1	0	1	0	0	2	14	0	0	0	0	0
	1:15 PM	0	5	0	2	3	1	0	0	0	0	0	2	13	0	0	0	0	0
	1:30 PM	0	4	0	0	4	1	2	0	1	0	0	1	13	0	0	0	0	0
	1:45 PM	0	5	0	1	5	2	0	0	1	0	0	1	15	0	0	0	0	0
	VOLUMES	2	42	1	9	39	7	6	0	3	0	0	9	118	0	1	0	0	1
	APPROACH %	4%	93%	2%	16%	71%	13%	67%	0%	33%	0%	0%	100%						
	APP/DEPART	45	/	58	55	/	42	9	/	9	9	/	9	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	1	23	1	3	23	3	2	0	1	0	0	5	63					
	APPROACH %	4%	92%	4%	10%	77%	10%	67%	0%	33%	0%	0%	100%						
	PEAK HR FACTOR		0.694			0.682			0.375			0.625		0.875					
	APP/DEPART	25	/	31	30	/	24	3	/	4	5	/	4	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

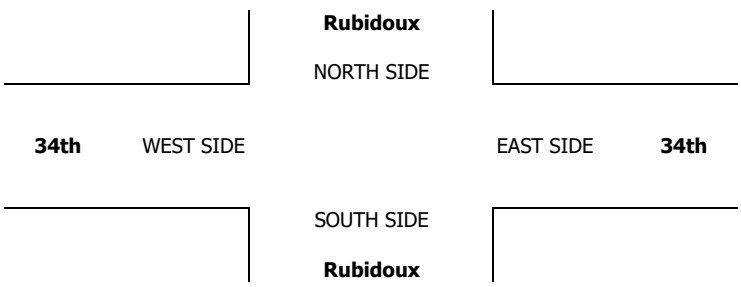
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:15 PM	0	3	0	0	4	0	0	0	0	0	0	0	7	0	0	0	0	0
	12:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	12:45 PM	0	3	1	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	1:00 PM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	1:15 PM	0	3	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
	1:30 PM	0	3	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
	1:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	VOLUMES	0	18	1	1	15	0	0	0	0	0	0	0	35	0	0	0	0	0
	APPROACH %	0%	95%	5%	6%	94%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	19	/	18	16	/	15	0	/	2	0	/	0	0					
	BEGIN PEAK HR		12:15 PM																
	VOLUMES	0	10	1	0	11	0	0	0	0	0	0	0	22					
	APPROACH %	0%	91%	9%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.688			0.688			0.000			0.000		0.786					
	APP/DEPART	11	/	10	11	/	11	0	/	1	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

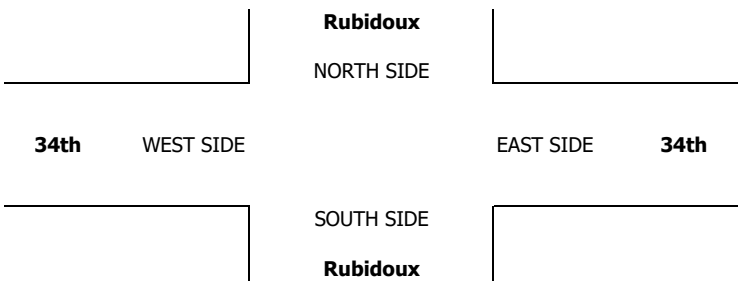
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
12:15 PM	0	2	0	0	1	0	1	0	0	0	0	0	4	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	2	0	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0
1:15 PM	0	2	0	0	1	0	0	0	0	0	0	1	4	0	0	0	0	0
1:30 PM	0	4	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0
1:45 PM	0	4	0	1	1	0	0	0	0	0	0	0	6	0	0	0	0	0
VOLUMES	0	16	0	1	9	0	1	0	0	0	0	1	28	0	0	0	0	0
APPROACH %	0%	100%	0%	10%	90%	0%	100%	0%	0%	0%	0%	100%						
APP/DEPART	16	/	18	10	/	9	1	/	1	1	/	0	0					
MD BEGIN PEAK HR		1:00 PM																
VOLUMES	0	12	0	1	8	0	0	0	0	0	0	1	22					
APPROACH %	0%	100%	0%	11%	89%	0%	0%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.750			0.750			0.000			0.250		0.786					
APP/DEPART	12	/	13	9	/	8	0	/	1	1	/	0	0					
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

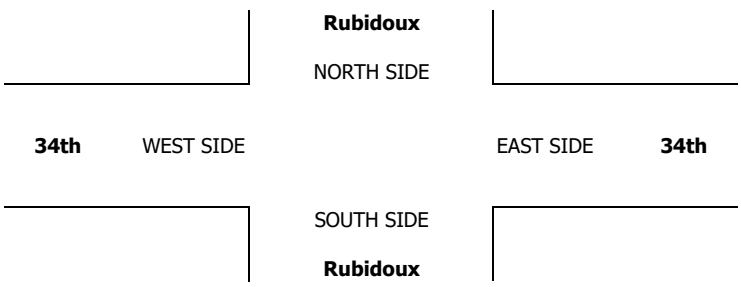
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

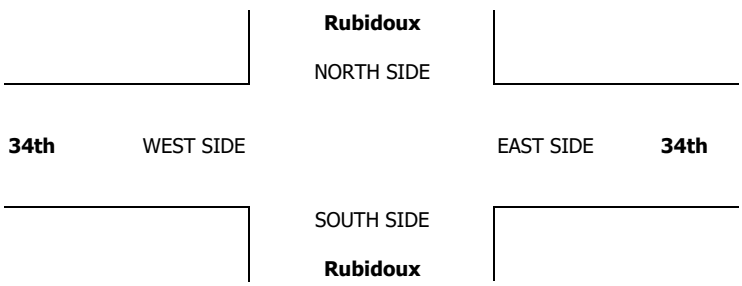
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Rubidoux	LOCATION #:	16
WEDNESDAY	EAST & WEST:	34th	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND 34th			WESTBOUND 34th				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0
12:30 PM	0	0	1	0	0	1	1	0	0	0	0	0	3	0	0	0	0	0
12:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
1:00 PM	0	2	0	0	1	0	0	0	0	0	1	0	4	0	0	0	0	0
1:15 PM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
1:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
1:45 PM	0	1	0	0	1	2	1	0	0	0	0	0	5	0	0	0	0	0
VOLUMES	0	8	1	0	11	3	3	0	1	0	1	0	28	0	0	0	0	0
APPROACH %	0%	89%	11%	0%	79%	21%	75%	0%	25%	0%	100%	0%						
APP/DEPART	9	/	11	14	/	12	4	/	1	1	/	4	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	0	5	0	0	8	2	1	0	0	0	1	0	17					
APPROACH %	0%	100%	0%	0%	80%	20%	100%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.625			0.625			0.250			0.250		0.708					
APP/DEPART	5	/	6	10	/	8	1	/	0	1	/	3	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cactus
EAST & WEST: El Rivino

PROJECT #: SC1321
LOCATION #: 12
CONTROL: SIGNAL

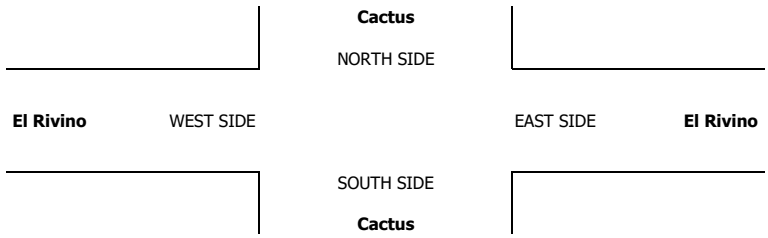
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL
AM	6:30 AM	0	0	0	4	0	8	6	23	0	0	14	5	60
	6:45 AM	0	0	0	9	0	1	10	25	0	0	19	8	72
	7:00 AM	0	0	0	7	0	3	11	16	0	0	16	14	67
	7:15 AM	0	0	0	9	0	4	14	15	0	0	10	19	71
	7:30 AM	0	0	0	20	0	7	11	17	0	0	18	9	82
	7:45 AM	0	0	0	11	0	12	14	24	0	0	18	7	86
	8:00 AM	0	0	0	5	0	8	10	15	0	0	17	13	68
	8:15 AM	0	0	0	5	0	6	10	16	0	0	11	8	56
	8:30 AM	0	0	0	6	0	6	7	18	0	0	11	6	54
	8:45 AM	0	0	0	13	0	24	7	20	0	0	8	6	78
	9:00 AM	0	0	0	12	0	22	3	8	0	0	9	9	63
	9:15 AM	0	0	0	9	0	9	4	15	0	0	7	14	58
	VOLUMES	0	0	0	110	0	110	107	212	0	0	158	118	815
	APPROACH %	0%	0%	0%	50%	0%	50%	34%	66%	0%	0%	57%	43%	
	APP/DEPART	0	/	225	220	/	0	319	/	322	276	/	268	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	45	0	31	49	71	0	0	63	48	307
	APPROACH %	0%	0%	0%	59%	0%	41%	41%	59%	0%	0%	57%	43%	
	PEAK HR FACTOR		0.000			0.704			0.789			0.925		0.892
	APP/DEPART	0	/	97	76	/	0	120	/	116	111	/	94	0
PM	03:30 PM	0	0	0	13	0	14	13	85	0	0	41	11	177
	3:45 PM	0	0	0	11	0	12	20	64	0	0	46	14	167
	4:00 PM	0	0	0	0	0	13	12	71	0	0	45	14	155
	4:15 PM	0	0	0	5	0	12	16	71	0	0	51	12	167
	4:30 PM	0	0	0	9	0	13	17	67	0	0	48	14	168
	4:45 PM	0	0	0	10	0	6	11	70	0	0	45	13	155
	5:00 PM	0	0	0	4	0	12	8	73	0	0	47	11	155
	5:15 PM	0	0	0	7	0	6	22	63	0	0	48	16	162
	5:30 PM	0	0	0	9	0	14	10	23	0	0	25	26	107
	5:45 PM	0	0	0	8	0	11	7	23	0	0	16	11	76
	6:00 PM	0	0	0	4	0	11	20	21	0	0	17	16	89
	6:15 PM	0	0	0	14	0	9	20	18	0	0	16	9	86
	VOLUMES	0	0	0	94	0	133	176	649	0	0	445	167	1,664
	APPROACH %	0%	0%	0%	41%	0%	59%	21%	79%	0%	0%	73%	27%	
	APP/DEPART	0	/	343	227	/	0	825	/	743	612	/	578	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	29	0	51	61	291	0	0	183	51	666
	APPROACH %	0%	0%	0%	36%	0%	64%	17%	83%	0%	0%	78%	22%	
	PEAK HR FACTOR		0.000			0.741			0.898			0.929		0.941
	APP/DEPART	0	/	112	80	/	0	352	/	320	234	/	234	0

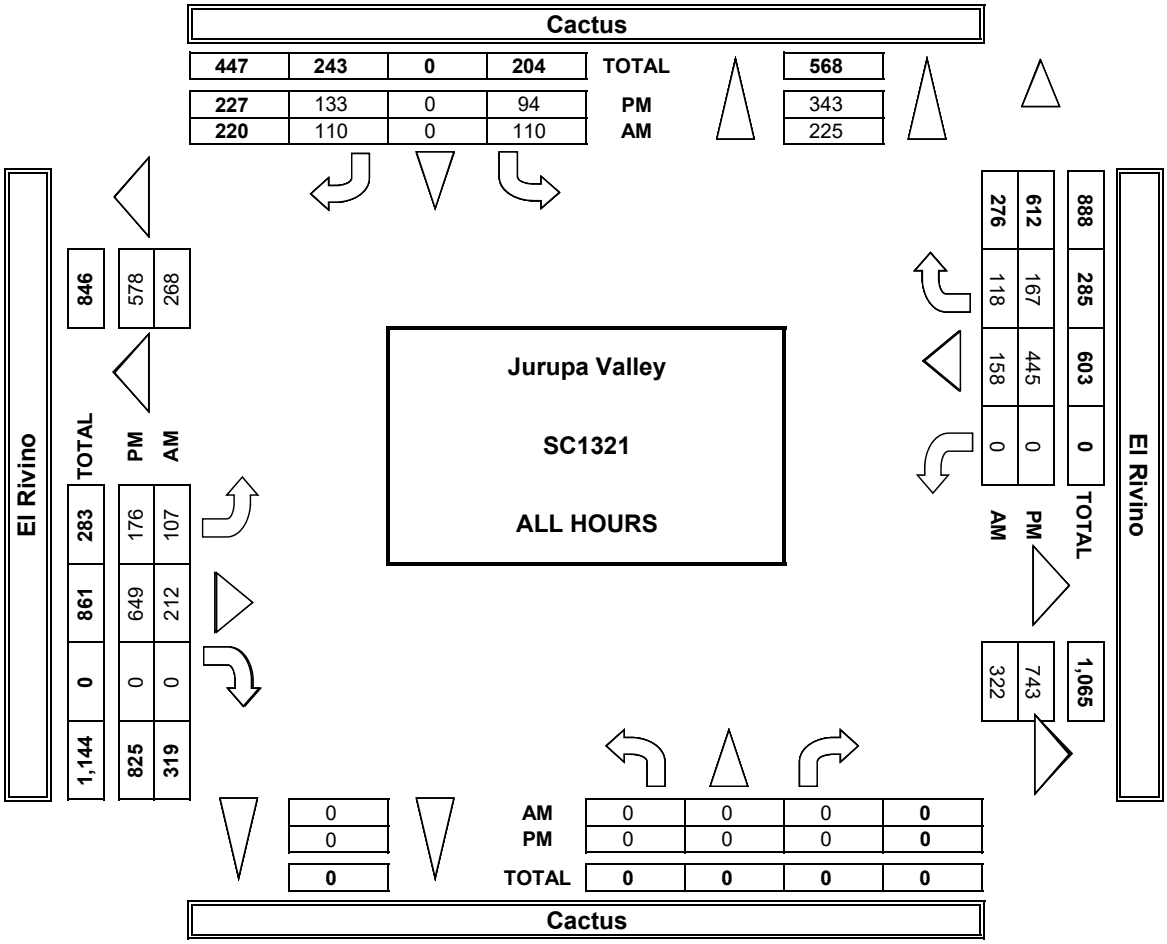
U-TURNS					
	NB	SB	EB	WB	TTL
	0	0	0	0	
AM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
PM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

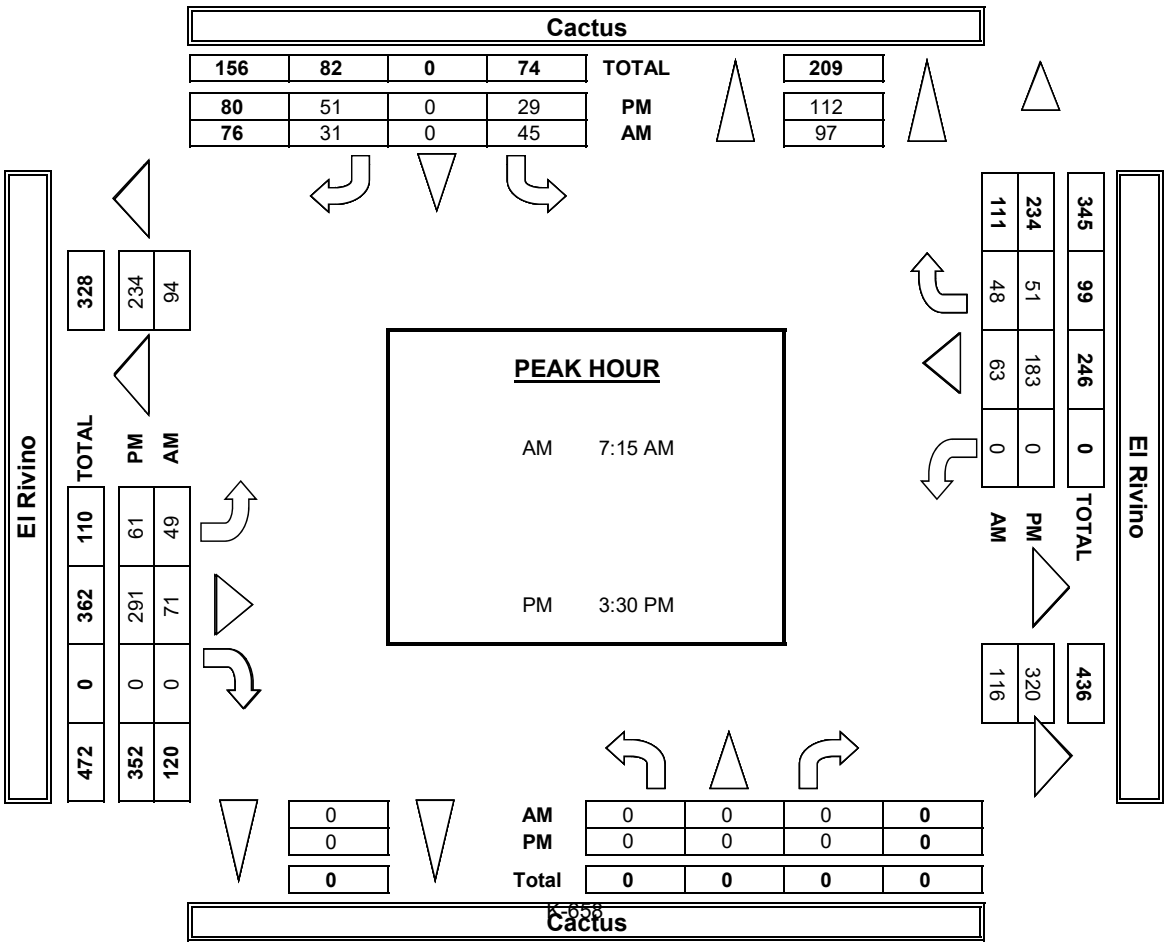


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL
AM	6:30 AM	0	0	0	4	0	10	7	24	0	0	19	5	68
	6:45 AM	0	0	0	10	0	2	12	27	0	0	30	12	92
	7:00 AM	0	0	0	7	0	3	12	19	0	0	20	17	78
	7:15 AM	0	0	0	10	0	8	15	16	0	0	14	21	82
	7:30 AM	0	0	0	22	0	7	13	18	0	0	22	10	91
	7:45 AM	0	0	0	11	0	13	17	26	0	0	21	7	94
	8:00 AM	0	0	0	5	0	11	13	20	0	0	21	15	84
	8:15 AM	0	0	0	5	0	10	10	20	0	0	11	9	65
	8:30 AM	0	0	0	7	0	13	7	18	0	0	18	7	69
	8:45 AM	0	0	0	16	0	35	9	22	0	0	10	6	97
	9:00 AM	0	0	0	17	0	30	5	10	0	0	11	10	83
	9:15 AM	0	0	0	11	0	13	7	18	0	0	8	14	69
	VOLUMES	0	0	0	122	0	153	125	236	0	0	204	131	970
	APPROACH %	0%	0%	0%	44%	0%	56%	35%	65%	0%	0%	61%	39%	
	APP/DEPART	0	/	256	275	/	0	360	/	358	335	/	357	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	48	0	39	57	79	0	0	78	52	351
	APPROACH %	0%	0%	0%	55%	0%	45%	42%	58%	0%	0%	60%	40%	
	PEAK HR FACTOR		0.000			0.741			0.810			0.908		0.934
	APP/DEPART	0	/	109	86	/	0	136	/	127	129	/	116	0
PM	03:30 PM	0	0	0	13	0	18	22	119	0	0	53	12	235
	3:45 PM	0	0	0	12	0	16	36	83	0	0	51	18	215
	4:00 PM	0	0	0	0	0	15	18	88	0	0	49	14	184
	4:15 PM	0	0	0	6	0	16	29	86	0	0	58	16	211
	4:30 PM	0	0	0	9	0	19	26	78	0	0	57	14	202
	4:45 PM	0	0	0	11	0	9	16	89	0	0	47	16	187
	5:00 PM	0	0	0	6	0	18	14	80	0	0	47	13	178
	5:15 PM	0	0	0	7	0	9	32	78	0	0	56	16	197
	5:30 PM	0	0	0	9	0	24	21	27	0	0	25	27	132
	5:45 PM	0	0	0	8	0	15	14	24	0	0	21	13	93
	6:00 PM	0	0	0	6	0	17	34	21	0	0	18	19	114
	6:15 PM	0	0	0	14	0	13	32	24	0	0	19	11	112
	VOLUMES	0	0	0	100	0	185	291	795	0	0	497	188	2,055
	APPROACH %	0%	0%	0%	35%	0%	65%	27%	73%	0%	0%	73%	27%	
	APP/DEPART	0	/	479	285	/	0	1,086	/	895	685	/	682	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	31	0	65	104	375	0	0	210	60	843
	APPROACH %	0%	0%	0%	32%	0%	68%	22%	78%	0%	0%	78%	22%	
	PEAK HR FACTOR		0.000			0.779			0.855			0.909		0.899
	APP/DEPART	0	/	164	95	/	0	479	/	406	269	/	274	0

Cactus

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Cactus

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

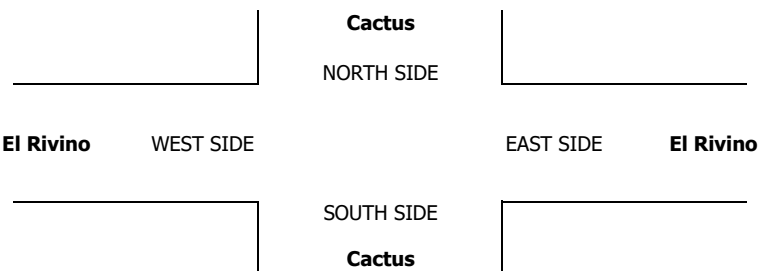
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	4	0	7	5	22	0	0	10	5	53	0	0	0	0	0
6:45 AM	0	0	0	8	0	0	7	22	0	0	9	6	52	0	0	0	0	0
7:00 AM	0	0	0	7	0	3	9	13	0	0	12	12	56	0	0	0	0	0
7:15 AM	0	0	0	8	0	2	12	14	0	0	6	17	59	0	0	0	0	0
7:30 AM	0	0	0	19	0	7	8	16	0	0	13	8	71	0	0	0	0	0
7:45 AM	0	0	0	11	0	10	12	22	0	0	16	7	78	0	0	0	0	0
8:00 AM	0	0	0	5	0	6	7	12	0	0	11	11	52	0	0	0	0	0
8:15 AM	0	0	0	5	0	3	10	14	0	0	11	7	50	0	0	0	0	0
8:30 AM	0	0	0	5	0	2	7	18	0	0	7	4	43	0	0	0	0	0
8:45 AM	0	0	0	8	0	7	4	18	0	0	7	6	50	0	0	0	0	0
9:00 AM	0	0	0	3	0	10	2	7	0	0	8	7	37	0	0	0	0	0
9:15 AM	0	0	0	6	0	3	2	13	0	0	5	14	43	0	0	0	0	0
VOLUMES	0	0	0	89	0	60	85	191	0	0	115	104	644	0	0	0	0	0
APPROACH %	0%	0%	0%	60%	0%	40%	31%	69%	0%	0%	53%	47%						
APP/DEPART	0	/	189	149	/	0	276	/	280	219	/	175	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	0	0	45	0	22	41	65	0	0	47	44	264					
APPROACH %	0%	0%	0%	67%	0%	33%	39%	61%	0%	0%	52%	48%						
PEAK HR FACTOR		0.000			0.644			0.779			0.948		0.846					
APP/DEPART	0	/	85	67	/	0	106	/	110	91	/	69	0					
PM																		
03:30 PM	0	0	0	13	0	11	8	58	0	0	30	10	130	0	0	0	0	0
3:45 PM	0	0	0	9	0	9	11	48	0	0	42	12	131	0	0	0	0	0
4:00 PM	0	0	0	0	0	11	8	53	0	0	40	14	126	0	0	0	0	0
4:15 PM	0	0	0	4	0	10	9	56	0	0	44	7	130	0	0	0	0	0
4:30 PM	0	0	0	9	0	6	11	54	0	0	40	14	134	0	0	0	0	0
4:45 PM	0	0	0	9	0	4	5	52	0	0	42	11	123	0	0	0	0	0
5:00 PM	0	0	0	3	0	8	4	67	0	0	47	10	139	0	0	0	0	0
5:15 PM	0	0	0	7	0	4	14	53	0	0	42	16	136	0	0	0	0	0
5:30 PM	0	0	0	9	0	8	2	20	0	0	25	24	88	0	0	0	0	0
5:45 PM	0	0	0	8	0	8	1	21	0	0	13	8	59	0	0	0	0	0
6:00 PM	0	0	0	2	0	8	5	21	0	0	16	13	65	0	0	0	0	0
6:15 PM	0	0	0	14	0	6	8	13	0	0	14	5	60	0	0	0	0	0
VOLUMES	0	0	0	87	0	93	86	516	0	0	395	144	1,321	0	0	0	0	0
APPROACH %	0%	0%	0%	48%	0%	52%	14%	86%	0%	0%	73%	27%						
APP/DEPART	0	/	230	180	/	0	602	/	603	539	/	488	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	0	0	28	0	22	34	226	0	0	171	51	532					
APPROACH %	0%	0%	0%	56%	0%	44%	13%	87%	0%	0%	77%	23%						
PEAK HR FACTOR		0.000			0.833			0.915			0.957		0.957					
APP/DEPART	0	/	85	50	/	0	260	/	254	222	/	193	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

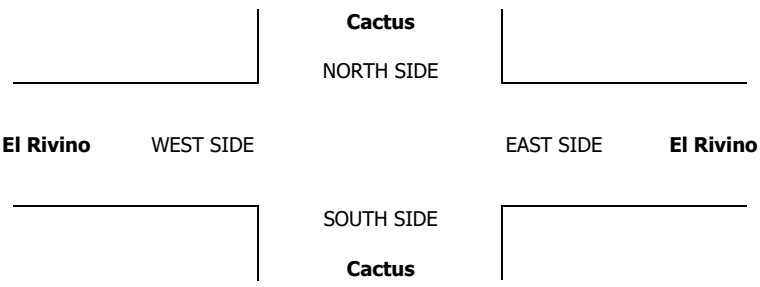
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0
	6:45 AM	0	0	0	1	0	0	3	2	0	0	3	0	9	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	2	2	0	0	2	0	6	0	0	0	0	0
	7:15 AM	0	0	0	1	0	0	2	1	0	0	3	1	8	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	3	0	0	0	4	1	8	0	0	0	0	0
	7:45 AM	0	0	0	0	0	2	1	1	0	0	0	0	4	0	0	0	0	0
	8:00 AM	0	0	0	0	0	1	2	0	0	0	4	1	8	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	8:30 AM	0	0	0	1	0	1	0	0	0	0	1	2	5	0	0	0	0	0
	8:45 AM	0	0	0	5	0	13	2	1	0	0	0	0	21	0	0	0	0	0
	9:00 AM	0	0	0	9	0	10	0	0	0	0	0	2	21	0	0	0	0	0
	9:15 AM	0	0	0	3	0	5	1	1	0	0	2	0	12	0	0	0	0	0
	VOLUMES	0	0	0	20	0	32	17	9	0	0	19	8	105	0	0	0	0	0
	APPROACH %	0%	0%	0%	38%	0%	62%	65%	35%	0%	0%	70%	30%						
	APP/DEPART	0	/	25	52	/	0	26	/	29	27	/	51	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	0	0	0	18	0	29	3	2	0	0	3	4	59					
	APPROACH %	0%	0%	0%	38%	0%	62%	60%	40%	0%	0%	43%	57%						
	PEAK HR FACTOR		0.000			0.618			0.417			0.583		0.702					
	APP/DEPART	0	/	7	47	/	0	5	/	20	7	/	32	0					
PM	03:30 PM	0	0	0	0	0	1	1	11	0	0	5	1	19	0	0	0	0	0
	3:45 PM	0	0	0	2	0	0	1	7	0	0	1	0	11	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	10	0	0	3	0	13	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	8	0	0	2	4	15	0	0	0	0	0
	4:30 PM	0	0	0	0	0	5	0	7	0	0	3	0	15	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	3	6	0	0	2	1	13	0	0	0	0	0
	5:00 PM	0	0	0	0	0	1	0	2	0	0	0	0	3	0	0	0	0	0
	5:15 PM	0	0	0	0	0	1	1	2	0	0	1	0	5	0	0	0	0	0
	5:30 PM	0	0	0	0	0	1	3	1	0	0	0	2	7	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	3	2	0	0	1	3	10	0	0	0	0	0
	6:00 PM	0	0	0	1	0	0	10	0	0	0	1	2	14	0	0	0	0	0
	6:15 PM	0	0	0	0	0	1	6	3	0	0	1	4	15	0	0	0	0	0
	VOLUMES	0	0	0	4	0	12	28	59	0	0	20	17	140	0	0	0	0	0
	APPROACH %	0%	0%	0%	25%	0%	75%	32%	68%	0%	0%	54%	46%						
	APP/DEPART	0	/	45	16	/	0	87	/	63	37	/	32	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	3	0	1	2	36	0	0	11	5	58					
	APPROACH %	0%	0%	0%	75%	0%	25%	5%	95%	0%	0%	69%	31%						
	PEAK HR FACTOR		0.000			0.500			0.792			0.667		0.763					
	APP/DEPART	0	/	7	4	/	0	38	/	39	16	/	12	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

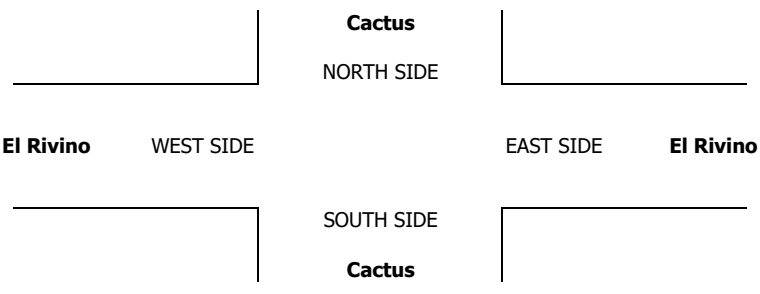
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	6:45 AM	0	0	0	0	0	1	0	1	0	0	3	0	5	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0
	8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	4	1	0	0	0	0	0	5	0	0	0	0	0
	9:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	9:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	8	1	3	0	0	7	1	20	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	25%	75%	0%	0%	88%	13%						
	APP/DEPART	0	/	2	8	/	0	4	/	3	8	/	15	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	5	1	1	0	0	1	1	9					
	APPROACH %	0%	0%	0%	0%	0%	100%	50%	50%	0%	0%	50%	50%						
	PEAK HR FACTOR		0.000			0.313			0.500			0.250		0.450					
	APP/DEPART	0	/	2	5	/	0	2	/	1	2	/	6	0					
PM	03:30 PM	0	0	0	0	0	1	0	3	0	0	3	0	7	0	0	0	0	0
	3:45 PM	0	0	0	0	0	2	1	3	0	0	1	0	7	0	0	0	0	0
	4:00 PM	0	0	0	0	0	2	2	3	0	0	2	0	9	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	1	3	0	0	4	0	8	0	0	0	0	0
	4:30 PM	0	0	0	0	0	1	3	5	0	0	3	0	12	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	3	8	0	0	1	0	13	0	0	0	0	0
	5:00 PM	0	0	0	0	0	1	2	2	0	0	0	0	5	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	5	2	0	0	3	0	10	0	0	0	0	0
	5:30 PM	0	0	0	0	0	1	1	1	0	0	0	0	3	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0
	6:00 PM	0	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	0
	6:15 PM	0	0	0	0	0	1	3	0	0	0	0	0	4	0	0	0	0	0
	VOLUMES	0	0	0	2	0	10	23	30	0	0	17	0	82	0	0	0	0	0
	APPROACH %	0%	0%	0%	17%	0%	83%	43%	57%	0%	0%	100%	0%						
	APP/DEPART	0	/	23	12	/	0	53	/	32	17	/	27	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	1	0	3	9	19	0	0	10	0	42					
	APPROACH %	0%	0%	0%	25%	0%	75%	32%	68%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.500			0.636			0.625		0.808					
	APP/DEPART	0	/	9	4	/	0	28	/	20	10	/	13	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

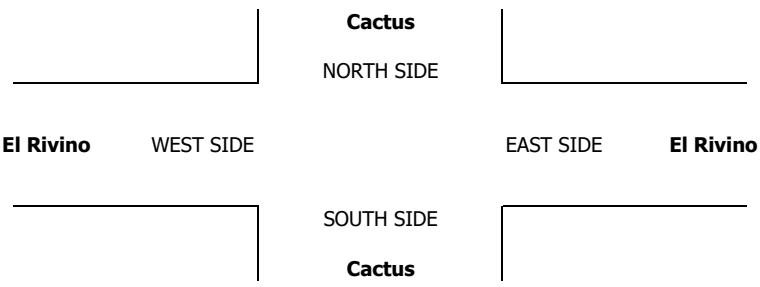
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0
	7:15 AM	0	0	0	0	0	2	0	0	0	0	1	0	3	0	0	0	0	0
	7:30 AM	0	0	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	4	0	0	0	0	0
	8:15 AM	0	0	0	0	0	1	0	2	0	0	0	0	3	0	0	0	0	0
	8:30 AM	0	0	0	0	0	3	0	0	0	0	3	0	6	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	1	1	1	0	0	1	0	4	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0
	VOLUMES	0	0	0	1	0	9	4	7	0	0	12	3	36	0	0	0	0	0
	APPROACH %	0%	0%	0%	10%	0%	90%	36%	64%	0%	0%	80%	20%						
	APP/DEPART	0	/	7	10	/	0	11	/	8	15	/	21	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	0	0	5	2	4	0	0	4	0	15					
	APPROACH %	0%	0%	0%	0%	0%	100%	33%	67%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.417			0.500			0.333		0.625					
	APP/DEPART	0	/	2	5	/	0	6	/	4	4	/	9	0					
PM	03:30 PM	0	0	0	0	0	1	4	12	0	0	3	0	20	0	0	0	0	0
	3:45 PM	0	0	0	0	0	1	7	6	0	0	1	2	17	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	2	4	0	0	0	0	6	0	0	0	0	0
	4:15 PM	0	0	0	0	0	2	6	4	0	0	1	1	14	0	0	0	0	0
	4:30 PM	0	0	0	0	0	1	3	1	0	0	2	0	7	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	0	4	0	0	0	1	6	0	0	0	0	0
	5:00 PM	0	0	0	1	0	2	2	2	0	0	0	1	8	0	0	0	0	0
	5:15 PM	0	0	0	0	0	1	2	6	0	0	2	0	11	0	0	0	0	0
	5:30 PM	0	0	0	0	0	4	4	1	0	0	0	0	9	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	2	0	0	0	2	0	5	0	0	0	0	0
	6:00 PM	0	0	0	0	0	3	4	0	0	0	0	1	8	0	0	0	0	0
	6:15 PM	0	0	0	0	0	1	3	2	0	0	1	0	7	0	0	0	0	0
	VOLUMES	0	0	0	1	0	18	39	42	0	0	12	6	118	0	0	0	0	0
	APPROACH %	0%	0%	0%	5%	0%	95%	48%	52%	0%	0%	67%	33%						
	APP/DEPART	0	/	45	19	/	0	81	/	43	18	/	30	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	4	19	26	0	0	5	3	57					
	APPROACH %	0%	0%	0%	0%	0%	100%	42%	58%	0%	0%	63%	38%						
	PEAK HR FACTOR		0.000			0.500			0.703			0.667		0.713					
	APP/DEPART	0	/	22	4	/	0	45	/	26	8	/	9	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

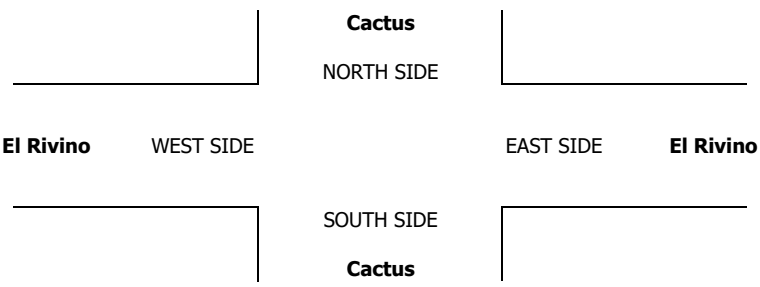
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



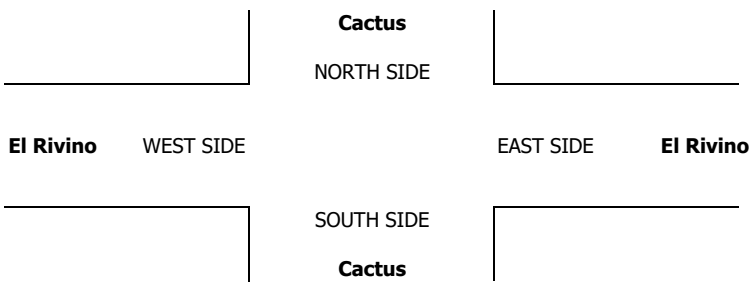
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Cactus	LOCATION #:	12
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

	NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	1	0	2	0	0	5	2	10	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	71%	29%						
APP/DEPART	0	/	2	1	/	0	2	/	2	7	/	6	0					
BEGIN PEAK HR		6:30 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	4	2	6					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	67%	33%						
PEAK HR FACTOR		0.000			0.000			0.000			0.750		0.750					
APP/DEPART	0	/	2	0	/	0	0	/	0	6	/	4	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.750					
APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Cactus
EAST & WEST: El Rivino

PROJECT #: SC1439
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼



		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	10	0	3	9	10	0	0	19	9	60	0	0	0	0	0
	12:15 PM	0	0	0	6	0	5	12	17	0	0	8	9	57	0	0	0	0	0
	12:30 PM	0	0	0	9	0	10	10	20	0	0	20	10	79	0	0	0	0	0
	12:45 PM	0	0	0	13	0	11	10	22	0	0	7	8	71	0	0	0	0	0
	1:00 PM	0	0	0	2	0	8	6	9	0	0	16	5	46	0	0	0	0	0
	1:15 PM	0	0	0	6	0	4	10	14	0	0	17	7	58	0	0	0	0	0
	1:30 PM	0	0	0	5	0	11	9	19	0	0	12	5	61	0	0	0	0	0
	1:45 PM	0	0	0	9	0	14	10	16	0	0	14	8	71	0	0	0	0	0
	VOLUMES	0	0	0	60	0	66	76	127	0	0	113	61	503	0	0	0	0	0
	APPROACH %	0%	0%	0%	48%	0%	52%	37%	63%	0%	0%	65%	35%						
	APP/DEPART	0	/	137	126	/	0	203	/	187	174	/	179	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	38	0	29	41	69	0	0	54	36	267					
	APPROACH %	0%	0%	0%	57%	0%	43%	37%	63%	0%	0%	60%	40%						
	PEAK HR FACTOR		0.000			0.698			0.859			0.750		0.845					
	APP/DEPART	0	/	77	67	/	0	110	/	107	90	/	83	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Cactus

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

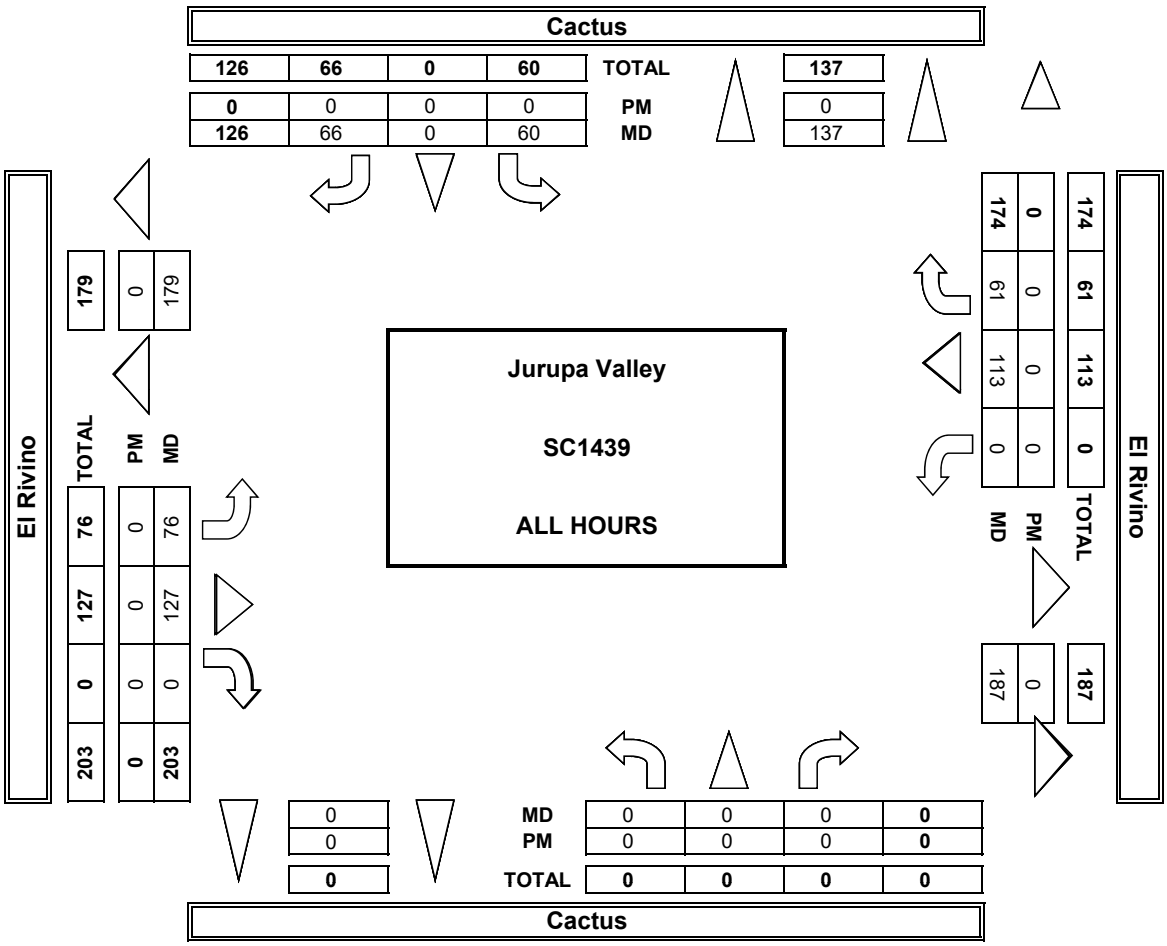
SOUTH SIDE

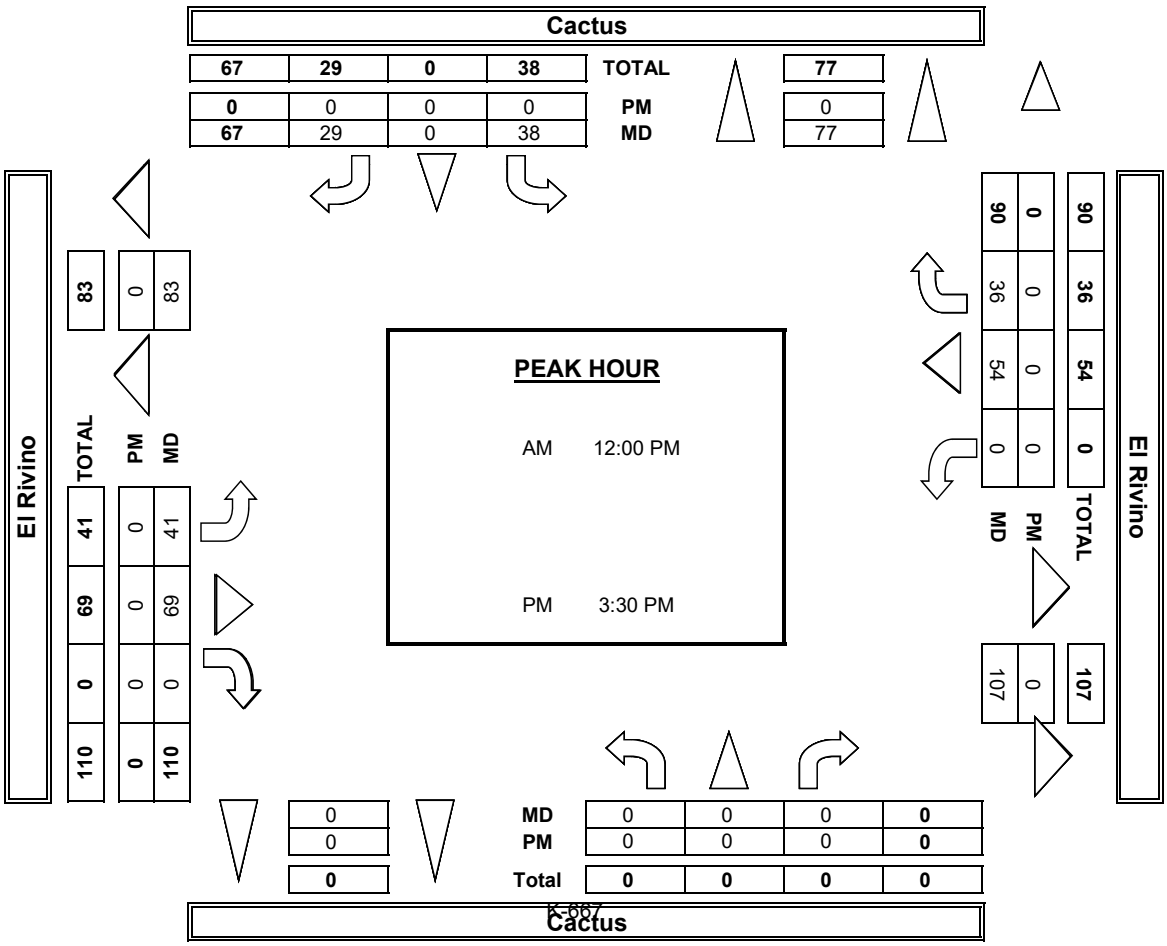
Cactus

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND (Cactus)			SOUTHBOUND (Cactus)			EASTBOUND (El Rivino)			WESTBOUND (El Rivino)			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	12	0	5	17	13	0	0	22	12	80
	8:15 AM	0	0	0	8	0	10	21	19	0	0	10	9	76
	8:30 AM	0	0	0	12	0	17	18	21	0	0	21	13	102
	8:45 AM	0	0	0	15	0	29	16	24	0	0	11	10	103
	9:00 AM	0	0	0	2	0	14	13	9	0	0	17	5	60
	9:15 AM	0	0	0	7	0	7	14	15	0	0	20	7	69
	9:30 AM	0	0	0	5	0	17	19	19	0	0	14	5	78
	9:45 AM	0	0	0	9	0	27	17	19	0	0	15	11	96
	VOLUMES	0	0	0	69	0	124	134	137	0	0	129	71	662
	APPROACH %	0%	0%	0%	36%	0%	64%	49%	51%	0%	0%	65%	35%	
	APP/DEPART	0	/	204	193	/	0	270	/	205	199	/	253	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	46	0	60	72	76	0	0	64	43	360
	APPROACH %	0%	0%	0%	43%	0%	57%	49%	51%	0%	0%	60%	40%	
	PEAK HR FACTOR		0.000			0.616			0.930			0.783		0.873
	APP/DEPART	0	/	115	106	/	0	147	/	122	107	/	124	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Cactus

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Cactus

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

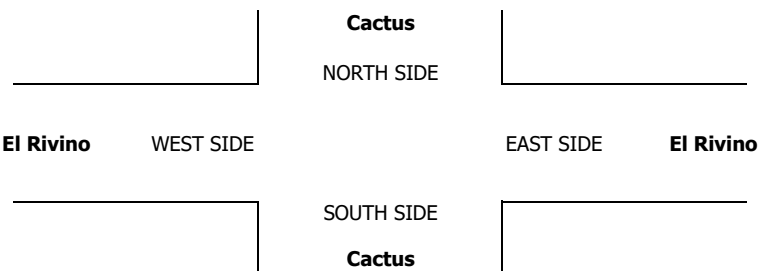
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	7	0	0	4	8	0	0	16	7	42	0	0	0	0	0
12:15 PM	0	0	0	5	0	2	6	13	0	0	6	9	41	0	0	0	0	0
12:30 PM	0	0	0	7	0	6	5	19	0	0	18	7	62	0	0	0	0	0
12:45 PM	0	0	0	11	0	1	6	19	0	0	3	6	46	0	0	0	0	0
1:00 PM	0	0	0	2	0	4	2	9	0	0	15	5	37	0	0	0	0	0
1:15 PM	0	0	0	5	0	2	8	13	0	0	13	7	48	0	0	0	0	0
1:30 PM	0	0	0	5	0	7	3	19	0	0	11	5	50	0	0	0	0	0
1:45 PM	0	0	0	9	0	7	6	12	0	0	13	5	52	0	0	0	0	0
VOLUMES	0	0	0	51	0	29	40	112	0	0	95	51	378	0	0	0	0	0
APPROACH %	0%	0%	0%	64%	0%	36%	26%	74%	0%	0%	65%	35%						
APP/DEPART	0	/	91	80	/	0	152	/	163	146	/	124	0					
BEGIN PEAK HR		12:30 PM																
VOLUMES	0	0	0	25	0	13	21	60	0	0	49	25	193					
APPROACH %	0%	0%	0%	66%	0%	34%	26%	74%	0%	0%	66%	34%						
PEAK HR FACTOR		0.000			0.731			0.810			0.740		0.778					
APP/DEPART	0	/	46	38	/	0	81	/	85	74	/	62	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

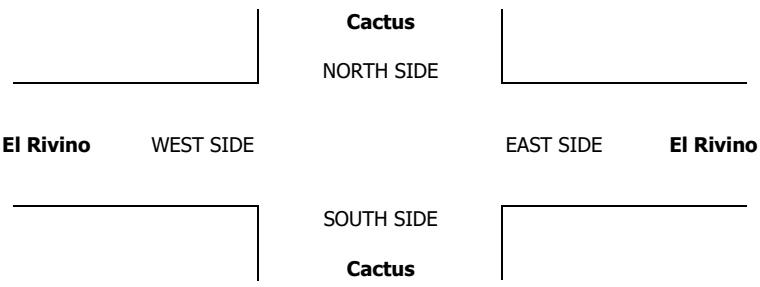
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	3	0	2	0	1	0	0	2	1	9	0	0	0	0	0
	12:15 PM	0	0	0	0	0	1	1	4	0	0	1	0	7	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	1	0	0	2	2	5	0	0	0	0	0
	12:45 PM	0	0	0	1	0	1	0	3	0	0	2	1	8	0	0	0	0	0
	1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	1:15 PM	0	0	0	1	0	0	0	1	0	0	3	0	5	0	0	0	0	0
	1:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	1	3	0	0	1	1	6	0	0	0	0	0
	VOLUMES	0	0	0	5	0	6	3	13	0	0	11	5	43	0	0	0	0	0
	APPROACH %	0%	0%	0%	45%	0%	55%	19%	81%	0%	0%	69%	31%						
	APP/DEPART	0	/	8	11	/	0	16	/	18	16	/	17	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	4	0	4	1	9	0	0	7	4	29					
	APPROACH %	0%	0%	0%	50%	0%	50%	10%	90%	0%	0%	64%	36%						
	PEAK HR FACTOR		0.000			0.400			0.500			0.688		0.806					
	APP/DEPART	0	/	5	8	/	0	10	/	13	11	/	11	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

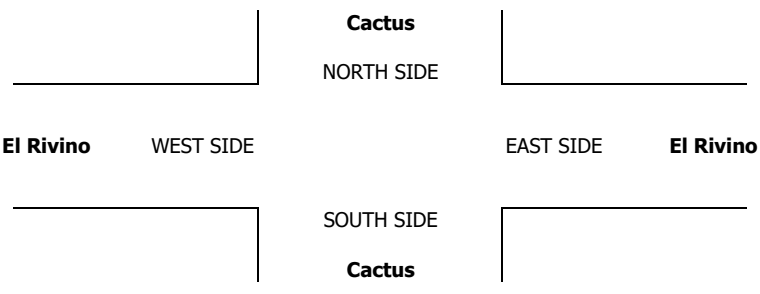
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	1	2	0	0	0	0	0	3	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	2	0	0	0	1	0	3	0	0	0	0	0
	12:30 PM	0	0	0	1	0	1	2	0	0	0	0	0	4	0	0	0	0	0
	12:45 PM	0	0	0	1	0	1	2	0	0	0	1	0	5	0	0	0	0	0
	1:00 PM	0	0	0	0	0	1	1	0	0	0	1	0	3	0	0	0	0	0
	1:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0
	1:45 PM	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	0
	VOLUMES	0	0	0	2	0	7	10	0	0	0	3	1	23	0	0	0	0	0
	APPROACH %	0%	0%	0%	22%	0%	78%	100%	0%	0%	0%	75%	25%						
	APP/DEPART	0	/	11	9	/	0	10	/	2	4	/	10	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	2	0	3	7	0	0	0	3	0	15					
	APPROACH %	0%	0%	0%	40%	0%	60%	100%	0%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.625			0.875			0.750		0.750					
	APP/DEPART	0	/	7	5	/	0	7	/	2	3	/	6	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

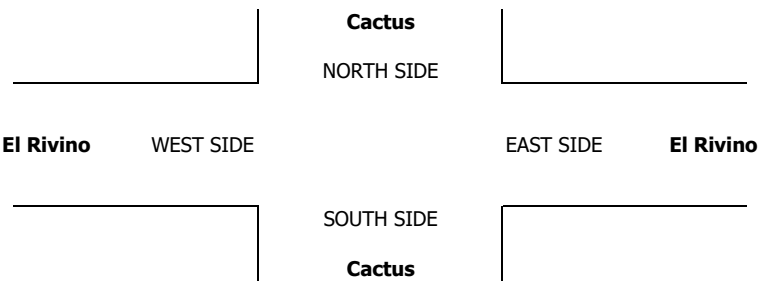
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Cactus)			SOUTHBOUND (Cactus)			EASTBOUND (El Rivino)			WESTBOUND (El Rivino)				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	3	1	0	0	1	1	6	0	0	0	0	0
	12:15 PM	0	0	0	1	0	2	3	0	0	0	0	0	6	0	0	0	0	0
	12:30 PM	0	0	0	1	0	3	3	0	0	0	0	1	8	0	0	0	0	0
	12:45 PM	0	0	0	0	0	8	2	0	0	0	1	0	11	0	0	0	0	0
	1:00 PM	0	0	0	0	0	2	3	0	0	0	0	0	5	0	0	0	0	0
	1:15 PM	0	0	0	0	0	1	2	0	0	0	0	0	3	0	0	0	0	0
	1:30 PM	0	0	0	0	0	2	4	0	0	0	1	0	7	0	0	0	0	0
	1:45 PM	0	0	0	0	0	6	3	0	0	0	0	0	9	0	0	0	0	0
	VOLUMES	0	0	0	2	0	24	23	1	0	0	3	2	55	0	0	0	0	0
	APPROACH %	0%	0%	0%	8%	0%	92%	96%	4%	0%	0%	60%	40%						
	APP/DEPART	0	/	25	26	/	0	24	/	3	5	/	27	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	2	0	13	11	1	0	0	2	2	31					
	APPROACH %	0%	0%	0%	13%	0%	87%	92%	8%	0%	0%	50%	50%						
	PEAK HR FACTOR		0.000			0.469			0.750			0.500		0.705					
	APP/DEPART	0	/	13	15	/	0	12	/	3	4	/	15	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

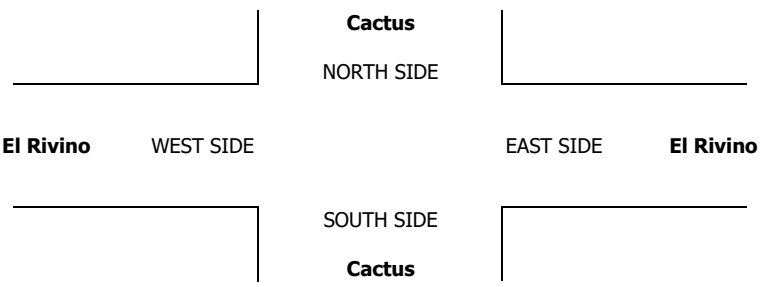
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Cactus)			SOUTHBOUND (Cactus)			EASTBOUND (El Rivino)			WESTBOUND (El Rivino)				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



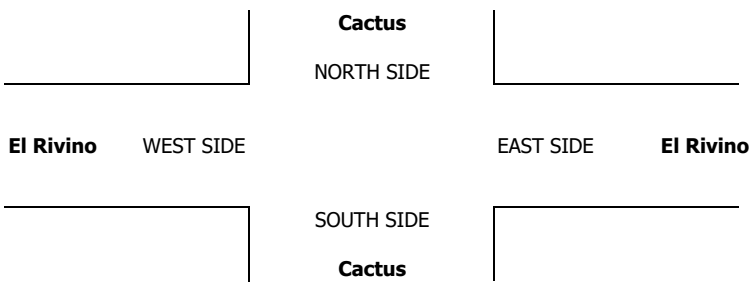
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Cactus	LOCATION #:	2
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND Cactus			SOUTHBOUND Cactus			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	1	2	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	33%	67%						
	APP/DEPART	0	/	2	0	/	0	1	/	1	3	/	1	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	1	1	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.500		0.375					
	APP/DEPART	0	/	1	0	/	0	1	/	1	2	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Hall
EAST & WEST: El Rivino

PROJECT #: SC1321
LOCATION #: 13
CONTROL: STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ ◄ W E ►

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	6:30 AM	3	0	0	0	0	0	0	23	9	0	16	1	52
	6:45 AM	5	0	0	2	0	3	0	21	14	0	21	1	67
	7:00 AM	2	0	1	0	2	1	1	13	5	0	24	3	52
	7:15 AM	8	0	0	2	0	2	0	12	8	0	17	0	49
	7:30 AM	6	0	0	4	2	3	1	28	10	0	25	2	81
	7:45 AM	6	1	1	1	2	1	1	23	9	0	20	1	66
	8:00 AM	9	1	0	2	2	4	0	18	4	1	23	2	66
	8:15 AM	3	0	0	1	0	1	2	10	8	0	14	1	40
	8:30 AM	6	0	0	1	1	0	0	18	6	0	11	0	43
	8:45 AM	3	0	0	3	0	0	0	29	7	0	11	1	54
	9:00 AM	2	0	0	1	1	0	1	14	3	0	6	2	30
	9:15 AM	4	1	0	2	2	2	2	12	9	0	10	2	46
	VOLUMES	57	3	2	19	12	17	8	221	92	1	198	16	646
	APPROACH %	92%	5%	3%	40%	25%	35%	2%	69%	29%	0%	92%	7%	
	APP/DEPART	62	/	27	48	/	105	321	/	242	215	/	272	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	29	2	1	9	6	10	2	81	31	1	85	5	262
	APPROACH %	91%	6%	3%	36%	24%	40%	2%	71%	27%	1%	93%	5%	
	PEAK HR FACTOR		0.800			0.694			0.731			0.843		0.809
	APP/DEPART	32	/	9	25	/	38	114	/	91	91	/	124	0
PM	03:30 PM	18	1	0	0	1	1	0	74	28	0	34	1	158
	3:45 PM	22	0	0	1	2	1	3	58	13	0	36	0	136
	4:00 PM	23	0	1	1	0	3	0	63	7	0	34	6	138
	4:15 PM	21	0	0	1	1	0	4	58	11	0	41	2	139
	4:30 PM	27	0	1	0	3	0	2	58	16	0	35	0	142
	4:45 PM	16	0	0	0	1	0	2	67	17	0	40	0	143
	5:00 PM	24	0	0	0	2	1	2	62	15	0	37	0	143
	5:15 PM	21	0	0	0	0	0	3	55	9	1	37	4	130
	5:30 PM	20	1	0	3	2	0	0	24	4	0	31	4	89
	5:45 PM	6	2	1	1	1	0	2	27	0	1	16	3	60
	6:00 PM	8	0	0	2	1	0	4	17	2	0	29	1	64
	6:15 PM	6	1	0	2	3	0	3	28	2	0	21	1	67
	VOLUMES	212	5	3	11	17	6	25	591	124	2	391	22	1,409
	APPROACH %	96%	2%	1%	32%	50%	18%	3%	80%	17%	0%	94%	5%	
	APP/DEPART	220	/	51	34	/	143	740	/	605	415	/	610	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	84	1	1	3	4	5	7	253	59	0	145	9	571
	APPROACH %	98%	1%	1%	25%	33%	42%	2%	79%	18%	0%	94%	6%	
	PEAK HR FACTOR		0.896			0.750			0.782			0.895		0.903
	APP/DEPART	86	/	16	12	/	63	319	/	257	154	/	235	0

Hall

NORTH SIDE

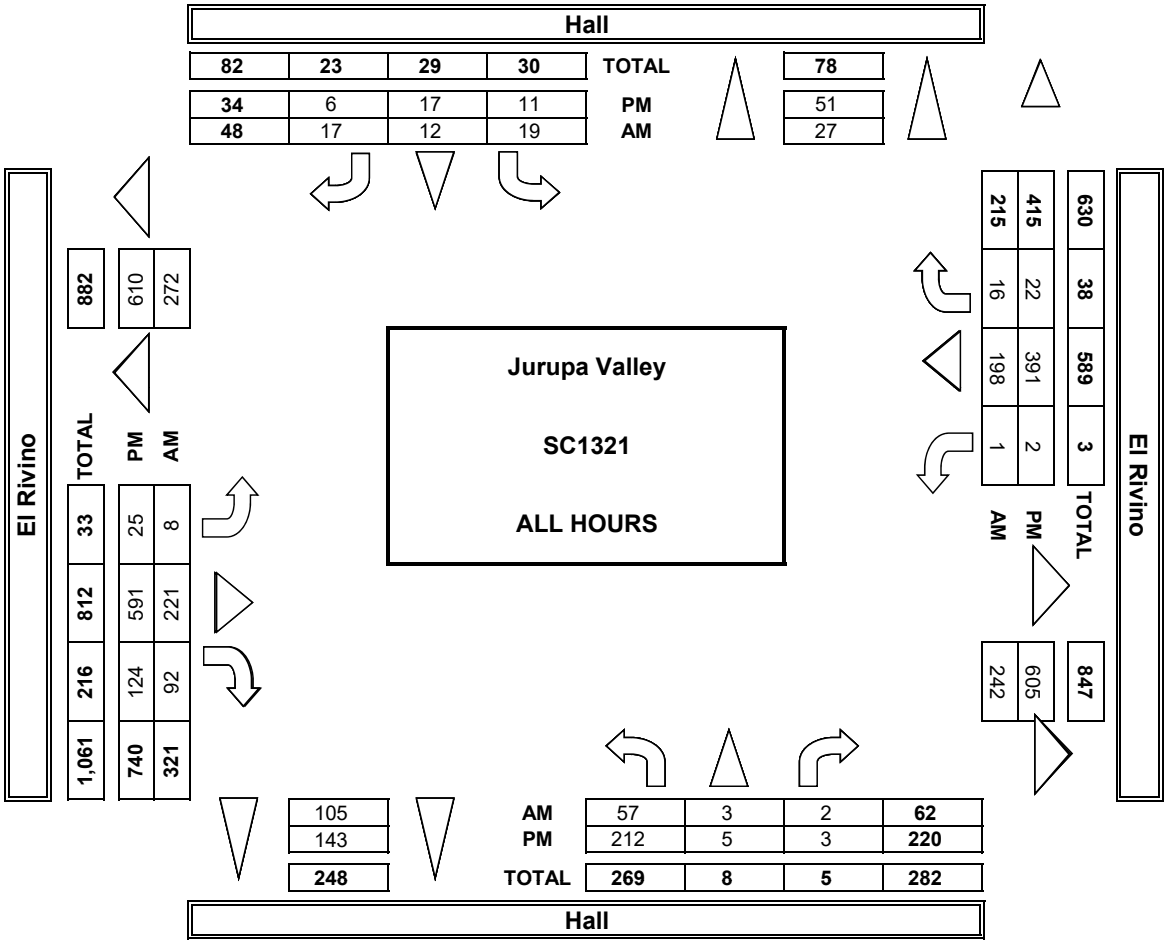
El Rivino WEST SIDE EAST SIDE **El Rivino**

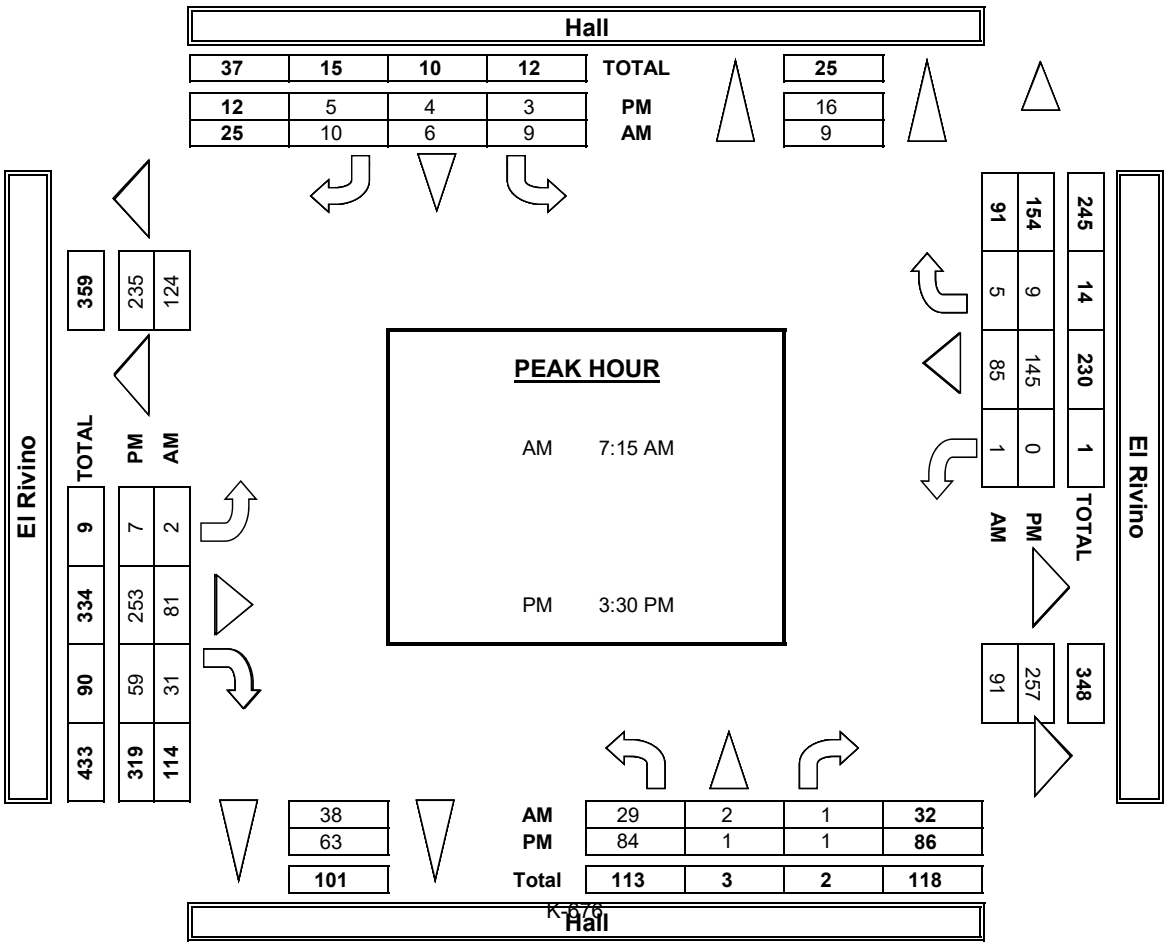
SOUTH SIDE

Hall

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	6:30 AM	3	0	0	0	0	0	0	24	9	0	21	1	58
	6:45 AM	5	0	0	2	0	4	0	23	15	0	30	1	78
	7:00 AM	2	0	1	0	2	1	1	15	6	0	30	3	61
	7:15 AM	9	0	0	2	0	2	0	13	10	0	25	0	60
	7:30 AM	7	0	0	4	2	4	1	31	10	0	28	2	88
	7:45 AM	10	1	2	1	2	1	1	24	12	0	20	1	74
	8:00 AM	11	1	0	2	2	4	0	20	6	1	27	2	76
	8:15 AM	5	0	0	1	0	1	2	10	12	0	14	1	46
	8:30 AM	10	0	0	1	1	0	0	18	7	0	12	0	48
	8:45 AM	3	0	0	3	0	0	0	32	9	0	14	1	61
	9:00 AM	5	0	0	1	1	0	1	17	6	0	6	2	38
	9:15 AM	6	1	0	2	2	2	2	14	12	0	11	2	54
	VOLUMES	75	3	3	19	12	18	8	239	111	1	236	16	740
	APPROACH %	93%	4%	4%	39%	24%	37%	2%	67%	31%	0%	93%	6%	
	APP/DEPART	81	/	27	49	/	124	358	/	261	253	/	329	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	37	2	2	9	6	11	2	87	38	1	99	5	297
	APPROACH %	90%	5%	5%	35%	24%	41%	2%	69%	30%	1%	94%	5%	
	PEAK HR FACTOR		0.810			0.671			0.750			0.875		0.844
	APP/DEPART	41	/	9	26	/	45	126	/	98	105	/	146	0
PM	03:30 PM	22	1	0	0	1	1	0	92	43	0	38	2	199
	3:45 PM	24	0	0	1	2	1	3	73	17	0	43	0	163
	4:00 PM	26	0	1	1	0	3	0	77	13	0	35	8	163
	4:15 PM	33	0	0	1	1	0	4	71	16	0	44	2	171
	4:30 PM	31	0	1	0	3	0	3	62	25	0	38	0	162
	4:45 PM	19	0	0	0	1	0	2	76	27	0	42	0	167
	5:00 PM	28	0	0	0	2	1	2	64	22	0	37	0	156
	5:15 PM	27	0	0	0	0	0	4	60	19	1	38	5	152
	5:30 PM	23	1	0	3	2	0	0	26	6	0	31	4	96
	5:45 PM	9	2	1	1	1	0	2	28	0	1	18	3	65
	6:00 PM	9	0	0	2	1	0	4	17	3	0	32	1	69
	6:15 PM	7	1	0	2	3	0	3	30	4	0	26	1	76
	VOLUMES	255	5	3	11	17	6	26	673	193	2	420	25	1,635
	APPROACH %	97%	2%	1%	32%	50%	18%	3%	75%	22%	0%	94%	6%	
	APP/DEPART	263	/	56	34	/	212	892	/	687	447	/	680	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	105	1	1	3	4	5	7	311	88	0	159	12	695
	APPROACH %	98%	1%	1%	25%	33%	42%	2%	77%	22%	0%	93%	7%	
	PEAK HR FACTOR		0.807			0.750			0.757			0.937		0.875
	APP/DEPART	107	/	20	12	/	92	406	/	315	171	/	269	0

Hall

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Hall

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

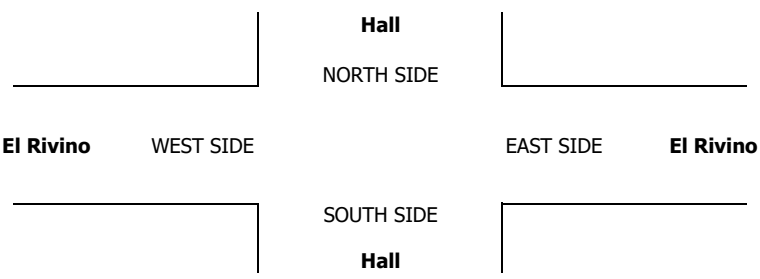
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	3	0	0	0	0	0	0	22	9	0	12	1	47	0	0	0	0	0
6:45 AM	5	0	0	2	0	2	0	19	13	0	12	1	54	0	0	0	0	0
7:00 AM	2	0	1	0	2	1	1	10	4	0	15	3	39	0	0	0	0	0
7:15 AM	6	0	0	2	0	2	0	11	7	0	12	0	40	0	0	0	0	0
7:30 AM	4	0	0	4	2	2	1	26	10	0	23	2	74	0	0	0	0	0
7:45 AM	3	1	0	1	2	1	1	22	7	0	20	1	59	0	0	0	0	0
8:00 AM	8	1	0	2	2	4	0	16	3	1	17	2	56	0	0	0	0	0
8:15 AM	2	0	0	1	0	1	2	10	6	0	14	1	37	0	0	0	0	0
8:30 AM	4	0	0	1	1	0	0	18	5	0	10	0	39	0	0	0	0	0
8:45 AM	3	0	0	3	0	0	0	24	4	0	9	1	44	0	0	0	0	0
9:00 AM	0	0	0	1	1	0	1	8	1	0	6	2	20	0	0	0	0	0
9:15 AM	3	1	0	2	2	2	2	8	6	0	8	2	36	0	0	0	0	0
VOLUMES	43	3	1	19	12	15	8	194	75	1	158	16	545	0	0	0	0	0
APPROACH %	91%	6%	2%	41%	26%	33%	3%	70%	27%	1%	90%	9%						
APP/DEPART	47	/	27	46	/	88	277	/	214	175	/	216	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	21	2	0	9	6	9	2	75	27	1	72	5	229					
APPROACH %	91%	9%	0%	38%	25%	38%	2%	72%	26%	1%	92%	6%						
PEAK HR FACTOR		0.639			0.750			0.703			0.780		0.774					
APP/DEPART	23	/	9	24	/	34	104	/	84	78	/	102	0					
PM																		
03:30 PM	16	1	0	0	1	1	0	59	18	0	26	0	122	0	0	0	0	0
3:45 PM	21	0	0	1	2	1	3	44	9	0	31	0	112	0	0	1	0	1
4:00 PM	20	0	1	1	0	3	0	50	1	0	32	5	113	0	0	0	0	0
4:15 PM	11	0	0	1	1	0	4	46	7	0	37	2	109	0	0	0	0	0
4:30 PM	24	0	1	0	3	0	1	53	8	0	31	0	121	0	0	0	0	0
4:45 PM	14	0	0	0	1	0	2	57	8	0	37	0	119	0	0	0	0	0
5:00 PM	21	0	0	0	2	1	2	61	9	0	37	0	133	0	0	0	0	0
5:15 PM	17	0	0	0	0	0	2	52	3	1	36	3	114	0	0	0	0	0
5:30 PM	17	1	0	3	2	0	0	23	2	0	31	4	83	0	0	0	0	0
5:45 PM	4	2	1	1	1	0	2	25	0	1	13	3	53	0	0	0	0	0
6:00 PM	7	0	0	2	1	0	4	17	1	0	26	1	59	0	0	0	0	0
6:15 PM	5	1	0	2	3	0	3	25	1	0	15	1	56	0	0	0	0	0
VOLUMES	177	5	3	11	17	6	23	512	67	2	352	19	1,194	0	0	1	0	1
APPROACH %	96%	3%	2%	32%	50%	18%	4%	85%	11%	1%	94%	5%						
APP/DEPART	185	/	46	34	/	86	602	/	526	373	/	536	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	76	0	1	0	6	1	7	223	28	1	141	3	487					
APPROACH %	99%	0%	1%	0%	86%	14%	3%	86%	11%	1%	97%	2%						
PEAK HR FACTOR		0.770			0.583			0.896			0.906		0.915					
APP/DEPART	77	/	10	7	/	35	258	/	224	145	/	218	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

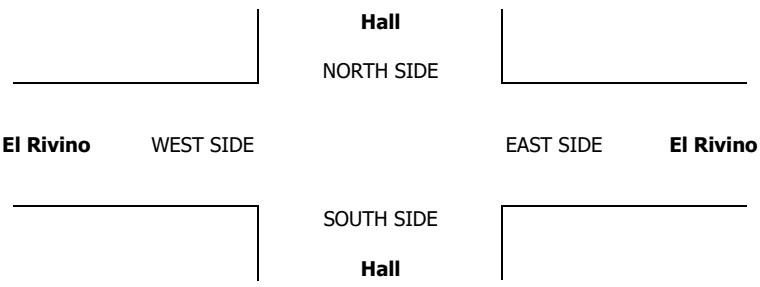
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	6:45 AM	0	0	0	0	0	1	0	1	1	0	3	0	6	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	2	1	0	6	0	9	0	0	0	0	0
	7:15 AM	2	0	0	0	0	0	0	1	0	0	1	0	4	0	0	0	0	0
	7:30 AM	2	0	0	0	0	1	0	0	0	0	1	0	4	0	0	0	0	0
	7:45 AM	1	0	0	0	0	0	0	1	1	0	0	0	3	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	4	3	0	1	0	8	0	0	0	0	0
	9:00 AM	1	0	0	0	0	0	0	6	1	0	0	0	8	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	4	2	0	2	0	8	0	0	0	0	0
	VOLUMES	6	0	0	0	0	2	0	21	10	0	19	0	58	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	100%	0%	68%	32%	0%	100%	0%						
	APP/DEPART	6	/	0	2	/	10	31	/	21	19	/	27	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	1	0	0	0	0	0	0	14	7	0	4	0	26					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	67%	33%	0%	100%	0%						
	PEAK HR FACTOR		0.250			0.000			0.750			0.500		0.813					
	APP/DEPART	1	/	0	0	/	7	21	/	14	4	/	5	0					
PM	03:30 PM	0	0	0	0	0	0	0	7	1	0	8	1	17	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	7	2	0	1	0	10	0	0	0	0	0
	4:00 PM	1	0	0	0	0	0	0	7	3	0	2	0	13	0	0	0	0	0
	4:15 PM	2	0	0	0	0	0	0	7	1	0	3	0	13	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	1	3	2	0	3	0	9	0	0	0	0	0
	4:45 PM	1	0	0	0	0	0	0	6	2	0	2	0	11	0	0	0	0	0
	5:00 PM	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
	5:15 PM	1	0	0	0	0	0	1	1	1	0	0	1	5	0	0	0	0	0
	5:30 PM	2	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0
	5:45 PM	1	0	0	0	0	0	0	2	0	0	3	0	6	0	0	0	0	0
	6:00 PM	1	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0
	6:15 PM	1	0	0	0	0	0	0	2	0	0	5	0	8	0	0	0	0	0
	VOLUMES	11	0	0	0	0	0	2	42	15	0	29	2	101	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	3%	71%	25%	0%	94%	6%						
	APP/DEPART	11	/	4	0	/	15	59	/	42	31	/	40	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	3	0	0	0	0	0	0	28	7	0	14	1	53					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	80%	20%	0%	93%	7%						
	PEAK HR FACTOR		0.375			0.000			0.875			0.417		0.779					
	APP/DEPART	3	/	1	0	/	7	35	/	28	15	/	17	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

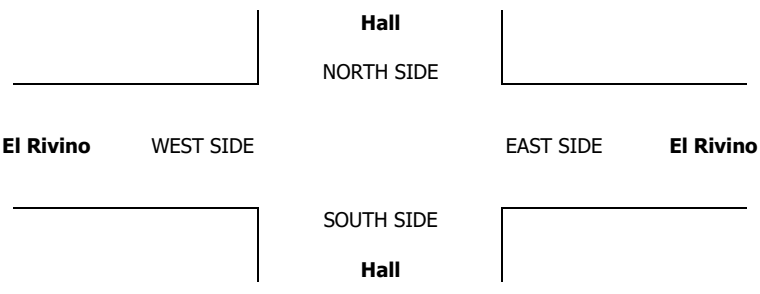
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	0	1	0	0	0	0	3	0	0	8	0	13	0	0	0	0	0
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	2	/	0	0	/	0	3	/	4	8	/	9	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	0	0	0	0	2	0	0	7	0	9					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.438		0.450					
	APP/DEPART	0	/	0	0	/	0	2	/	2	7	/	7	0					
PM	03:30 PM	0	0	0	0	0	0	0	1	4	0	0	0	5	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	3	1	0	1	0	5	0	0	0	0	0
	4:00 PM	2	0	0	0	0	0	0	2	1	0	0	0	5	0	0	0	0	0
	4:15 PM	5	0	0	0	0	0	0	1	2	0	1	0	9	0	0	0	0	0
	4:30 PM	2	0	0	0	0	0	0	2	4	0	1	0	9	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	2	5	0	1	0	8	0	0	0	0	0
	5:00 PM	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
	5:15 PM	1	0	0	0	0	0	0	0	1	0	1	0	3	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	11	0	0	0	0	0	0	12	22	0	5	0	50	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	35%	65%	0%	100%	0%						
	APP/DEPART	11	/	0	0	/	22	34	/	12	5	/	16	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	9	0	0	0	0	0	0	7	12	0	3	0	31					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	37%	63%	0%	100%	0%						
	PEAK HR FACTOR		0.450			0.000			0.679			0.750		0.861					
	APP/DEPART	9	/	0	0	/	12	19	/	7	3	/	12	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

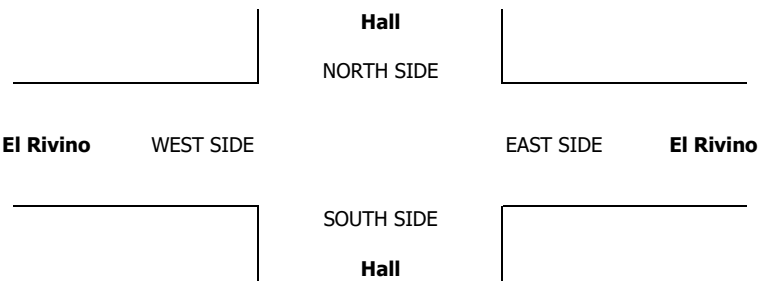
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	0	3	0	4	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
8:00 AM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
8:15 AM	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
8:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
9:00 AM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
9:15 AM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
VOLUMES	7	0	0	0	0	0	0	1	7	0	7	0	22	0	0	0	0	0
APPROACH %	100%	0%	0%	0%	0%	0%	0%	13%	88%	0%	100%	0%						
APP/DEPART	7	/	0	0	/	7	8	/	1	7	/	14	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	2	0	0	0	0	0	0	1	3	0	4	0	10					
APPROACH %	100%	0%	0%	0%	0%	0%	0%	25%	75%	0%	100%	0%						
PEAK HR FACTOR		0.500			0.000			1.000			0.333		0.625					
APP/DEPART	2	/	0	0	/	3	4	/	1	4	/	6	0					
PM																		
03:30 PM	2	0	0	0	0	0	0	6	5	0	0	0	13	0	0	0	0	0
3:45 PM	1	0	0	0	0	0	0	4	1	0	2	0	8	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	4	1	0	0	1	6	0	0	0	0	0
4:15 PM	3	0	0	0	0	0	0	4	1	0	0	0	8	0	0	0	0	0
4:30 PM	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	2	2	0	0	0	5	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	1	2	0	0	0	4	0	0	0	0	0
5:15 PM	2	0	0	0	0	0	0	2	4	0	0	0	8	0	0	0	0	0
5:30 PM	1	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0
VOLUMES	13	0	0	0	0	0	0	24	19	0	4	1	61	0	0	0	0	0
APPROACH %	100%	0%	0%	0%	0%	0%	0%	56%	44%	0%	80%	20%						
APP/DEPART	13	/	1	0	/	19	43	/	24	5	/	17	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	6	0	0	0	0	0	0	18	8	0	2	1	35					
APPROACH %	100%	0%	0%	0%	0%	0%	0%	69%	31%	0%	67%	33%						
PEAK HR FACTOR		0.500			0.000			0.591			0.375		0.673					
APP/DEPART	6	/	1	0	/	8	26	/	18	3	/	8	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

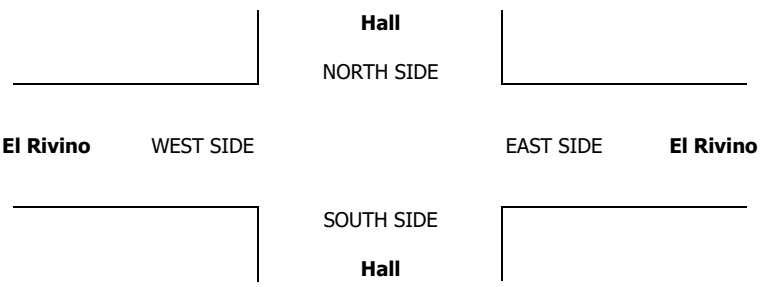
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

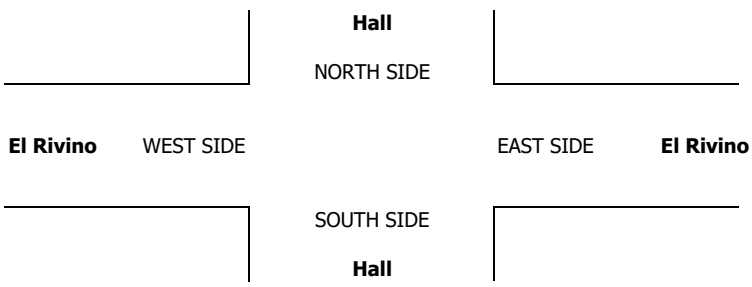
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	13
THURSDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	2	0	0	6	0	8	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	2	/	2	6	/	6	0					
BEGIN PEAK HR		6:30 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	5	0	5					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.625		0.625					
APP/DEPART	0	/	0	0	/	0	0	/	0	5	/	5	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	1	1	0	1	0	3	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	1	2	/	1	1	/	1	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	1	1	0	1	0	3					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.750					
APP/DEPART	0	/	0	0	/	1	2	/	1	1	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Hall
EAST & WEST: El Rivino

PROJECT #: SC1439
LOCATION #: 3
CONTROL: STOP N/S

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	10	0	0	0	1	3	1	12	10	1	16	2	56	0	0	0	0	0
	12:15 PM	5	0	1	2	2	0	1	12	8	1	12	1	45	0	0	0	0	0
	12:30 PM	14	1	2	5	2	3	2	16	12	0	14	2	73	0	0	0	0	0
	12:45 PM	5	2	1	3	0	0	1	18	13	0	12	6	61	0	0	0	0	0
	1:00 PM	7	1	0	1	0	0	3	8	1	1	11	1	34	0	1	0	0	1
	1:15 PM	6	1	0	3	2	0	1	13	5	0	17	2	50	0	0	0	0	0
	1:30 PM	3	1	0	1	2	2	2	19	1	1	15	4	51	0	0	0	0	0
	1:45 PM	2	1	0	2	0	0	2	14	7	0	19	3	50	0	0	0	0	0
	VOLUMES	52	7	4	17	9	8	13	112	57	4	116	21	420	0	1	0	0	1
	APPROACH %	83%	11%	6%	50%	26%	24%	7%	62%	31%	3%	82%	15%						
	APP/DEPART	63	/	42	34	/	70	182	/	132	141	/	176	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	34	3	4	10	5	6	5	58	43	2	54	11	235					
	APPROACH %	83%	7%	10%	48%	24%	29%	5%	55%	41%	3%	81%	16%						
	PEAK HR FACTOR		0.603			0.525			0.828			0.882		0.805					
	APP/DEPART	41	/	19	21	/	50	106	/	72	67	/	94	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Hall

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

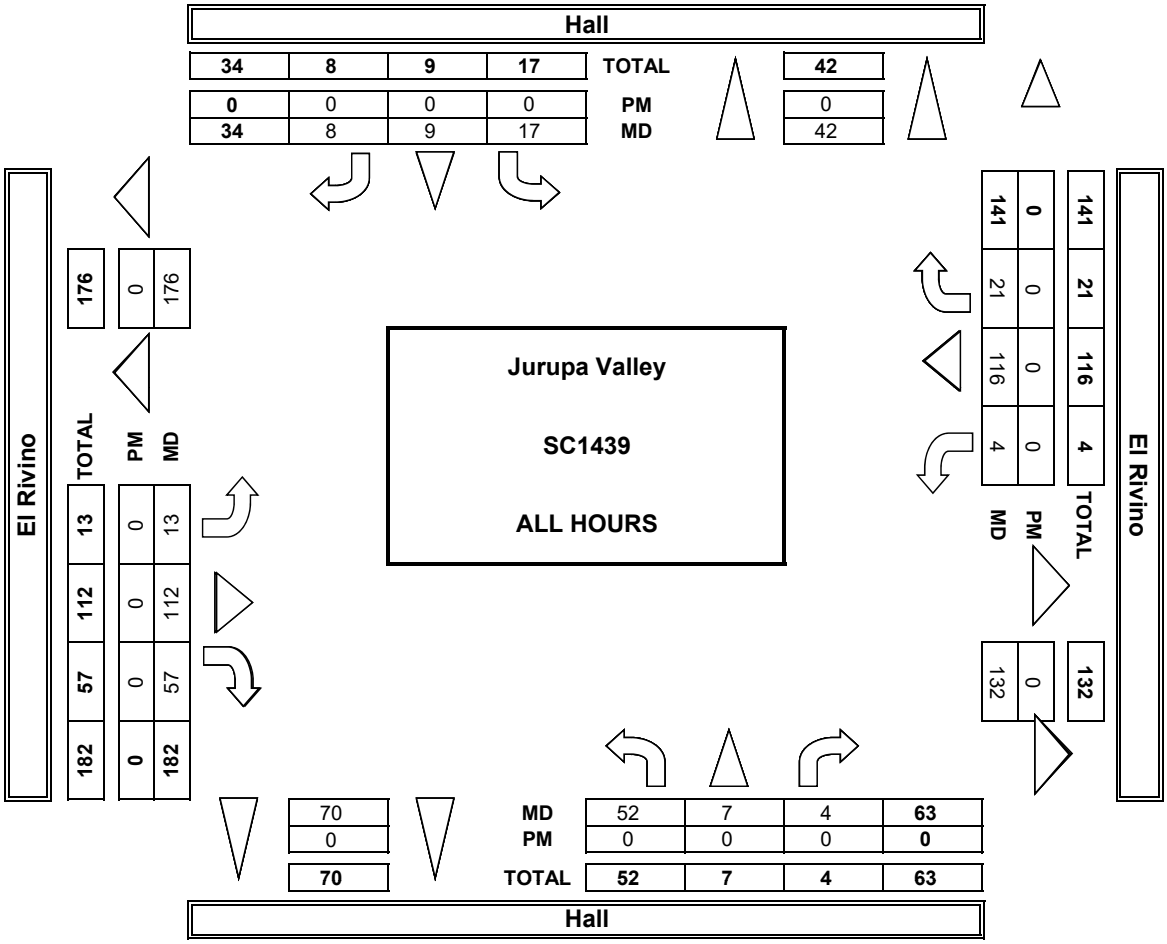
SOUTH SIDE

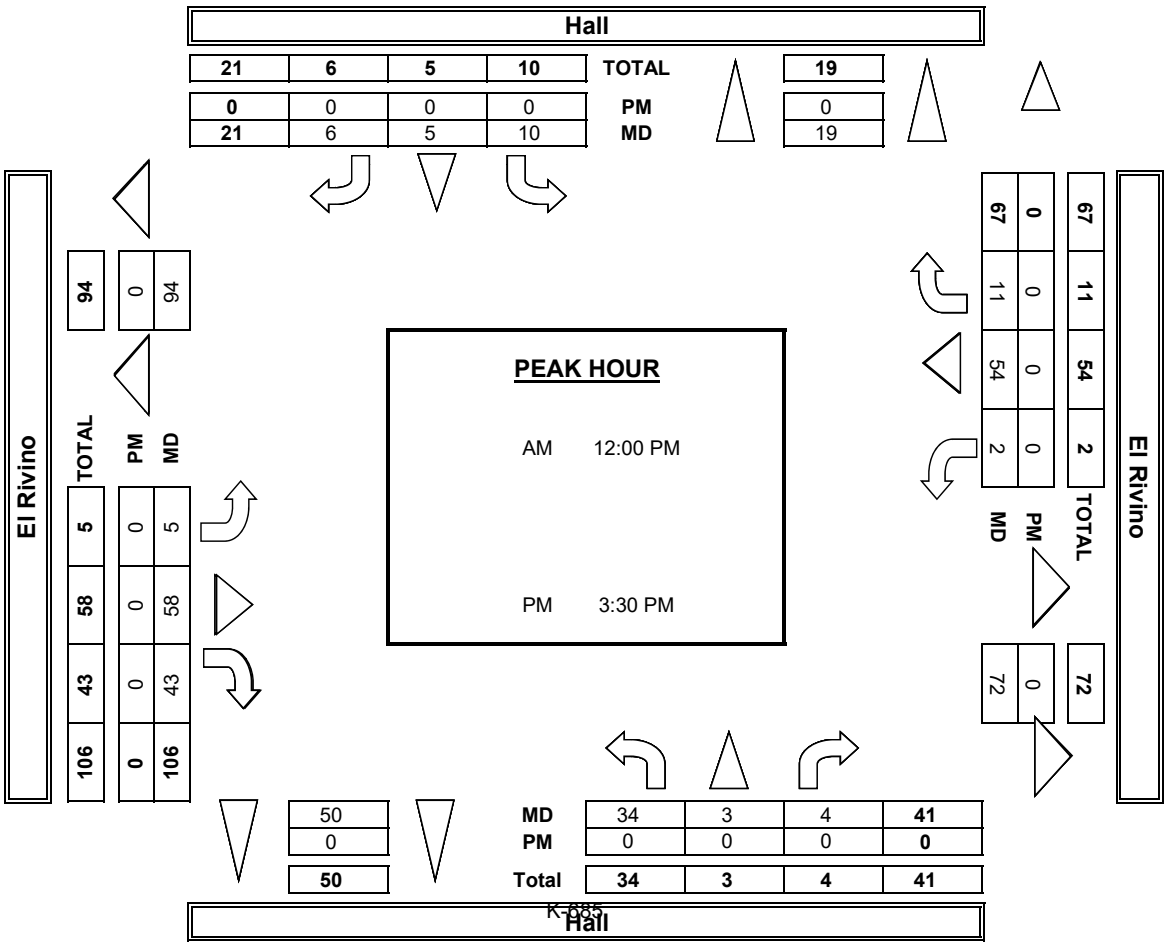
Hall

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	15	0	0	0	1	3	1	13	14	1	17	2	67
	8:15 AM	6	0	2	3	2	0	1	14	11	1	13	2	53
	8:30 AM	17	1	3	5	2	3	2	18	14	0	15	2	82
	8:45 AM	8	3	2	3	0	0	1	19	14	0	15	6	71
	9:00 AM	7	1	0	1	0	0	3	8	1	1	13	1	36
	9:15 AM	8	1	0	3	2	0	1	14	7	0	19	2	55
	9:30 AM	4	1	0	1	2	2	2	19	1	1	16	5	53
	9:45 AM	3	1	0	2	0	0	2	15	9	0	20	3	55
	VOLUMES	66	8	7	18	9	8	13	119	70	4	127	22	469
	APPROACH %	81%	10%	9%	51%	26%	23%	6%	59%	35%	3%	83%	14%	
	APP/DEPART	81	/	43	35	/	83	201	/	143	153	/	201	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	45	4	7	11	5	6	5	63	53	2	60	12	271
	APPROACH %	80%	7%	13%	49%	23%	28%	4%	52%	44%	3%	82%	16%	
	PEAK HR FACTOR		0.667			0.538			0.886			0.869		0.831
	APP/DEPART	56	/	21	22	/	60	121	/	81	73	/	111	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Hall

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Hall

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

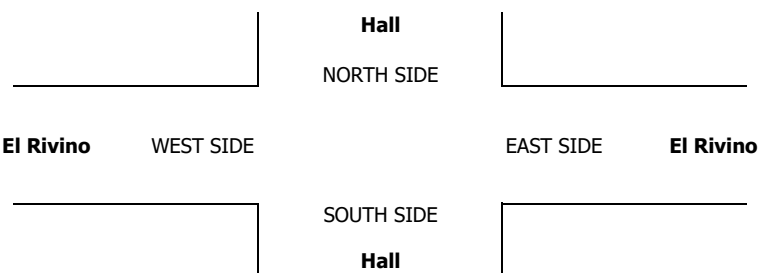
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	6	0	0	0	1	3	1	10	6	1	15	2	45	0	0	0	0	0
12:15 PM	4	0	0	1	2	0	1	9	6	1	11	0	35	0	0	0	0	0
12:30 PM	11	1	1	5	2	3	2	14	11	0	12	2	64	0	0	0	0	0
12:45 PM	3	1	0	3	0	0	1	16	11	0	10	6	51	0	0	0	0	0
1:00 PM	7	1	0	1	0	0	3	8	1	1	9	1	32	0	1	0	0	1
1:15 PM	3	1	0	3	2	0	1	12	2	0	15	2	41	0	0	0	0	0
1:30 PM	2	1	0	1	2	2	2	19	1	1	14	3	48	0	0	0	0	0
1:45 PM	1	1	0	2	0	0	2	13	4	0	17	3	43	0	0	0	0	0
VOLUMES	37	6	1	16	9	8	13	101	42	4	103	19	359	0	1	0	0	1
APPROACH %	84%	14%	2%	48%	27%	24%	8%	65%	27%	3%	82%	15%						
APP/DEPART	44	/	39	33	/	55	156	/	117	126	/	148	0					
BEGIN PEAK HR		12:00 PM																
VOLUMES	24	2	1	9	5	6	5	49	34	2	48	10	195					
APPROACH %	89%	7%	4%	45%	25%	30%	6%	56%	39%	3%	80%	17%						
PEAK HR FACTOR		0.519			0.500			0.786			0.833		0.762					
APP/DEPART	27	/	17	20	/	41	88	/	59	60	/	78	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

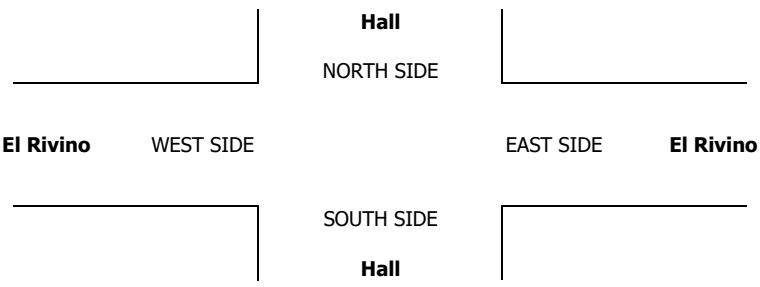
NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	2	0	0	0	0	0	0	2	2	0	1	0	7
	12:15 PM	1	0	0	1	0	0	0	3	1	0	0	1	7
	12:30 PM	2	0	0	0	0	0	0	1	0	0	2	0	5
	12:45 PM	1	0	0	0	0	0	0	2	2	0	0	0	5
	1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	1:15 PM	3	0	0	0	0	0	0	1	3	0	1	0	8
	1:30 PM	1	0	0	0	0	0	0	0	0	0	0	1	2
	1:45 PM	0	0	0	0	0	0	0	0	3	0	2	0	5
	VOLUMES	10	0	0	1	0	0	0	9	11	0	7	2	40
	APPROACH %	100%	0%	0%	100%	0%	0%	0%	45%	55%	0%	78%	22%	
	APP/DEPART	10	/	2	1	/	11	20	/	10	9	/	17	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	6	0	0	1	0	0	0	8	5	0	3	1	24
	APPROACH %	100%	0%	0%	100%	0%	0%	0%	62%	38%	0%	75%	25%	
	PEAK HR FACTOR		0.750			0.250			0.813			0.500		0.857
	APP/DEPART	6	/	1	1	/	5	13	/	9	4	/	9	0
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

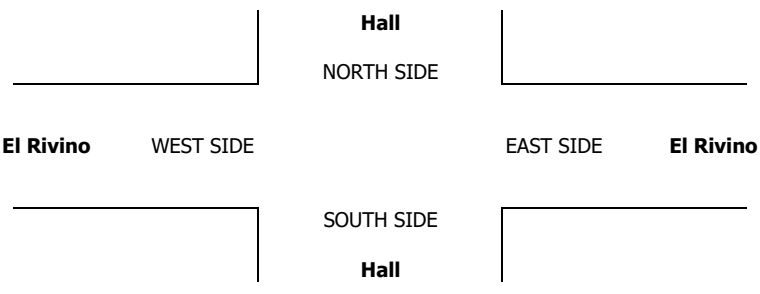
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	12:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0
	12:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
	12:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	1	1	3	0	0	0	0	1	1	0	2	0	9	0	0	0	0	0
	APPROACH %	20%	20%	60%	0%	0%	0%	0%	50%	50%	0%	100%	0%						
	APP/DEPART	5	/	1	0	/	1	2	/	4	2	/	3	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	1	3	0	0	0	0	1	0	0	2	0	7					
	APPROACH %	0%	25%	75%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.500			0.000			0.250			0.500		0.875					
	APP/DEPART	4	/	1	0	/	0	1	/	4	2	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	2	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	12:30 PM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
	12:45 PM	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	4	0	0	0	0	0	0	0	3	0	1	0	8	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%						
	APP/DEPART	4	/	0	0	/	3	3	/	0	1	/	5	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	4	0	0	0	0	0	0	0	3	0	1	0	8					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%						
	PEAK HR FACTOR		0.500			0.000			0.750			0.250		0.667					
	APP/DEPART	4	/	0	0	/	3	3	/	0	1	/	5	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Hall

NORTH SIDE

El Rivino WEST SIDE EAST SIDE **El Rivino**

SOUTH SIDE

Hall

INTERSECTION TURNING MOVEMENT COUNTS

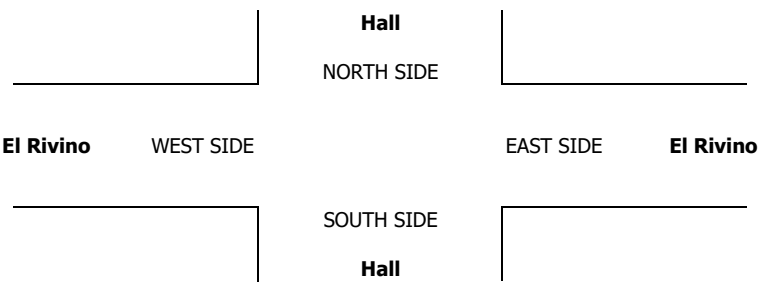
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND El Rivino			WESTBOUND El Rivino				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Hall	LOCATION #:	3
WEDNESDAY	EAST & WEST:	El Rivino	CONTROL:	STOP N/S

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Hall)			SOUTHBOUND (Hall)			EASTBOUND (El Rivino)			WESTBOUND (El Rivino)				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	3	0	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	1	/	1	3	/	3	0					
	BEGIN PEAK HR		12:45 PM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	2	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.500		0.750					
	APP/DEPART	0	/	0	0	/	0	1	/	1	2	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
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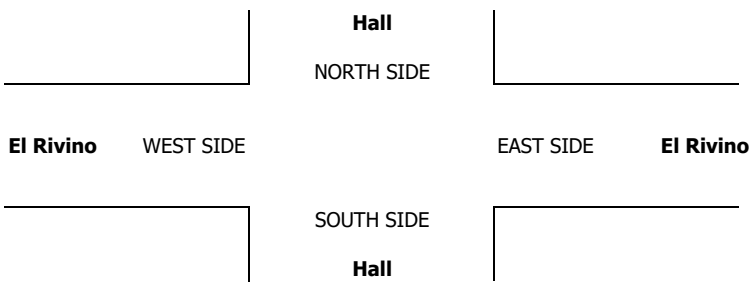

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County of Riverside
N/S: Agua Mansa Road
E/W: El Rivino Road
Weather: Clear

File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	88	13	101	5	44	49	16	0	16	166
06:45 AM	110	30	140	8	66	74	21	9	30	244
Total	198	43	241	13	110	123	37	9	46	410
07:00 AM	74	8	82	8	51	59	11	10	21	162
07:15 AM	77	12	89	0	66	66	14	1	15	170
07:30 AM	94	16	110	1	71	72	8	3	11	193
07:45 AM	104	6	110	3	64	67	18	2	20	197
Total	349	42	391	12	252	264	51	16	67	722
08:00 AM	86	4	90	2	53	55	6	1	7	152
08:15 AM	60	13	73	1	49	50	12	1	13	136
08:30 AM	60	8	68	3	40	43	8	1	9	120
08:45 AM	52	9	61	2	58	60	6	4	10	131
Total	258	34	292	8	200	208	32	7	39	539
09:00 AM	48	5	53	4	54	58	22	0	22	133
09:15 AM	53	14	67	2	59	61	23	3	26	154
Grand Total	906	138	1044	39	675	714	165	35	200	1958
Apprch %	86.8	13.2		5.5	94.5		82.5	17.5		
Total %	46.3	7	53.3	2	34.5	36.5	8.4	1.8	10.2	
Passenger Vehicles	712	126	838	36	484	520	129	33	162	1520
% Passenger Vehicles	78.6	91.3	80.3	92.3	71.7	72.8	78.2	94.3	81	77.6
Large 2 Axle Vehicles	65	10	75	3	53	56	33	1	34	165
% Large 2 Axle Vehicles	7.2	7.2	7.2	7.7	7.9	7.8	20	2.9	17	8.4
3 Axle Vehicles	33	2	35	0	31	31	2	0	2	68
% 3 Axle Vehicles	3.6	1.4	3.4	0	4.6	4.3	1.2	0	1	3.5
4+ Axle Trucks	96	0	96	0	107	107	1	1	2	205
% 4+ Axle Trucks	10.6	0	9.2	0	15.9	15	0.6	2.9	1	10.5

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:45 AM										
06:45 AM	**110**	**30**	**140**	**8**	66	**74**	**21**	9	**30**	**244**
07:00 AM	74	8	82	8	51	59	11	**10**	21	162
07:15 AM	77	12	89	0	66	66	14	1	15	170
07:30 AM	94	16	110	1	**71**	72	8	3	11	193
Total Volume	355	66	421	17	254	271	54	23	77	769
% App. Total	84.3	15.7		6.3	93.7		70.1	29.9		
PHF	.807	.550	.752	.531	.894	.916	.643	.575	.642	.788

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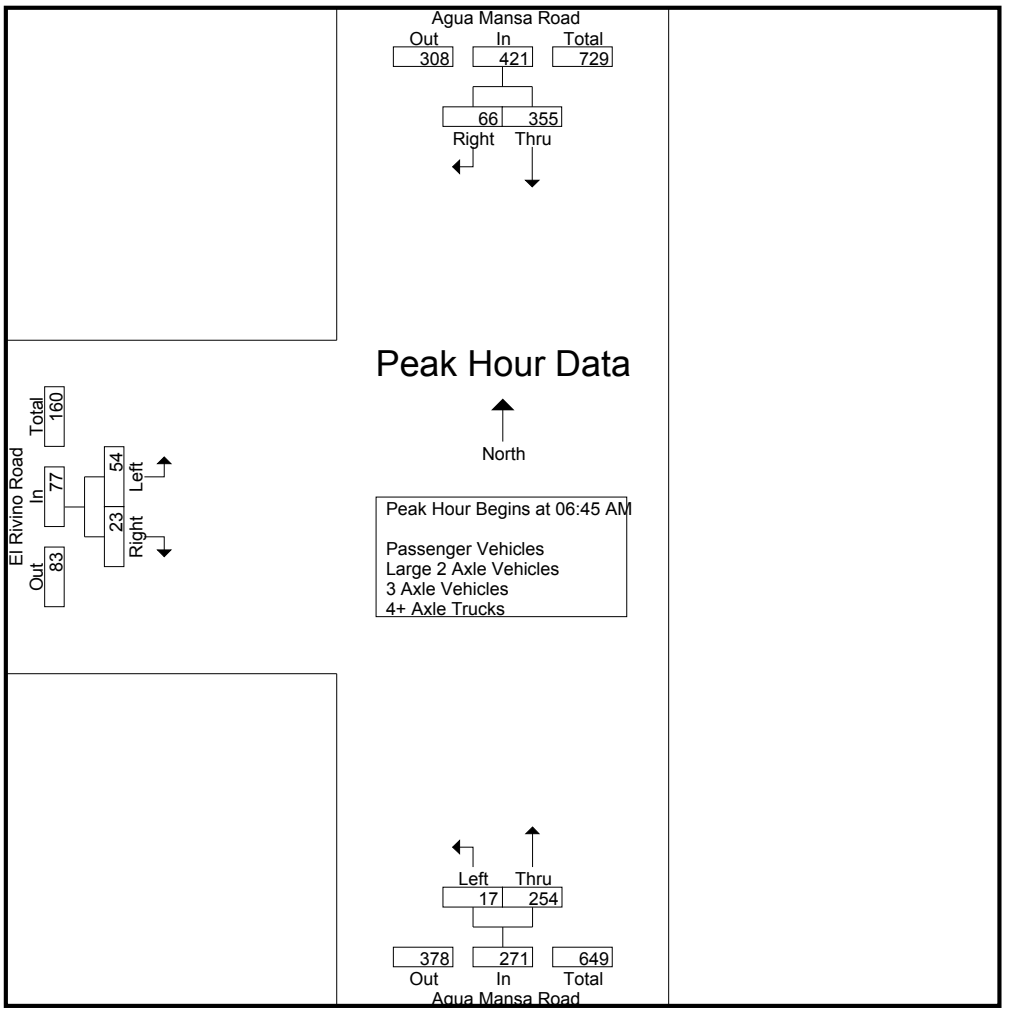
File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM			06:45 AM			06:30 AM		
+0 mins.	**110**	**30**	**140**	**8**	66	**74**	16	0	16
+15 mins.	74	8	82	8	51	59	**21**	9	**30**
+30 mins.	77	12	89	0	66	66	11	**10**	21
+45 mins.	94	16	110	1	**71**	72	14	1	15
Total Volume	355	66	421	17	254	271	62	20	82
% App. Total	84.3	15.7		6.3	93.7		75.6	24.4	
PHF	.807	.550	.752	.531	.894	.916	.738	.500	.683

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File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	74	11	85	5	30	35	13	0	13	133
06:45 AM	87	28	115	8	53	61	14	9	23	199
Total	161	39	200	13	83	96	27	9	36	332
07:00 AM	61	6	67	7	43	50	10	10	20	137
07:15 AM	61	11	72	0	44	44	9	1	10	126
07:30 AM	79	14	93	1	50	51	8	3	11	155
07:45 AM	90	6	96	3	52	55	18	2	20	171
Total	291	37	328	11	189	200	45	16	61	589
08:00 AM	72	4	76	2	46	48	6	1	7	131
08:15 AM	50	12	62	1	36	37	11	1	12	111
08:30 AM	41	8	49	3	26	29	8	1	9	87
08:45 AM	40	9	49	1	43	44	6	4	10	103
Total	203	33	236	7	151	158	31	7	38	432
09:00 AM	26	3	29	3	28	31	9	0	9	69
09:15 AM	31	14	45	2	33	35	17	1	18	98
Grand Total	712	126	838	36	484	520	129	33	162	1520
Apprch %	85	15		6.9	93.1		79.6	20.4		
Total %	46.8	8.3	55.1	2.4	31.8	34.2	8.5	2.2	10.7	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:45 AM										
06:45 AM	**87**	**28**	**115**	**8**	**53**	**61**	**14**	9	**23**	**199**
07:00 AM	61	6	67	7	43	50	10	**10**	20	137
07:15 AM	61	11	72	0	44	44	9	1	10	126
07:30 AM	79	14	93	1	50	51	8	3	11	155
Total Volume	288	59	347	16	190	206	41	23	64	617
% App. Total	83	17		7.8	92.2		64.1	35.9		
PHF	.828	.527	.754	.500	.896	.844	.732	.575	.696	.775

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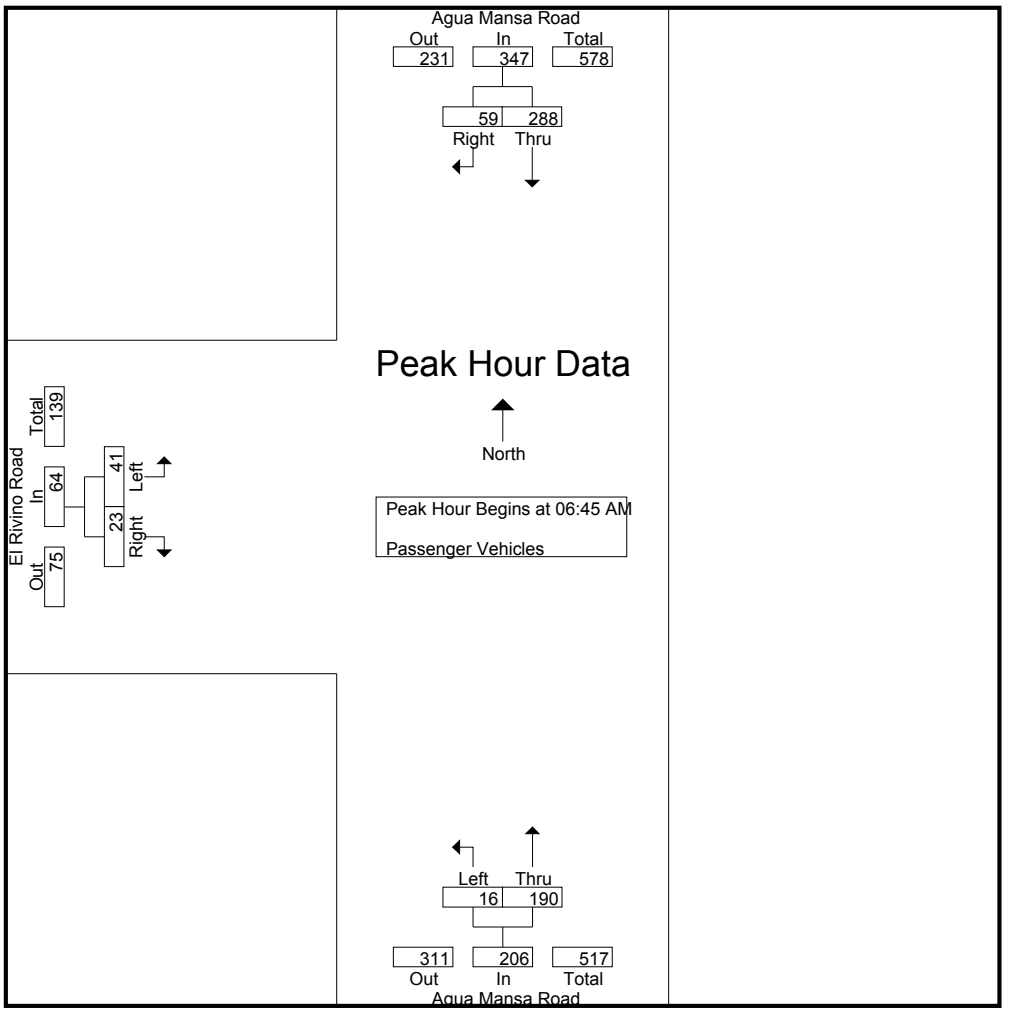
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM			06:45 AM			06:45 AM		
+0 mins.	**87**	**28**	**115**	**8**	**53**	**61**	**14**	9	**23**
+15 mins.	61	6	67	7	43	50	10	**10**	20
+30 mins.	61	11	72	0	44	44	9	1	10
+45 mins.	79	14	93	1	50	51	8	3	11
Total Volume	288	59	347	16	190	206	41	23	64
% App. Total	83	17		7.8	92.2		64.1	35.9	
PHF	.828	.527	.754	.500	.896	.844	.732	.575	.696

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File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	1	2	3	0	5	5	1	0	1	9
06:45 AM	10	0	10	0	2	2	7	0	7	19
Total	11	2	13	0	7	7	8	0	8	28
07:00 AM	3	2	5	1	2	3	1	0	1	9
07:15 AM	5	1	6	0	7	7	5	0	5	18
07:30 AM	4	2	6	0	0	0	0	0	0	6
07:45 AM	9	0	9	0	3	3	0	0	0	12
Total	21	5	26	1	12	13	6	0	6	45
08:00 AM	3	0	3	0	2	2	0	0	0	5
08:15 AM	2	1	3	0	6	6	0	0	0	9
08:30 AM	5	0	5	0	3	3	0	0	0	8
08:45 AM	6	0	6	1	3	4	0	0	0	10
Total	16	1	17	1	14	15	0	0	0	32
09:00 AM	9	2	11	1	10	11	13	0	13	35
09:15 AM	8	0	8	0	10	10	6	1	7	25
Grand Total	65	10	75	3	53	56	33	1	34	165
Apprch %	86.7	13.3		5.4	94.6		97.1	2.9		
Total %	39.4	6.1	45.5	1.8	32.1	33.9	20	0.6	20.6	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:45 AM										
06:45 AM	**10**	0	**10**	0	2	2	**7**	0	**7**	**19**
07:00 AM	3	**2**	5	**1**	2	3	1	0	1	9
07:15 AM	5	1	6	0	**7**	**7**	5	0	5	18
07:30 AM	4	2	6	0	0	0	0	0	0	6
Total Volume	22	5	27	1	11	12	13	0	13	52
% App. Total	81.5	18.5		8.3	91.7		100	0		
PHF	.550	.625	.675	.250	.393	.429	.464	.000	.464	.684

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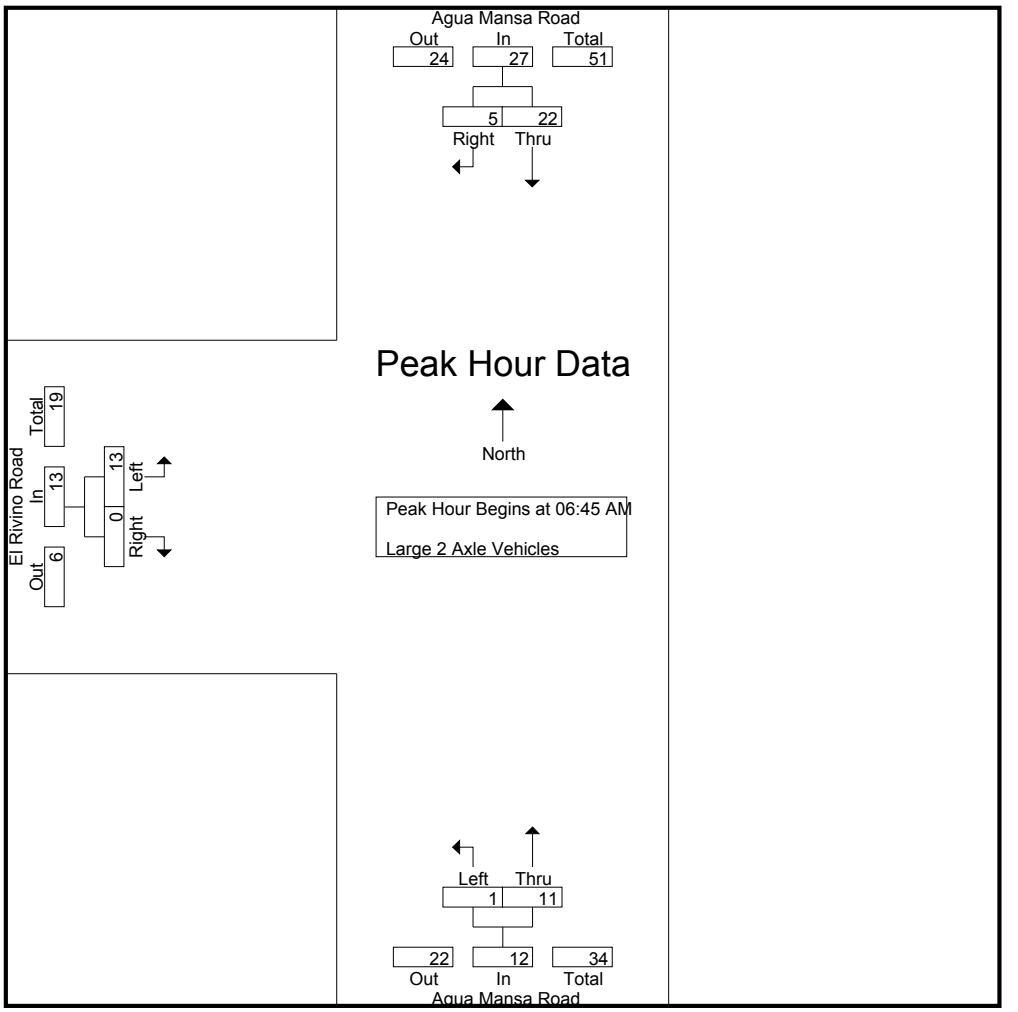
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM			06:45 AM			06:45 AM		
+0 mins.	**10**	0	**10**	0	2	2	**7**	0	**7**
+15 mins.	3	**2**	5	**1**	2	3	1	0	1
+30 mins.	5	1	6	0	**7**	**7**	5	0	5
+45 mins.	4	2	6	0	0	0	0	0	0
Total Volume	22	5	27	1	11	12	13	0	13
% App. Total	81.5	18.5		8.3	91.7		100	0	
PHF	.550	.625	.675	.250	.393	.429	.464	.000	.464

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File Name : 06_CRVAGELAM
Site Code : 05117022
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Page No : 1

Groups Printed- 3 Axle Vehicles

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	8	0	8	0	3	3	1	0	1	12
06:45 AM	5	2	7	0	3	3	0	0	0	10
Total	13	2	15	0	6	6	1	0	1	22
07:00 AM	3	0	3	0	1	1	0	0	0	4
07:15 AM	2	0	2	0	2	2	0	0	0	4
07:30 AM	0	0	0	0	5	5	0	0	0	5
07:45 AM	2	0	2	0	2	2	0	0	0	4
Total	7	0	7	0	10	10	0	0	0	17
08:00 AM	4	0	4	0	0	0	0	0	0	4
08:15 AM	2	0	2	0	2	2	1	0	1	5
08:30 AM	2	0	2	0	3	3	0	0	0	5
08:45 AM	1	0	1	0	0	0	0	0	0	1
Total	9	0	9	0	5	5	1	0	1	15
09:00 AM	1	0	1	0	5	5	0	0	0	6
09:15 AM	3	0	3	0	5	5	0	0	0	8
Grand Total	33	2	35	0	31	31	2	0	2	68
Apprch %	94.3	5.7		0	100		100	0		
Total %	48.5	2.9	51.5	0	45.6	45.6	2.9	0	2.9	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:45 AM										
06:45 AM	**5**	**2**	**7**	0	3	3	0	0	0	**10**
07:00 AM	3	0	3	0	1	1	0	0	0	4
07:15 AM	2	0	2	0	2	2	0	0	0	4
07:30 AM	0	0	0	0	**5**	**5**	0	0	0	5
Total Volume	10	2	12	0	11	11	0	0	0	23
% App. Total	83.3	16.7		0	100		0	0		
PHF	.500	.250	.429	.000	.550	.550	.000	.000	.000	.575

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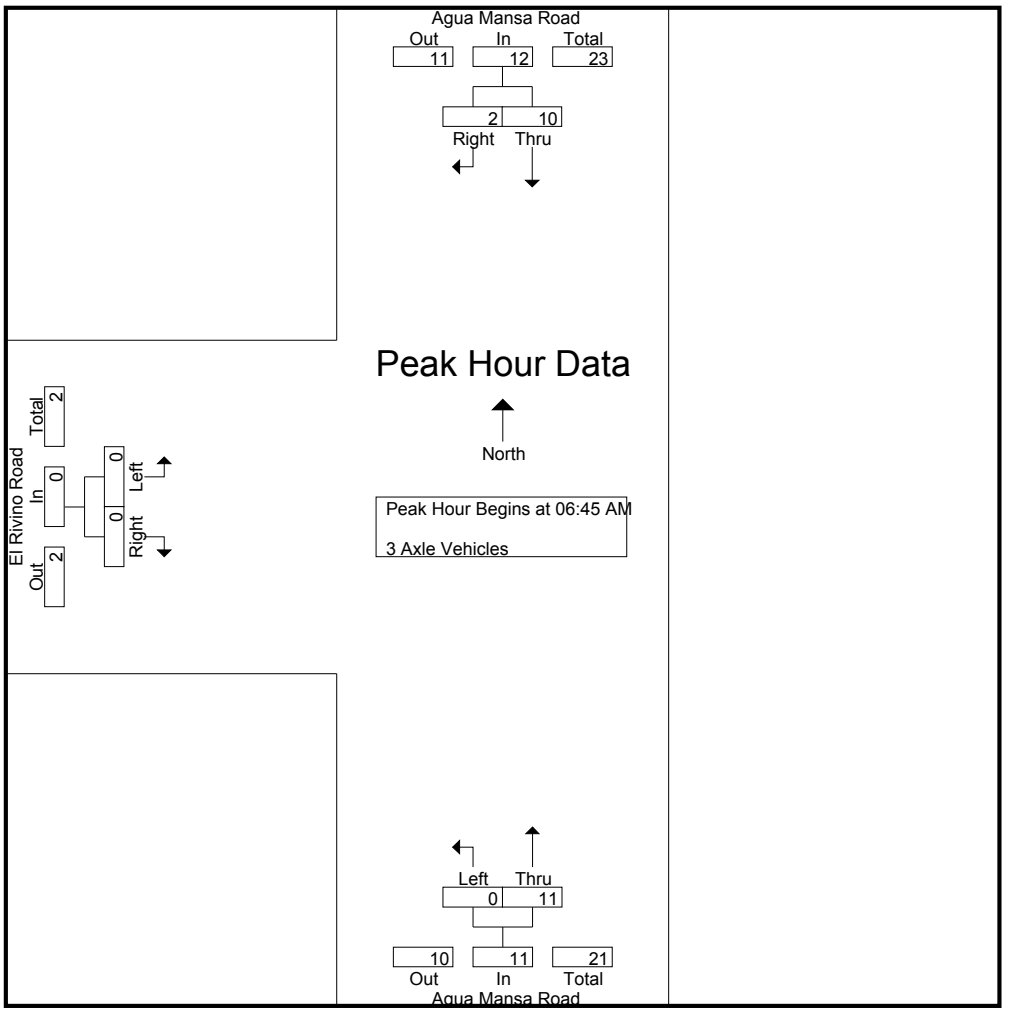
File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM			06:45 AM			06:45 AM		
+0 mins.	**5**	**2**	**7**	0	3	3	0	0	0
+15 mins.	3	0	3	0	1	1	0	0	0
+30 mins.	2	0	2	0	2	2	0	0	0
+45 mins.	0	0	0	0	**5**	**5**	0	0	0
Total Volume	10	2	12	0	11	11	0	0	0
% App. Total	83.3	16.7		0	100		0	0	
PHF	.500	.250	.429	.000	.550	.550	.000	.000	.000

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E/W: El Rivino Road
Weather: Clear

File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:30 AM	5	0	5	0	6	6	1	0	1	12
06:45 AM	8	0	8	0	8	8	0	0	0	16
Total	13	0	13	0	14	14	1	0	1	28
07:00 AM	7	0	7	0	5	5	0	0	0	12
07:15 AM	9	0	9	0	13	13	0	0	0	22
07:30 AM	11	0	11	0	16	16	0	0	0	27
07:45 AM	3	0	3	0	7	7	0	0	0	10
Total	30	0	30	0	41	41	0	0	0	71
08:00 AM	7	0	7	0	5	5	0	0	0	12
08:15 AM	6	0	6	0	5	5	0	0	0	11
08:30 AM	12	0	12	0	8	8	0	0	0	20
08:45 AM	5	0	5	0	12	12	0	0	0	17
Total	30	0	30	0	30	30	0	0	0	60
09:00 AM	12	0	12	0	11	11	0	0	0	23
09:15 AM	11	0	11	0	11	11	0	1	1	23
Grand Total	96	0	96	0	107	107	1	1	2	205
Apprch %	100	0		0	100		50	50		
Total %	46.8	0	46.8	0	52.2	52.2	0.5	0.5	1	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:45 AM										
06:45 AM	8	0	8	0	8	8	0	0	0	16
07:00 AM	7	0	7	0	5	5	0	0	0	12
07:15 AM	9	0	9	0	13	13	0	0	0	22
07:30 AM	**11**	0	**11**	0	**16**	**16**	0	0	0	**27**
Total Volume	35	0	35	0	42	42	0	0	0	77
% App. Total	100	0		0	100		0	0		
PHF	.795	.000	.795	.000	.656	.656	.000	.000	.000	.713

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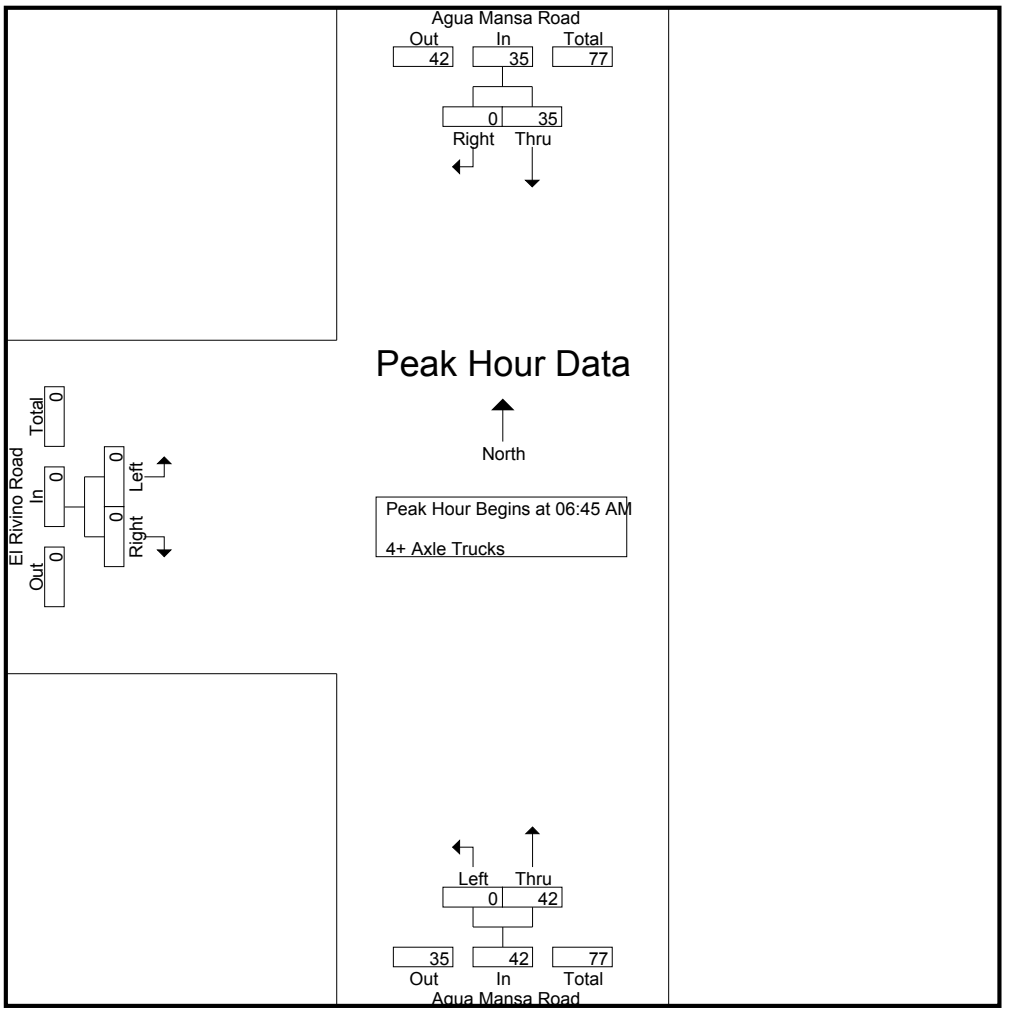
Weather: Clear

File Name : 06_CRVAGELAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM			06:45 AM			06:45 AM		
+0 mins.	8	0	8	0	8	8	0	0	0
+15 mins.	7	0	7	0	5	5	0	0	0
+30 mins.	9	0	9	0	13	13	0	0	0
+45 mins.	**11**	0	**11**	0	**16**	**16**	0	0	0
Total Volume	35	0	35	0	42	42	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.795	.000	.795	.000	.656	.656	.000	.000	.000

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County of Riverside
N/S: Agua Mansa Road
E/W: El Rivino Road
Weather: Clear

File Name : 06_CRVAGELPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	79	11	90	6	178	184	18	4	22	296
03:45 PM	86	31	117	15	138	153	27	6	33	303
Total	165	42	207	21	316	337	45	10	55	599
04:00 PM	62	11	73	10	175	185	27	11	38	296
04:15 PM	85	16	101	3	157	160	14	9	23	284
04:30 PM	65	10	75	1	146	147	14	1	15	237
04:45 PM	69	11	80	2	166	168	23	5	28	276
Total	281	48	329	16	644	660	78	26	104	1093
05:00 PM	83	13	96	1	159	160	19	10	29	285
05:15 PM	63	17	80	5	185	190	12	3	15	285
05:30 PM	73	9	82	5	138	143	13	5	18	243
05:45 PM	70	8	78	4	133	137	6	4	10	225
Total	289	47	336	15	615	630	50	22	72	1038
06:00 PM	58	17	75	3	110	113	21	4	25	213
06:15 PM	46	18	64	0	75	75	16	0	16	155
Grand Total	839	172	1011	55	1760	1815	210	62	272	3098
Apprch %	83	17		3	97		77.2	22.8		
Total %	27.1	5.6	32.6	1.8	56.8	58.6	6.8	2	8.8	
Passenger Vehicles	663	148	811	54	1469	1523	199	61	260	2594
% Passenger Vehicles	79	86	80.2	98.2	83.5	83.9	94.8	98.4	95.6	83.7
Large 2 Axle Vehicles	56	22	78	1	74	75	11	1	12	165
% Large 2 Axle Vehicles	6.7	12.8	7.7	1.8	4.2	4.1	5.2	1.6	4.4	5.3
3 Axle Vehicles	40	2	42	0	57	57	0	0	0	99
% 3 Axle Vehicles	4.8	1.2	4.2	0	3.2	3.1	0	0	0	3.2
4+ Axle Trucks	80	0	80	0	160	160	0	0	0	240
% 4+ Axle Trucks	9.5	0	7.9	0	9.1	8.8	0	0	0	7.7

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	79	11	90	6	**178**	184	18	4	22	296
03:45 PM	**86**	**31**	**117**	**15**	138	153	**27**	6	33	**303**
04:00 PM	62	11	73	10	175	**185**	27	**11**	**38**	296
04:15 PM	85	16	101	3	157	160	14	9	23	284
Total Volume	312	69	381	34	648	682	86	30	116	1179
% App. Total	81.9	18.1		5	95		74.1	25.9		
PHF	.907	.556	.814	.567	.910	.922	.796	.682	.763	.973

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Site Code : 05117022
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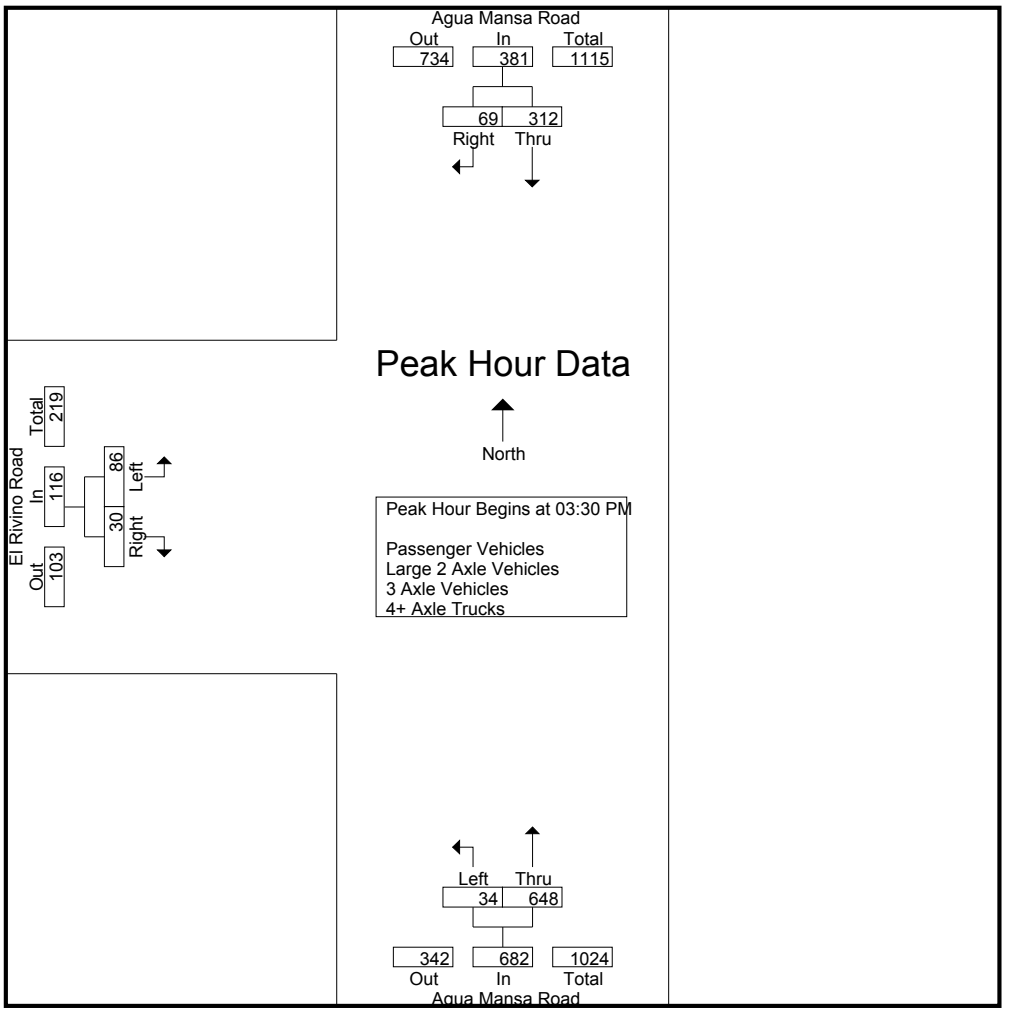
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	79	11	90	6	**178**	184	18	4	22
+15 mins.	**86**	**31**	**117**	**15**	138	153	**27**	6	33
+30 mins.	62	11	73	10	175	**185**	27	**11**	**38**
+45 mins.	85	16	101	3	157	160	14	9	23
Total Volume	312	69	381	34	648	682	86	30	116
% App. Total	81.9	18.1		5	95		74.1	25.9	
PHF	.907	.556	.814	.567	.910	.922	.796	.682	.763

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N/S: Agua Mansa Road
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Weather: Clear

File Name : 06_CRVAGELPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	60	9	69	6	143	149	17	4	21	239
03:45 PM	60	23	83	14	99	113	26	6	32	228
Total	120	32	152	20	242	262	43	10	53	467
04:00 PM	44	10	54	10	153	163	24	11	35	252
04:15 PM	71	11	82	3	132	135	14	9	23	240
04:30 PM	51	10	61	1	124	125	12	1	13	199
04:45 PM	58	10	68	2	148	150	22	5	27	245
Total	224	41	265	16	557	573	72	26	98	936
05:00 PM	68	13	81	1	135	136	19	10	29	246
05:15 PM	52	17	69	5	157	162	11	2	13	244
05:30 PM	62	8	70	5	117	122	13	5	18	210
05:45 PM	55	7	62	4	116	120	6	4	10	192
Total	237	45	282	15	525	540	49	21	70	892
06:00 PM	43	16	59	3	86	89	21	4	25	173
06:15 PM	39	14	53	0	59	59	14	0	14	126
Grand Total	663	148	811	54	1469	1523	199	61	260	2594
Apprch %	81.8	18.2		3.5	96.5		76.5	23.5		
Total %	25.6	5.7	31.3	2.1	56.6	58.7	7.7	2.4	10	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	60	9	69	6	143	149	17	4	21	239
03:45 PM	60	**23**	**83**	**14**	99	113	**26**	6	32	228
04:00 PM	44	10	54	10	**153**	**163**	24	**11**	**35**	**252**
04:15 PM	**71**	11	82	3	132	135	14	9	23	240
Total Volume	235	53	288	33	527	560	81	30	111	959
% App. Total	81.6	18.4		5.9	94.1		73	27		
PHF	.827	.576	.867	.589	.861	.859	.779	.682	.793	.951

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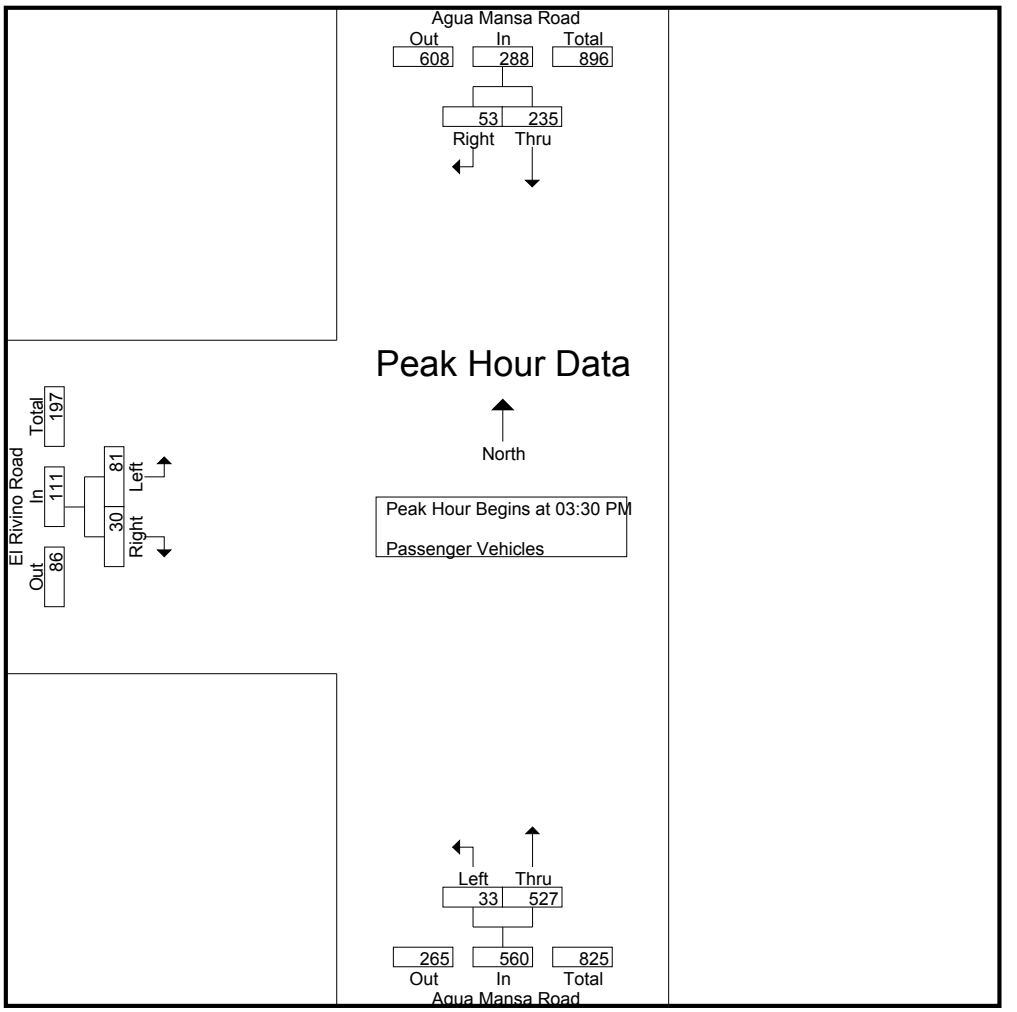
File Name : 06_CRVAGELPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	60	9	69	6	143	149	17	4	21
+15 mins.	60	**23**	**83**	**14**	99	113	**26**	6	32
+30 mins.	44	10	54	10	**153**	**163**	24	**11**	**35**
+45 mins.	**71**	11	82	3	132	135	14	9	23
Total Volume	235	53	288	33	527	560	81	30	111
% App. Total	81.6	18.4		5.9	94.1		73	27	
PHF	.827	.576	.867	.589	.861	.859	.779	.682	.793

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File Name : 06_CRVAGELPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	6	2	8	0	9	9	1	0	1	18
03:45 PM	10	7	17	1	13	14	1	0	1	32
Total	16	9	25	1	22	23	2	0	2	50
04:00 PM	7	1	8	0	6	6	3	0	3	17
04:15 PM	4	5	9	0	6	6	0	0	0	15
04:30 PM	4	0	4	0	6	6	2	0	2	12
04:45 PM	4	1	5	0	2	2	1	0	1	8
Total	19	7	26	0	20	20	6	0	6	52
05:00 PM	4	0	4	0	3	3	0	0	0	7
05:15 PM	2	0	2	0	9	9	1	1	2	13
05:30 PM	4	1	5	0	4	4	0	0	0	9
05:45 PM	5	0	5	0	6	6	0	0	0	11
Total	15	1	16	0	22	22	1	1	2	40
06:00 PM	4	1	5	0	5	5	0	0	0	10
06:15 PM	2	4	6	0	5	5	2	0	2	13
Grand Total	56	22	78	1	74	75	11	1	12	165
Apprch %	71.8	28.2		1.3	98.7		91.7	8.3		
Total %	33.9	13.3	47.3	0.6	44.8	45.5	6.7	0.6	7.3	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	6	2	8	0	9	9	1	0	1	18
03:45 PM	**10**	**7**	**17**	**1**	**13**	**14**	1	0	1	**32**
04:00 PM	7	1	8	0	6	6	**3**	0	**3**	17
04:15 PM	4	5	9	0	6	6	0	0	0	15
Total Volume	27	15	42	1	34	35	5	0	5	82
% App. Total	64.3	35.7		2.9	97.1		100	0		
PHF	.675	.536	.618	.250	.654	.625	.417	.000	.417	.641

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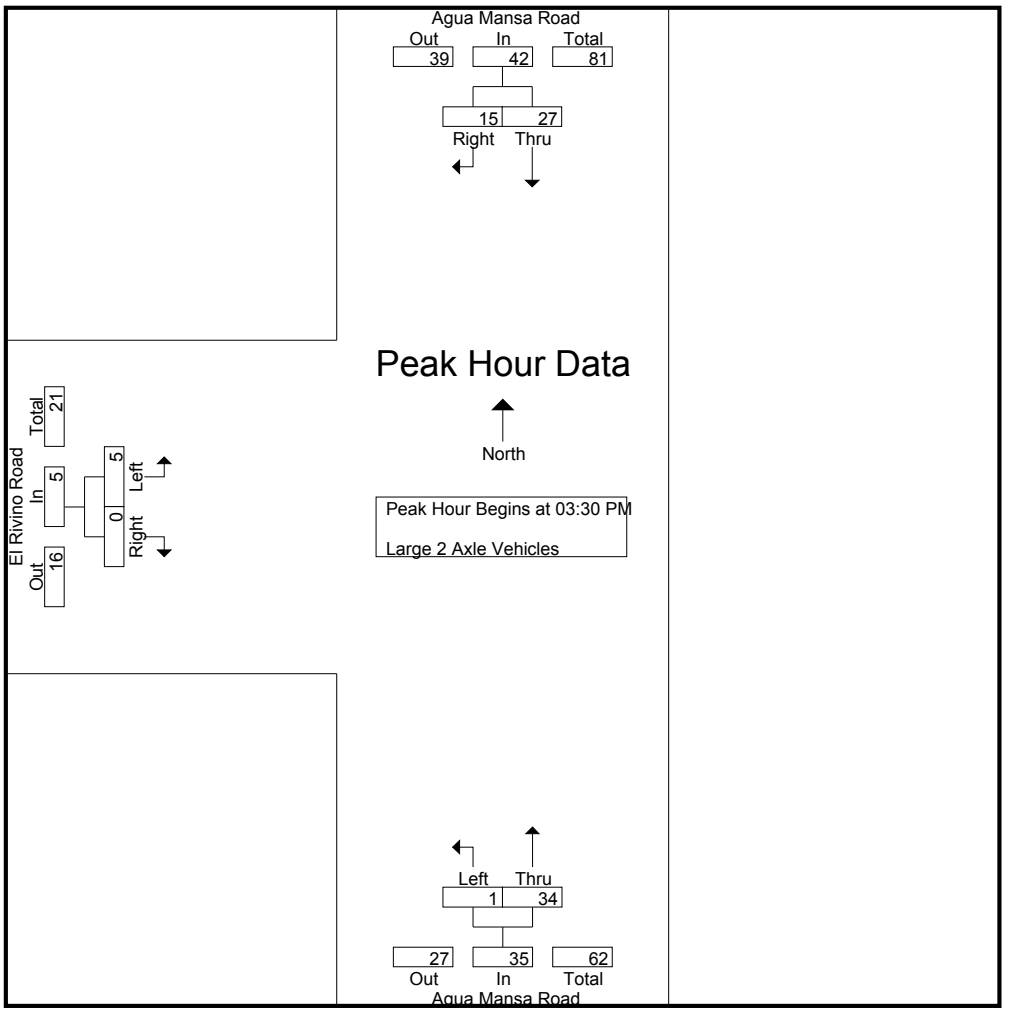
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	6	2	8	0	9	9	1	0	1
+15 mins.	**10**	**7**	**17**	**1**	**13**	**14**	1	0	1
+30 mins.	7	1	8	0	6	6	**3**	0	**3**
+45 mins.	4	5	9	0	6	6	0	0	0
Total Volume	27	15	42	1	34	35	5	0	5
% App. Total	64.3	35.7		2.9	97.1		100	0	
PHF	.675	.536	.618	.250	.654	.625	.417	.000	.417

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County of Riverside
N/S: Agua Mansa Road
E/W: El Rivino Road
Weather: Clear

File Name : 06_CRVAGELPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	7	0	7	0	5	5	0	0	0	12
03:45 PM	5	1	6	0	10	10	0	0	0	16
Total	12	1	13	0	15	15	0	0	0	28
04:00 PM	4	0	4	0	3	3	0	0	0	7
04:15 PM	5	0	5	0	2	2	0	0	0	7
04:30 PM	1	0	1	0	3	3	0	0	0	4
04:45 PM	1	0	1	0	7	7	0	0	0	8
Total	11	0	11	0	15	15	0	0	0	26
05:00 PM	5	0	5	0	6	6	0	0	0	11
05:15 PM	3	0	3	0	6	6	0	0	0	9
05:30 PM	1	0	1	0	6	6	0	0	0	7
05:45 PM	2	1	3	0	0	0	0	0	0	3
Total	11	1	12	0	18	18	0	0	0	30
06:00 PM	5	0	5	0	6	6	0	0	0	11
06:15 PM	1	0	1	0	3	3	0	0	0	4
Grand Total	40	2	42	0	57	57	0	0	0	99
Apprch %	95.2	4.8		0	100		0	0		
Total %	40.4	2	42.4	0	57.6	57.6	0	0	0	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	**7**	0	**7**	0	5	5	0	0	0	12
03:45 PM	5	**1**	6	0	**10**	**10**	0	0	0	**16**
04:00 PM	4	0	4	0	3	3	0	0	0	7
04:15 PM	5	0	5	0	2	2	0	0	0	7
Total Volume	21	1	22	0	20	20	0	0	0	42
% App. Total	95.5	4.5		0	100		0	0		
PHF	.750	.250	.786	.000	.500	.500	.000	.000	.000	.656

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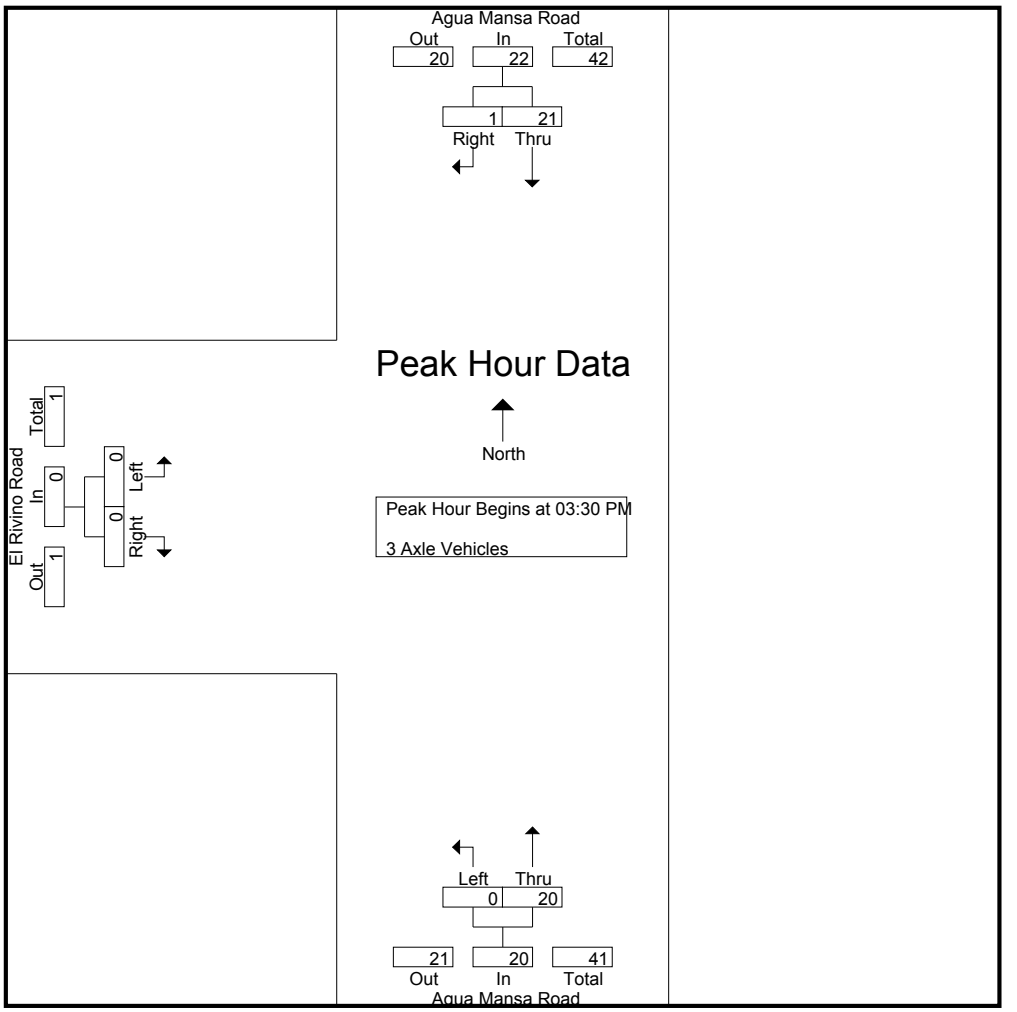
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	**7**	0	**7**	0	5	5	0	0	0
+15 mins.	5	**1**	6	0	**10**	**10**	0	0	0
+30 mins.	4	0	4	0	3	3	0	0	0
+45 mins.	5	0	5	0	2	2	0	0	0
Total Volume	21	1	22	0	20	20	0	0	0
% App. Total	95.5	4.5		0	100		0	0	
PHF	.750	.250	.786	.000	.500	.500	.000	.000	.000

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County of Riverside
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File Name : 06_CRVAGELPM
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Page No : 1

Groups Printed- 4+ Axle Trucks

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:30 PM	6	0	6	0	21	21	0	0	0	27
03:45 PM	11	0	11	0	16	16	0	0	0	27
Total	17	0	17	0	37	37	0	0	0	54
04:00 PM	7	0	7	0	13	13	0	0	0	20
04:15 PM	5	0	5	0	17	17	0	0	0	22
04:30 PM	9	0	9	0	13	13	0	0	0	22
04:45 PM	6	0	6	0	9	9	0	0	0	15
Total	27	0	27	0	52	52	0	0	0	79
05:00 PM	6	0	6	0	15	15	0	0	0	21
05:15 PM	6	0	6	0	13	13	0	0	0	19
05:30 PM	6	0	6	0	11	11	0	0	0	17
05:45 PM	8	0	8	0	11	11	0	0	0	19
Total	26	0	26	0	50	50	0	0	0	76
06:00 PM	6	0	6	0	13	13	0	0	0	19
06:15 PM	4	0	4	0	8	8	0	0	0	12
Grand Total	80	0	80	0	160	160	0	0	0	240
Apprch %	100	0		0	100		0	0		
Total %	33.3	0	33.3	0	66.7	66.7	0	0	0	

	Agua Mansa Road Southbound			Agua Mansa Road Northbound			El Rivino Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	6	0	6	0	**21**	**21**	0	0	0	**27**
03:45 PM	**11**	0	**11**	0	16	16	0	0	0	27
04:00 PM	7	0	7	0	13	13	0	0	0	20
04:15 PM	5	0	5	0	17	17	0	0	0	22
Total Volume	29	0	29	0	67	67	0	0	0	96
% App. Total	100	0		0	100		0	0		
PHF	.659	.000	.659	.000	.798	.798	.000	.000	.000	.889

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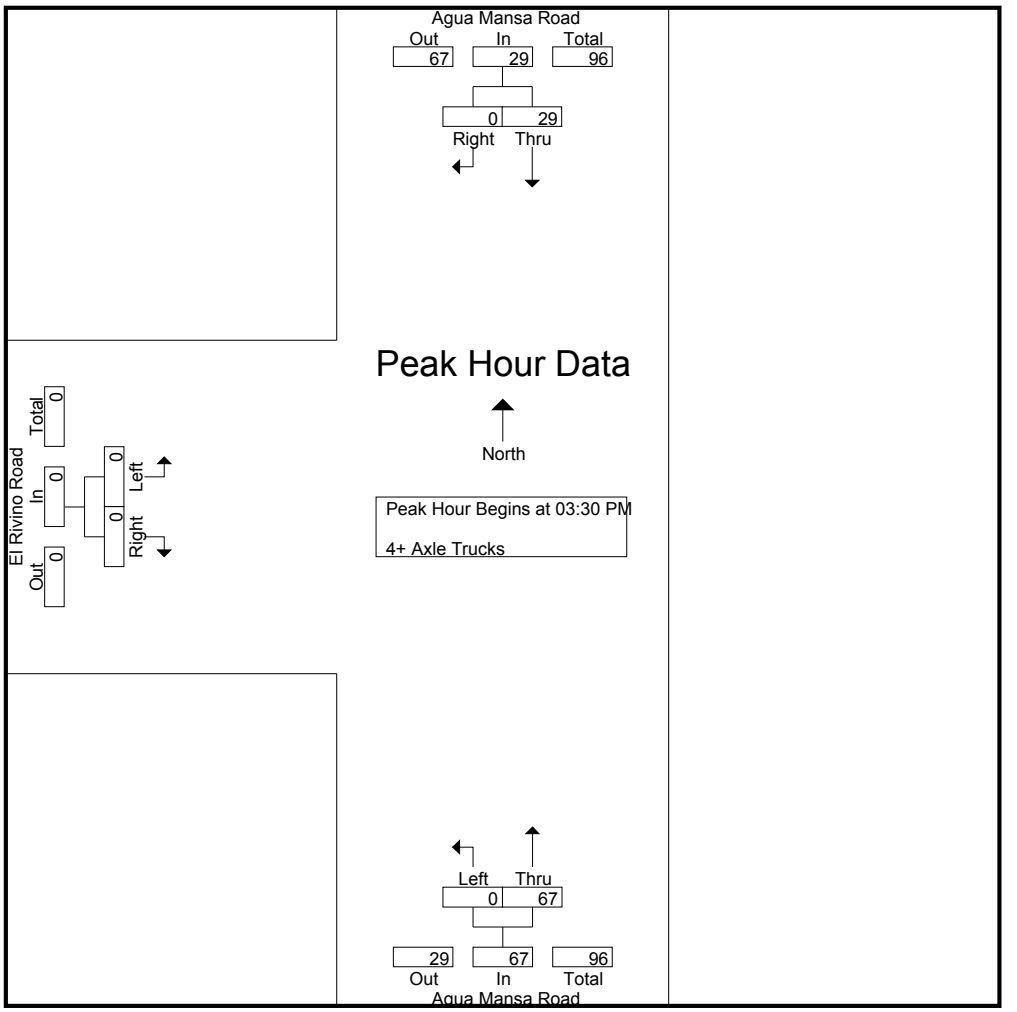
Page No : 2



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	6	0	6	0	**21**	**21**	0	0	0
+15 mins.	**11**	0	**11**	0	16	16	0	0	0
+30 mins.	7	0	7	0	13	13	0	0	0
+45 mins.	5	0	5	0	17	17	0	0	0
Total Volume	29	0	29	0	67	67	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.659	.000	.659	.000	.798	.798	.000	.000	.000

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Holly
EAST & WEST: Agua Mansa

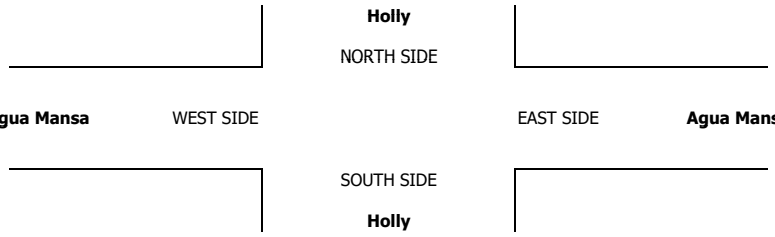
PROJECT #: SC1439
LOCATION #: 18
CONTROL: STOP N

NOTES:

AM / PM / MD / OTHER / OTHER



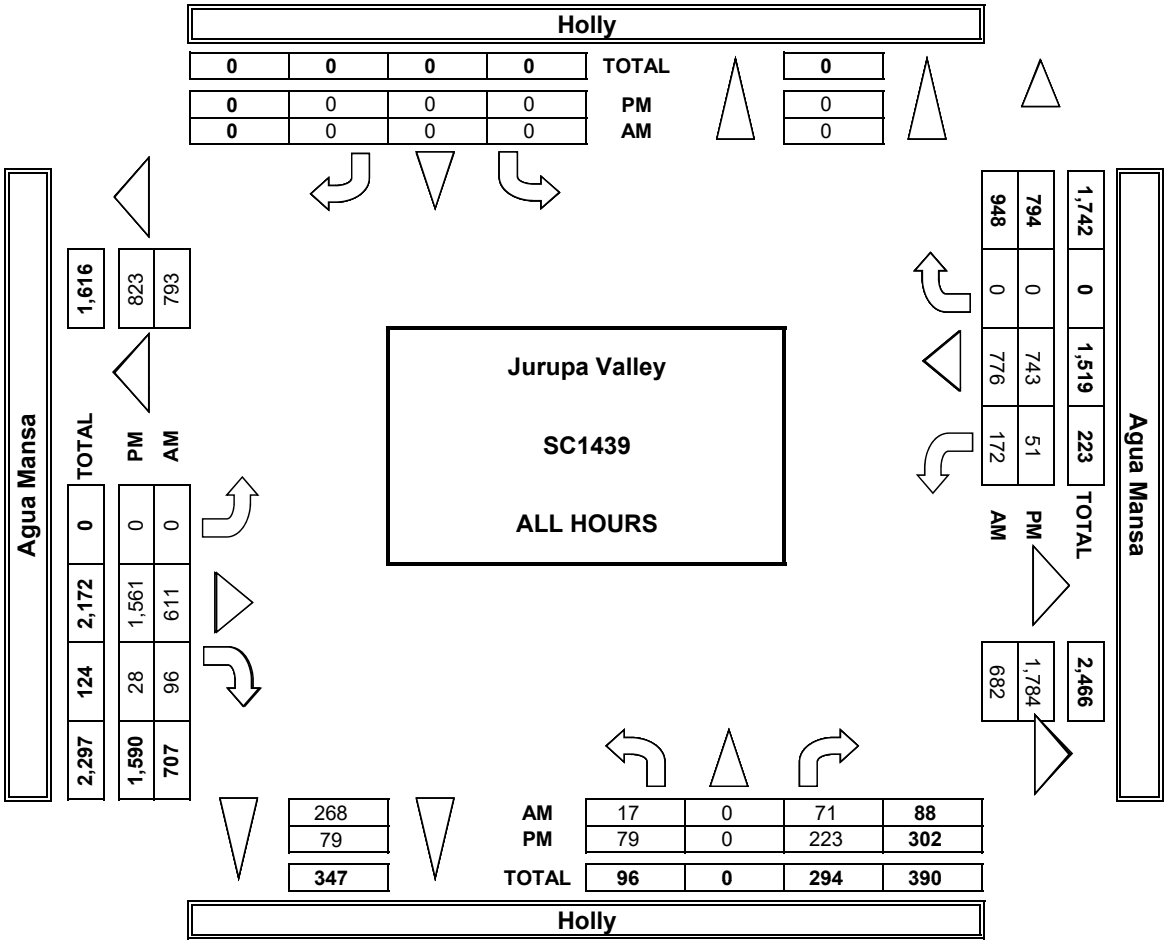
		NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:30 AM	1	0	1	0	0	0	0	64	9	11	79	0	165	0	0	0	0	0
	6:45 AM	1	0	7	0	0	0	0	62	18	32	76	0	196	0	0	0	0	0
	7:00 AM	2	0	5	0	0	0	0	44	13	32	72	0	168	0	0	0	0	0
	7:15 AM	3	0	8	0	0	0	0	51	23	24	86	0	195	0	0	0	0	0
	7:30 AM	3	0	6	0	0	0	0	51	4	6	98	0	168	0	0	0	0	0
	7:45 AM	1	0	6	0	0	0	0	59	5	13	72	0	156	0	0	0	0	0
	8:00 AM	0	0	8	0	0	0	0	50	3	9	57	0	127	0	0	0	0	0
	8:15 AM	4	0	5	0	0	0	0	49	4	11	69	0	142	0	0	0	0	0
	8:30 AM	1	0	8	0	0	0	0	48	6	5	40	0	108	0	0	0	0	0
	8:45 AM	1	0	6	0	0	0	0	48	3	7	44	0	109	0	0	0	0	0
	9:00 AM	0	0	4	0	0	0	0	38	2	14	40	0	98	0	0	0	0	0
	9:15 AM	0	0	7	0	0	0	0	47	6	8	43	0	111	0	0	0	0	0
	VOLUMES	17	0	71	0	0	0	0	611	96	172	776	0	1,743	0	0	0	0	0
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	86%	14%	18%	82%	0%						
	APP/DEPART	88	/	0	0	/	268	707	/	682	948	/	793	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	9	0	26	0	0	0	0	208	58	94	332	0	727					
	APPROACH %	26%	0%	74%	0%	0%	0%	0%	78%	22%	22%	78%	0%						
	PEAK HR FACTOR		0.795			0.000			0.831			0.968		0.927					
	APP/DEPART	35	/	0	0	/	152	266	/	234	426	/	341	0					
PM	03:30 PM	10	0	35	0	0	0	0	152	5	3	69	0	274	0	0	0	0	0
	3:45 PM	12	0	33	0	0	0	0	135	4	13	67	0	264	0	0	0	0	0
	4:00 PM	21	0	42	0	0	0	0	142	3	5	56	0	269	0	0	0	0	0
	4:15 PM	5	0	21	0	0	0	0	141	0	7	68	0	242	0	0	1	0	1
	4:30 PM	3	0	42	0	0	0	0	111	3	4	71	0	234	0	0	0	0	0
	4:45 PM	5	0	7	0	0	0	0	112	4	4	74	0	206	0	0	0	0	0
	5:00 PM	7	0	20	0	0	0	0	170	2	2	53	0	254	0	0	0	0	0
	5:15 PM	8	0	10	0	0	0	0	132	2	4	71	0	227	0	0	0	0	0
	5:30 PM	3	0	2	0	0	0	0	145	2	2	70	0	224	0	0	0	0	0
	5:45 PM	4	0	7	0	0	0	0	131	1	3	46	0	192	0	0	0	0	0
	6:00 PM	0	0	2	0	0	0	0	110	1	2	54	0	169	0	0	0	0	0
	6:15 PM	1	0	2	0	0	0	0	80	1	2	44	0	130	0	0	0	0	0
	VOLUMES	79	0	223	0	0	0	0	1,561	28	51	743	0	2,686	0	0	1	0	1
	APPROACH %	26%	0%	74%	0%	0%	0%	0%	98%	2%	6%	94%	0%						
	APP/DEPART	302	/	0	0	/	79	1,590	/	1,784	794	/	823	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	48	0	131	0	0	0	0	570	12	28	260	0	1,050					
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	98%	2%	10%	90%	0%						
	PEAK HR FACTOR		0.710			0.000			0.928			0.900		0.958					
	APP/DEPART	179	/	0	0	/	40	583	/	701	288	/	309	0					

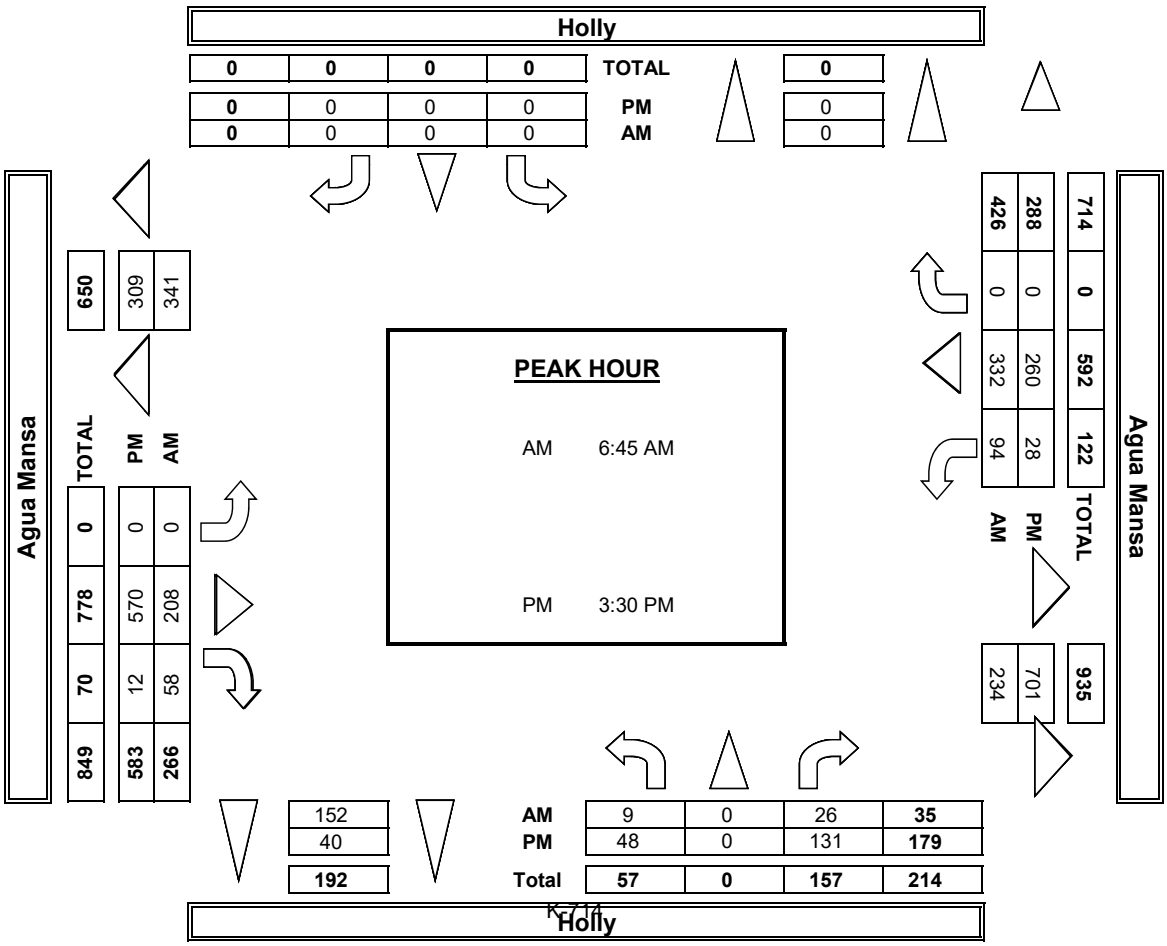


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





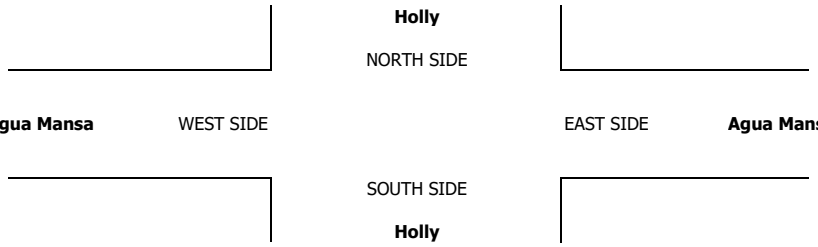
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND (Holly)			SOUTHBOUND (Holly)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)			
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL
AM	7:00 AM	1	0	3	0	0	0	0	99	9	13	117	0	242
	7:15 AM	1	0	13	0	0	0	0	97	18	32	98	0	259
	7:30 AM	2	0	9	0	0	0	0	75	13	35	103	0	236
	7:45 AM	3	0	11	0	0	0	0	77	23	30	111	0	255
	8:00 AM	4	0	10	0	0	0	0	77	6	8	128	0	232
	8:15 AM	3	0	11	0	0	0	0	89	5	16	93	0	216
	8:30 AM	0	0	13	0	0	0	0	83	4	14	83	0	196
	8:45 AM	7	0	9	0	0	0	0	73	4	18	106	0	216
	9:00 AM	1	0	15	0	0	0	0	67	10	10	55	0	157
	9:15 AM	3	0	15	0	0	0	0	81	4	11	70	0	182
	9:30 AM	0	0	6	0	0	0	0	64	3	22	67	0	161
	9:45 AM	0	0	11	0	0	0	0	73	10	10	68	0	171
	VOLUMES	25	0	124	0	0	0	0	953	107	216	1,096	0	2,520
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	90%	10%	16%	84%	0%	
	APP/DEPART	148	/	0	0	/	323	1,060	/	1,077	1,312	/	1,121	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	7	0	36	0	0	0	0	348	63	110	428	0	991
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	85%	15%	20%	80%	0%	
	PEAK HR FACTOR		0.759			0.000			0.893			0.953		0.957
	APP/DEPART	43	/	0	0	/	173	411	/	384	538	/	435	0
PM	03:00 PM	10	0	41	0	0	0	0	196	10	5	106	0	367
	3:15 PM	16	0	44	0	0	0	0	177	6	20	84	0	346
	3:30 PM	25	0	47	0	0	0	0	167	5	9	74	0	326
	3:45 PM	9	0	35	0	0	0	0	179	0	11	94	0	328
	4:00 PM	5	0	48	0	0	0	0	141	5	6	86	0	291
	4:15 PM	10	0	7	0	0	0	0	163	4	4	94	0	282
	4:30 PM	8	0	23	0	0	0	0	201	4	2	73	0	310
	4:45 PM	8	0	15	0	0	0	0	161	2	4	99	0	289
	5:00 PM	5	0	4	0	0	0	0	171	4	4	92	0	280
	5:15 PM	4	0	11	0	0	0	0	174	1	3	66	0	258
	5:30 PM	0	0	2	0	0	0	0	139	1	2	75	0	218
	5:45 PM	3	0	2	0	0	0	0	107	1	4	55	0	172
	VOLUMES	102	0	277	0	0	0	0	1,974	43	73	996	0	3,464
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	98%	2%	7%	93%	0%	
	APP/DEPART	379	/	0	0	/	116	2,016	/	2,251	1,069	/	1,098	0
	BEGIN PEAK HR		3:00 PM											
	VOLUMES	60	0	167	0	0	0	0	719	21	44	357	0	1,366
	APPROACH %	26%	0%	74%	0%	0%	0%	0%	97%	3%	11%	89%	0%	
	PEAK HR FACTOR		0.785			0.000			0.899			0.907		0.932
	APP/DEPART	226	/	0	0	/	65	739	/	885	401	/	417	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

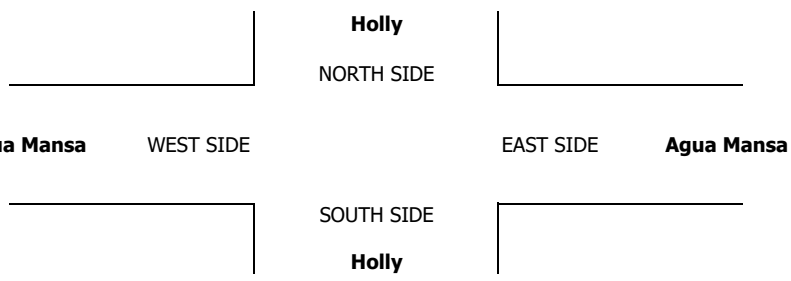
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	1	0	0	0	0	0	0	38	9	10	54	0	112	0	0	0	0	0
6:45 AM	1	0	4	0	0	0	0	44	18	32	61	0	160	0	0	0	0	0
7:00 AM	2	0	3	0	0	0	0	27	13	30	53	0	128	0	0	0	0	0
7:15 AM	3	0	6	0	0	0	0	28	23	18	65	0	143	0	0	0	0	0
7:30 AM	2	0	2	0	0	0	0	32	3	5	76	0	120	0	0	0	0	0
7:45 AM	0	0	3	0	0	0	0	38	5	11	58	0	115	0	0	0	0	0
8:00 AM	0	0	5	0	0	0	0	32	2	6	39	0	84	0	0	0	0	0
8:15 AM	2	0	3	0	0	0	0	35	4	7	44	0	95	0	0	0	0	0
8:30 AM	1	0	3	0	0	0	0	32	2	2	30	0	70	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	26	2	5	28	0	62	0	0	0	0	0
9:00 AM	0	0	3	0	0	0	0	19	1	8	22	0	53	0	0	0	0	0
9:15 AM	0	0	3	0	0	0	0	30	2	6	25	0	66	0	0	0	0	0
VOLUMES	12	0	36	0	0	0	0	381	84	140	555	0	1,208	0	0	0	0	0
APPROACH %	25%	0%	75%	0%	0%	0%	0%	82%	18%	20%	80%	0%						
APP/DEPART	48	/	0	0	/	224	465	/	417	695	/	567	0					
BEGIN PEAK HR		6:45 AM																
VOLUMES	8	0	15	0	0	0	0	131	57	85	255	0	551					
APPROACH %	35%	0%	65%	0%	0%	0%	0%	70%	30%	25%	75%	0%						
PEAK HR FACTOR		0.639			0.000			0.758			0.914		0.861					
APP/DEPART	23	/	0	0	/	142	188	/	146	340	/	263	0					
PM																		
03:30 PM	10	0	31	0	0	0	0	123	2	2	42	0	210	0	0	0	0	0
3:45 PM	8	0	27	0	0	0	0	104	3	8	57	0	207	0	0	0	0	0
4:00 PM	19	0	39	0	0	0	0	124	2	2	44	0	230	0	0	0	0	0
4:15 PM	3	0	14	0	0	0	0	114	0	5	51	0	187	0	0	1	0	1
4:30 PM	2	0	38	0	0	0	0	89	2	3	60	0	194	0	0	0	0	0
4:45 PM	2	0	7	0	0	0	0	85	4	4	61	0	163	0	0	0	0	0
5:00 PM	6	0	18	0	0	0	0	151	1	2	40	0	218	0	0	0	0	0
5:15 PM	8	0	7	0	0	0	0	114	2	4	53	0	188	0	0	0	0	0
5:30 PM	2	0	1	0	0	0	0	124	1	1	55	0	184	0	0	0	0	0
5:45 PM	4	0	5	0	0	0	0	106	1	3	34	0	153	0	0	0	0	0
6:00 PM	0	0	2	0	0	0	0	88	1	2	41	0	134	0	0	0	0	0
6:15 PM	0	0	2	0	0	0	0	63	1	1	37	0	104	0	0	0	0	0
VOLUMES	64	0	191	0	0	0	0	1,285	20	37	575	0	2,173	0	0	1	0	1
APPROACH %	25%	0%	75%	0%	0%	0%	0%	98%	2%	6%	94%	0%						
APP/DEPART	255	/	0	0	/	57	1,306	/	1,476	612	/	640	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	40	0	111	0	0	0	0	465	7	17	194	0	835					
APPROACH %	26%	0%	74%	0%	0%	0%	0%	98%	1%	8%	92%	0%						
PEAK HR FACTOR		0.651			0.000			0.938			0.812		0.908					
APP/DEPART	151	/	0	0	/	24	473	/	576	211	/	235	0					



INTERSECTION TURNING MOVEMENT COUNTS

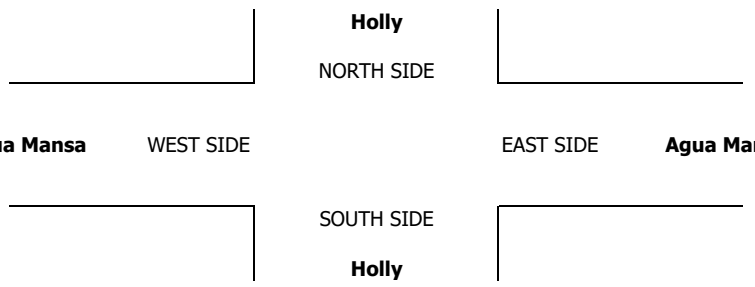
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	10	0	0	5	0	15	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	1	5	0	6	0	0	0	0	0
	7:15 AM	0	0	1	0	0	0	0	10	0	4	6	0	21	0	0	0	0	0
	7:30 AM	1	0	3	0	0	0	0	4	0	0	7	0	15	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	7	0	1	3	0	11	0	0	0	0	0
	8:00 AM	0	0	1	0	0	0	0	2	1	0	4	0	8	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	3	0	1	4	0	8	0	0	0	0	0
	8:30 AM	0	0	2	0	0	0	0	6	3	1	1	0	13	0	0	0	0	0
	8:45 AM	0	0	1	0	0	0	0	1	1	0	3	0	6	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	7	0	3	4	0	14	0	0	0	0	0
	9:15 AM	0	0	3	0	0	0	0	4	3	1	4	0	15	0	0	0	0	0
	VOLUMES	1	0	11	0	0	0	0	54	8	12	50	0	136	0	0	0	0	0
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	87%	13%	19%	81%	0%						
	APP/DEPART	12	/	0	0	/	20	62	/	65	62	/	51	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	1	0	5	0	0	0	0	23	1	5	20	0	55					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	96%	4%	20%	80%	0%						
	PEAK HR FACTOR		0.375			0.000			0.600			0.625		0.655					
	APP/DEPART	6	/	0	0	/	6	24	/	28	25	/	21	0					
PM	03:30 PM	0	0	1	0	0	0	0	6	1	0	5	0	13	0	0	0	0	0
	3:45 PM	3	0	0	0	0	0	0	6	0	1	2	0	12	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	5	0	1	2	0	8	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	6	0	0	1	0	7	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	0	6	0	0	4	0	11	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
	5:00 PM	1	0	1	0	0	0	0	3	0	0	2	0	7	0	0	0	0	0
	5:15 PM	0	0	1	0	0	0	0	2	0	0	2	0	5	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	6	0	0	5	0	11	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	9	0	0	3	0	12	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
	VOLUMES	4	0	4	0	0	0	0	51	1	2	31	0	93	0	0	0	0	0
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	98%	2%	6%	94%	0%						
	APP/DEPART	8	/	0	0	/	3	52	/	55	33	/	35	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	3	0	1	0	0	0	0	23	1	2	10	0	40					
	APPROACH %	75%	0%	25%	0%	0%	0%	0%	96%	4%	17%	83%	0%						
	PEAK HR FACTOR		0.333			0.000			0.857			0.600		0.769					
	APP/DEPART	4	/	0	0	/	3	24	/	24	12	/	13	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

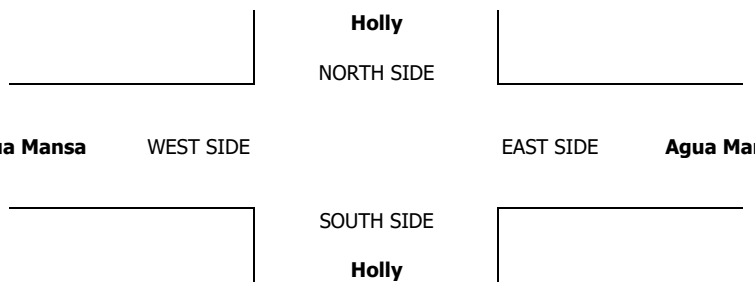
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	2	0	0	5	0	7	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	5	0	0	8	0	13	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	3	0	0	4	0	7	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	0	2	0	0	2	0	5	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	4	0	5	0	0	0	0	0
8:15 AM	1	0	0	0	0	0	0	0	0	0	4	0	5	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	4	0	0	2	0	6	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	6	0	0	2	0	8	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	2	1	0	3	0	6	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	1	0	1	4	0	6	0	0	0	0	0
VOLUMES	1	0	1	0	0	0	0	29	1	2	40	0	74	0	0	0	0	0
APPROACH %	50%	0%	50%	0%	0%	0%	0%	97%	3%	5%	95%	0%						
APP/DEPART	2	/	0	0	/	3	30	/	30	42	/	41	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	0	1	0	0	0	0	10	0	1	18	0	30					
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	5%	95%	0%						
PEAK HR FACTOR		0.250			0.000			0.500			0.594		0.577					
APP/DEPART	1	/	0	0	/	1	10	/	11	19	/	18	0					
PM																		
03:30 PM	0	0	1	0	0	0	0	5	0	0	10	0	16	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	0	11	0	2	0	0	14	0	0	0	0	0
4:00 PM	0	0	1	0	0	0	0	4	0	1	3	0	9	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	7	0	0	7	0	14	0	0	0	0	0
4:30 PM	0	0	1	0	0	0	0	5	0	0	1	0	7	0	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	2	0	0	3	0	6	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	3	0	0	3	0	6	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	3	0	0	5	0	8	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	7	0	0	1	0	8	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	6	0	0	3	0	9	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	7	0	0	0	0	7	0	0	0	0	0
VOLUMES	1	0	4	0	0	0	0	62	0	3	37	0	107	0	0	0	0	0
APPROACH %	20%	0%	80%	0%	0%	0%	0%	100%	0%	8%	93%	0%						
APP/DEPART	5	/	0	0	/	3	62	/	66	40	/	38	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	3	0	0	0	0	27	0	3	20	0	53					
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	13%	87%	0%						
PEAK HR FACTOR		0.750			0.000			0.614			0.575		0.828					
APP/DEPART	3	/	0	0	/	3	27	/	30	23	/	20	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	1	0	0	0	0	14	0	1	15	0	31	0	0	0	0	0
6:45 AM	0	0	3	0	0	0	0	17	0	0	9	0	29	0	0	0	0	0
7:00 AM	0	0	2	0	0	0	0	14	0	1	14	0	31	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	8	0	2	7	0	18	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	0	9	1	1	11	0	23	0	0	0	0	0
7:45 AM	1	0	2	0	0	0	0	12	0	1	8	0	24	0	0	0	0	0
8:00 AM	0	0	2	0	0	0	0	16	0	2	10	0	30	0	0	0	0	0
8:15 AM	1	0	2	0	0	0	0	11	0	3	14	0	31	0	0	0	0	0
8:30 AM	0	0	3	0	0	0	0	6	1	2	5	0	17	0	0	0	0	0
8:45 AM	1	0	4	0	0	0	0	11	0	2	11	0	29	0	0	0	0	0
9:00 AM	0	0	1	0	0	0	0	10	0	3	11	0	25	0	0	0	0	0
9:15 AM	0	0	1	0	0	0	0	11	1	0	9	0	22	0	0	0	0	0
VOLUMES	3	0	23	0	0	0	0	139	3	18	124	0	310	0	0	0	0	0
APPROACH %	12%	0%	88%	0%	0%	0%	0%	98%	2%	13%	87%	0%						
APP/DEPART	26	/	0	0	/	21	142	/	162	142	/	127	0					
BEGIN PEAK HR		6:30 AM																
VOLUMES	0	0	7	0	0	0	0	53	0	4	45	0	109					
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	8%	92%	0%						
PEAK HR FACTOR		0.583			0.000			0.779			0.766		0.879					
APP/DEPART	7	/	0	0	/	4	53	/	60	49	/	45	0					
PM																		
03:30 PM	0	0	2	0	0	0	0	18	2	1	12	0	35	0	0	0	0	0
3:45 PM	1	0	5	0	0	0	0	14	1	2	8	0	31	0	0	0	0	0
4:00 PM	2	0	2	0	0	0	0	9	1	1	7	0	22	0	0	0	0	0
4:15 PM	2	0	7	0	0	0	0	14	0	2	9	0	34	0	0	0	0	0
4:30 PM	1	0	2	0	0	0	0	11	1	1	6	0	22	0	0	0	0	0
4:45 PM	2	0	0	0	0	0	0	24	0	0	8	0	34	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	13	1	0	8	0	23	0	0	0	0	0
5:15 PM	0	0	2	0	0	0	0	12	0	0	11	0	25	0	0	0	0	0
5:30 PM	1	0	1	0	0	0	0	8	1	1	9	0	21	0	0	0	0	0
5:45 PM	0	0	2	0	0	0	0	18	0	0	8	0	28	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	11	0	0	9	0	20	0	0	0	0	0
6:15 PM	1	0	0	0	0	0	0	10	0	1	5	0	17	0	0	0	0	0
VOLUMES	10	0	24	0	0	0	0	162	7	9	100	0	312	0	0	0	0	0
APPROACH %	29%	0%	71%	0%	0%	0%	0%	96%	4%	8%	92%	0%						
APP/DEPART	34	/	0	0	/	16	169	/	186	109	/	110	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	5	0	16	0	0	0	0	55	4	6	36	0	122					
APPROACH %	24%	0%	76%	0%	0%	0%	0%	93%	7%	14%	86%	0%						
PEAK HR FACTOR		0.583			0.000			0.738			0.808		0.871					
APP/DEPART	21	/	0	0	/	10	59	/	71	42	/	41	0					

Holly

NORTH SIDE

Agua Mansa WEST SIDE EAST SIDE **Agua Mansa**

SOUTH SIDE

Holly

INTERSECTION TURNING MOVEMENT COUNTS

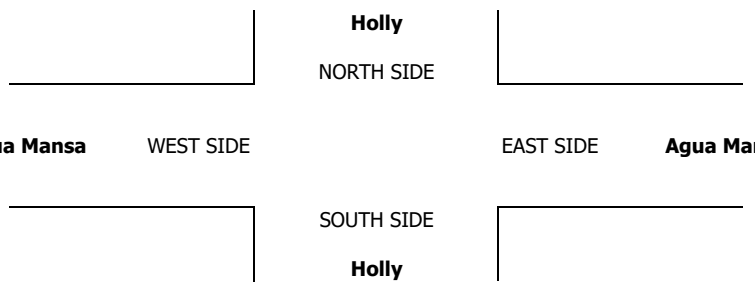
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



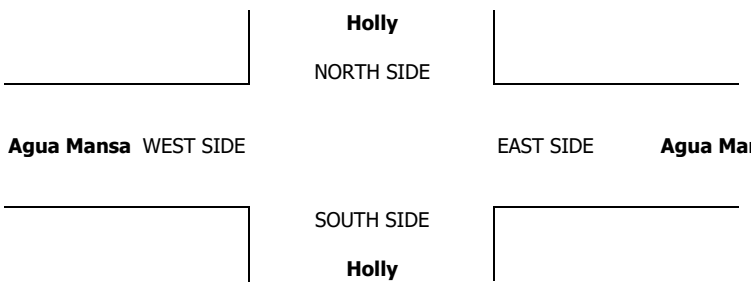
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Holly	LOCATION #:	18
WEDNESDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP N

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
BUSES			

		NORTHBOUND Holly			SOUTHBOUND Holly			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	8	0	0	7	0	15	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	8	/	8	7	/	7	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	4	0	0	5	0	9					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.417		0.563					
	APP/DEPART	0	/	0	0	/	0	4	/	4	5	/	5	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250					
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Hall
EAST & WEST: Agua Mansa

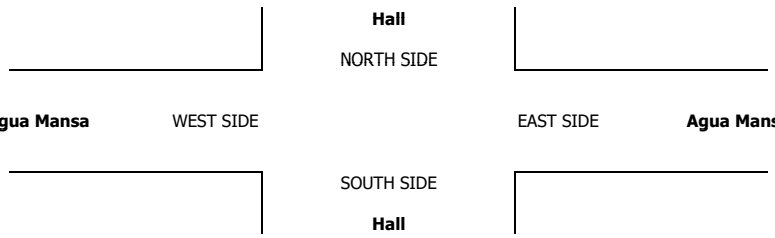
PROJECT #: SC1321
LOCATION #: 14
CONTROL: STOP S

NOTES:

AM / PM / MD / OTHER / OTHER

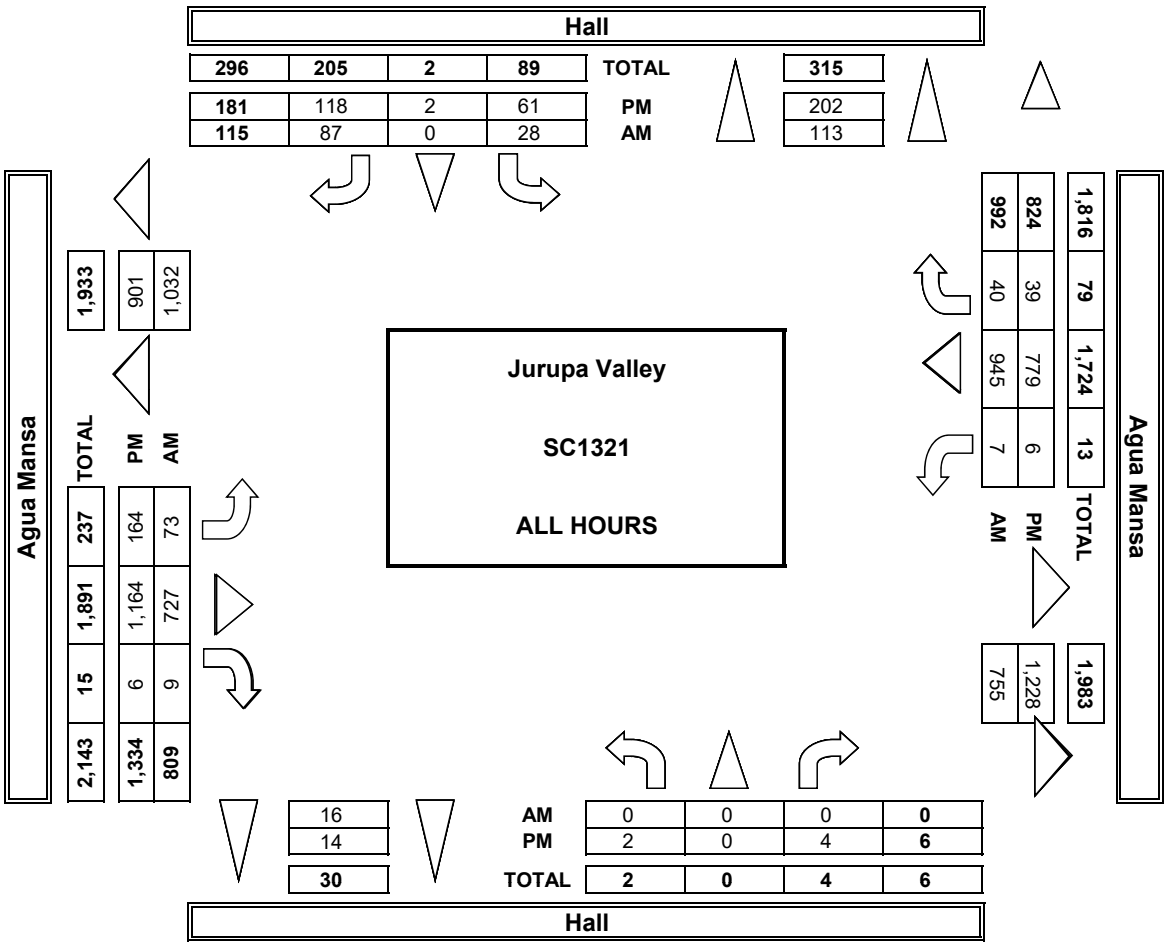


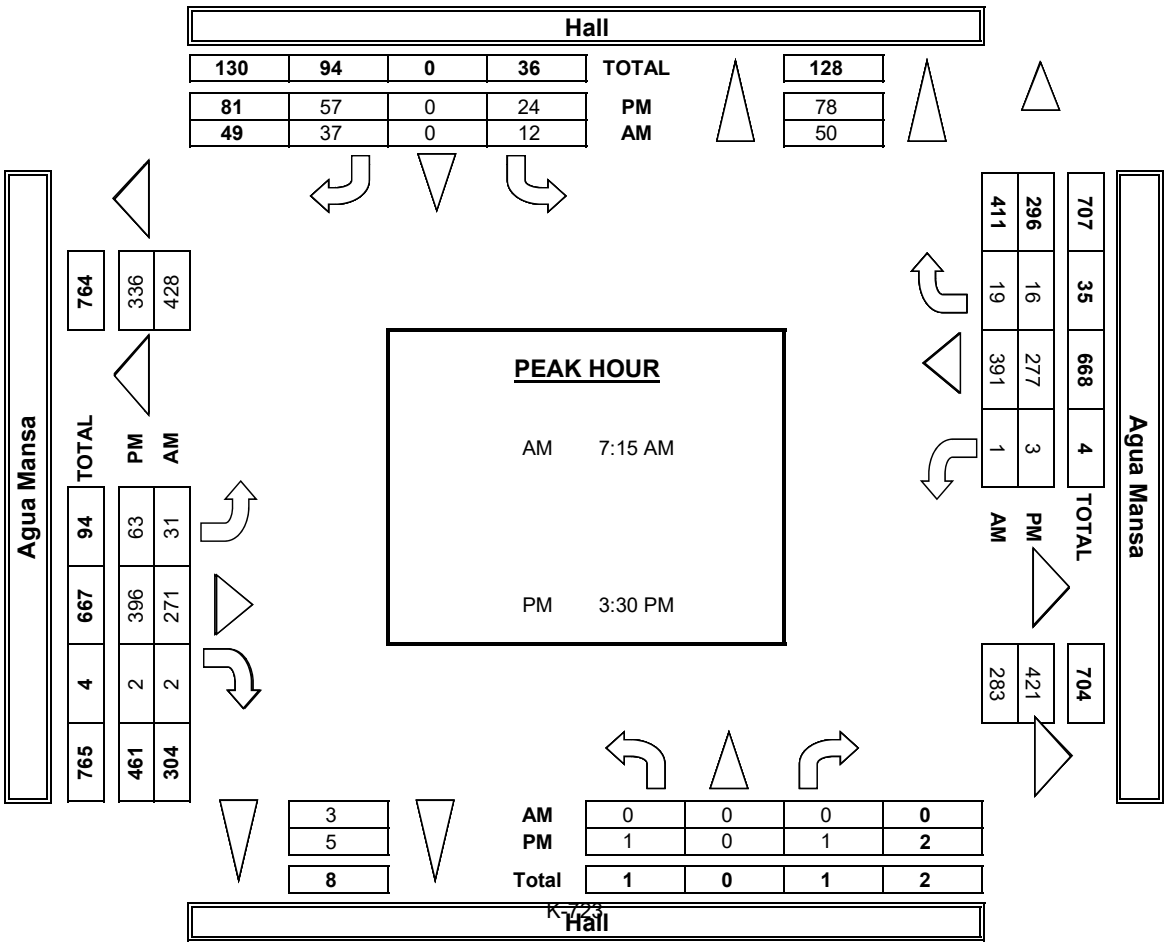
		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	0	0	0	0	0	9	5	65	1	0	96	1	177	0	0	0	0	0
	6:45 AM	0	0	0	2	0	12	7	77	2	1	88	4	193	0	0	0	0	0
	7:00 AM	0	0	0	5	0	7	6	43	0	3	80	6	150	0	0	0	0	0
	7:15 AM	0	0	0	2	0	9	9	74	0	0	91	10	195	0	0	0	0	0
	7:30 AM	0	0	0	3	0	10	8	63	1	1	113	3	202	0	0	0	0	0
	7:45 AM	0	0	0	4	0	10	8	65	0	0	103	1	191	0	0	0	0	0
	8:00 AM	0	0	0	3	0	8	6	69	1	0	84	5	176	0	0	0	0	0
	8:15 AM	0	0	0	1	0	6	7	60	1	0	57	4	136	0	0	0	0	0
	8:30 AM	0	0	0	2	0	7	8	59	0	1	60	3	140	0	0	0	0	0
	8:45 AM	0	0	0	3	0	6	6	45	3	0	53	1	117	0	0	0	0	0
	9:00 AM	0	0	0	3	0	3	3	49	0	1	62	2	123	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	58	0	0	58	0	116	0	0	0	0	0
	VOLUMES	0	0	0	28	0	87	73	727	9	7	945	40	1,916	0	0	0	0	0
	APPROACH %	0%	0%	0%	24%	0%	76%	9%	90%	1%	1%	95%	4%						
	APP/DEPART	0	/	113	115	/	16	809	/	755	992	/	1,032	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	12	0	37	31	271	2	1	391	19	764					
	APPROACH %	0%	0%	0%	24%	0%	76%	10%	89%	1%	0%	95%	5%						
	PEAK HR FACTOR		0.000			0.875			0.916			0.878		0.946					
	APP/DEPART	0	/	50	49	/	3	304	/	283	411	/	428	0					
PM	03:30 PM	1	0	1	6	0	21	13	125	0	1	89	3	260	0	0	0	0	0
	3:45 PM	0	0	0	4	0	17	15	95	0	0	63	5	199	0	0	1	0	1
	4:00 PM	0	0	0	5	0	4	17	115	0	1	64	5	211	0	0	0	0	0
	4:15 PM	0	0	0	9	0	15	18	61	2	1	61	3	170	0	0	0	0	0
	4:30 PM	0	0	0	3	0	12	21	109	0	1	78	3	227	0	0	0	0	0
	4:45 PM	0	0	0	5	1	12	12	85	1	0	69	2	187	0	1	1	0	2
	5:00 PM	0	0	0	8	0	11	17	95	0	1	67	3	202	0	0	0	0	0
	5:15 PM	0	0	0	8	0	6	14	98	0	1	51	2	180	0	0	0	0	0
	5:30 PM	1	0	0	5	0	7	18	113	1	0	66	3	214	0	0	0	0	0
	5:45 PM	0	0	0	0	0	5	6	113	2	0	60	4	190	0	0	0	0	0
	6:00 PM	0	0	1	4	0	6	6	102	0	0	64	5	188	0	0	0	0	0
	6:15 PM	0	0	2	4	1	2	7	53	0	0	47	1	117	0	0	0	0	0
	VOLUMES	2	0	4	61	2	118	164	1,164	6	6	779	39	2,345	0	1	2	0	3
	APPROACH %	33%	0%	67%	34%	1%	65%	12%	87%	0%	1%	95%	5%						
	APP/DEPART	6	/	202	181	/	14	1,334	/	1,228	824	/	901	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	1	0	1	24	0	57	63	396	2	3	277	16	840					
	APPROACH %	50%	0%	50%	30%	0%	70%	14%	86%	0%	1%	94%	5%						
	PEAK HR FACTOR		0.250			0.750			0.835			0.796		0.808					
	APP/DEPART	2	/	78	81	/	5	461	/	421	296	/	336	0					



		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa			
	LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL
AM	6:30 AM	0	0	0	0	0	9	5	98	3	0	132	1	248
	6:45 AM	0	0	0	3	0	15	8	114	6	3	103	8	258
	7:00 AM	0	0	0	7	0	9	6	66	0	6	112	7	211
	7:15 AM	0	0	0	3	0	10	9	109	0	0	130	12	271
	7:30 AM	0	0	0	5	0	11	11	103	3	1	147	4	282
	7:45 AM	0	0	0	7	0	13	11	86	0	0	139	2	257
	8:00 AM	0	0	0	4	0	10	8	105	3	0	122	5	256
	8:15 AM	0	0	0	1	0	10	11	98	3	0	91	5	219
	8:30 AM	0	0	0	3	0	8	12	106	0	3	100	3	233
	8:45 AM	0	0	0	6	0	7	7	78	9	0	88	2	196
	9:00 AM	0	0	0	4	0	5	4	88	0	3	108	5	216
	9:15 AM	0	0	0	0	0	0	0	97	0	0	104	0	201
	VOLUMES	0	0	0	40	0	105	91	1,144	27	16	1,372	51	2,845
	APPROACH %	0%	0%	0%	28%	0%	72%	7%	91%	2%	1%	95%	4%	
	APP/DEPART	0	/	142	145	/	43	1,262	/	1,184	1,439	/	1,477	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	18	0	43	39	402	6	1	536	22	1,065
	APPROACH %	0%	0%	0%	29%	0%	71%	9%	90%	1%	0%	96%	4%	
	PEAK HR FACTOR		0.000			0.769			0.949			0.925		0.944
	APP/DEPART	0	/	61	60	/	7	446	/	419	559	/	579	0
PM	03:30 PM	1	0	1	10	0	32	17	151	0	2	117	4	334
	3:45 PM	0	0	0	6	0	22	16	126	0	0	92	7	269
	4:00 PM	0	0	0	10	0	6	20	141	0	3	88	8	275
	4:15 PM	0	0	0	13	0	19	27	74	6	3	91	5	237
	4:30 PM	0	0	0	3	0	16	25	138	0	3	107	4	296
	4:45 PM	0	0	0	5	3	20	15	108	3	0	91	2	245
	5:00 PM	0	0	0	10	0	17	18	122	0	3	89	5	263
	5:15 PM	0	0	0	13	0	11	20	128	0	3	68	3	245
	5:30 PM	1	0	0	5	0	8	20	141	3	0	87	5	269
	5:45 PM	0	0	0	0	0	5	7	130	5	0	87	7	239
	6:00 PM	0	0	2	5	0	7	7	134	0	0	75	7	236
	6:15 PM	0	0	2	5	3	2	8	69	0	0	69	1	157
	VOLUMES	2	0	5	83	6	163	197	1,459	17	17	1,058	56	3,062
	APPROACH %	29%	0%	71%	33%	2%	65%	12%	87%	1%	2%	94%	5%	
	APP/DEPART	7	/	253	252	/	40	1,672	/	1,547	1,131	/	1,223	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	1	0	1	38	0	79	79	492	6	8	387	23	1,114
	APPROACH %	50%	0%	50%	33%	0%	67%	14%	85%	1%	2%	93%	6%	
	PEAK HR FACTOR		0.250			0.702			0.859			0.857		0.835
	APP/DEPART	2	/	102	117	/	14	577	/	531	418	/	467	0

Hall

NORTH SIDE

Agua Mansa WEST SIDE EAST SIDE **Agua Mansa**

SOUTH SIDE

Hall

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

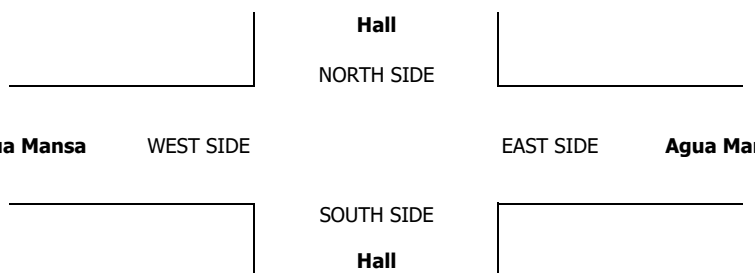
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	9	5	44	0	0	69	1	128	0	0	0	0	0
6:45 AM	0	0	0	1	0	9	6	55	0	0	75	0	146	0	0	0	0	0
7:00 AM	0	0	0	3	0	6	6	30	0	0	55	5	105	0	0	0	0	0
7:15 AM	0	0	0	1	0	8	9	52	0	0	65	8	143	0	0	0	0	0
7:30 AM	0	0	0	0	0	9	6	38	0	1	89	2	145	0	0	0	0	0
7:45 AM	0	0	0	1	0	8	6	50	0	0	81	0	146	0	0	0	0	0
8:00 AM	0	0	0	2	0	7	5	43	0	0	57	5	119	0	0	0	0	0
8:15 AM	0	0	0	1	0	4	5	34	0	0	36	3	83	0	0	0	0	0
8:30 AM	0	0	0	1	0	6	5	30	0	0	32	3	77	0	0	0	0	0
8:45 AM	0	0	0	0	0	4	5	24	0	0	29	0	62	0	0	0	0	0
9:00 AM	0	0	0	2	0	1	1	26	0	0	25	0	55	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	31	0	0	26	0	57	0	0	0	0	0
VOLUMES	0	0	0	12	0	71	59	457	0	1	639	27	1,266	0	0	0	0	0
APPROACH %	0%	0%	0%	14%	0%	86%	11%	89%	0%	0%	96%	4%						
APP/DEPART	0	/	86	83	/	1	516	/	469	667	/	710	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	0	0	4	0	32	26	183	0	1	292	15	553					
APPROACH %	0%	0%	0%	11%	0%	89%	12%	88%	0%	0%	95%	5%						
PEAK HR FACTOR		0.000			1.000			0.857			0.837		0.947					
APP/DEPART	0	/	41	36	/	1	209	/	187	308	/	324	0					
PM																		
03:30 PM	1	0	1	2	0	13	11	103	0	0	66	2	199	0	0	0	0	0
3:45 PM	0	0	0	2	0	12	14	71	0	0	43	4	146	0	0	0	0	0
4:00 PM	0	0	0	2	0	3	14	95	0	0	46	3	163	0	0	0	0	0
4:15 PM	0	0	0	6	0	12	11	51	0	0	39	2	121	0	0	0	0	0
4:30 PM	0	0	0	3	0	8	18	89	0	0	57	1	176	0	0	0	0	0
4:45 PM	0	0	0	5	0	5	10	67	0	0	50	2	139	0	1	1	0	2
5:00 PM	0	0	0	6	0	7	16	78	0	0	51	2	160	0	0	0	0	0
5:15 PM	0	0	0	5	0	3	9	76	0	0	40	1	134	0	0	0	0	0
5:30 PM	1	0	0	5	0	6	15	93	0	0	52	2	174	0	0	0	0	0
5:45 PM	0	0	0	0	0	5	5	101	0	0	44	2	157	0	0	0	0	0
6:00 PM	0	0	0	2	0	5	5	78	0	0	56	4	150	0	0	0	0	0
6:15 PM	0	0	2	3	0	2	6	44	0	0	35	1	93	0	0	0	0	0
VOLUMES	2	0	3	41	0	81	134	946	0	0	579	26	1,812	0	1	1	0	2
APPROACH %	40%	0%	60%	34%	0%	66%	12%	88%	0%	0%	96%	4%						
APP/DEPART	5	/	160	122	/	0	1,080	/	989	605	/	663	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	1	0	1	12	0	40	50	320	0	0	194	11	629					
APPROACH %	50%	0%	50%	23%	0%	77%	14%	86%	0%	0%	95%	5%						
PEAK HR FACTOR		0.250			0.722			0.811			0.754		0.790					
APP/DEPART	2	/	61	52	/	0	370	/	333	205	/	235	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

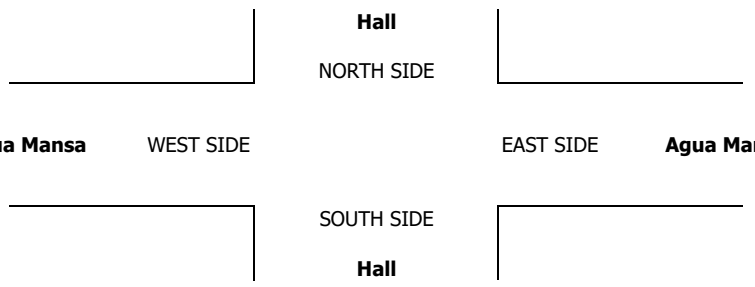
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
6:30 AM	0	0	0	0	0	0	0	2	0	0	7	0	9	0	0	0	0	0
6:45 AM	0	0	0	1	0	2	1	3	0	0	5	3	15	0	0	0	0	0
7:00 AM	0	0	0	1	0	0	0	1	0	2	7	1	12	0	0	0	0	0
7:15 AM	0	0	0	1	0	1	0	5	0	0	5	1	13	0	0	0	0	0
7:30 AM	0	0	0	3	0	1	1	3	0	0	5	1	14	0	0	0	0	0
7:45 AM	0	0	0	2	0	1	0	1	0	0	3	0	7	0	0	0	0	0
8:00 AM	0	0	0	1	0	0	0	4	0	0	7	0	12	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	6	0	0	4	0	10	0	0	0	0	0
8:30 AM	0	0	0	1	0	0	1	3	0	0	3	0	8	0	0	0	0	0
8:45 AM	0	0	0	2	0	2	0	1	0	0	3	1	9	0	0	0	0	0
9:00 AM	0	0	0	0	0	1	2	3	0	0	12	1	19	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	6	0	0	8	0	14	0	0	0	0	0
VOLUMES	0	0	0	12	0	8	5	38	0	2	69	8	142	0	0	0	0	0
APPROACH %	0%	0%	0%	60%	0%	40%	12%	88%	0%	3%	87%	10%						
APP/DEPART	0	/	13	20	/	2	43	/	50	79	/	77	0					
BEGIN PEAK HR		6:45 AM																
VOLUMES	0	0	0	6	0	4	2	12	0	2	22	6	54					
APPROACH %	0%	0%	0%	60%	0%	40%	14%	86%	0%	7%	73%	20%						
PEAK HR FACTOR		0.000			0.625			0.700			0.750		0.900					
APP/DEPART	0	/	8	10	/	2	14	/	18	30	/	26	0					
03:30 PM	0	0	0	3	0	2	0	6	0	0	7	1	19	0	0	0	0	0
3:45 PM	0	0	0	1	0	2	0	6	0	0	4	0	13	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	1	8	0	0	5	1	15	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	1	2	0	0	4	0	8	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	6	0	0	6	2	15	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	1	5	0	0	5	0	12	0	0	0	0	0
5:00 PM	0	0	0	1	0	0	0	3	0	0	5	0	9	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	2	7	0	0	2	1	13	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	3	5	0	0	4	0	12	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	3	1	0	2	1	8	0	0	0	0	0
6:00 PM	0	0	0	2	0	0	1	6	0	0	1	0	10	0	0	0	0	0
6:15 PM	0	0	0	1	0	0	1	1	0	0	1	0	4	0	0	0	0	0
VOLUMES	0	0	0	8	0	8	11	58	1	0	46	6	138	0	0	0	0	0
APPROACH %	0%	0%	0%	50%	0%	50%	16%	83%	1%	0%	88%	12%						
APP/DEPART	0	/	17	16	/	1	70	/	66	52	/	54	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	4	0	5	2	22	0	0	20	2	55					
APPROACH %	0%	0%	0%	44%	0%	56%	8%	92%	0%	0%	91%	9%						
PEAK HR FACTOR		0.000			0.450			0.667			0.688		0.724					
APP/DEPART	0	/	4	9	/	0	24	/	26	22	/	25	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

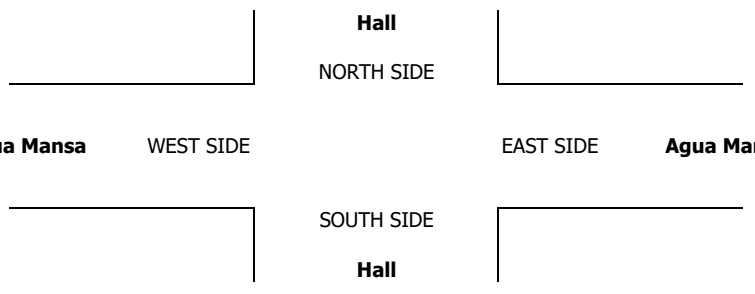
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	6	0	0	8	0	14	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	3	0	0	4	0	7	0	0	0	0	0
7:00 AM	0	0	0	1	0	0	0	2	0	0	8	0	11	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	2	0	0	5	1	8	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	3	0	0	7	0	10	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	8	0	0	4	1	14	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	9	0	0	4	0	13	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	4	0	0	2	1	7	0	0	0	0	0
8:30 AM	0	0	0	0	0	1	1	7	0	0	11	0	20	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	7	0	0	9	0	17	0	0	0	0	0
9:00 AM	0	0	0	1	0	1	0	3	0	0	10	0	15	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	5	0	0	5	0	10	0	0	0	0	0
VOLUMES	0	0	0	2	0	2	3	59	0	0	77	3	146	0	0	0	0	0
APPROACH %	0%	0%	0%	50%	0%	50%	5%	95%	0%	0%	96%	4%						
APP/DEPART	0	/	6	4	/	0	62	/	61	80	/	79	0					
BEGIN PEAK HR		8:30 AM																
VOLUMES	0	0	0	1	0	2	2	22	0	0	35	0	62					
APPROACH %	0%	0%	0%	33%	0%	67%	8%	92%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.375			0.750			0.795		0.775					
APP/DEPART	0	/	2	3	/	0	24	/	23	35	/	37	0					
PM																		
03:30 PM	0	0	0	0	0	2	0	9	0	1	8	0	20	0	0	0	0	0
3:45 PM	0	0	0	1	0	2	1	8	0	0	5	0	17	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	2	2	0	0	5	0	9	0	0	0	0	0
4:15 PM	0	0	0	2	0	1	4	4	0	0	7	0	18	0	0	0	0	0
4:30 PM	0	0	0	0	0	3	2	2	0	0	4	0	11	0	0	0	0	0
4:45 PM	0	0	0	0	0	5	0	6	0	0	8	0	19	0	0	0	0	0
5:00 PM	0	0	0	1	0	2	1	3	0	0	3	0	10	0	0	0	0	0
5:15 PM	0	0	0	1	0	0	1	4	0	0	2	0	8	0	0	0	0	0
5:30 PM	0	0	0	0	0	1	0	4	0	0	1	0	6	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0
6:00 PM	0	0	1	0	0	1	0	7	0	0	4	0	13	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	0	0	1	5	0	17	11	53	0	1	50	0	138	0	0	1	0	1
APPROACH %	0%	0%	100%	23%	0%	77%	17%	83%	0%	2%	98%	0%						
APP/DEPART	1	/	10	22	/	1	64	/	59	51	/	68	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	3	0	5	6	23	0	1	25	0	64					
APPROACH %	0%	0%	0%	38%	0%	63%	20%	77%	0%	4%	96%	0%						
PEAK HR FACTOR		0.000			0.667			0.833			0.722		0.800					
APP/DEPART	0	/	6	8	/	1	30	/	26	26	/	31	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

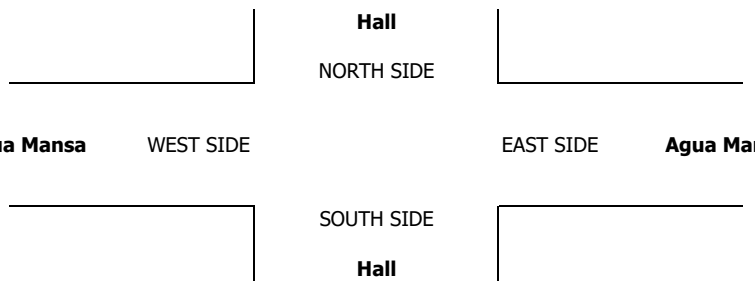
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	13	1	0	12	0	26	0	0	0	0	0
6:45 AM	0	0	0	0	0	1	0	16	2	1	4	1	25	0	0	0	0	0
7:00 AM	0	0	0	0	0	1	0	10	0	1	10	0	22	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	15	0	0	15	0	30	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	16	1	0	12	0	30	0	0	0	0	0
7:45 AM	0	0	0	1	0	1	1	6	0	0	15	0	24	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	1	12	1	0	14	0	29	0	0	0	0	0
8:15 AM	0	0	0	0	0	2	2	15	1	0	15	0	35	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	1	19	0	1	13	0	34	0	0	0	0	0
8:45 AM	0	0	0	1	0	0	0	12	3	0	12	0	28	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	17	0	1	15	1	34	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	15	0	0	18	0	33	0	0	0	0	0
VOLUMES	0	0	0	2	0	6	6	166	9	4	155	2	350	0	0	0	0	0
APPROACH %	0%	0%	0%	25%	0%	75%	3%	92%	5%	2%	96%	1%						
APP/DEPART	0	/	8	8	/	13	181	/	168	161	/	161	0					
BEGIN PEAK HR		8:15 AM																
VOLUMES	0	0	0	1	0	2	3	63	4	2	55	1	131					
APPROACH %	0%	0%	0%	33%	0%	67%	4%	90%	6%	3%	95%	2%						
PEAK HR FACTOR		0.000			0.375			0.875			0.853		0.936					
APP/DEPART	0	/	4	3	/	6	70	/	64	58	/	57	0					
PM																		
03:30 PM	0	0	0	1	0	4	2	7	0	0	8	0	22	0	0	0	0	0
3:45 PM	0	0	0	0	0	1	0	10	0	0	11	1	23	0	0	0	0	0
4:00 PM	0	0	0	2	0	1	0	10	0	1	8	1	23	0	0	0	0	0
4:15 PM	0	0	0	1	0	1	2	4	2	1	10	1	22	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	12	0	1	11	0	25	0	0	0	0	0
4:45 PM	0	0	0	0	1	1	1	7	1	0	5	0	16	0	0	0	0	0
5:00 PM	0	0	0	0	0	2	0	11	0	1	8	1	23	0	0	0	0	0
5:15 PM	0	0	0	2	0	2	2	11	0	1	7	0	25	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	10	1	0	9	1	21	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	6	1	0	12	1	20	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	11	0	0	3	1	15	0	0	0	0	0
6:15 PM	0	0	0	0	1	0	0	7	0	0	10	0	18	0	0	0	0	0
VOLUMES	0	0	0	6	2	12	8	106	5	5	102	7	253	0	0	0	0	0
APPROACH %	0%	0%	0%	30%	10%	60%	7%	89%	4%	4%	89%	6%						
APP/DEPART	0	/	15	20	/	12	119	/	112	114	/	114	0					
BEGIN PEAK HR		3:45 PM																
VOLUMES	0	0	0	3	0	3	3	36	2	3	40	3	93					
APPROACH %	0%	0%	0%	50%	0%	50%	7%	88%	5%	7%	87%	7%						
PEAK HR FACTOR		0.000			0.500			0.788			0.958		0.930					
APP/DEPART	0	/	6	6	/	5	41	/	39	46	/	43	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		6:30 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Hall

NORTH SIDE

Agua Mansa WEST SIDE EAST SIDE **Agua Mansa**

SOUTH SIDE

Hall

INTERSECTION TURNING MOVEMENT COUNTS

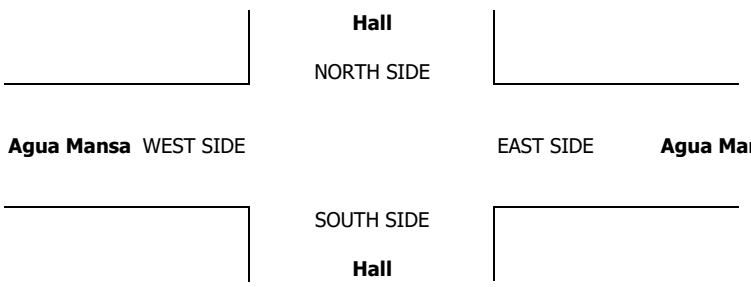
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Hall	LOCATION #:	14
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	STOP S

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Hall			SOUTHBOUND Hall			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL 1	ST X	SR 1	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	7	0	0	5	0	12	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	7	/	7	5	/	5	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	0	0	0	0	0	0	5	0	0	2	0	7					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.417			0.250		0.583					
APP/DEPART	0	/	0	0	/	0	5	/	5	2	/	2	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	1	0	0	0	1	0	0	2	0	4	0	0	0	0	0
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	1	/	0	1	/	2	2	/	2	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	0	0	1	0	0	0	0	0	0	2	0	3					
APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.250			0.000			0.500		0.750					
APP/DEPART	0	/	0	1	/	0	0	/	1	2	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Agua Mansa
EAST & WEST: Hall

PROJECT #: SC1439
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	3	56	0	0	39	1	4	0	4	0	0	0	107	0	0	0	0	0
	12:15 PM	5	68	0	0	49	4	2	0	5	0	0	0	133	0	0	0	0	0
	12:30 PM	12	52	0	0	38	10	22	0	13	0	0	0	147	0	0	0	0	0
	12:45 PM	8	42	0	0	41	20	9	0	4	0	0	0	124	0	0	0	0	0
	1:00 PM	4	70	0	0	48	2	5	0	5	0	0	0	134	0	0	0	0	0
	1:15 PM	8	60	0	0	62	1	3	0	6	0	0	0	140	0	0	0	0	0
	1:30 PM	6	70	0	0	65	3	5	0	3	0	0	0	152	0	0	0	0	0
	1:45 PM	3	89	0	1	54	5	5	0	2	0	0	0	159	0	1	0	0	1
	VOLUMES	49	507	0	1	396	46	55	0	42	0	0	0	1,096	0	1	0	0	1
	APPROACH %	9%	91%	0%	0%	89%	10%	57%	0%	43%	0%	0%	0%						
	APP/DEPART	556	/	563	443	/	438	97	/	0	0	/	95	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	21	289	0	1	229	11	18	0	16	0	0	0	585					
	APPROACH %	7%	93%	0%	0%	95%	5%	53%	0%	47%	0%	0%	0%						
	PEAK HR FACTOR		0.842			0.886			0.850			0.000		0.920					
	APP/DEPART	310	/	308	241	/	245	34	/	0	0	/	32	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Agua Mansa
NORTH SIDE

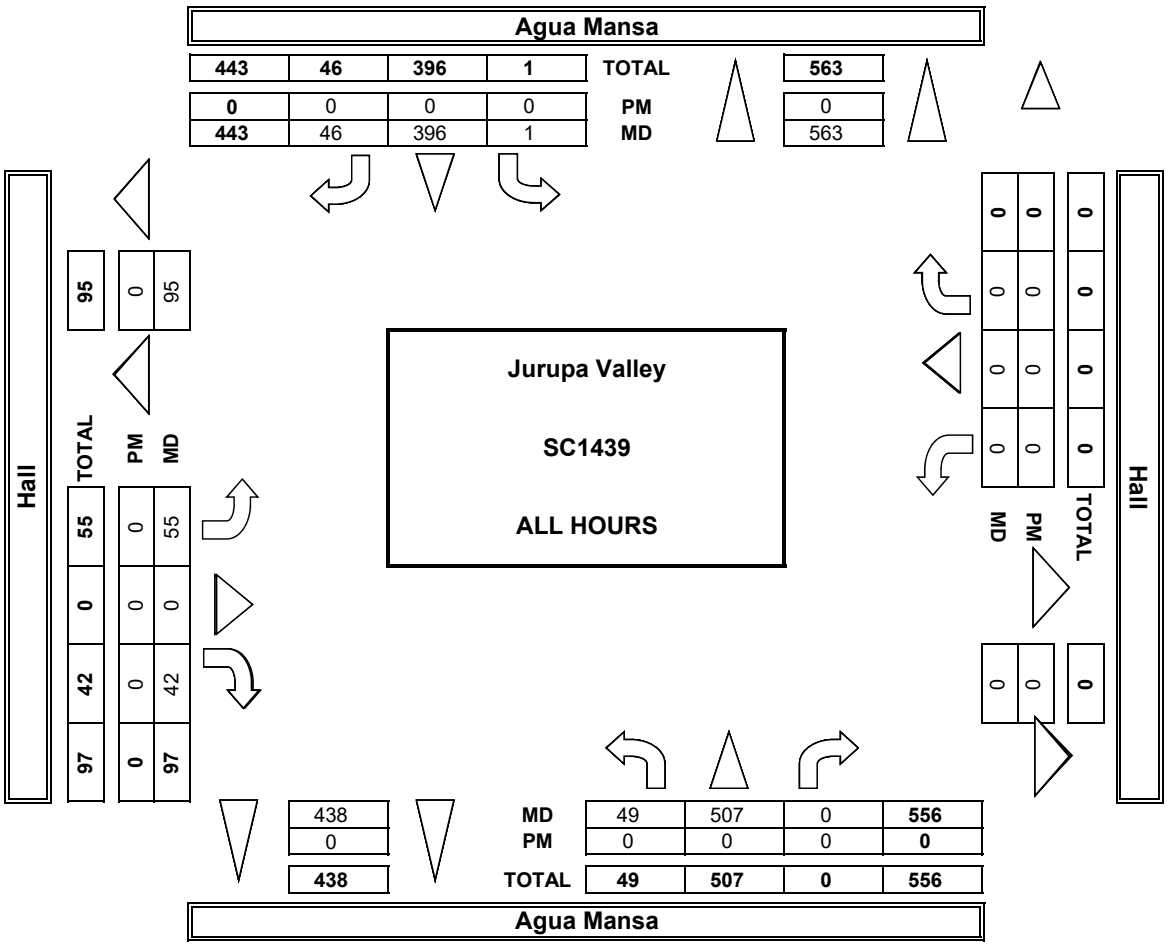
Hall WEST SIDE EAST SIDE **Hall**

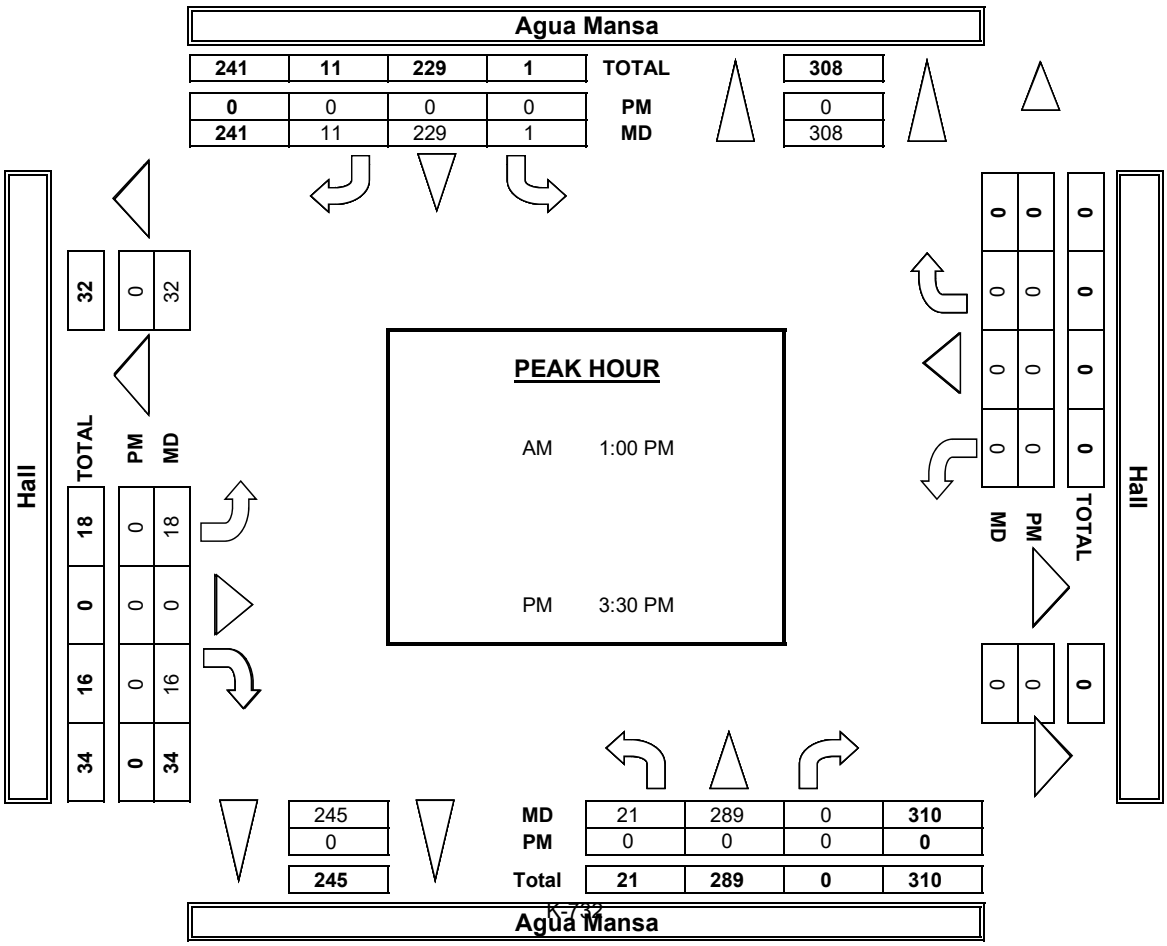
SOUTH SIDE
Agua Mansa

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





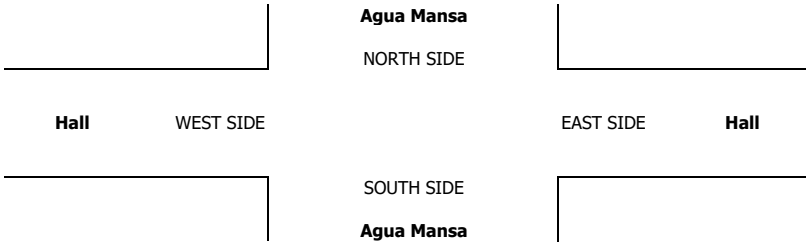
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Hall			WESTBOUND Hall			
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	3	97	0	0	60	1	7	0	9	0	0	0	176
	8:15 AM	7	117	0	0	76	5	2	0	7	0	0	0	214
	8:30 AM	17	84	0	0	51	16	23	0	15	0	0	0	205
	8:45 AM	9	65	0	0	54	22	9	0	5	0	0	0	164
	9:00 AM	9	95	0	0	70	2	7	0	8	0	0	0	189
	9:15 AM	13	92	0	0	94	1	8	0	9	0	0	0	216
	9:30 AM	10	103	0	0	105	6	7	0	5	0	0	0	235
	9:45 AM	3	150	0	1	79	12	9	0	5	0	0	0	258
	VOLUMES	70	802	0	1	588	64	70	0	62	0	0	0	1,655
	APPROACH %	8%	92%	0%	0%	90%	10%	53%	0%	47%	0%	0%	0%	
	APP/DEPART	871	/	872	653	/	649	132	/	1	0	/	134	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	34	439	0	1	347	20	30	0	26	0	0	0	897
	APPROACH %	7%	93%	0%	0%	94%	5%	54%	0%	46%	0%	0%	0%	
	PEAK HR FACTOR		0.775			0.835			0.848			0.000		0.870
	APP/DEPART	473	/	469	368	/	373	56	/	1	0	/	54	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	3	28	0	0	26	1	2	0	0	0	0	0	60	0	0	0	0	0
12:15 PM	4	39	0	0	31	2	2	0	4	0	0	0	82	0	0	0	0	0
12:30 PM	9	32	0	0	30	7	21	0	12	0	0	0	111	0	0	0	0	0
12:45 PM	7	27	0	0	30	19	9	0	3	0	0	0	95	0	0	0	0	0
1:00 PM	1	51	0	0	36	2	2	0	3	0	0	0	95	0	0	0	0	0
1:15 PM	5	40	0	0	39	1	0	0	3	0	0	0	88	0	0	0	0	0
1:30 PM	4	50	0	0	42	1	4	0	2	0	0	0	103	0	0	0	0	0
1:45 PM	3	50	0	1	35	1	3	0	0	0	0	0	93	0	1	0	0	1
VOLUMES	36	317	0	1	269	34	43	0	27	0	0	0	727	0	1	0	0	1
APPROACH %	10%	90%	0%	0%	88%	11%	61%	0%	39%	0%	0%	0%						
APP/DEPART	353	/	361	304	/	296	70	/	0	0	/	70	0					
BEGIN PEAK HR		12:30 PM																
VOLUMES	22	150	0	0	135	29	32	0	21	0	0	0	389					
APPROACH %	13%	87%	0%	0%	82%	18%	60%	0%	40%	0%	0%	0%						
PEAK HR FACTOR		0.827			0.837			0.402			0.000		0.876					
APP/DEPART	172	/	182	164	/	156	53	/	0	0	/	51	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Agua Mansa

NORTH SIDE

Hall WEST SIDE EAST SIDE **Hall**

SOUTH SIDE

Agua Mansa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

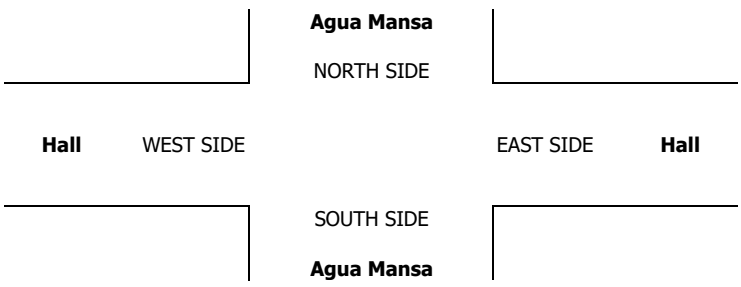
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	9	0	0	0	0	1	0	2	0	0	0	12	0	0	0	0	0
12:15 PM	0	4	0	0	2	2	0	0	0	0	0	0	8	0	0	0	0	0
12:30 PM	1	2	0	0	2	0	1	0	0	0	0	0	6	0	0	0	0	0
12:45 PM	0	6	0	0	4	0	0	0	1	0	0	0	11	0	0	0	0	0
1:00 PM	1	3	0	0	3	0	3	0	1	0	0	0	11	0	0	0	0	0
1:15 PM	1	2	0	0	7	0	1	0	2	0	0	0	13	0	0	0	0	0
1:30 PM	0	2	0	0	1	1	0	0	0	0	0	0	4	0	0	0	0	0
1:45 PM	0	7	0	0	4	1	0	0	1	0	0	0	13	0	0	0	0	0
VOLUMES	3	35	0	0	23	4	6	0	7	0	0	0	78	0	0	0	0	0
APPROACH %	8%	92%	0%	0%	85%	15%	46%	0%	54%	0%	0%	0%						
APP/DEPART	38	/	41	27	/	30	13	/	0	0	/	7	0					
BEGIN PEAK HR		12:30 PM																
VOLUMES	2	14	0	0	15	2	4	0	4	0	0	0	41					
APPROACH %	13%	88%	0%	0%	88%	12%	50%	0%	50%	0%	0%	0%						
PEAK HR FACTOR		0.571			0.607			0.500			0.000		0.788					
APP/DEPART	16	/	18	17	/	19	8	/	0	0	/	4	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

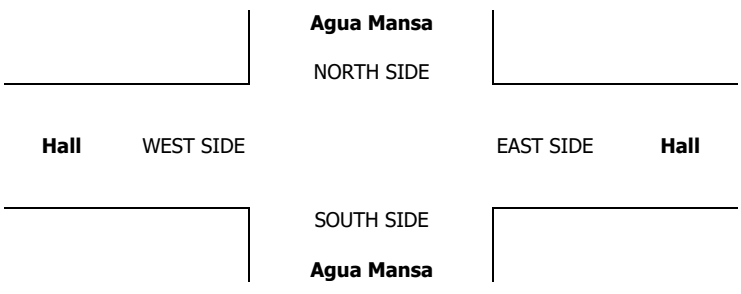
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND (Agua Mansa)			SOUTHBOUND (Agua Mansa)			EASTBOUND (Hall)			WESTBOUND (Hall)				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	2	0	0	5	0	0	0	0	0	0	0	7	0	0	0	0	0
	12:15 PM	0	5	0	0	6	0	0	0	0	0	0	0	11	0	0	0	0	0
	12:30 PM	0	5	0	0	3	0	0	0	0	0	0	0	8	0	0	0	0	0
	12:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	1:00 PM	0	6	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0
	1:15 PM	0	5	0	0	4	0	0	0	0	0	0	0	9	0	0	0	0	0
	1:30 PM	0	7	0	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0
	1:45 PM	0	9	0	0	7	0	0	0	0	0	0	0	16	0	0	0	0	0
	VOLUMES	1	40	0	0	31	0	0	0	0	0	0	0	72	0	0	0	0	0
	APPROACH %	2%	98%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	41	/	40	31	/	31	0	/	0	0	/	1	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	27	0	0	17	0	0	0	0	0	0	0	44					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.750			0.607			0.000			0.000		0.688					
	APP/DEPART	27	/	27	17	/	17	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

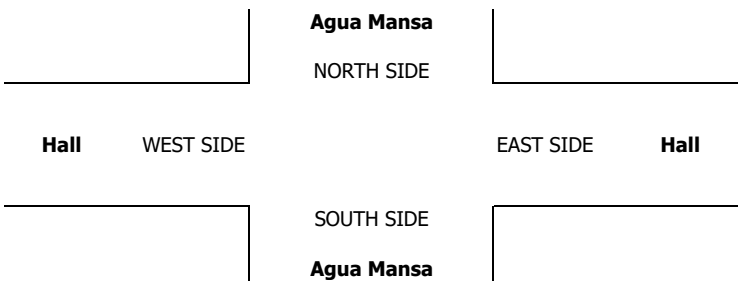
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	17	0	0	8	0	1	0	2	0	0	0	28	0	0	0	0	0
12:15 PM	1	20	0	0	10	0	0	0	1	0	0	0	32	0	0	0	0	0
12:30 PM	2	13	0	0	4	3	0	0	1	0	0	0	23	0	0	0	0	0
12:45 PM	0	9	0	0	6	1	0	0	0	0	0	0	16	0	0	0	0	0
1:00 PM	2	9	0	0	9	0	0	0	1	0	0	0	21	0	0	0	0	0
1:15 PM	2	13	0	0	12	0	2	0	1	0	0	0	30	0	0	0	0	0
1:30 PM	2	12	0	0	17	1	1	0	1	0	0	0	34	0	0	0	0	0
1:45 PM	0	23	0	0	8	3	2	0	1	0	0	0	37	0	0	0	0	0
VOLUMES	9	116	0	0	74	8	6	0	8	0	0	0	221	0	0	0	0	0
APPROACH %	7%	93%	0%	0%	90%	10%	43%	0%	57%	0%	0%	0%						
APP/DEPART	125	/	122	82	/	82	14	/	0	0	/	17	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	6	57	0	0	46	4	5	0	4	0	0	0	122					
APPROACH %	10%	90%	0%	0%	92%	8%	56%	0%	44%	0%	0%	0%						
PEAK HR FACTOR		0.685			0.694			0.750			0.000		0.824					
APP/DEPART	63	/	62	50	/	50	9	/	0	0	/	10	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

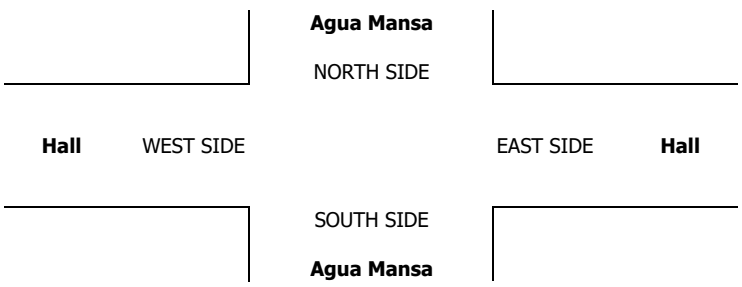
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Agua Mansa)			SOUTHBOUND (Agua Mansa)			EASTBOUND (Hall)			WESTBOUND (Hall)				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



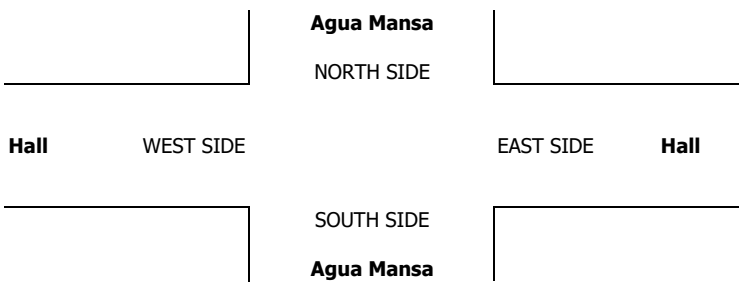
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:30 AM																
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Brown
EAST & WEST: Agua Mansa

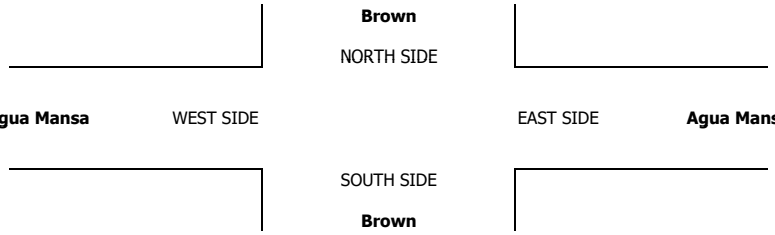
PROJECT #: SC1321
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER



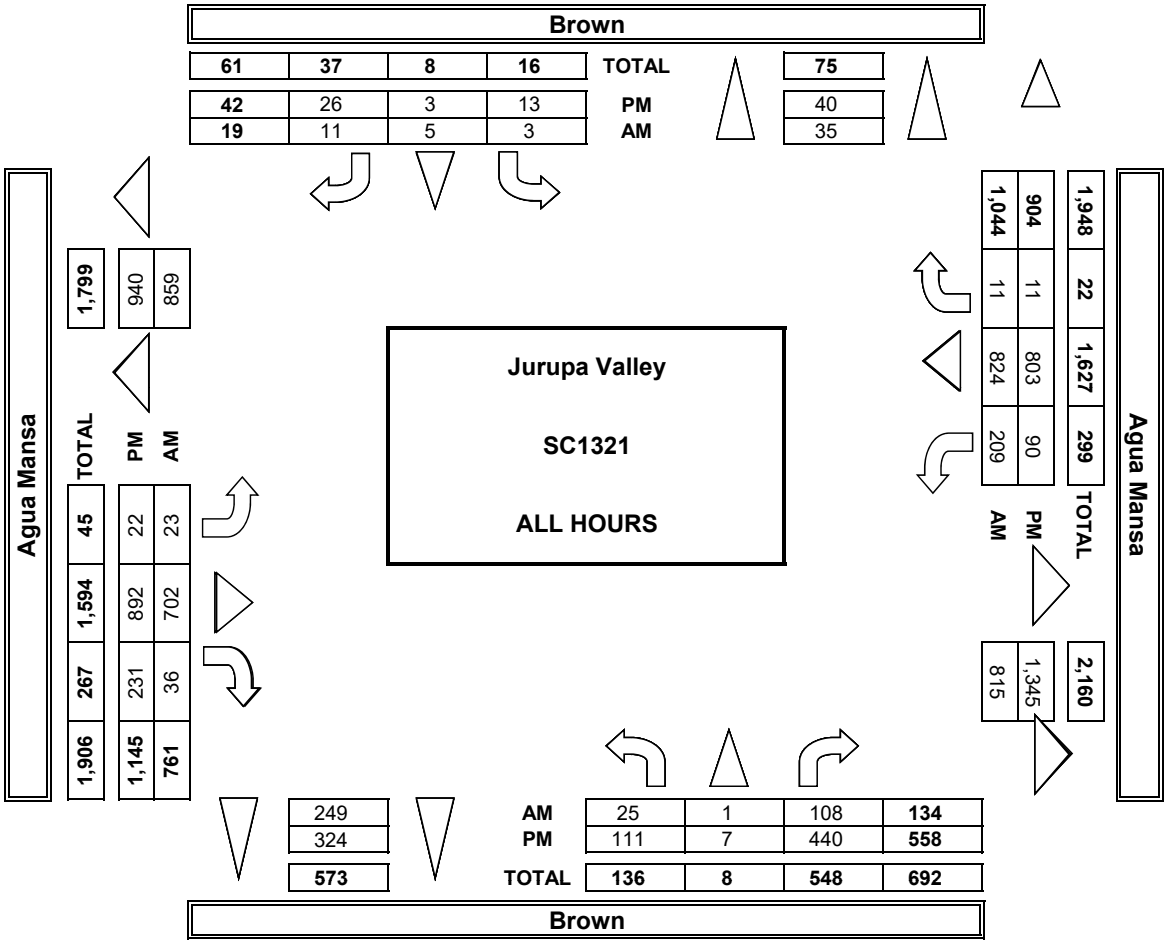
		NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	0	0	15	0	0	0	6	58	2	25	78	2	186	0	0	0	0	0
	6:45 AM	0	0	14	0	1	2	3	72	6	29	71	0	198	0	0	0	0	0
	7:00 AM	3	0	8	0	1	2	2	41	2	23	64	0	146	0	0	0	0	0
	7:15 AM	4	0	7	0	0	1	3	76	4	19	79	2	195	0	0	0	0	0
	7:30 AM	1	0	13	0	1	2	0	61	3	21	102	1	205	0	0	0	1	1
	7:45 AM	5	0	6	0	1	0	4	67	4	23	100	0	210	1	0	0	0	1
	8:00 AM	2	0	10	0	0	3	0	66	2	21	70	1	175	0	0	0	0	0
	8:15 AM	1	0	10	0	1	0	3	58	3	12	50	1	139	0	0	0	0	0
	8:30 AM	4	1	11	0	0	0	0	56	3	13	54	0	142	0	0	0	0	0
	8:45 AM	1	0	4	0	0	0	0	50	1	6	53	0	115	0	0	0	0	0
	9:00 AM	2	0	2	0	0	1	0	50	2	9	56	1	123	0	0	0	1	1
	9:15 AM	2	0	8	3	0	0	2	47	4	8	47	3	124	0	0	0	0	0
	VOLUMES	25	1	108	3	5	11	23	702	36	209	824	11	1,958	1	0	0	2	3
	APPROACH %	19%	1%	81%	16%	26%	58%	3%	92%	5%	20%	79%	1%						
	APP/DEPART	134	/	35	19	/	249	761	/	815	1,044	/	859	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	12	0	36	0	2	6	7	270	13	84	351	4	785					
	APPROACH %	25%	0%	75%	0%	25%	75%	2%	93%	4%	19%	80%	1%						
	PEAK HR FACTOR		0.857			0.667			0.873			0.885		0.935					
	APP/DEPART	48	/	11	8	/	99	290	/	307	439	/	368	0					
PM	03:30 PM	17	1	57	1	0	8	3	80	31	21	86	4	309	0	0	0	0	0
	3:45 PM	12	2	39	1	2	1	3	69	41	10	68	2	250	0	0	0	0	0
	4:00 PM	8	1	63	4	1	3	2	65	22	7	60	1	237	0	0	0	0	0
	4:15 PM	12	0	31	1	0	2	3	49	21	13	63	0	195	0	0	0	0	0
	4:30 PM	19	0	69	1	0	2	3	60	32	6	84	0	276	0	0	0	0	0
	4:45 PM	22	0	46	1	0	3	2	50	36	9	71	1	241	0	0	0	0	0
	5:00 PM	10	1	56	1	0	2	2	55	28	8	74	1	238	0	0	0	0	0
	5:15 PM	8	2	39	0	0	1	2	73	12	6	50	1	194	0	0	0	0	0
	5:30 PM	2	0	17	3	0	0	1	125	4	2	71	1	226	0	0	0	0	0
	5:45 PM	1	0	9	0	0	1	1	112	2	2	63	0	191	0	0	0	0	0
	6:00 PM	0	0	9	0	0	0	0	99	0	2	68	0	178	0	0	0	0	0
	6:15 PM	0	0	5	0	0	3	0	55	2	4	45	0	114	0	0	0	0	0
	VOLUMES	111	7	440	13	3	26	22	892	231	90	803	11	2,649	0	0	0	0	0
	APPROACH %	20%	1%	79%	31%	7%	62%	2%	78%	20%	10%	89%	1%						
	APP/DEPART	558	/	40	42	/	324	1,145	/	1,345	904	/	940	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	49	4	190	7	3	14	11	263	115	51	277	7	991					
	APPROACH %	20%	2%	78%	29%	13%	58%	3%	68%	30%	15%	83%	2%						
	PEAK HR FACTOR		0.810			0.667			0.853			0.755		0.802					
	APP/DEPART	243	/	22	24	/	169	389	/	460	335	/	340	0					

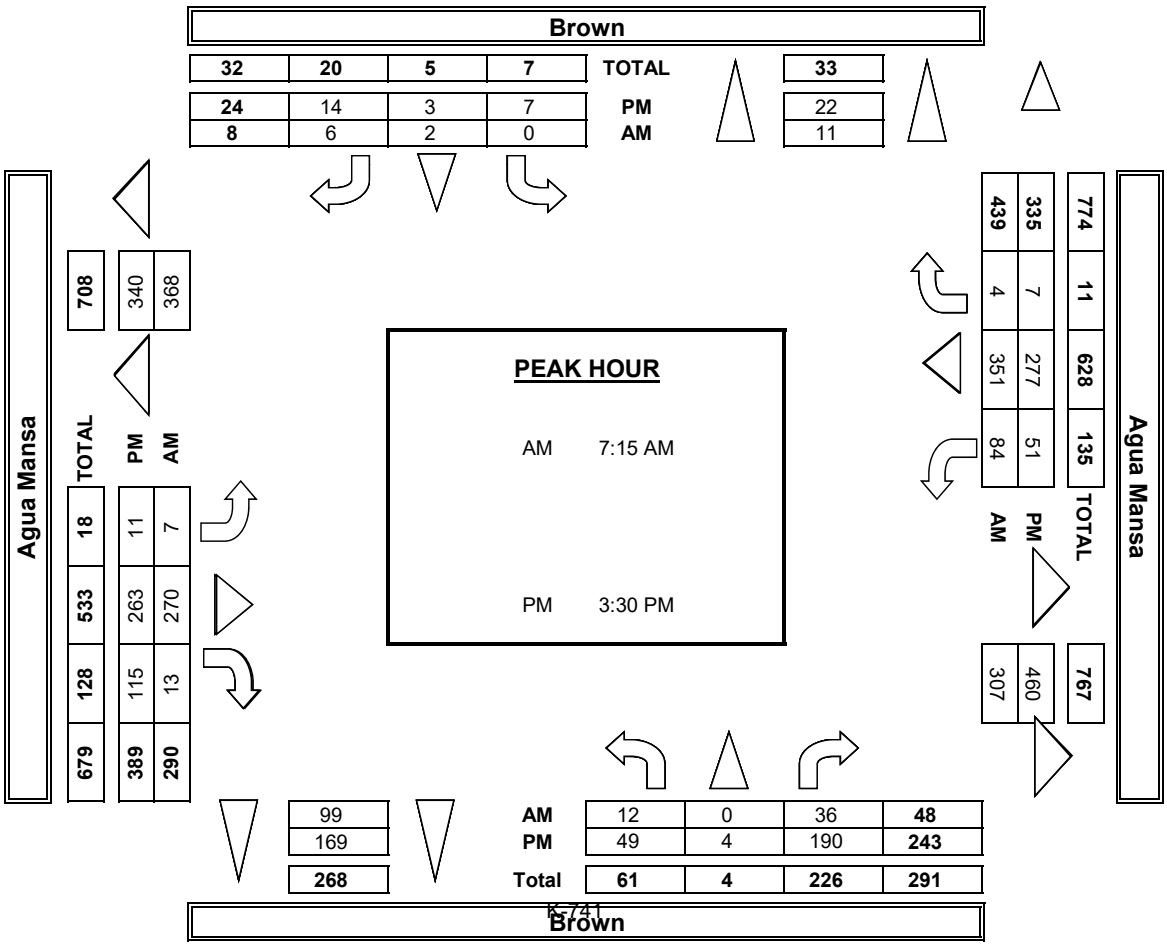


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





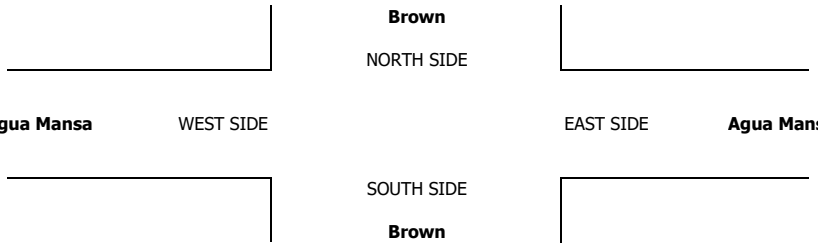
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	6:30 AM	0	0	25	0	0	0	11	87	2	28	111	2	265
	6:45 AM	0	0	21	0	3	5	5	106	10	32	86	0	267
	7:00 AM	4	0	10	0	1	3	3	62	6	23	98	0	208
	7:15 AM	10	0	12	0	0	2	4	116	6	23	116	2	289
	7:30 AM	1	0	21	0	2	3	0	98	3	28	141	1	297
	7:45 AM	12	0	8	0	1	0	8	89	4	25	137	0	282
	8:00 AM	6	0	18	0	0	7	0	100	2	29	102	1	264
	8:15 AM	3	0	15	0	1	0	3	98	3	19	81	1	223
	8:30 AM	8	3	16	0	0	0	0	101	3	16	92	0	239
	8:45 AM	2	0	6	0	0	0	0	88	1	10	87	0	193
	9:00 AM	4	0	4	0	0	2	0	88	2	15	97	2	213
	9:15 AM	4	0	12	4	0	0	5	82	6	10	91	4	216
	VOLUMES	53	3	166	4	8	19	38	1,112	48	256	1,236	12	2,953
	APPROACH %	24%	1%	75%	11%	26%	62%	3%	93%	4%	17%	82%	1%	
	APP/DEPART	222	/	53	31	/	312	1,197	/	1,281	1,504	/	1,308	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	28	0	58	0	3	11	12	402	15	104	495	4	1,131
	APPROACH %	33%	0%	67%	0%	22%	78%	3%	94%	4%	17%	82%	1%	
	PEAK HR FACTOR		0.896			0.519			0.854			0.887		0.954
	APP/DEPART	86	/	16	14	/	122	429	/	460	603	/	534	0
PM	03:30 PM	28	2	66	1	0	11	3	103	39	23	121	6	401
	3:45 PM	20	2	44	1	5	2	3	95	62	13	99	3	347
	4:00 PM	13	1	71	6	2	3	2	84	33	9	84	1	307
	4:15 PM	19	0	41	1	0	2	4	65	27	30	85	0	273
	4:30 PM	35	0	90	1	0	2	3	73	40	12	111	0	365
	4:45 PM	39	0	64	1	0	4	2	61	47	18	91	1	326
	5:00 PM	18	1	66	1	0	4	2	73	40	16	97	3	320
	5:15 PM	17	2	51	0	0	1	2	97	16	15	63	1	263
	5:30 PM	3	0	19	3	0	0	1	155	8	4	93	1	286
	5:45 PM	1	0	12	0	0	1	2	129	3	4	88	0	239
	6:00 PM	0	0	10	0	0	0	0	131	0	5	77	0	222
	6:15 PM	0	0	7	0	0	6	0	79	5	8	63	0	167
	VOLUMES	192	8	538	15	6	34	24	1,141	317	155	1,069	15	3,512
	APPROACH %	26%	1%	73%	27%	11%	62%	2%	77%	21%	13%	86%	1%	
	APP/DEPART	737	/	46	55	/	478	1,481	/	1,694	1,239	/	1,294	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	80	5	222	9	6	17	12	346	160	75	388	9	1,327
	APPROACH %	26%	1%	73%	28%	19%	53%	2%	67%	31%	16%	82%	2%	
	PEAK HR FACTOR		0.804			0.696			0.811			0.788		0.828
	APP/DEPART	306	/	26	32	/	241	518	/	576	472	/	485	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

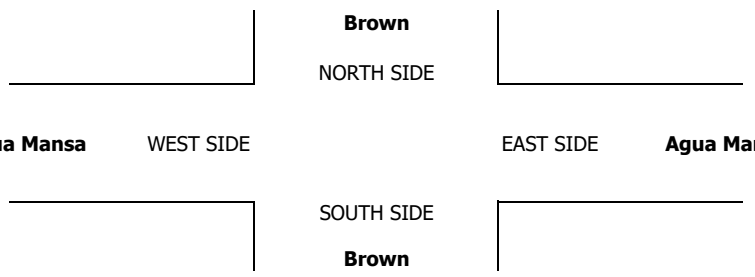
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM 6:30 AM	0	0	9	0	0	0	3	36	2	23	53	2	128	0	0	0	0	0
6:45 AM	0	0	10	0	0	0	2	51	3	27	57	0	150	0	0	0	0	0
7:00 AM	1	0	7	0	1	1	1	29	0	23	38	0	101	0	0	0	0	0
7:15 AM	0	0	4	0	0	0	2	52	3	15	53	2	131	0	0	0	0	0
7:30 AM	1	0	8	0	0	1	0	38	3	17	75	1	144	0	0	0	1	1
7:45 AM	1	0	5	0	1	0	2	51	4	21	78	0	163	1	0	0	0	1
8:00 AM	0	0	5	0	0	0	0	41	2	16	47	1	112	0	0	0	0	0
8:15 AM	0	0	7	0	1	0	3	32	3	7	32	1	86	0	0	0	0	0
8:30 AM	2	0	8	0	0	0	0	27	3	9	29	0	78	0	0	0	0	0
8:45 AM	0	0	3	0	0	0	0	26	1	4	27	0	61	0	0	0	0	0
9:00 AM	1	0	1	0	0	0	0	26	2	3	24	0	57	0	0	0	1	1
9:15 AM	1	0	5	2	0	0	0	24	3	5	19	2	61	0	0	0	0	0
VOLUMES	7	0	72	2	3	2	13	433	29	170	532	9	1,272	1	0	0	2	3
APPROACH %	9%	0%	91%	29%	43%	29%	3%	91%	6%	24%	75%	1%						
APP/DEPART	79	/	22	7	/	201	475	/	509	711	/	540	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	1	0	22	0	1	1	4	182	12	68	253	4	550					
APPROACH %	4%	0%	92%	0%	50%	50%	2%	92%	6%	21%	78%	1%						
PEAK HR FACTOR		0.667			0.500			0.868			0.823		0.844					
APP/DEPART	24	/	8	2	/	82	198	/	205	326	/	255	0					
PM 03:30 PM	9	0	51	1	0	5	3	61	24	19	59	2	234	0	0	0	0	0
3:45 PM	6	2	34	1	0	0	3	50	27	8	46	1	178	0	0	0	0	0
4:00 PM	3	1	57	3	0	3	2	49	14	5	43	1	181	0	0	0	0	0
4:15 PM	5	0	26	1	0	2	2	35	16	4	42	0	133	0	0	0	0	0
4:30 PM	3	0	56	1	0	2	3	50	27	3	62	0	207	0	0	0	0	0
4:45 PM	6	0	33	1	0	2	2	40	27	3	52	1	167	0	0	0	0	0
5:00 PM	3	1	50	1	0	1	2	43	20	3	57	0	181	0	0	0	0	0
5:15 PM	0	2	31	0	0	1	2	54	9	1	41	1	142	0	0	0	0	0
5:30 PM	1	0	15	3	0	0	1	103	2	1	54	1	181	0	0	0	0	0
5:45 PM	1	0	7	0	0	1	0	99	1	1	48	0	158	0	0	0	0	0
6:00 PM	0	0	8	0	0	0	0	75	0	0	61	0	144	0	0	0	0	0
6:15 PM	0	0	4	0	0	1	0	41	0	2	35	0	83	0	0	0	0	0
VOLUMES	37	6	372	12	0	18	20	700	167	50	600	7	1,989	0	0	0	0	0
APPROACH %	9%	1%	90%	40%	0%	60%	2%	79%	19%	8%	91%	1%						
APP/DEPART	415	/	33	30	/	217	887	/	1,084	657	/	655	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	23	3	168	6	0	10	10	195	81	36	190	4	726					
APPROACH %	12%	2%	87%	38%	0%	63%	3%	68%	28%	16%	83%	2%						
PEAK HR FACTOR		0.795			0.667			0.813			0.719		0.776					
APP/DEPART	194	/	17	16	/	117	286	/	369	230	/	223	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

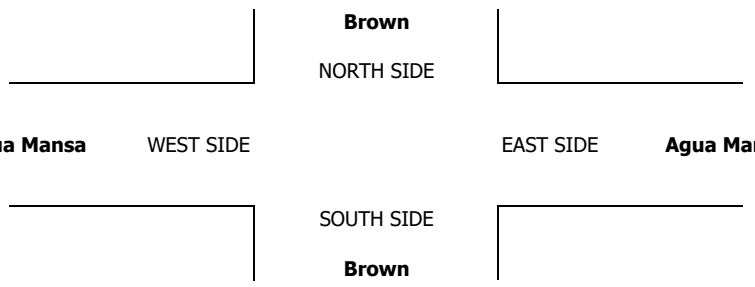
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	6:30 AM	0	0	1	0	0	0	0	7	0	1	6	0	15
	6:45 AM	0	0	0	0	0	1	0	4	1	1	6	0	13
	7:00 AM	2	0	0	0	0	1	1	1	0	0	7	0	12
	7:15 AM	1	0	1	0	0	1	1	4	0	3	6	0	17
	7:30 AM	0	0	1	0	0	1	0	3	0	0	6	0	11
	7:45 AM	1	0	0	0	0	0	0	1	0	1	3	0	6
	8:00 AM	0	0	0	0	0	1	0	4	0	0	7	0	12
	8:15 AM	0	0	1	0	0	0	0	5	0	2	2	0	10
	8:30 AM	0	0	0	0	0	0	0	4	0	2	1	0	7
	8:45 AM	0	0	0	0	0	0	0	1	0	0	5	0	6
	9:00 AM	0	0	0	0	0	1	0	5	0	4	8	1	19
	9:15 AM	0	0	1	1	0	0	1	4	0	2	5	1	15
	VOLUMES	4	0	5	1	0	6	3	43	1	16	62	2	143
	APPROACH %	44%	0%	56%	14%	0%	86%	6%	91%	2%	20%	78%	3%	
	APP/DEPART	9	/	5	7	/	17	47	/	49	80	/	72	0
	BEGIN PEAK HR		6:30 AM											
	VOLUMES	3	0	2	0	0	3	2	16	1	5	25	0	57
	APPROACH %	60%	0%	40%	0%	0%	100%	11%	84%	5%	17%	83%	0%	
	PEAK HR FACTOR		0.625			0.750			0.679			0.833		0.838
	APP/DEPART	5	/	2	3	/	6	19	/	18	30	/	31	0
PM	03:30 PM	0	1	1	0	0	1	0	5	2	0	8	1	19
	3:45 PM	0	0	2	0	1	1	0	4	1	0	5	1	15
	4:00 PM	1	0	2	0	1	0	0	7	1	1	4	0	17
	4:15 PM	2	0	0	0	0	0	0	3	2	0	5	0	12
	4:30 PM	1	0	3	0	0	0	0	3	1	0	7	0	15
	4:45 PM	2	0	3	0	0	1	0	5	2	1	5	0	19
	5:00 PM	0	0	1	0	0	0	0	2	3	1	4	0	11
	5:15 PM	1	0	2	0	0	0	0	7	1	1	2	0	14
	5:30 PM	0	0	1	0	0	0	0	7	0	0	7	0	15
	5:45 PM	0	0	1	0	0	0	1	4	1	0	2	0	9
	6:00 PM	0	0	0	0	0	0	0	7	0	0	1	0	8
	6:15 PM	0	0	0	0	0	1	0	2	1	0	1	0	5
	VOLUMES	7	1	16	0	2	4	1	56	15	4	51	2	159
	APPROACH %	29%	4%	67%	0%	33%	67%	1%	78%	21%	7%	89%	4%	
	APP/DEPART	24	/	4	6	/	21	72	/	72	57	/	62	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	6	0	8	0	1	1	0	18	6	2	21	0	63
	APPROACH %	43%	0%	57%	0%	50%	50%	0%	75%	25%	9%	91%	0%	
	PEAK HR FACTOR		0.700			0.250			0.750			0.639		0.829
	APP/DEPART	14	/	0	2	/	9	24	/	26	23	/	28	0

U-TURNS

	NB	SB	EB	WB	TTL
AM 6:30 AM	0	0	0	0	0
AM 6:45 AM	0	0	0	0	0
AM 7:00 AM	0	0	0	0	0
AM 7:15 AM	0	0	0	0	0
AM 7:30 AM	0	0	0	0	0
AM 7:45 AM	0	0	0	0	0
AM 8:00 AM	0	0	0	0	0
AM 8:15 AM	0	0	0	0	0
AM 8:30 AM	0	0	0	0	0
AM 8:45 AM	0	0	0	0	0
AM 9:00 AM	0	0	0	0	0
AM 9:15 AM	0	0	0	0	0
AM VOLUMES	0	0	0	0	0
PM 03:30 PM	0	0	0	0	0
PM 3:45 PM	0	0	0	0	0
PM 4:00 PM	0	0	0	0	0
PM 4:15 PM	0	0	0	0	0
PM 4:30 PM	0	0	0	0	0
PM 4:45 PM	0	0	0	0	0
PM 5:00 PM	0	0	0	0	0
PM 5:15 PM	0	0	0	0	0
PM 5:30 PM	0	0	0	0	0
PM 5:45 PM	0	0	0	0	0
PM 6:00 PM	0	0	0	0	0
PM 6:15 PM	0	0	0	0	0
PM VOLUMES	0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

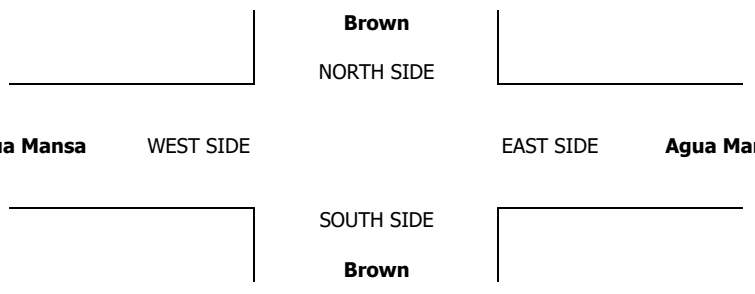
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	1	0	0	0	1	5	0	0	8	0	15	0	0	0	0	0
6:45 AM	0	0	1	0	0	0	0	2	1	0	4	0	8	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	2	0	0	8	0	10	0	0	0	0	0
7:15 AM	1	0	0	0	0	0	0	2	0	0	5	0	8	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	3	0	1	6	0	11	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	9	0	1	3	0	13	0	0	0	0	0
8:00 AM	0	0	2	0	0	1	0	9	0	1	3	0	16	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	4	0	0	2	0	6	0	0	0	0	0
8:30 AM	0	0	1	0	0	0	0	7	0	2	10	0	20	0	0	0	0	0
8:45 AM	1	0	0	0	0	0	0	8	0	0	11	0	20	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	3	0	0	11	0	14	0	0	0	0	0
9:15 AM	0	0	1	0	0	0	0	4	0	1	4	0	10	0	0	0	0	0
VOLUMES	2	0	6	0	1	1	1	58	1	6	75	0	151	0	0	0	0	0
APPROACH %	25%	0%	75%	0%	50%	50%	2%	97%	2%	7%	93%	0%						
APP/DEPART	8	/	1	2	/	8	60	/	64	81	/	78	0					
BEGIN PEAK HR		8:30 AM																
VOLUMES	1	0	2	0	0	0	0	22	0	3	36	0	64					
APPROACH %	33%	0%	67%	0%	0%	0%	0%	100%	0%	8%	92%	0%						
PEAK HR FACTOR		0.750			0.000			0.688			0.813		0.800					
APP/DEPART	3	/	0	0	/	3	22	/	24	39	/	37	0					
PM																		
03:30 PM	5	0	2	0	0	2	0	8	3	2	7	1	30	0	0	0	0	0
3:45 PM	4	0	2	0	0	0	0	6	6	1	6	0	25	0	0	0	0	0
4:00 PM	4	0	1	0	0	0	0	3	4	1	4	0	17	0	0	0	0	0
4:15 PM	4	0	0	0	0	0	1	8	1	1	12	0	27	0	0	0	0	0
4:30 PM	15	0	1	0	0	0	0	3	1	0	7	0	27	0	0	0	0	0
4:45 PM	12	0	4	0	0	0	0	2	4	2	11	0	35	0	0	0	0	0
5:00 PM	6	0	1	0	0	0	0	3	0	1	4	0	15	0	0	0	0	0
5:15 PM	6	0	1	0	0	0	0	4	1	0	2	0	14	0	0	0	0	0
5:30 PM	1	0	1	0	0	0	0	3	0	0	2	0	7	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0
6:00 PM	0	0	1	0	0	0	0	6	0	1	4	0	12	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	57	0	14	0	0	2	1	50	20	9	62	1	216	0	0	0	0	0
APPROACH %	80%	0%	20%	0%	0%	100%	1%	70%	28%	13%	86%	1%						
APP/DEPART	71	/	2	2	/	29	71	/	64	72	/	121	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	35	0	6	0	0	0	1	16	10	4	34	0	106					
APPROACH %	85%	0%	15%	0%	0%	0%	4%	59%	37%	11%	89%	0%						
PEAK HR FACTOR		0.641			0.000			0.675			0.731		0.757					
APP/DEPART	41	/	1	0	/	14	27	/	22	38	/	69	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	4	0	0	0	2	10	0	1	11	0	28	0	0	0	0	0
6:45 AM	0	0	3	0	1	1	1	15	1	1	4	0	27	0	0	0	0	0
7:00 AM	0	0	1	0	0	0	0	9	2	0	11	0	23	0	0	0	0	0
7:15 AM	2	0	2	0	0	0	0	18	1	1	14	0	38	0	0	0	0	0
7:30 AM	0	0	3	0	0	0	0	15	0	3	15	0	36	0	0	0	0	0
7:45 AM	3	0	1	0	0	0	2	6	0	0	16	0	28	0	0	0	0	0
8:00 AM	2	0	3	0	0	1	0	11	0	3	12	0	32	0	0	0	0	0
8:15 AM	1	0	2	0	0	0	0	16	0	3	14	0	36	0	0	0	0	0
8:30 AM	2	1	2	0	0	0	0	18	0	0	13	0	36	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	14	0	2	10	0	27	0	0	0	0	0
9:00 AM	1	0	1	0	0	0	0	16	0	2	13	0	33	0	0	0	0	0
9:15 AM	1	0	1	0	0	0	1	14	1	0	18	0	36	0	0	0	0	0
VOLUMES	12	1	24	0	1	2	6	162	5	16	151	0	380	0	0	0	0	0
APPROACH %	32%	3%	65%	0%	33%	67%	3%	94%	3%	10%	90%	0%						
APP/DEPART	37	/	7	3	/	22	173	/	186	167	/	165	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	7	0	9	0	0	1	2	50	1	7	57	0	134					
APPROACH %	44%	0%	56%	0%	0%	100%	4%	94%	2%	11%	89%	0%						
PEAK HR FACTOR		0.800			0.250			0.697			0.889		0.882					
APP/DEPART	16	/	2	1	/	8	53	/	59	64	/	65	0					
PM																		
03:30 PM	3	0	3	0	0	0	0	6	2	0	12	0	26	0	0	0	0	0
3:45 PM	2	0	1	0	1	0	0	9	7	1	11	0	32	0	0	0	0	0
4:00 PM	0	0	3	1	0	0	0	6	3	0	9	0	22	0	0	0	0	0
4:15 PM	1	0	5	0	0	0	0	3	2	8	3	0	22	0	0	0	0	0
4:30 PM	0	0	9	0	0	0	0	4	3	3	8	0	27	0	0	0	0	0
4:45 PM	2	0	6	0	0	0	0	3	3	3	3	0	20	0	0	0	0	0
5:00 PM	1	0	4	0	0	1	0	7	5	3	8	1	30	0	0	0	0	0
5:15 PM	1	0	5	0	0	0	0	8	1	4	5	0	24	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	11	2	1	8	0	22	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	6	0	1	11	0	19	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	11	0	1	2	0	14	0	0	0	0	0
6:15 PM	0	0	1	0	0	1	0	11	1	2	8	0	24	0	0	0	0	0
VOLUMES	10	0	38	1	1	2	0	85	29	27	88	1	282	0	0	0	0	0
APPROACH %	21%	0%	79%	25%	25%	50%	0%	75%	25%	23%	76%	1%						
APP/DEPART	48	/	1	4	/	57	114	/	124	116	/	100	0					
BEGIN PEAK HR		3:45 PM																
VOLUMES	3	0	18	1	1	0	0	22	15	12	31	0	103					
APPROACH %	14%	0%	86%	50%	50%	0%	0%	59%	41%	28%	72%	0%						
PEAK HR FACTOR		0.583			0.500			0.578			0.896		0.805					
APP/DEPART	21	/	0	2	/	28	37	/	41	43	/	34	0					

Brown

NORTH SIDE

Agua Mansa WEST SIDE EAST SIDE **Agua Mansa**

SOUTH SIDE

Brown

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

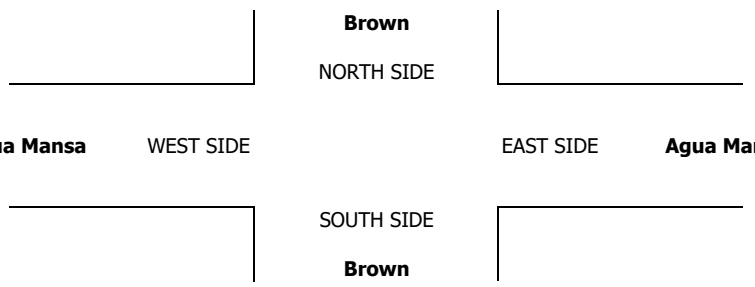
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM 6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		6:30 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



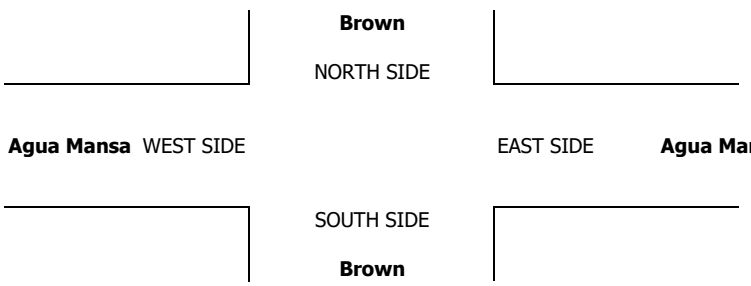
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Brown	LOCATION #:	15
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND Brown			SOUTHBOUND Brown			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	7:30 AM	0	0	1	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	3	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	6	0	1	4	0	12	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	20%	80%	0%						
	APP/DEPART	1	/	0	0	/	1	6	/	7	5	/	4	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	1	0	0	0	0	4	0	1	1	0	7					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	50%	50%	0%						
	PEAK HR FACTOR		0.250			0.000			0.500			0.250		0.583					
	APP/DEPART	1	/	0	0	/	1	4	/	5	2	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	1	/	1	2	/	2	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.250		0.500					
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Agua Mansa
EAST & WEST: Brown

PROJECT #: SC1439
LOCATION #: 5
CONTROL: SIGNAL

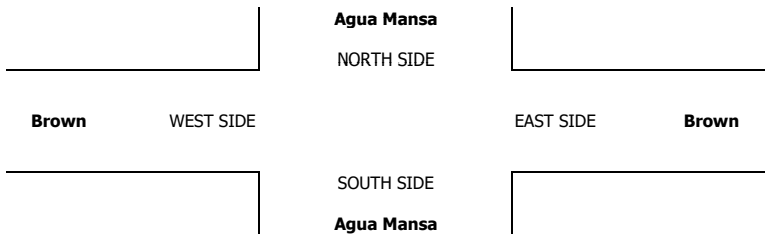
NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►



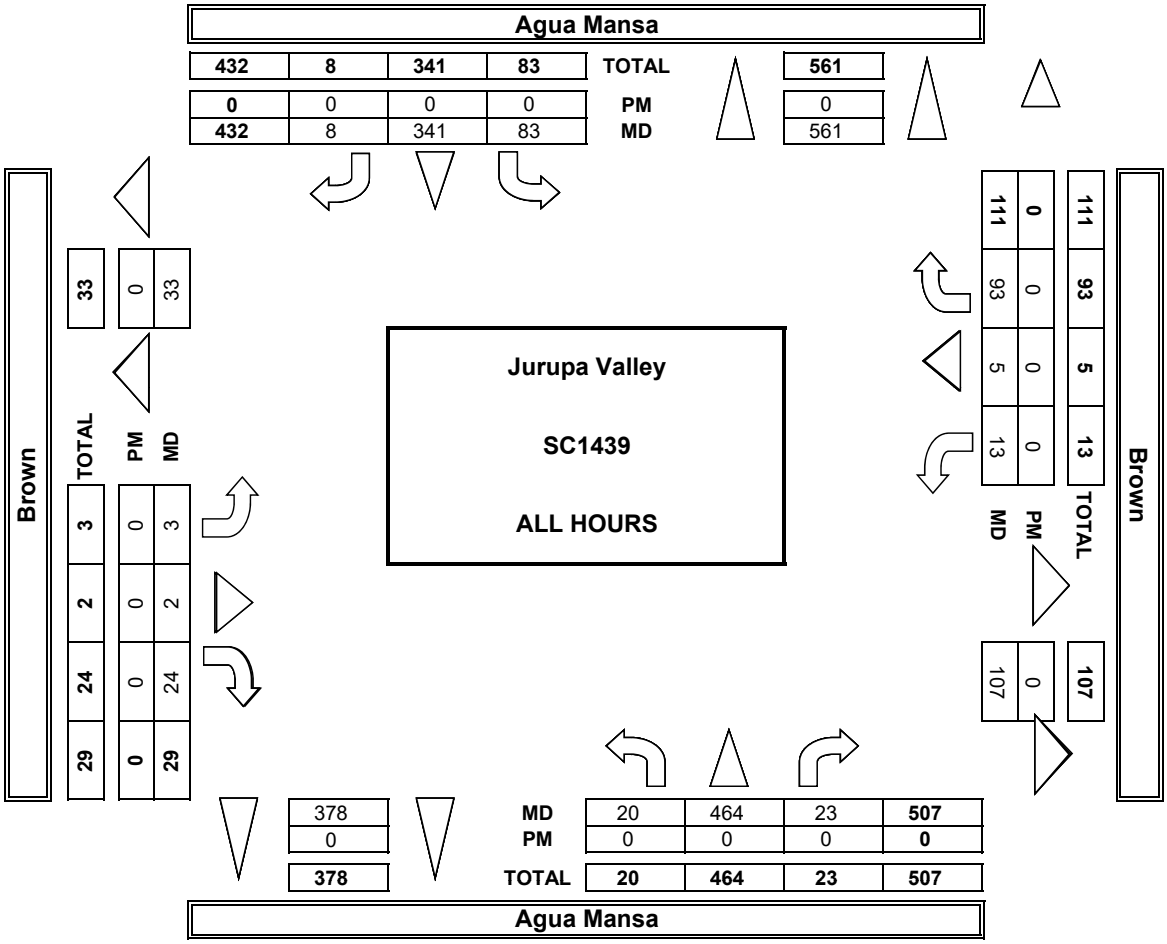
	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	47	5	7	35	0	0	1	5	2	3	12	118	0	0	0	0	0
12:15 PM	1	63	2	8	44	1	1	1	1	1	0	10	133	0	0	0	0	0
12:30 PM	7	56	2	11	39	1	0	0	6	2	0	8	132	0	0	0	0	0
12:45 PM	4	41	2	8	36	0	0	0	4	1	1	10	107	0	0	0	0	0
1:00 PM	0	60	1	10	42	1	2	0	3	1	0	12	132	0	0	0	0	0
1:15 PM	1	55	5	14	52	1	0	0	2	2	0	14	146	0	0	0	0	0
1:30 PM	4	62	3	14	51	2	0	0	1	1	0	15	153	0	0	0	0	0
1:45 PM	2	80	3	11	42	2	0	0	2	3	1	12	158	0	1	0	0	1
VOLUMES	20	464	23	83	341	8	3	2	24	13	5	93	1,079	0	1	0	0	1
APPROACH %	4%	92%	5%	19%	79%	2%	10%	7%	83%	12%	5%	84%						
APP/DEPART	507	/	561	432	/	378	29	/	107	111	/	33	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	7	257	12	49	187	6	2	0	8	7	1	53	589					
APPROACH %	3%	93%	4%	20%	77%	2%	20%	0%	80%	11%	2%	87%						
PEAK HR FACTOR		0.812			0.903			0.500			0.953		0.932					
APP/DEPART	276	/	313	242	/	202	10	/	60	61	/	14	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

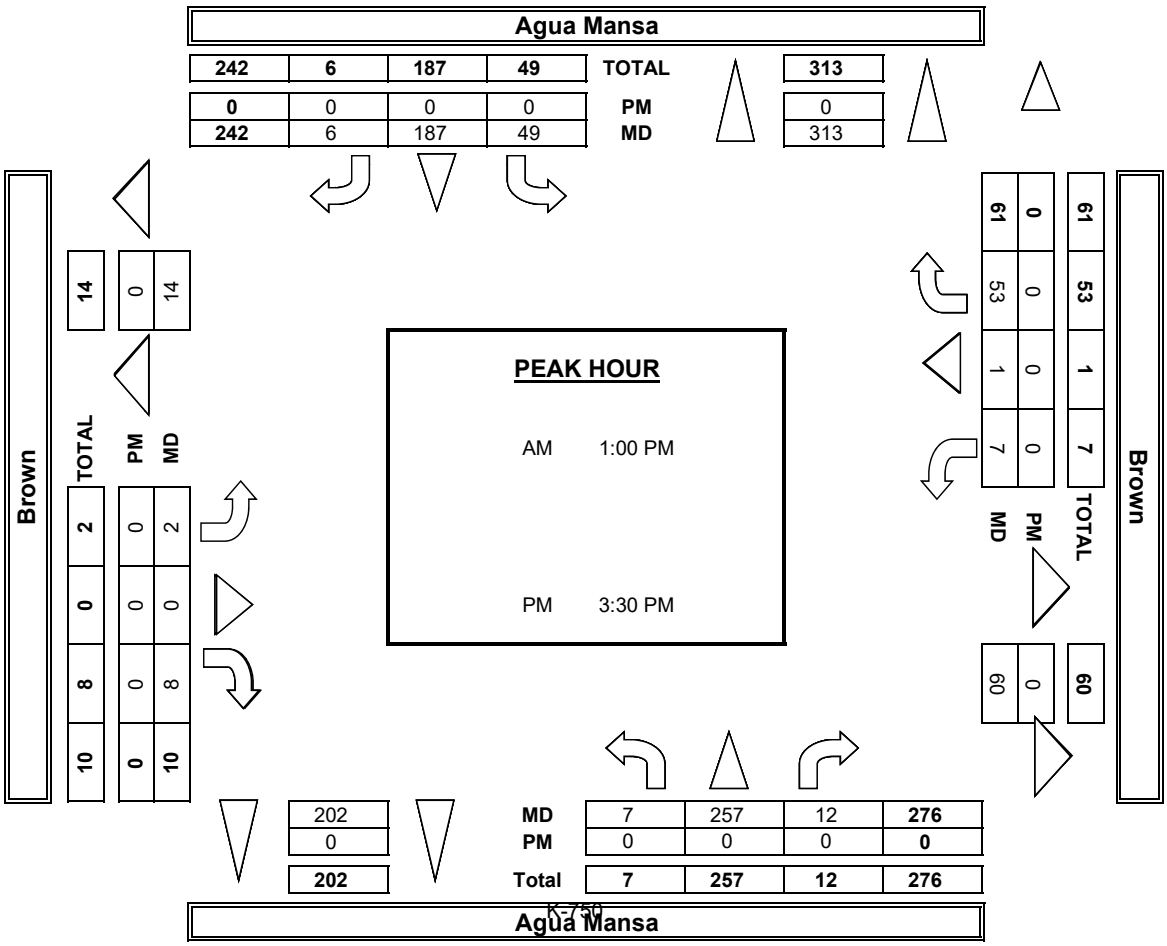


	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

	NOTES:											
PCE	Class	1	2	3	4	5	6			AM	▲ N	
Adjusted	Factor	1	1.5	2	3	2	2			PM		
										MD	◄ W	E ►
										OTHER	S	
										OTHER	▼	

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	1	88	8	12	56	0	0	3	9	4	7	12	199
	8:15 AM	2	111	2	8	73	1	1	1	1	1	0	12	213
	8:30 AM	11	93	4	14	50	1	0	0	10	3	0	8	193
	8:45 AM	5	61	2	10	49	0	0	0	4	3	2	13	149
	9:00 AM	0	85	1	13	62	1	2	0	6	1	0	18	188
	9:15 AM	2	85	10	19	80	3	0	0	3	4	0	21	225
	9:30 AM	9	91	5	17	87	5	0	0	1	3	0	23	239
	9:45 AM	4	134	7	13	67	3	0	0	4	4	2	18	254
	VOLUMES	32	745	38	106	523	14	3	4	38	23	11	124	1,659
	APPROACH %	4%	91%	5%	16%	81%	2%	7%	9%	84%	14%	7%	79%	
	APP/DEPART	815	/	872	642	/	583	45	/	148	157	/	56	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	14	393	23	62	296	12	2	0	14	12	2	79	906
	APPROACH %	3%	92%	5%	17%	80%	3%	13%	0%	87%	13%	2%	85%	
	PEAK HR FACTOR		0.745			0.849			0.517			0.907		0.891
	APP/DEPART	429	/	474	369	/	321	16	/	84	93	/	27	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

Agua Mansa

NORTH SIDE

Brown WEST SIDE EAST SIDE **Brown**

SOUTH SIDE

Agua Mansa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

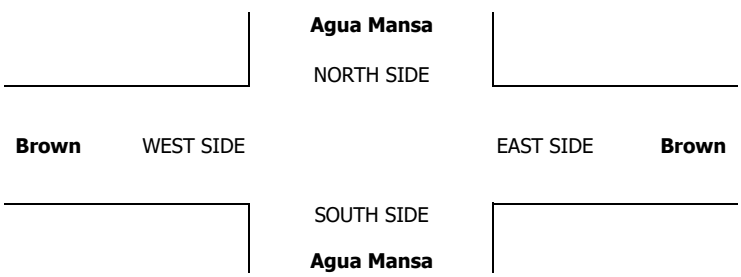
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	19	3	4	21	0	0	0	1	1	1	12	63	0	0	0	0	0
12:15 PM	0	33	2	8	25	1	1	1	1	1	0	9	82	0	0	0	0	0
12:30 PM	4	33	1	9	31	1	0	0	4	1	0	8	92	0	0	0	0	0
12:45 PM	2	27	2	7	26	0	0	0	4	0	0	7	75	0	0	0	0	0
1:00 PM	0	43	1	7	30	1	2	0	1	1	0	8	94	0	0	0	0	0
1:15 PM	0	36	1	11	30	0	0	0	1	1	0	10	90	0	0	0	0	0
1:30 PM	1	44	1	12	31	0	0	0	1	0	0	10	100	0	0	0	0	0
1:45 PM	0	43	1	9	24	1	0	0	1	2	0	9	90	0	1	0	0	1
VOLUMES	8	278	12	67	218	4	3	1	14	7	1	73	686	0	1	0	0	1
APPROACH %	3%	93%	4%	23%	75%	1%	17%	6%	78%	9%	1%	90%						
APP/DEPART	298	/	355	289	/	239	18	/	79	81	/	13	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	1	166	4	38	115	2	2	0	4	4	0	37	374					
APPROACH %	1%	97%	2%	24%	74%	1%	33%	0%	67%	10%	0%	90%						
PEAK HR FACTOR		0.929			0.907			0.500			0.932		0.935					
APP/DEPART	171	/	206	156	/	123	6	/	42	41	/	3	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

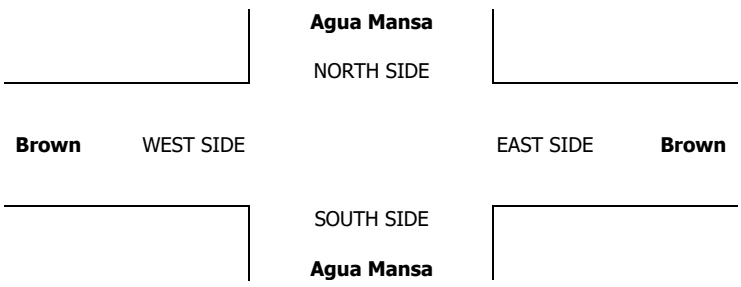
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	9	1	0	2	0	0	0	2	0	0	0	14	0	0	0	0	0
12:15 PM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
12:30 PM	1	3	0	0	2	0	0	0	0	1	0	0	7	0	0	0	0	0
12:45 PM	2	4	0	0	5	0	0	0	0	0	0	2	13	0	0	0	0	0
1:00 PM	0	3	0	2	2	0	0	0	1	0	0	1	9	0	0	0	0	0
1:15 PM	1	3	1	1	8	0	0	0	0	0	0	0	14	0	0	0	0	0
1:30 PM	1	1	0	0	1	0	0	0	0	0	0	1	4	0	0	0	0	0
1:45 PM	1	7	0	0	4	1	0	0	0	0	1	0	14	0	0	0	0	0
VOLUMES	6	34	2	3	26	1	0	0	3	1	1	4	81	0	0	0	0	0
APPROACH %	14%	81%	5%	10%	87%	3%	0%	0%	100%	17%	17%	67%						
APP/DEPART	42	/	38	30	/	30	3	/	5	6	/	8	0					
BEGIN PEAK HR		12:30 PM																
VOLUMES	4	13	1	3	17	0	0	0	1	1	0	3	43					
APPROACH %	22%	72%	6%	15%	85%	0%	0%	0%	100%	25%	0%	75%						
PEAK HR FACTOR		0.750			0.556			0.250			0.500		0.768					
APP/DEPART	18	/	16	20	/	19	1	/	4	4	/	4	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

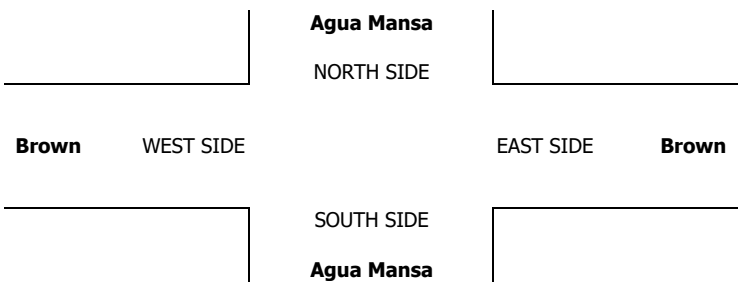
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	2	0	1	4	0	0	0	1	0	0	0	8	0	0	0	0	0
	12:15 PM	1	5	0	0	6	0	0	0	0	0	0	0	12	0	0	0	0	0
	12:30 PM	1	5	0	1	2	0	0	0	0	0	0	0	9	0	0	0	0	0
	12:45 PM	0	2	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0
	1:00 PM	0	5	0	0	1	0	0	0	0	0	0	1	7	0	0	0	0	0
	1:15 PM	0	4	2	0	4	0	0	0	1	0	0	1	12	0	0	0	0	0
	1:30 PM	0	6	2	1	3	1	0	0	0	0	0	1	14	0	0	0	0	0
	1:45 PM	1	9	0	2	5	0	0	0	0	1	0	0	18	0	0	0	0	0
	VOLUMES	3	38	4	5	25	1	0	0	2	1	1	3	83	0	0	0	0	0
	APPROACH %	7%	84%	9%	16%	81%	3%	0%	0%	100%	20%	20%	60%						
	APP/DEPART	45	/	41	31	/	28	2	/	9	5	/	5	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	24	4	3	13	1	0	0	1	1	0	3	51					
	APPROACH %	3%	83%	14%	18%	76%	6%	0%	0%	100%	25%	0%	75%						
	PEAK HR FACTOR		0.725			0.607			0.250			1.000		0.708					
	APP/DEPART	29	/	27	17	/	15	1	/	7	4	/	2	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

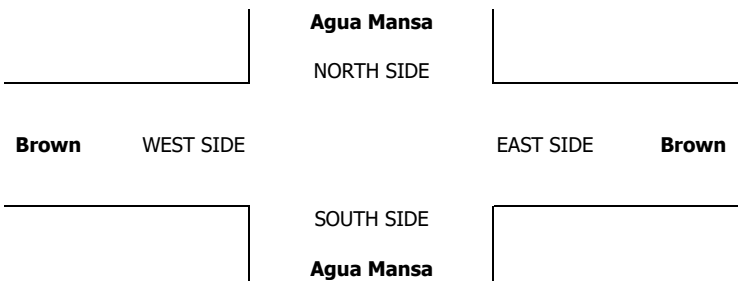
CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	17	1	2	8	0	0	1	1	1	2	0	33	0	0	0	0	0
	12:15 PM	0	20	0	0	11	0	0	0	0	0	0	1	32	0	0	0	0	0
	12:30 PM	1	15	1	1	4	0	0	0	2	0	0	0	24	0	0	0	0	0
	12:45 PM	0	8	0	1	5	0	0	0	0	1	0	1	16	0	0	0	0	0
	1:00 PM	0	9	0	1	9	0	0	0	1	0	0	2	22	0	0	0	0	0
	1:15 PM	0	12	1	2	10	1	0	0	0	1	0	3	30	0	0	0	0	0
	1:30 PM	2	11	0	1	16	1	0	0	0	1	0	3	35	0	0	0	0	0
	1:45 PM	0	20	2	0	9	0	0	0	1	0	0	3	35	0	0	0	0	0
	VOLUMES	3	112	5	8	72	2	0	1	5	4	2	13	227	0	0	0	0	0
	APPROACH %	3%	93%	4%	10%	88%	2%	0%	17%	83%	21%	11%	68%						
	APP/DEPART	120	/	125	82	/	81	6	/	14	19	/	7	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	2	52	3	4	44	2	0	0	2	2	0	11	122					
	APPROACH %	4%	91%	5%	8%	88%	4%	0%	0%	100%	15%	0%	85%						
	PEAK HR FACTOR		0.648			0.694			0.500			0.813		0.871					
	APP/DEPART	57	/	63	50	/	48	2	/	7	13	/	4	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

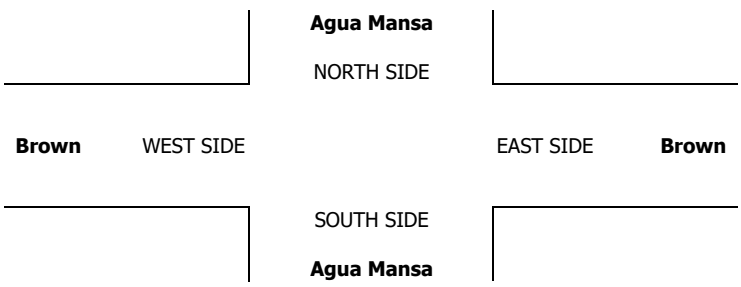
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Agua Mansa)			SOUTHBOUND (Agua Mansa)			EASTBOUND (Brown)			WESTBOUND (Brown)				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



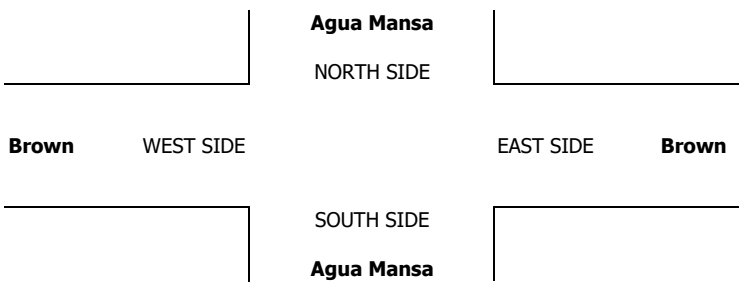
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Brown	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Brown			WESTBOUND Brown				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:30 AM																
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Driveway
EAST & WEST: Agua Mansa

PROJECT #: SC1321
LOCATION #: 17
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

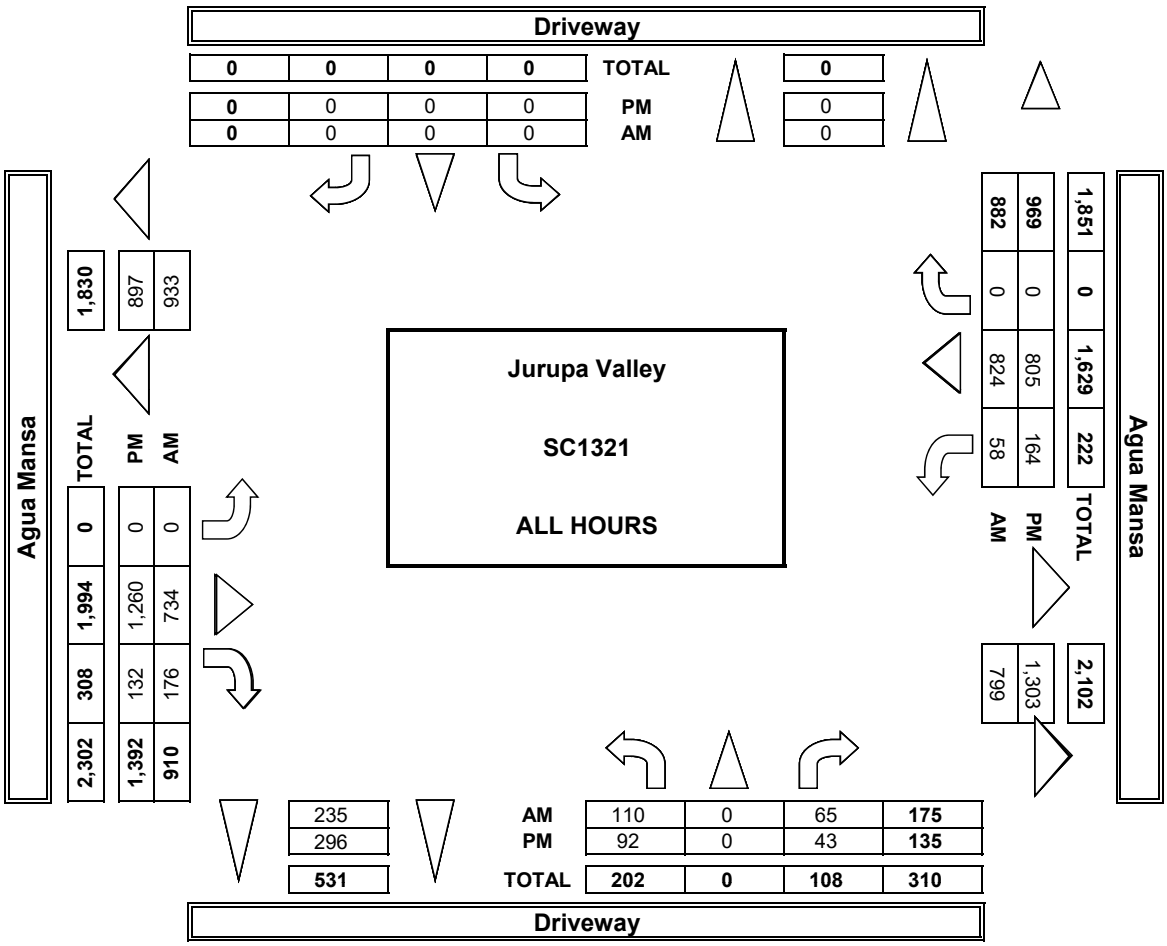
		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:30 AM	7	0	6	0	0	0	0	73	20	5	62	0	173	0	0	0	0	0
	6:45 AM	9	0	4	0	0	0	0	71	13	6	69	0	172	0	0	0	0	0
	7:00 AM	9	0	3	0	0	0	0	43	11	6	65	0	137	0	0	0	0	0
	7:15 AM	11	0	7	0	0	0	0	83	11	3	76	0	191	0	0	0	0	0
	7:30 AM	4	0	4	0	0	0	0	62	10	11	99	0	190	0	0	0	0	0
	7:45 AM	8	0	7	0	0	0	0	82	9	3	107	0	216	0	0	0	0	0
	8:00 AM	6	0	6	0	0	0	0	61	14	6	71	0	164	0	0	0	0	0
	8:15 AM	9	0	7	0	0	0	0	59	12	2	51	0	140	0	0	0	0	0
	8:30 AM	13	0	5	0	0	0	0	51	13	3	58	0	143	0	0	0	0	0
	8:45 AM	8	0	8	0	0	0	0	45	22	6	54	0	143	0	0	0	0	0
	9:00 AM	13	0	3	0	0	0	0	52	27	5	57	0	157	0	0	0	0	0
	9:15 AM	13	0	5	0	0	0	0	52	14	2	55	0	141	1	0	0	0	1
	VOLUMES	110	0	65	0	0	0	0	734	176	58	824	0	1,967	1	0	0	0	1
	APPROACH %	63%	0%	37%	0%	0%	0%	0%	81%	19%	7%	93%	0%						
	APP/DEPART	175	/	0	0	/	235	910	/	799	882	/	933	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	29	0	24	0	0	0	0	288	44	23	353	0	761					
	APPROACH %	55%	0%	45%	0%	0%	0%	0%	87%	13%	6%	94%	0%						
	PEAK HR FACTOR		0.736			0.000			0.883			0.855		0.881					
	APP/DEPART	53	/	0	0	/	67	332	/	312	376	/	382	0					
PM	03:30 PM	9	0	4	0	0	0	0	98	21	21	71	0	224	0	0	0	0	0
	3:45 PM	12	0	5	0	0	0	0	107	19	12	69	0	224	0	0	0	0	0
	4:00 PM	10	0	3	0	0	0	0	104	23	16	76	0	232	0	0	0	0	0
	4:15 PM	11	0	4	0	0	0	0	95	18	25	55	0	208	0	0	0	0	0
	4:30 PM	11	0	7	0	0	0	0	99	13	24	68	0	222	0	0	0	0	0
	4:45 PM	11	0	3	0	0	0	0	135	14	25	63	0	251	0	0	0	0	0
	5:00 PM	9	0	5	0	0	0	0	116	7	17	78	0	232	0	0	0	0	0
	5:15 PM	5	0	5	0	0	0	0	131	5	9	70	0	225	0	0	0	0	0
	5:30 PM	5	0	1	0	0	0	0	119	5	9	68	0	207	0	0	0	0	0
	5:45 PM	7	0	2	0	0	0	0	104	5	2	65	0	185	0	0	0	0	0
	6:00 PM	2	0	3	0	0	0	0	98	2	1	68	0	174	0	0	0	0	0
	6:15 PM	0	0	1	0	0	0	0	54	0	3	54	0	112	0	0	0	0	0
	VOLUMES	92	0	43	0	0	0	0	1,260	132	164	805	0	2,496	0	0	0	0	0
	APPROACH %	68%	0%	32%	0%	0%	0%	0%	91%	9%	17%	83%	0%						
	APP/DEPART	135	/	0	0	/	296	1,392	/	1,303	969	/	897	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	36	0	20	0	0	0	0	481	39	75	279	0	930					
	APPROACH %	64%	0%	36%	0%	0%	0%	0%	93%	8%	21%	79%	0%						
	PEAK HR FACTOR		0.778			0.000			0.872			0.932		0.926					
	APP/DEPART	56	/	0	0	/	114	520	/	501	354	/	315	0					

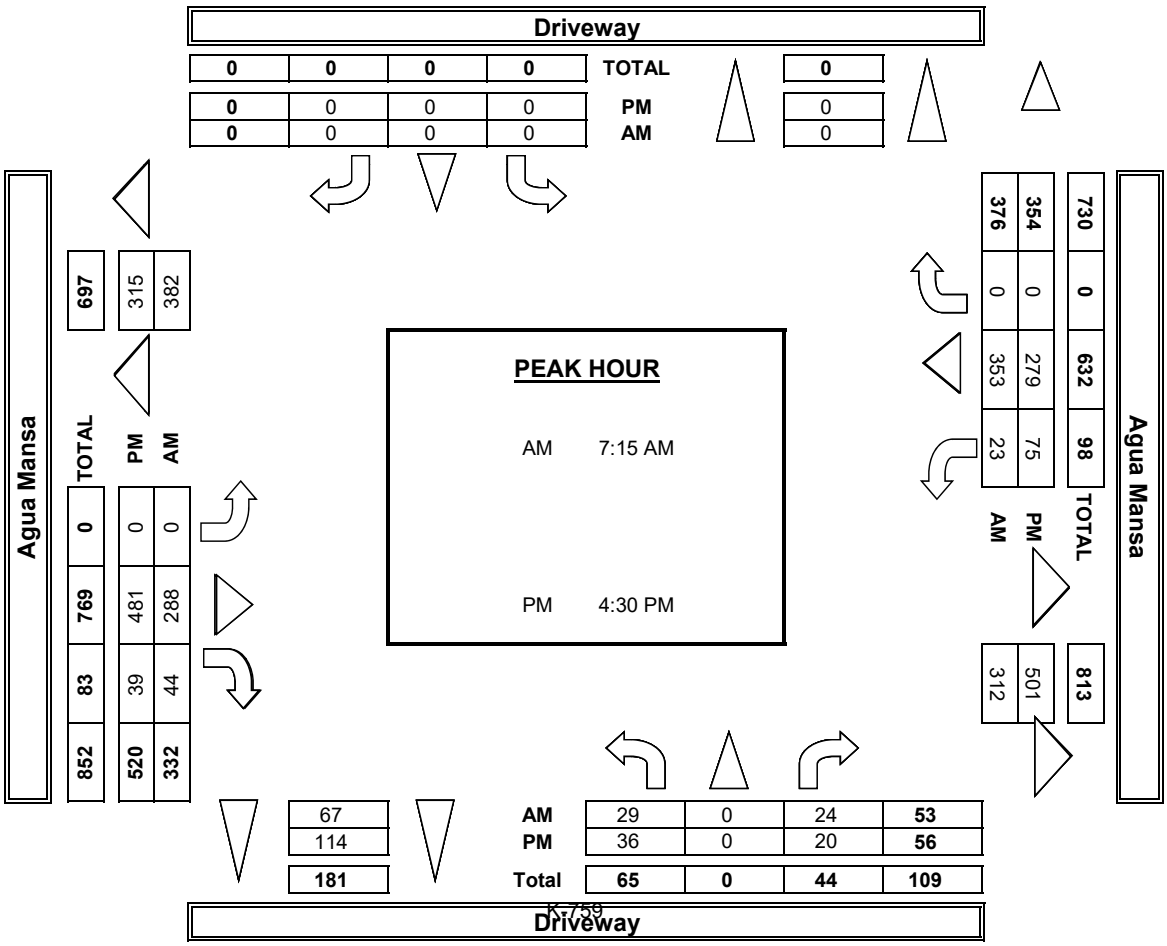


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





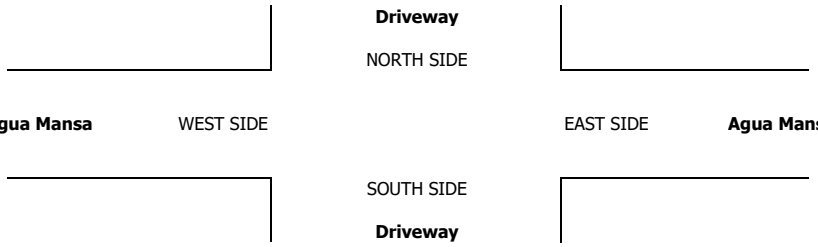
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa			
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL
AM	7:00 AM	14	0	9	0	0	0	0	100	31	9	84	0	246
	7:15 AM	15	0	8	0	0	0	0	105	23	7	91	0	248
	7:30 AM	16	0	5	0	0	0	0	74	26	13	100	0	232
	7:45 AM	20	0	15	0	0	0	0	126	21	7	118	0	305
	8:00 AM	9	0	7	0	0	0	0	99	20	18	145	0	298
	8:15 AM	18	0	15	0	0	0	0	114	14	5	157	0	322
	8:30 AM	7	0	13	0	0	0	0	99	23	12	110	0	262
	8:45 AM	18	0	12	0	0	0	0	92	24	3	92	0	241
	9:00 AM	24	0	8	0	0	0	0	95	23	5	101	0	255
	9:15 AM	15	0	15	0	0	0	0	77	49	10	91	0	256
	9:30 AM	26	0	5	0	0	0	0	87	43	8	97	0	264
	9:45 AM	23	0	10	0	0	0	0	95	24	3	110	0	265
	VOLUMES	202	0	119	0	0	0	0	1,160	320	98	1,293	0	3,191
	APPROACH %	63%	0%	37%	0%	0%	0%	0%	78%	22%	7%	93%	0%	
	APP/DEPART	321	/	0	0	/	418	1,480	/	1,278	1,391	/	1,495	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	53	0	49	0	0	0	0	437	78	41	529	0	1,186
	APPROACH %	52%	0%	48%	0%	0%	0%	0%	85%	15%	7%	93%	0%	
	PEAK HR FACTOR		0.746			0.000			0.875			0.873		0.922
	APP/DEPART	102	/	0	0	/	119	515	/	485	570	/	582	0
PM	03:00 PM	10	0	9	0	0	0	0	121	32	31	97	0	298
	3:15 PM	15	0	11	0	0	0	0	134	31	18	96	0	305
	3:30 PM	15	0	5	0	0	0	0	136	44	21	102	0	323
	3:45 PM	17	0	8	0	0	0	0	125	30	32	84	0	294
	4:00 PM	18	0	12	0	0	0	0	123	24	29	101	0	305
	4:15 PM	17	0	6	0	0	0	0	163	24	29	86	0	324
	4:30 PM	14	0	8	0	0	0	0	136	15	20	95	0	287
	4:45 PM	9	0	10	0	0	0	0	153	8	16	87	0	282
	5:00 PM	13	0	1	0	0	0	0	145	8	17	82	0	265
	5:15 PM	12	0	3	0	0	0	0	123	8	3	90	0	238
	5:30 PM	3	0	4	0	0	0	0	127	3	2	77	0	216
	5:45 PM	0	0	2	0	0	0	0	75	0	7	73	0	157
	VOLUMES	140	0	77	0	0	0	0	1,560	224	224	1,067	0	3,292
	APPROACH %	64%	0%	36%	0%	0%	0%	0%	87%	13%	17%	83%	0%	
	APP/DEPART	217	/	0	0	/	448	1,784	/	1,637	1,291	/	1,207	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	66	0	30	0	0	0	0	546	121	111	373	0	1,246
	APPROACH %	69%	0%	31%	0%	0%	0%	0%	82%	18%	23%	77%	0%	
	PEAK HR FACTOR		0.823			0.000			0.893			0.933		0.961
	APP/DEPART	96	/	0	0	/	232	667	/	576	484	/	438	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

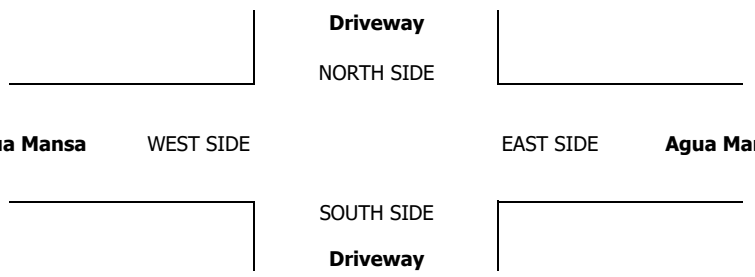
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	1	0	2	0	0	0	0	55	10	1	48	0	117	0	0	0	0	0
6:45 AM	2	0	1	0	0	0	0	52	4	5	53	0	117	0	0	0	0	0
7:00 AM	1	0	1	0	0	0	0	25	2	1	40	0	70	0	0	0	0	0
7:15 AM	4	0	1	0	0	0	0	56	4	0	49	0	114	0	0	0	0	0
7:30 AM	1	0	1	0	0	0	0	42	2	2	69	0	117	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	0	64	5	1	79	0	150	0	0	0	0	0
8:00 AM	5	0	0	0	0	0	0	36	5	2	43	0	91	0	0	0	0	0
8:15 AM	2	0	2	0	0	0	0	39	2	1	28	0	74	0	0	0	0	0
8:30 AM	3	0	2	0	0	0	0	23	7	1	31	0	67	0	0	0	0	0
8:45 AM	3	0	3	0	0	0	0	25	3	1	26	0	61	0	0	0	0	0
9:00 AM	2	0	1	0	0	0	0	31	13	2	28	0	77	0	0	0	0	0
9:15 AM	5	0	1	0	0	0	0	24	4	1	19	0	54	1	0	0	0	1
VOLUMES	29	0	16	0	0	0	0	472	61	18	513	0	1,109	1	0	0	0	1
APPROACH %	64%	0%	36%	0%	0%	0%	0%	89%	11%	3%	97%	0%						
APP/DEPART	45	/	0	0	/	80	533	/	488	531	/	541	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	10	0	3	0	0	0	0	198	16	5	240	0	472					
APPROACH %	77%	0%	23%	0%	0%	0%	0%	93%	7%	2%	98%	0%						
PEAK HR FACTOR		0.650			0.000			0.775			0.766		0.787					
APP/DEPART	13	/	0	0	/	21	214	/	201	245	/	250	0					
PM																		
03:30 PM	8	0	0	0	0	0	0	82	9	13	52	0	164	0	0	0	0	0
3:45 PM	8	0	0	0	0	0	0	87	6	6	48	0	155	0	0	0	0	0
4:00 PM	3	0	1	0	0	0	0	83	4	10	53	0	154	0	0	0	0	0
4:15 PM	6	0	0	0	0	0	0	72	5	19	31	0	133	0	0	0	0	0
4:30 PM	3	0	2	0	0	0	0	81	1	20	42	0	149	0	0	0	0	0
4:45 PM	5	0	0	0	0	0	0	113	3	20	43	0	184	0	0	0	0	0
5:00 PM	4	0	3	0	0	0	0	98	1	14	64	0	184	0	0	0	0	0
5:15 PM	2	0	2	0	0	0	0	112	2	3	57	0	178	0	0	0	0	0
5:30 PM	1	0	1	0	0	0	0	101	2	2	58	0	165	0	0	0	0	0
5:45 PM	3	0	1	0	0	0	0	88	2	1	50	0	145	0	0	0	0	0
6:00 PM	1	0	2	0	0	0	0	77	1	0	62	0	143	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	40	0	0	43	0	83	0	0	0	0	0
VOLUMES	44	0	12	0	0	0	0	1,034	36	108	603	0	1,836	0	0	0	0	0
APPROACH %	80%	0%	22%	0%	0%	0%	0%	97%	3%	15%	85%	0%						
APP/DEPART	55	/	0	0	/	144	1,070	/	1,045	711	/	647	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	12	0	6	0	0	0	0	424	8	39	222	0	711					
APPROACH %	67%	0%	33%	0%	0%	0%	0%	98%	2%	15%	85%	0%						
PEAK HR FACTOR		0.643			0.000			0.931			0.837		0.966					
APP/DEPART	18	/	0	0	/	47	432	/	430	261	/	234	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

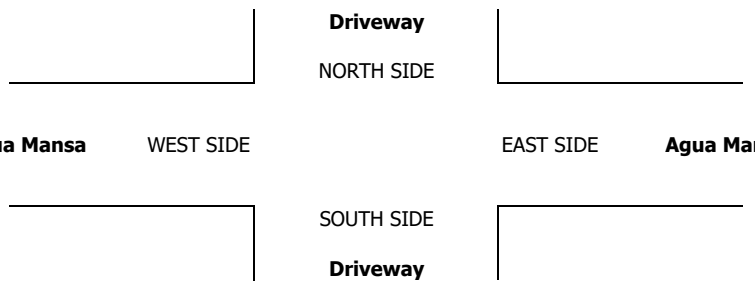
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	1	0	2	0	0	0	0	4	2	2	3	0	14	0	0	0	0	0
	6:45 AM	2	0	1	0	0	0	0	1	2	0	6	0	12	0	0	0	0	0
	7:00 AM	5	0	1	0	0	0	0	1	0	1	8	0	16	0	0	0	0	0
	7:15 AM	1	0	1	0	0	0	0	6	2	1	5	0	16	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	2	4	4	0	11	0	0	0	0	0
	7:45 AM	2	0	1	0	0	0	0	1	0	1	2	0	7	0	0	0	0	0
	8:00 AM	1	0	1	0	0	0	0	5	4	1	7	0	19	0	0	0	0	0
	8:15 AM	2	0	2	0	0	0	0	2	2	0	1	0	9	0	0	0	0	0
	8:30 AM	4	0	1	0	0	0	0	3	0	0	1	0	9	0	0	0	0	0
	8:45 AM	1	0	0	0	0	0	0	2	2	2	7	0	14	0	0	0	0	0
	9:00 AM	3	0	1	0	0	0	0	3	5	1	6	0	19	0	0	0	0	0
	9:15 AM	2	0	0	0	0	0	0	4	3	0	6	0	15	0	0	0	0	0
	VOLUMES	24	0	11	0	0	0	0	33	24	13	56	0	161	0	0	0	0	0
	APPROACH %	69%	0%	31%	0%	0%	0%	0%	58%	42%	19%	81%	0%						
	APP/DEPART	35	/	0	0	/	37	57	/	44	69	/	80	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	9	0	5	0	0	0	0	12	6	4	22	0	58					
	APPROACH %	64%	0%	36%	0%	0%	0%	0%	67%	33%	15%	85%	0%						
	PEAK HR FACTOR		0.583			0.000			0.563			0.722		0.906					
	APP/DEPART	14	/	0	0	/	10	18	/	17	26	/	31	0					
PM	03:30 PM	1	0	0	0	0	0	0	2	3	1	3	0	10	0	0	0	0	0
	3:45 PM	2	0	1	0	0	0	0	4	2	2	4	0	15	0	0	0	0	0
	4:00 PM	4	0	0	0	0	0	0	2	2	2	6	0	16	0	0	0	0	0
	4:15 PM	1	0	1	0	0	0	0	7	3	0	4	0	16	0	0	0	0	0
	4:30 PM	3	0	1	0	0	0	0	5	3	0	7	0	19	0	0	0	0	0
	4:45 PM	3	0	0	0	0	0	0	8	3	2	6	0	22	0	0	0	0	0
	5:00 PM	1	0	1	0	0	0	0	8	2	0	5	0	17	0	0	0	0	0
	5:15 PM	1	0	0	0	0	0	0	8	0	2	3	0	14	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	6	1	1	3	0	11	0	0	0	0	0
	5:45 PM	1	0	0	0	0	0	0	6	1	0	2	0	10	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	4	0	0	1	0	5	0	0	0	0	0
	VOLUMES	17	0	4	0	0	0	0	64	20	10	44	0	159	0	0	0	0	0
	APPROACH %	81%	0%	19%	0%	0%	0%	0%	76%	24%	19%	81%	0%						
	APP/DEPART	21	/	0	0	/	30	84	/	68	54	/	61	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	8	0	3	0	0	0	0	28	11	2	22	0	74					
	APPROACH %	73%	0%	27%	0%	0%	0%	0%	72%	28%	8%	92%	0%						
	PEAK HR FACTOR		0.688			0.000			0.886			0.750		0.841					
	APP/DEPART	11	/	0	0	/	13	39	/	31	24	/	30	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

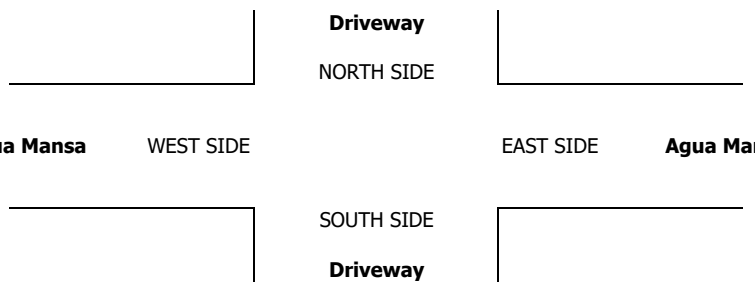
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	4	0	2	0	0	0	0	3	6	1	2	0	18	0	0	0	0	0
	6:45 AM	5	0	1	0	0	0	0	3	5	1	1	0	16	0	0	0	0	0
	7:00 AM	2	0	1	0	0	0	0	4	3	2	3	0	15	0	0	0	0	0
	7:15 AM	4	0	3	0	0	0	0	1	1	1	4	0	14	0	0	0	0	0
	7:30 AM	1	0	3	0	0	0	0	2	3	5	8	0	22	0	0	0	0	0
	7:45 AM	3	0	3	0	0	0	0	3	3	1	3	0	16	0	0	0	0	0
	8:00 AM	0	0	4	0	0	0	0	4	3	1	6	0	18	0	0	0	0	0
	8:15 AM	2	0	2	0	0	0	0	3	5	1	4	0	17	0	0	0	0	0
	8:30 AM	3	0	2	0	0	0	0	7	2	2	9	0	25	0	0	0	0	0
	8:45 AM	2	0	3	0	0	0	0	5	8	3	9	0	30	0	0	0	0	0
	9:00 AM	5	0	1	0	0	0	0	3	5	2	9	0	25	0	0	0	0	0
	9:15 AM	3	0	3	0	0	0	0	7	6	1	8	0	28	0	0	0	0	0
	VOLUMES	34	0	28	0	0	0	0	45	50	21	66	0	244	0	0	0	0	0
	APPROACH %	55%	0%	45%	0%	0%	0%	0%	47%	53%	24%	76%	0%						
	APP/DEPART	62	/	0	0	/	71	95	/	73	87	/	100	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	13	0	9	0	0	0	0	22	21	8	35	0	108					
	APPROACH %	59%	0%	41%	0%	0%	0%	0%	51%	49%	19%	81%	0%						
	PEAK HR FACTOR		0.917			0.000			0.827			0.896		0.900					
	APP/DEPART	22	/	0	0	/	29	43	/	31	43	/	48	0					
PM	03:30 PM	0	0	3	0	0	0	0	6	9	5	8	0	31	0	0	0	0	0
	3:45 PM	2	0	3	0	0	0	0	7	11	3	9	0	35	0	0	0	0	0
	4:00 PM	3	0	2	0	0	0	0	7	14	4	11	0	41	0	0	0	0	0
	4:15 PM	3	0	3	0	0	0	0	6	10	5	13	0	40	0	0	0	0	0
	4:30 PM	5	0	4	0	0	0	0	5	9	3	9	0	35	0	0	0	0	0
	4:45 PM	2	0	3	0	0	0	0	4	8	3	7	0	27	0	0	0	0	0
	5:00 PM	4	0	0	0	0	0	0	3	1	3	4	0	15	0	0	0	0	0
	5:15 PM	1	0	1	0	0	0	0	4	3	2	5	0	16	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	1	2	5	2	0	10	0	0	0	0	0
	5:45 PM	2	0	1	0	0	0	0	4	2	1	2	0	12	0	0	0	0	0
	6:00 PM	1	0	1	0	0	0	0	7	1	1	3	0	14	0	0	0	0	0
	6:15 PM	0	0	1	0	0	0	0	1	0	2	2	0	6	0	0	0	0	0
	VOLUMES	23	0	22	0	0	0	0	55	70	37	75	0	283	0	0	0	0	0
	APPROACH %	50%	0%	48%	0%	0%	0%	0%	44%	56%	33%	67%	0%						
	APP/DEPART	46	/	0	0	/	107	125	/	78	112	/	98	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	13	0	12	0	0	0	0	25	44	15	42	0	151					
	APPROACH %	52%	0%	48%	0%	0%	0%	0%	36%	64%	26%	74%	0%						
	PEAK HR FACTOR		0.694			0.000			0.821			0.792		0.921					
	APP/DEPART	25	/	0	0	/	59	69	/	37	57	/	55	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

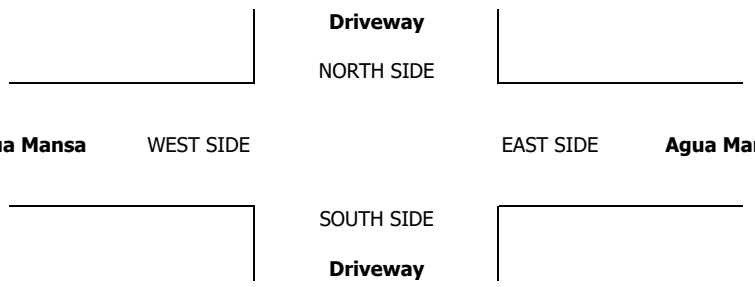
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	1	0	0	0	0	0	0	11	2	1	9	0	24	0	0	0	0	0
	6:45 AM	0	0	1	0	0	0	0	15	2	0	9	0	27	0	0	0	0	0
	7:00 AM	1	0	0	0	0	0	0	13	6	2	14	0	36	0	0	0	0	0
	7:15 AM	2	0	2	0	0	0	0	19	4	1	17	0	45	0	0	0	0	0
	7:30 AM	2	0	0	0	0	0	0	17	3	0	18	0	40	0	0	0	0	0
	7:45 AM	3	0	2	0	0	0	0	14	1	0	23	0	43	0	0	0	0	0
	8:00 AM	0	0	1	0	0	0	0	15	2	2	14	0	34	0	0	0	0	0
	8:15 AM	3	0	1	0	0	0	0	14	3	0	18	0	39	0	0	0	0	0
	8:30 AM	3	0	0	0	0	0	0	17	4	0	16	0	40	0	0	0	0	0
	8:45 AM	2	0	2	0	0	0	0	13	9	0	12	0	38	0	0	0	0	0
	9:00 AM	3	0	0	0	0	0	0	15	4	0	14	0	36	0	0	0	0	0
	9:15 AM	3	0	1	0	0	0	0	17	1	0	22	0	44	0	0	0	0	0
	VOLUMES	23	0	10	0	0	0	0	180	41	6	186	0	446	0	0	0	0	0
	APPROACH %	70%	0%	30%	0%	0%	0%	0%	81%	19%	3%	97%	0%						
	APP/DEPART	33	/	0	0	/	47	221	/	190	192	/	209	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	8	0	4	0	0	0	0	63	14	3	72	0	164					
	APPROACH %	67%	0%	33%	0%	0%	0%	0%	82%	18%	4%	96%	0%						
	PEAK HR FACTOR		0.600			0.000			0.837			0.815		0.911					
	APP/DEPART	12	/	0	0	/	17	77	/	67	75	/	80	0					
PM	03:30 PM	0	0	1	0	0	0	0	8	0	2	8	0	19	0	0	0	0	0
	3:45 PM	0	0	1	0	0	0	0	9	0	1	8	0	19	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	12	3	0	6	0	21	0	0	0	0	0
	4:15 PM	1	0	0	0	0	0	0	10	0	1	7	0	19	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	8	0	1	10	0	19	0	0	0	0	0
	4:45 PM	1	0	0	0	0	0	0	10	0	0	6	0	17	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	6	3	0	5	0	15	0	0	0	0	0
	5:15 PM	1	0	2	0	0	0	0	7	0	2	5	0	17	0	0	0	0	0
	5:30 PM	4	0	0	0	0	0	0	11	0	1	5	0	21	0	0	0	0	0
	5:45 PM	1	0	0	0	0	0	0	6	0	0	11	0	18	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	10	0	0	3	0	13	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	9	0	1	8	0	18	0	0	0	0	0
	VOLUMES	8	0	5	0	0	0	0	106	6	9	82	0	216	0	0	0	0	0
	APPROACH %	62%	0%	38%	0%	0%	0%	0%	95%	5%	10%	90%	0%						
	APP/DEPART	13	/	0	0	/	15	112	/	111	91	/	90	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	1	0	1	0	0	0	0	39	3	3	31	0	78					
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	93%	7%	9%	91%	0%						
	PEAK HR FACTOR		0.500			0.000			0.700			0.773		0.929					
	APP/DEPART	2	/	0	0	/	6	42	/	40	34	/	32	0					



INTERSECTION TURNING MOVEMENT COUNTS

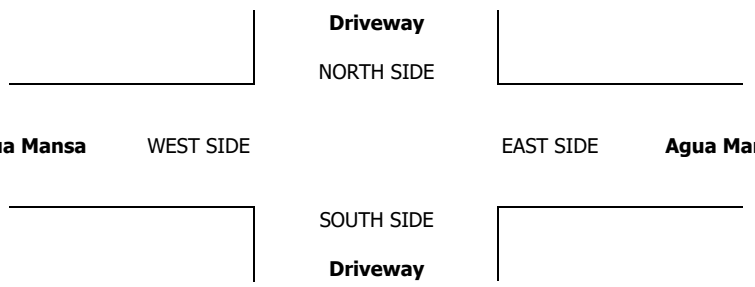
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

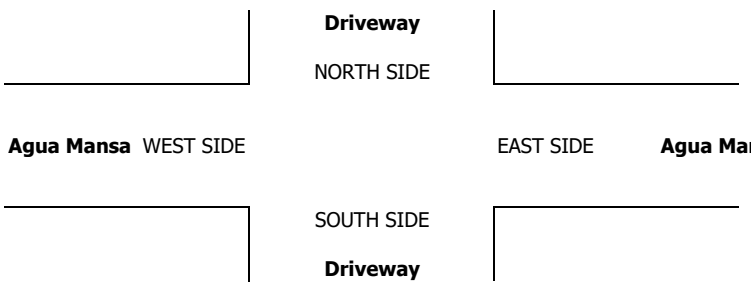
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Driveway	LOCATION #:	17
THURSDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 1	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	4	0	0	3	0	7	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	4	/	4	3	/	3	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	0	0	0	0	0	0	0	3	0	0	2	0	5					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.750			0.500		0.625					
APP/DEPART	0	/	0	0	/	0	3	/	3	2	/	2	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.250			0.250		0.500					
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Aqua Mansa
EAST & WEST: Driveway

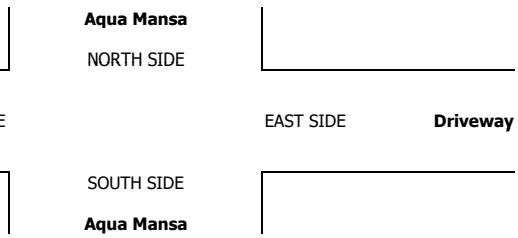
PROJECT #: SC1439
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N S E W

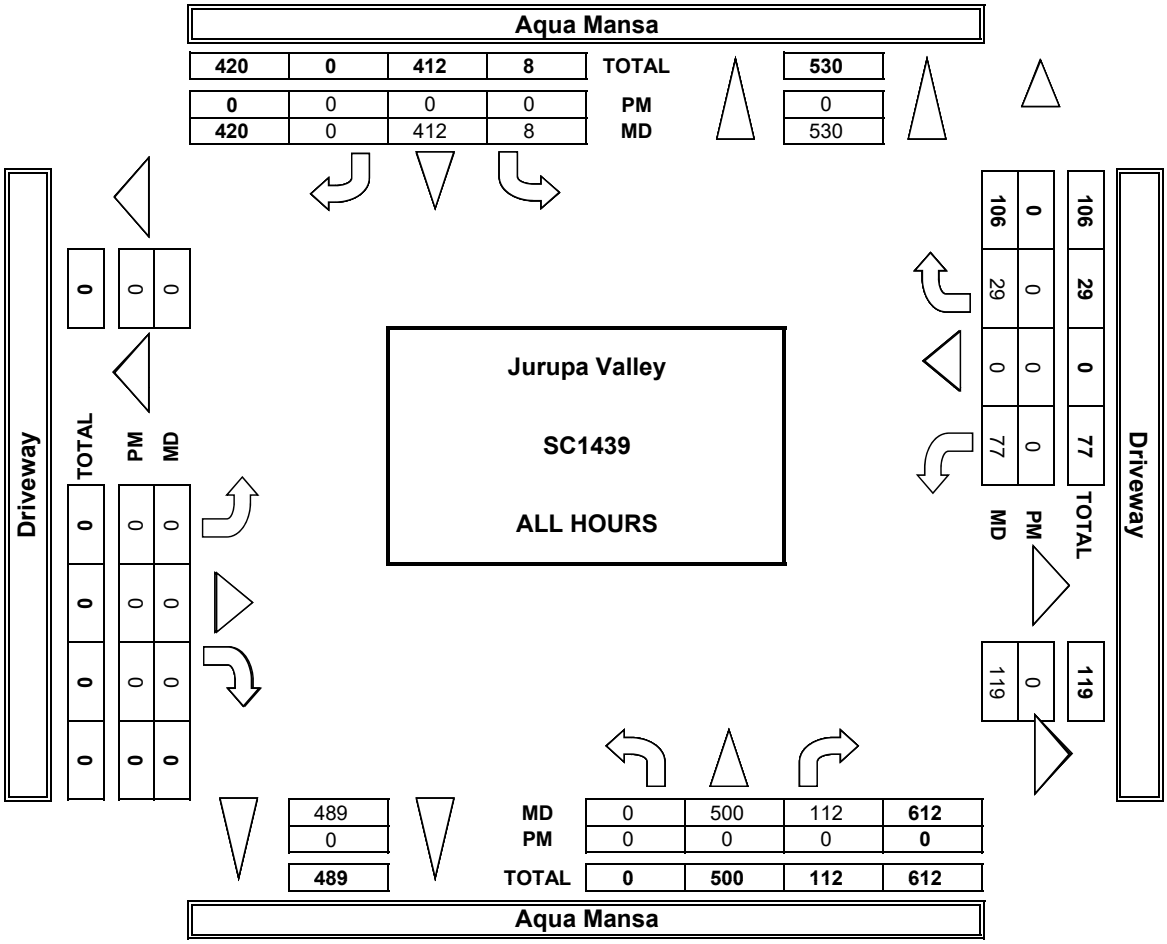
		NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	56	20	0	47	0	0	0	0	11	0	2	136	0	0	0	0	0
	12:15 PM	0	65	11	0	57	0	0	0	0	12	0	6	151	0	0	0	0	0
	12:30 PM	0	73	6	1	46	0	0	0	0	12	0	1	139	0	0	0	0	0
	12:45 PM	0	48	13	1	47	0	0	0	0	9	0	5	123	0	0	0	0	0
	1:00 PM	0	54	18	0	54	0	0	0	0	6	0	3	135	0	0	0	0	0
	1:15 PM	0	63	10	0	58	0	0	0	0	13	0	4	148	0	0	0	0	0
	1:30 PM	0	62	16	3	59	0	0	0	0	9	0	1	150	0	0	0	0	0
	1:45 PM	0	79	18	3	44	0	0	0	0	5	0	7	156	0	1	0	0	1
	VOLUMES	0	500	112	8	412	0	0	0	0	77	0	29	1,138	0	1	0	0	1
	APPROACH %	0%	82%	18%	2%	98%	0%	0%	0%	0%	73%	0%	27%						
	APP/DEPART	612	/	530	420	/	489	0	/	119	106	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	258	62	6	215	0	0	0	0	33	0	15	589					
	APPROACH %	0%	81%	19%	3%	97%	0%	0%	0%	0%	69%	0%	31%						
	PEAK HR FACTOR		0.825			0.891			0.000			0.706		0.944					
	APP/DEPART	320	/	274	221	/	248	0	/	67	48	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

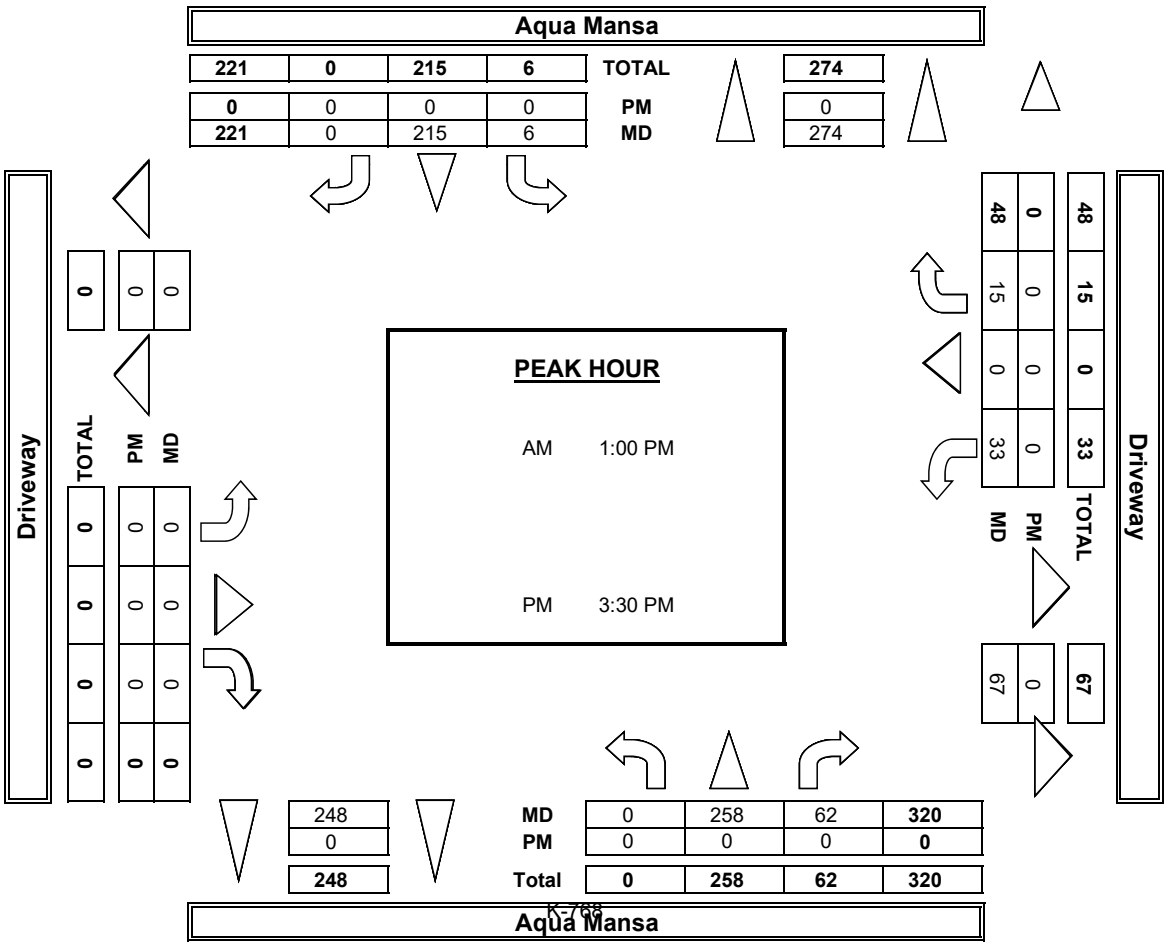


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





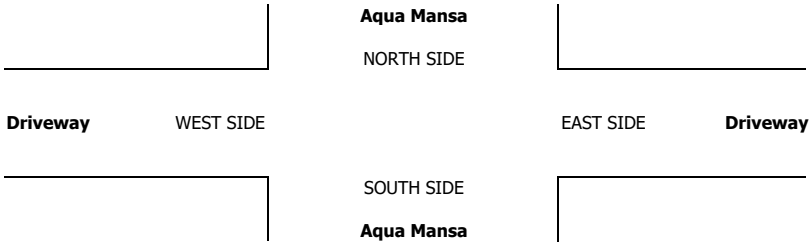
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND (Aqua Mansa)			SOUTHBOUND (Aqua Mansa)			EASTBOUND (Driveway)			WESTBOUND (Driveway)			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	103	33	0	74	0	0	0	0	15	0	3	227
	8:15 AM	0	117	20	0	102	0	0	0	0	21	0	9	268
	8:30 AM	0	124	14	2	67	0	0	0	0	22	0	2	231
	8:45 AM	0	73	30	1	69	0	0	0	0	13	0	9	194
	9:00 AM	0	74	35	0	83	0	0	0	0	12	0	6	209
	9:15 AM	0	98	14	0	97	0	0	0	0	25	0	6	239
	9:30 AM	0	96	24	5	103	0	0	0	0	16	0	2	245
	9:45 AM	0	135	27	4	72	0	0	0	0	8	0	12	256
	VOLUMES	0	819	195	12	665	0	0	0	0	130	0	47	1,868
	APPROACH %	0%	81%	19%	2%	98%	0%	0%	0%	0%	73%	0%	27%	
	APP/DEPART	1,014	/	866	677	/	795	0	/	207	177	/	0	0
	BEGIN PEAK HR		9:00 AM											
	VOLUMES	0	402	99	9	354	0	0	0	0	60	0	25	949
	APPROACH %	0%	80%	20%	2%	98%	0%	0%	0%	0%	71%	0%	29%	
	PEAK HR FACTOR		0.778			0.843			0.000			0.697		0.926
	APP/DEPART	501	/	427	363	/	414	0	/	108	85	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

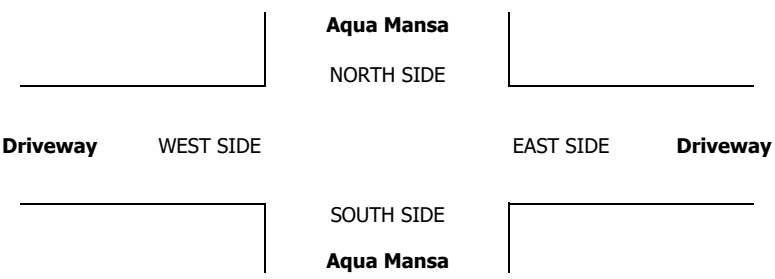
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	24	9	0	26	0	0	0	0	7	0	1	67	0	0	0	0	0
	12:15 PM	0	32	5	0	31	0	0	0	0	4	0	3	75	0	0	0	0	0
	12:30 PM	0	41	0	0	32	0	0	0	0	4	0	0	77	0	0	0	0	0
	12:45 PM	0	30	1	1	33	0	0	0	0	5	0	1	71	0	0	0	0	0
	1:00 PM	0	39	6	0	33	0	0	0	0	0	0	1	79	0	0	0	0	0
	1:15 PM	0	40	5	0	31	0	0	0	0	4	0	2	82	0	0	0	0	0
	1:30 PM	0	37	8	1	32	0	0	0	0	5	0	0	83	0	0	0	0	0
	1:45 PM	0	43	9	2	25	0	0	0	0	2	0	3	84	0	1	0	0	1
	VOLUMES	0	286	43	4	243	0	0	0	0	31	0	11	618	0	1	0	0	1
	APPROACH %	0%	87%	13%	2%	98%	0%	0%	0%	0%	74%	0%	26%						
	APP/DEPART	329	/	298	247	/	274	0	/	46	42	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	159	28	2	121	0	0	0	0	11	0	6	328					
	APPROACH %	0%	85%	15%	2%	98%	0%	0%	0%	0%	65%	0%	35%						
	PEAK HR FACTOR		0.899			0.939			0.000			0.708		0.976					
	APP/DEPART	187	/	166	124	/	132	0	/	30	17	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

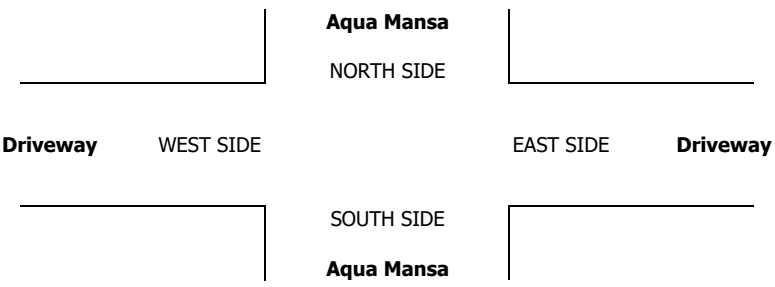
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	8	2	0	7	0	0	0	0	1	0	1	19	0	0	0	0	0
	12:15 PM	0	6	1	0	1	0	0	0	0	2	0	1	11	0	0	0	0	0
	12:30 PM	0	4	0	0	2	0	0	0	0	2	0	0	8	0	0	0	0	0
	12:45 PM	0	6	3	0	4	0	0	0	0	1	0	0	14	0	0	0	0	0
	1:00 PM	0	4	2	0	5	0	0	0	0	2	0	1	14	0	0	0	0	0
	1:15 PM	0	5	3	0	6	0	0	0	0	1	0	0	15	0	0	0	0	0
	1:30 PM	0	6	2	1	4	0	0	0	0	1	0	0	14	0	0	0	0	0
	1:45 PM	0	5	3	0	5	0	0	0	0	0	0	1	14	0	0	0	0	0
	VOLUMES	0	44	16	1	34	0	0	0	0	10	0	4	109	0	0	0	0	0
	APPROACH %	0%	73%	27%	3%	97%	0%	0%	0%	0%	71%	0%	29%						
	APP/DEPART	60	/	48	35	/	44	0	/	17	14	/	0	0					
	BEGIN PEAK HR		12:45 PM																
	VOLUMES	0	20	10	1	20	0	0	0	0	4	0	2	57					
	APPROACH %	0%	67%	33%	5%	95%	0%	0%	0%	0%	67%	0%	33%						
	PEAK HR FACTOR		0.833			0.875			0.000			0.500		0.950					
	APP/DEPART	30	/	22	21	/	24	0	/	11	6	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

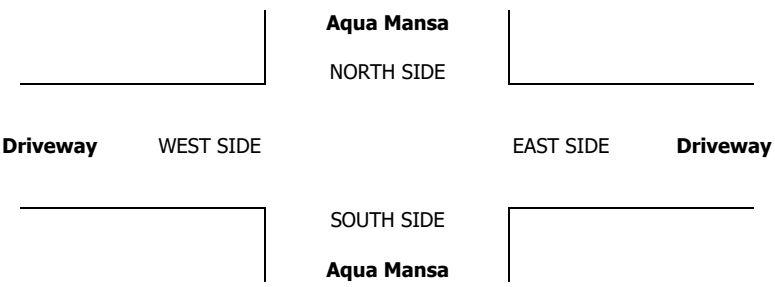
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	5	6	0	5	0	0	0	0	3	0	0	19	0	0	0	0	0
	12:15 PM	0	4	2	0	6	0	0	0	0	4	0	2	18	0	0	0	0	0
	12:30 PM	0	7	4	1	4	0	0	0	0	3	0	1	20	0	0	0	0	0
	12:45 PM	0	2	3	0	0	0	0	0	0	3	0	4	12	0	0	0	0	0
	1:00 PM	0	4	4	0	6	0	0	0	0	3	0	0	17	0	0	0	0	0
	1:15 PM	0	4	2	0	6	0	0	0	0	5	0	2	19	0	0	0	0	0
	1:30 PM	0	7	5	1	4	0	0	0	0	0	0	1	18	0	0	0	0	0
	1:45 PM	0	9	5	1	3	0	0	0	0	3	0	2	23	0	0	0	0	0
	VOLUMES	0	42	31	3	34	0	0	0	0	24	0	12	146	0	0	0	0	0
	APPROACH %	0%	58%	42%	8%	92%	0%	0%	0%	0%	67%	0%	33%						
	APP/DEPART	73	/	54	37	/	58	0	/	34	36	/	0	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	0	24	16	2	19	0	0	0	0	11	0	5	77					
	APPROACH %	0%	60%	40%	10%	90%	0%	0%	0%	0%	69%	0%	31%						
	PEAK HR FACTOR		0.714			0.875			0.000			0.571		0.837					
	APP/DEPART	40	/	29	21	/	30	0	/	18	16	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

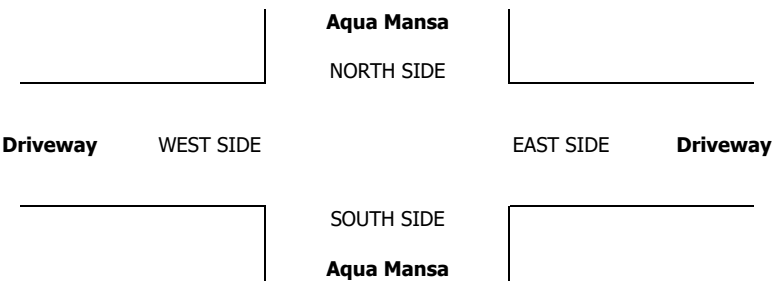
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	19	3	0	9	0	0	0	0	0	0	0	31	0	0	0	0	0
	12:15 PM	0	22	3	0	19	0	0	0	0	2	0	0	46	0	0	0	0	0
	12:30 PM	0	21	2	0	8	0	0	0	0	3	0	0	34	0	0	0	0	0
	12:45 PM	0	10	6	0	10	0	0	0	0	0	0	0	26	0	0	0	0	0
	1:00 PM	0	7	6	0	10	0	0	0	0	1	0	1	25	0	0	0	0	0
	1:15 PM	0	14	0	0	15	0	0	0	0	3	0	0	32	0	0	0	0	0
	1:30 PM	0	12	1	0	19	0	0	0	0	3	0	0	35	0	0	0	0	0
	1:45 PM	0	22	1	0	11	0	0	0	0	0	0	1	35	0	0	0	0	0
	VOLUMES	0	127	22	0	101	0	0	0	0	12	0	2	264	0	0	0	0	0
	APPROACH %	0%	85%	15%	0%	100%	0%	0%	0%	0%	86%	0%	14%						
	APP/DEPART	149	/	129	101	/	113	0	/	22	14	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	72	14	0	46	0	0	0	0	5	0	0	137					
	APPROACH %	0%	84%	16%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.860			0.605			0.000			0.417		0.745					
	APP/DEPART	86	/	72	46	/	51	0	/	14	5	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

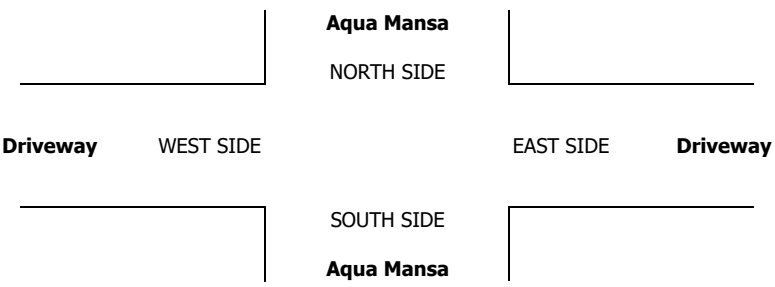
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



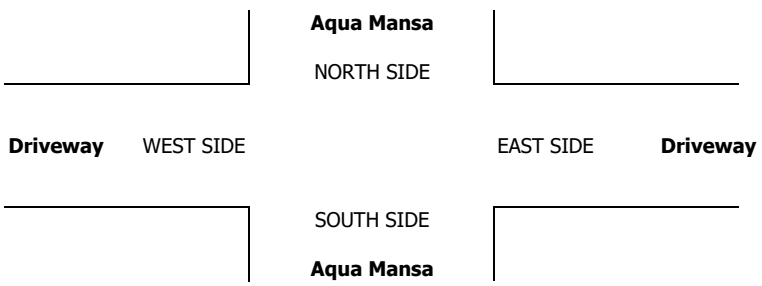
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Aqua Mansa	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Driveway	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

	NORTHBOUND Aqua Mansa			SOUTHBOUND Aqua Mansa			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		11:30 AM																
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	14	0	44	58	0	106	43	149	0	0	0	0	50	92	0	142	349
06:45 AM	13	0	46	59	2	86	56	144	0	0	0	0	67	107	0	174	377
Total	27	0	90	117	2	192	99	293	0	0	0	0	117	199	0	316	726
07:00 AM	16	1	28	45	3	106	36	145	0	0	1	1	51	86	1	138	329
07:15 AM	20	3	36	59	0	73	24	97	1	1	0	2	71	110	4	185	343
07:30 AM	21	0	65	86	0	67	35	102	2	1	1	4	47	131	3	181	373
07:45 AM	21	0	56	77	1	67	32	100	2	0	0	2	57	132	3	192	371
Total	78	4	185	267	4	313	127	444	5	2	2	9	226	459	11	696	1416
08:00 AM	20	0	49	69	2	96	20	118	3	0	0	3	52	116	0	168	358
08:15 AM	16	1	44	61	2	71	31	104	1	0	0	1	34	93	1	128	294
08:30 AM	16	2	44	62	1	66	13	80	1	1	0	2	43	99	0	142	286
08:45 AM	18	2	29	49	1	66	22	89	0	1	1	2	39	78	0	117	257
Total	70	5	166	241	6	299	86	391	5	2	1	8	168	386	1	555	1195
09:00 AM	16	1	38	55	1	68	23	92	1	0	1	2	42	71	0	113	262
09:15 AM	25	1	40	66	0	76	26	102	1	2	0	3	38	73	2	113	284
Grand Total	216	11	519	746	13	948	361	1322	12	6	4	22	591	1188	14	1793	3883
Apprch %	29	1.5	69.6		1	71.7	27.3		54.5	27.3	18.2		33	66.3	0.8		
Total %	5.6	0.3	13.4	19.2	0.3	24.4	9.3	34	0.3	0.2	0.1	0.6	15.2	30.6	0.4	46.2	
Passenger Vehicles	128	6	344	478	9	887	275	1171	6	3	2	11	425	1110	6	1541	3201
% Passenger Vehicles	59.3	54.5	66.3	64.1	69.2	93.6	76.2	88.6	50	50	50	50	71.9	93.4	42.9	85.9	82.4
Large 2 Axle Vehicles	19	1	28	48	4	25	14	43	6	1	2	9	32	23	7	62	162
% Large 2 Axle Vehicles	8.8	9.1	5.4	6.4	30.8	2.6	3.9	3.3	50	16.7	50	40.9	5.4	1.9	50	3.5	4.2
3 Axle Vehicles	30	3	51	84	0	12	26	38	0	1	0	1	37	24	1	62	185
% 3 Axle Vehicles	13.9	27.3	9.8	11.3	0	1.3	7.2	2.9	0	16.7	0	4.5	6.3	2	7.1	3.5	4.8
4+ Axle Trucks	39	1	96	136	0	24	46	70	0	1	0	1	97	31	0	128	335
% 4+ Axle Trucks	18.1	9.1	18.5	18.2	0	2.5	12.7	5.3	0	16.7	0	4.5	16.4	2.6	0	7.1	8.6

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	20	**3**	36	59	0	73	24	97	1	**1**	0	2	**71**	110	**4**	185	343
07:30 AM	**21**	0	**65**	**86**	0	67	**35**	102	2	1	**1**	**4**	47	131	3	181	**373**
07:45 AM	21	0	56	77	1	67	32	100	2	0	0	2	57	**132**	3	**192**	371
08:00 AM	20	0	49	69	**2**	**96**	20	**118**	**3**	0	0	3	52	116	0	168	358
Total Volume	82	3	206	291	3	303	111	417	8	2	1	11	227	489	10	726	1445
% App. Total	28.2	1	70.8		0.7	72.7	26.6		72.7	18.2	9.1		31.3	67.4	1.4		
PHF	.976	.250	.792	.846	.375	.789	.793	.883	.667	.500	.250	.688	.799	.926	.625	.945	.968

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City of Jurupa Valley
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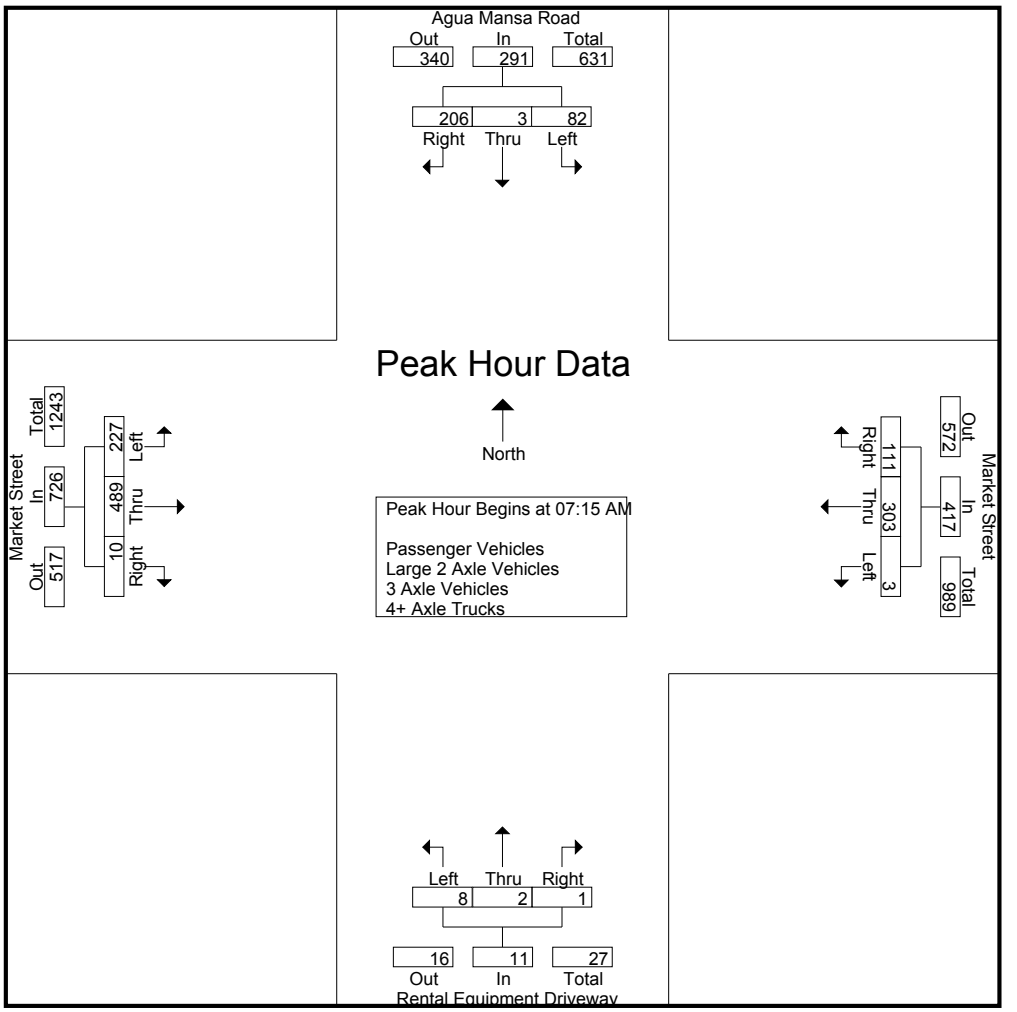
File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				06:30 AM				07:15 AM				07:15 AM			
+0 mins.	**21**	0	**65**	**86**	0	**106**	43	**149**	1	**1**	0	2	**71**	110	**4**	185
+15 mins.	21	0	56	77	2	86	**56**	144	2	1	**1**	**4**	47	131	3	181
+30 mins.	20	0	49	69	**3**	106	36	145	2	0	0	2	57	**132**	3	**192**
+45 mins.	16	**1**	44	61	0	73	24	97	**3**	0	0	3	52	116	0	168
Total Volume	78	1	214	293	5	371	159	535	8	2	1	11	227	489	10	726
% App. Total	26.6	0.3	73		0.9	69.3	29.7		72.7	18.2	9.1		31.3	67.4	1.4	
PHF	.929	.250	.823	.852	.417	.875	.710	.898	.667	.500	.250	.688	.799	.926	.625	.945

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Groups Printed- Passenger Vehicles

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	6	0	26	32	0	98	37	135	0	0	0	0	37	82	0	119	286
06:45 AM	9	0	26	35	1	83	52	136	0	0	0	0	58	96	0	154	325
Total	15	0	52	67	1	181	89	271	0	0	0	0	95	178	0	273	611
07:00 AM	10	1	18	29	2	102	33	137	0	0	1	1	41	81	1	123	290
07:15 AM	14	2	23	39	0	70	19	89	1	1	0	2	49	108	2	159	289
07:30 AM	13	0	49	62	0	62	24	86	1	0	0	1	35	125	2	162	311
07:45 AM	17	0	44	61	1	66	23	90	2	0	0	2	52	129	1	182	335
Total	54	3	134	191	3	300	99	402	4	1	1	6	177	443	6	626	1225
08:00 AM	12	0	41	53	2	89	15	106	1	0	0	1	39	108	0	147	307
08:15 AM	9	0	31	40	2	70	19	91	1	0	0	1	25	89	0	114	246
08:30 AM	10	1	25	36	0	59	11	70	0	1	0	1	27	91	0	118	225
08:45 AM	9	2	19	30	1	59	17	77	0	0	1	1	23	73	0	96	204
Total	40	3	116	159	5	277	62	344	2	1	1	4	114	361	0	475	982
09:00 AM	9	0	21	30	0	60	10	70	0	0	0	0	17	62	0	79	179
09:15 AM	10	0	21	31	0	69	15	84	0	1	0	1	22	66	0	88	204
Grand Total	128	6	344	478	9	887	275	1171	6	3	2	11	425	1110	6	1541	3201
Apprch %	26.8	1.3	72		0.8	75.7	23.5		54.5	27.3	18.2		27.6	72	0.4		
Total %	4	0.2	10.7	14.9	0.3	27.7	8.6	36.6	0.2	0.1	0.1	0.3	13.3	34.7	0.2	48.1	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	14	**2**	23	39	0	70	19	89	1	**1**	0	**2**	49	108	**2**	159	289
07:30 AM	13	0	**49**	**62**	0	62	**24**	86	1	0	0	1	35	125	2	162	311
07:45 AM	**17**	0	44	61	1	66	23	90	**2**	0	0	2	**52**	**129**	1	**182**	**335**
08:00 AM	12	0	41	53	**2**	**89**	15	**106**	1	0	0	1	39	108	0	147	307
Total Volume	56	2	157	215	3	287	81	371	5	1	0	6	175	470	5	650	1242
% App. Total	26	0.9	73		0.8	77.4	21.8		83.3	16.7	0		26.9	72.3	0.8		
PHF	.824	.250	.801	.867	.375	.806	.844	.875	.625	.250	.000	.750	.841	.911	.625	.893	.927

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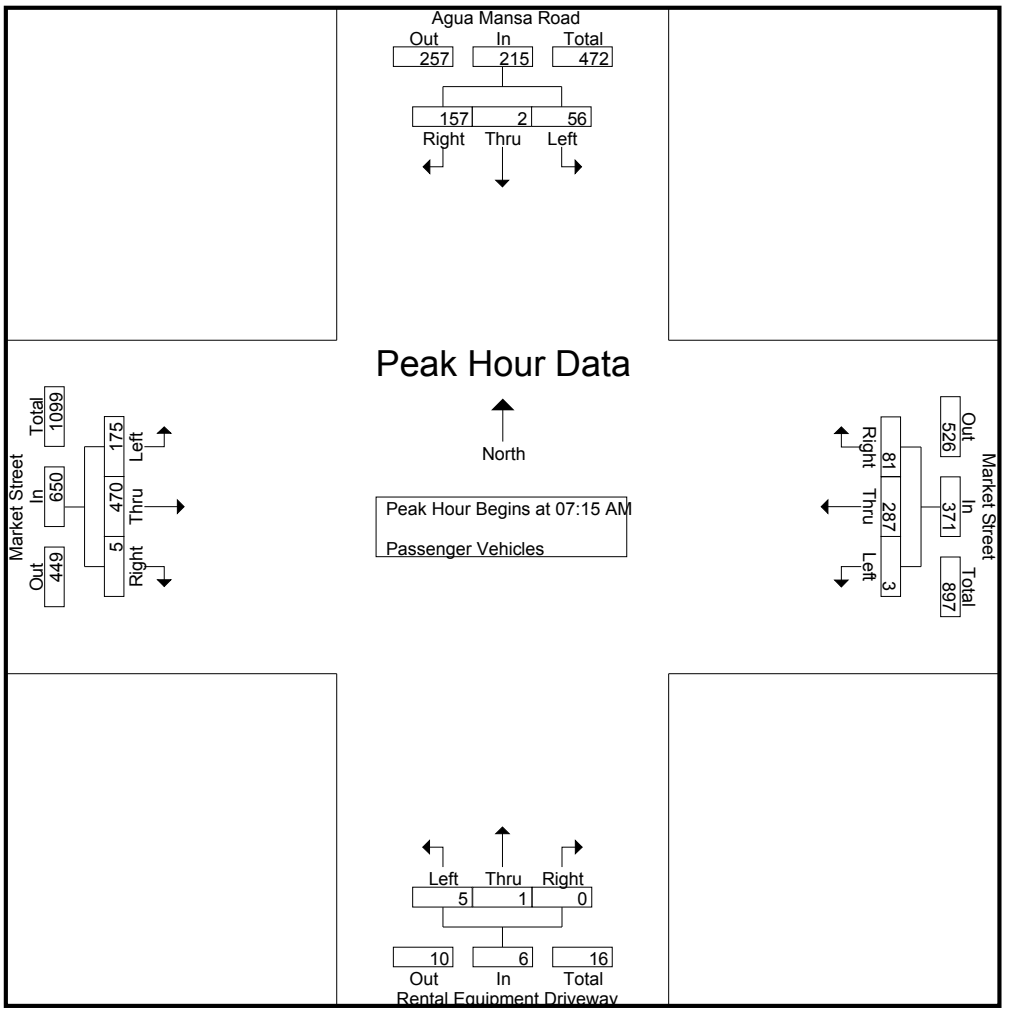
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	14	**2**	23	39	0	70	19	89	1	**1**	0	**2**	49	108	**2**	159
+15 mins.	13	0	**49**	**62**	0	62	**24**	86	1	0	0	1	35	125	2	162
+30 mins.	**17**	0	44	61	1	66	23	90	**2**	0	0	2	**52**	**129**	1	**182**
+45 mins.	12	0	41	53	**2**	**89**	15	**106**	1	0	0	1	39	108	0	147
Total Volume	56	2	157	215	3	287	81	371	5	1	0	6	175	470	5	650
% App. Total	26	0.9	73		0.8	77.4	21.8		83.3	16.7	0		26.9	72.3	0.8	
PHF	.824	.250	.801	.867	.375	.806	.844	.875	.625	.250	.000	.750	.841	.911	.625	.893

Counts Unlimited
PO Box 1178
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City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	2	0	1	3	0	6	1	7	0	0	0	0	4	3	0	7	17
06:45 AM	2	0	4	6	1	1	1	3	0	0	0	0	2	1	0	3	12
Total	4	0	5	9	1	7	2	10	0	0	0	0	6	4	0	10	29
07:00 AM	0	0	1	1	1	0	0	1	0	0	0	0	1	1	0	2	4
07:15 AM	2	1	1	4	0	3	1	4	0	0	0	0	5	0	2	7	15
07:30 AM	3	0	2	5	0	0	6	6	1	1	1	3	1	2	1	4	18
07:45 AM	2	0	2	4	0	1	1	2	0	0	0	0	3	1	2	6	12
Total	7	1	6	14	1	4	8	13	1	1	1	3	10	4	5	19	49
08:00 AM	2	0	2	4	0	3	0	3	2	0	0	2	3	2	0	5	14
08:15 AM	0	0	2	2	0	0	2	2	0	0	0	0	1	2	1	4	8
08:30 AM	2	0	3	5	1	3	0	4	1	0	0	1	0	3	0	3	13
08:45 AM	2	0	2	4	0	4	0	4	0	0	0	0	3	2	0	5	13
Total	6	0	9	15	1	10	2	13	3	0	0	3	7	9	1	17	48
09:00 AM	2	0	5	7	1	2	0	3	1	0	1	2	5	5	0	10	22
09:15 AM	0	0	3	3	0	2	2	4	1	0	0	1	4	1	1	6	14
Grand Total	19	1	28	48	4	25	14	43	6	1	2	9	32	23	7	62	162
Apprch %	39.6	2.1	58.3		9.3	58.1	32.6		66.7	11.1	22.2		51.6	37.1	11.3		
Total %	11.7	0.6	17.3	29.6	2.5	15.4	8.6	26.5	3.7	0.6	1.2	5.6	19.8	14.2	4.3	38.3	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	**1**	1	4	0	**3**	1	4	0	0	0	0	**5**	0	**2**	**7**	15
07:30 AM	**3**	0	**2**	**5**	0	0	**6**	**6**	1	**1**	**1**	**3**	1	**2**	1	4	**18**
07:45 AM	2	0	2	4	0	1	1	2	0	0	0	0	3	1	2	6	12
08:00 AM	2	0	2	4	0	3	0	3	**2**	0	0	2	3	2	0	5	14
Total Volume	9	1	7	17	0	7	8	15	3	1	1	5	12	5	5	22	59
% App. Total	52.9	5.9	41.2		0	46.7	53.3		60	20	20		54.5	22.7	22.7		
PHF	.750	.250	.875	.850	.000	.583	.333	.625	.375	.250	.250	.417	.600	.625	.625	.786	.819

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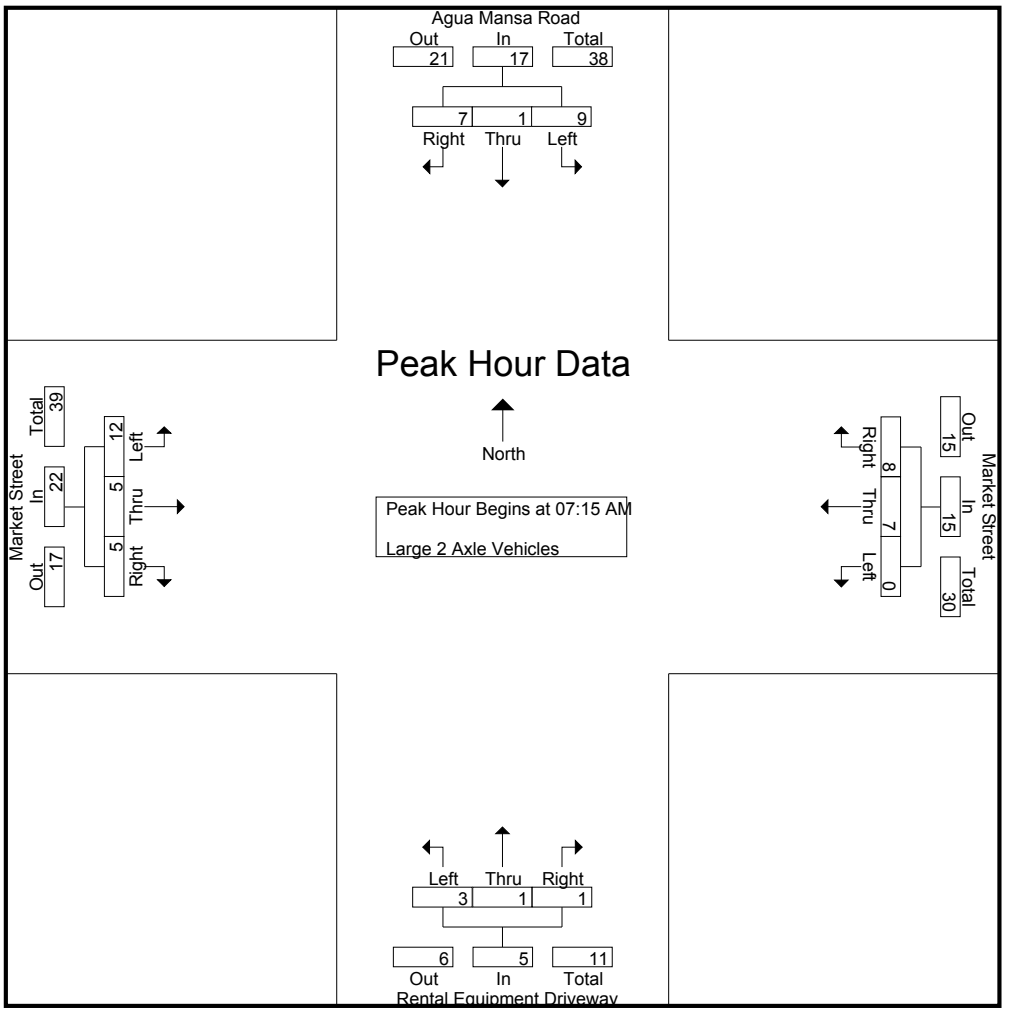
City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	2	**1**	1	4	0	**3**	1	4	0	0	0	0	**5**	0	**2**	**7**
+15 mins.	**3**	0	**2**	**5**	0	0	**6**	**6**	1	**1**	**1**	**3**	1	**2**	1	4
+30 mins.	2	0	2	4	0	1	1	2	0	0	0	0	3	1	2	6
+45 mins.	2	0	2	4	0	3	0	3	**2**	0	0	2	3	2	0	5
Total Volume	9	1	7	17	0	7	8	15	3	1	1	5	12	5	5	22
% App. Total	52.9	5.9	41.2		0	46.7	53.3		60	20	20		54.5	22.7	22.7	
PHF	.750	.250	.875	.850	.000	.583	.333	.625	.375	.250	.250	.417	.600	.625	.625	.786

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City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	3	0	9	12	0	1	1	2	0	0	0	0	4	6	0	10	24
06:45 AM	1	0	9	10	0	0	2	2	0	0	0	0	0	7	0	7	19
Total	4	0	18	22	0	1	3	4	0	0	0	0	4	13	0	17	43
07:00 AM	2	0	4	6	0	1	0	1	0	0	0	0	2	2	0	4	11
07:15 AM	0	0	6	6	0	0	3	3	0	0	0	0	4	1	0	5	14
07:30 AM	3	0	1	4	0	2	2	4	0	0	0	0	2	1	0	3	11
07:45 AM	0	0	4	4	0	0	2	2	0	0	0	0	1	2	0	3	9
Total	5	0	15	20	0	3	7	10	0	0	0	0	9	6	0	15	45
08:00 AM	1	0	2	3	0	3	2	5	0	0	0	0	2	0	0	2	10
08:15 AM	2	1	3	6	0	1	4	5	0	0	0	0	3	0	0	3	14
08:30 AM	4	1	3	8	0	0	0	0	0	0	0	0	5	2	0	7	15
08:45 AM	5	0	2	7	0	0	3	3	0	1	0	1	1	0	0	1	12
Total	12	2	10	24	0	4	9	13	0	1	0	1	11	2	0	13	51
09:00 AM	4	0	2	6	0	1	5	6	0	0	0	0	9	2	0	11	23
09:15 AM	5	1	6	12	0	3	2	5	0	0	0	0	4	1	1	6	23
Grand Total	30	3	51	84	0	12	26	38	0	1	0	1	37	24	1	62	185
Apprch %	35.7	3.6	60.7		0	31.6	68.4		0	100	0		59.7	38.7	1.6		
Total %	16.2	1.6	27.6	45.4	0	6.5	14.1	20.5	0	0.5	0	0.5	20	13	0.5	33.5	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**6**	**6**	0	0	**3**	3	0	0	0	0	**4**	1	0	**5**	**14**
07:30 AM	**3**	0	1	4	0	2	2	4	0	0	0	0	2	1	0	3	11
07:45 AM	0	0	4	4	0	0	2	2	0	0	0	0	1	**2**	0	3	9
08:00 AM	1	0	2	3	0	**3**	2	**5**	0	0	0	0	2	0	0	2	10
Total Volume	4	0	13	17	0	5	9	14	0	0	0	0	9	4	0	13	44
% App. Total	23.5	0	76.5		0	35.7	64.3		0	0	0		69.2	30.8	0		
PHF	.333	.000	.542	.708	.000	.417	.750	.700	.000	.000	.000	.000	.563	.500	.000	.650	.786

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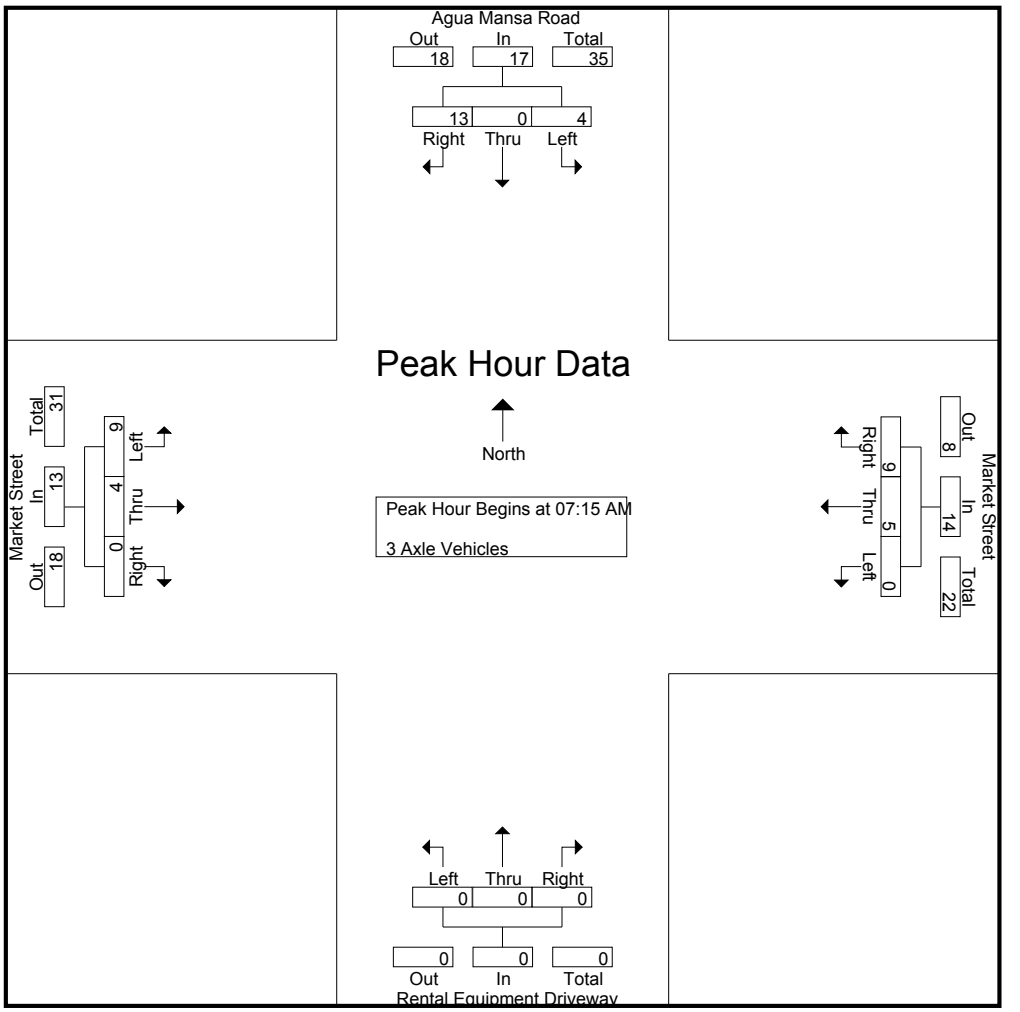
City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**6**	**6**	0	0	**3**	3	0	0	0	0	**4**	1	0	**5**
+15 mins.	**3**	0	1	4	0	2	2	4	0	0	0	0	2	1	0	3
+30 mins.	0	0	4	4	0	0	2	2	0	0	0	0	1	**2**	0	3
+45 mins.	1	0	2	3	0	**3**	2	**5**	0	0	0	0	2	0	0	2
Total Volume	4	0	13	17	0	5	9	14	0	0	0	0	9	4	0	13
% App. Total	23.5	0	76.5		0	35.7	64.3		0	0	0		69.2	30.8	0	
PHF	.333	.000	.542	.708	.000	.417	.750	.700	.000	.000	.000	.000	.563	.500	.000	.650

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City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	3	0	8	11	0	1	4	5	0	0	0	0	5	1	0	6	22
06:45 AM	1	0	7	8	0	2	1	3	0	0	0	0	7	3	0	10	21
Total	4	0	15	19	0	3	5	8	0	0	0	0	12	4	0	16	43
07:00 AM	4	0	5	9	0	3	3	6	0	0	0	0	7	2	0	9	24
07:15 AM	4	0	6	10	0	0	1	1	0	0	0	0	13	1	0	14	25
07:30 AM	2	0	13	15	0	3	3	6	0	0	0	0	9	3	0	12	33
07:45 AM	2	0	6	8	0	0	6	6	0	0	0	0	1	0	0	1	15
Total	12	0	30	42	0	6	13	19	0	0	0	0	30	6	0	36	97
08:00 AM	5	0	4	9	0	1	3	4	0	0	0	0	8	6	0	14	27
08:15 AM	5	0	8	13	0	0	6	6	0	0	0	0	5	2	0	7	26
08:30 AM	0	0	13	13	0	4	2	6	0	0	0	0	11	3	0	14	33
08:45 AM	2	0	6	8	0	3	2	5	0	0	0	0	12	3	0	15	28
Total	12	0	31	43	0	8	13	21	0	0	0	0	36	14	0	50	114
09:00 AM	1	1	10	12	0	5	8	13	0	0	0	0	11	2	0	13	38
09:15 AM	10	0	10	20	0	2	7	9	0	1	0	1	8	5	0	13	43
Grand Total	39	1	96	136	0	24	46	70	0	1	0	1	97	31	0	128	335
Apprch %	28.7	0.7	70.6		0	34.3	65.7		0	100	0		75.8	24.2	0		
Total %	11.6	0.3	28.7	40.6	0	7.2	13.7	20.9	0	0.3	0	0.3	29	9.3	0	38.2	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	0	6	10	0	0	1	1	0	0	0	0	**13**	1	0	**14**	25
07:30 AM	2	0	**13**	**15**	0	**3**	3	**6**	0	0	0	0	9	3	0	12	**33**
07:45 AM	2	0	6	8	0	0	**6**	6	0	0	0	0	1	0	0	1	15
08:00 AM	**5**	0	4	9	0	1	3	4	0	0	0	0	8	**6**	0	14	27
Total Volume	13	0	29	42	0	4	13	17	0	0	0	0	31	10	0	41	100
% App. Total	31	0	69		0	23.5	76.5		0	0	0		75.6	24.4	0		
PHF	.650	.000	.558	.700	.000	.333	.542	.708	.000	.000	.000	.000	.596	.417	.000	.732	.758

Counts Unlimited
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City of Jurupa Valley
N/S: Agua Mansa Road
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File Name : 05_JVYAGMAAM
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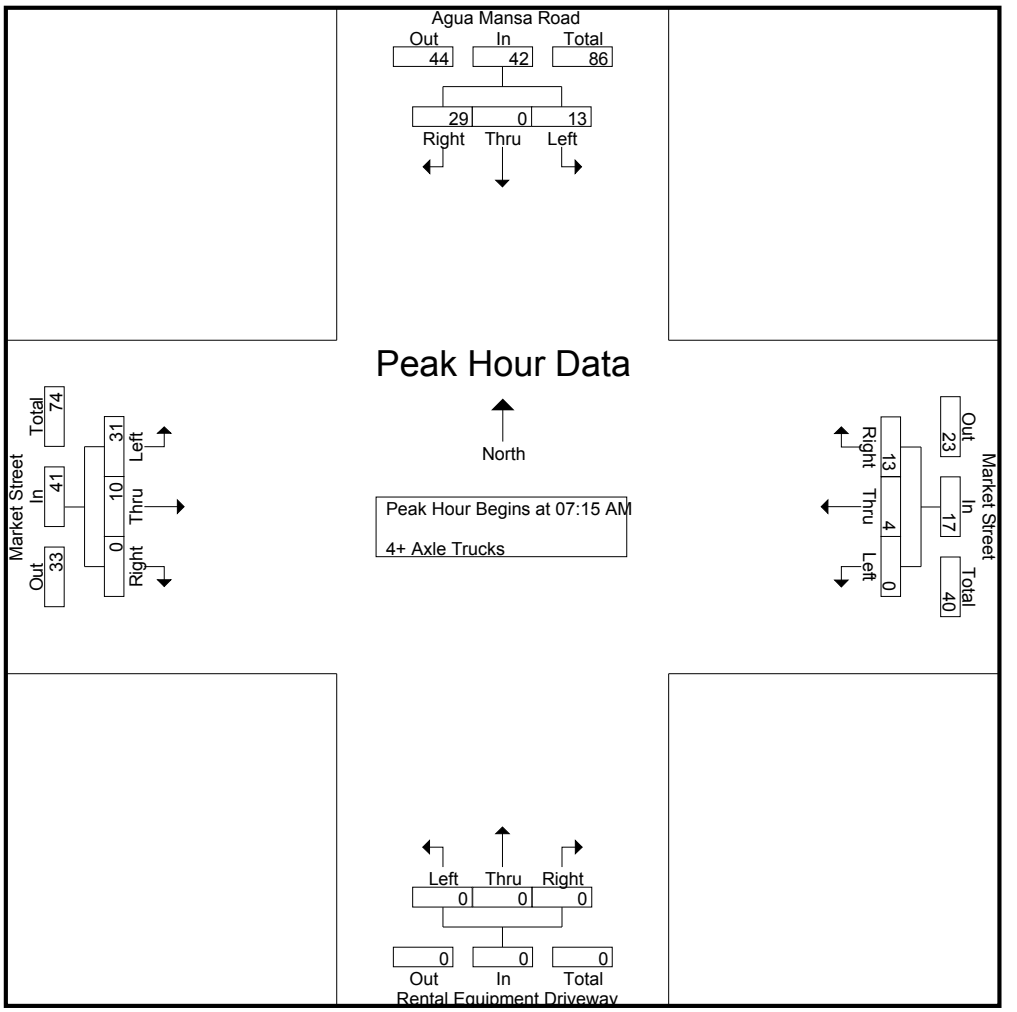

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	4	0	6	10	0	0	1	1	0	0	0	0	**13**	1	0	**14**
+15 mins.	2	0	**13**	**15**	0	**3**	3	**6**	0	0	0	0	9	3	0	12
+30 mins.	2	0	6	8	0	0	**6**	6	0	0	0	0	1	0	0	1
+45 mins.	**5**	0	4	9	0	1	3	4	0	0	0	0	8	**6**	0	14
Total Volume	13	0	29	42	0	4	13	17	0	0	0	0	31	10	0	41
% App. Total	31	0	69		0	23.5	76.5		0	0	0		75.6	24.4	0	
PHF	.650	.000	.558	.700	.000	.333	.542	.708	.000	.000	.000	.000	.596	.417	.000	.732

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City of Jurupa Valley
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File Name : 05_JVYAGMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	48	0	82	130	0	79	47	126	0	1	1	2	92	102	0	194	452
03:45 PM	35	0	79	114	3	98	28	129	1	0	0	1	93	116	0	209	453
Total	83	0	161	244	3	177	75	255	1	1	1	3	185	218	0	403	905
04:00 PM	36	1	62	99	0	74	31	105	1	3	1	5	83	117	2	202	411
04:15 PM	31	0	61	92	1	102	31	134	3	3	0	6	79	108	1	188	420
04:30 PM	24	1	58	83	0	98	32	130	2	0	0	2	87	94	2	183	398
04:45 PM	37	0	69	106	0	97	33	130	0	0	0	0	102	125	0	227	463
Total	128	2	250	380	1	371	127	499	6	6	1	13	351	444	5	800	1692
05:00 PM	38	0	78	116	0	112	30	142	0	0	1	1	98	111	0	209	468
05:15 PM	31	0	52	83	1	114	23	138	0	1	0	1	107	95	1	203	425
05:30 PM	19	0	62	81	0	119	16	135	0	0	0	0	99	121	0	220	436
05:45 PM	16	0	54	70	0	97	20	117	1	0	0	1	82	103	1	186	374
Total	104	0	246	350	1	442	89	532	1	1	1	3	386	430	2	818	1703
06:00 PM	25	0	49	74	0	94	14	108	0	0	0	0	77	67	0	144	326
06:15 PM	14	0	41	55	1	95	16	112	0	1	1	2	52	82	0	134	303
Grand Total	354	2	747	1103	6	1179	321	1506	8	9	4	21	1051	1241	7	2299	4929
Apprch %	32.1	0.2	67.7		0.4	78.3	21.3		38.1	42.9	19		45.7	54	0.3		
Total %	7.2	0	15.2	22.4	0.1	23.9	6.5	30.6	0.2	0.2	0.1	0.4	21.3	25.2	0.1	46.6	
Passenger Vehicles	326	2	625	953	5	1117	232	1354	5	9	3	17	822	1202	4	2028	4352
% Passenger Vehicles	92.1	100	83.7	86.4	83.3	94.7	72.3	89.9	62.5	100	75	81	78.2	96.9	57.1	88.2	88.3
Large 2 Axle Vehicles	4	0	29	33	0	18	16	34	1	0	0	1	37	12	2	51	119
% Large 2 Axle Vehicles	1.1	0	3.9	3	0	1.5	5	2.3	12.5	0	0	4.8	3.5	1	28.6	2.2	2.4
3 Axle Vehicles	16	0	25	41	1	13	29	43	2	0	1	3	82	12	1	95	182
% 3 Axle Vehicles	4.5	0	3.3	3.7	16.7	1.1	9	2.9	25	0	25	14.3	7.8	1	14.3	4.1	3.7
4+ Axle Trucks	8	0	68	76	0	31	44	75	0	0	0	0	110	15	0	125	276
% 4+ Axle Trucks	2.3	0	9.1	6.9	0	2.6	13.7	5	0	0	0	0	10.5	1.2	0	5.4	5.6

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	37	0	69	106	0	97	**33**	130	0	0	0	0	102	**125**	0	**227**	463
05:00 PM	**38**	0	**78**	**116**	0	112	30	**142**	0	0	**1**	**1**	98	111	0	209	**468**
05:15 PM	31	0	52	83	**1**	114	23	138	0	**1**	0	1	**107**	95	**1**	203	425
05:30 PM	19	0	62	81	0	**119**	16	135	0	0	0	0	99	121	0	220	436
Total Volume	125	0	261	386	1	442	102	545	0	1	1	2	406	452	1	859	1792
% App. Total	32.4	0	67.6		0.2	81.1	18.7		0	50	50		47.3	52.6	0.1		
PHF	.822	.000	.837	.832	.250	.929	.773	.960	.000	.250	.250	.500	.949	.904	.250	.946	.957

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City of Jurupa Valley
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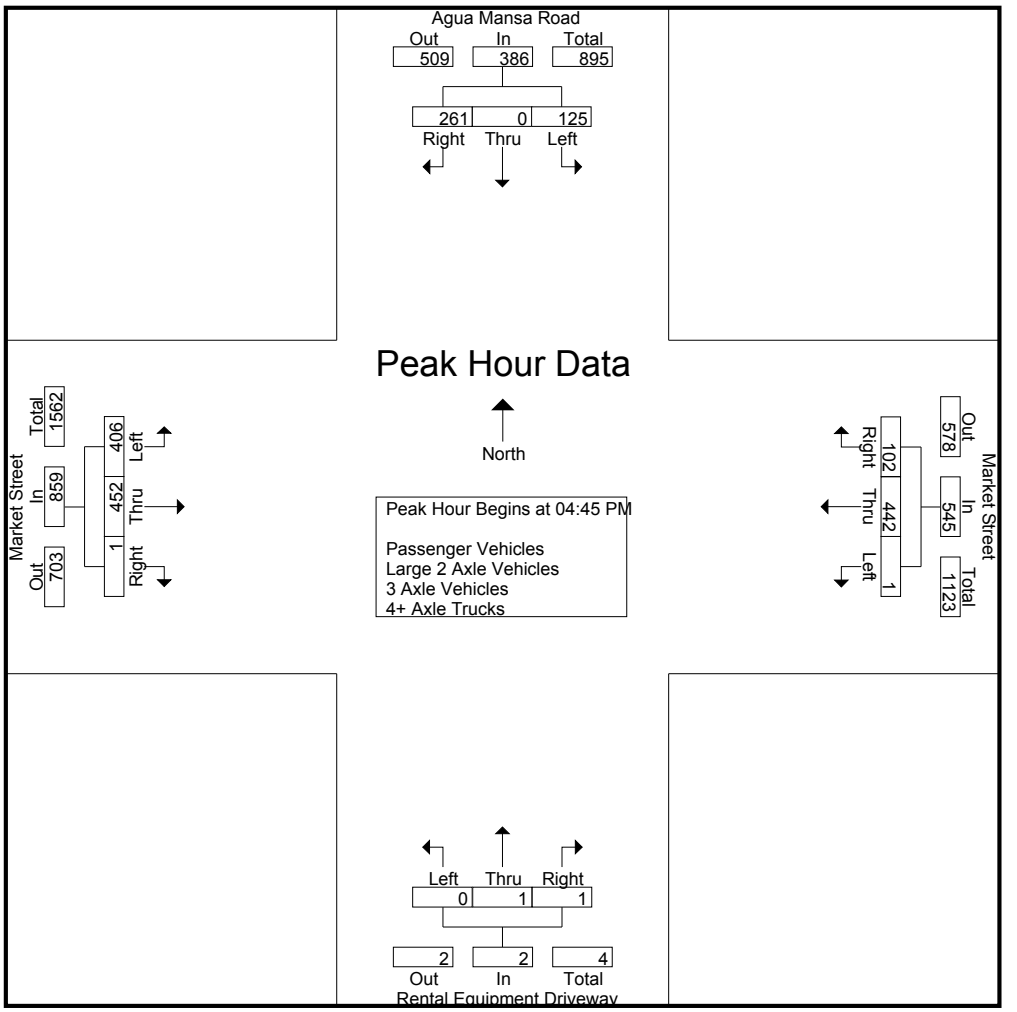
Weather: Clear

File Name : 05_JVYAGMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 03:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				04:45 PM				03:30 PM				04:45 PM			
+0 mins.	**48**	0	**82**	**130**	0	97	**33**	130	0	1	**1**	2	102	**125**	0	**227**
+15 mins.	35	0	79	114	0	112	30	**142**	1	0	0	1	98	111	0	209
+30 mins.	36	**1**	62	99	**1**	114	23	138	1	**3**	1	5	**107**	95	**1**	203
+45 mins.	31	0	61	92	0	**119**	16	135	**3**	3	0	**6**	99	121	0	220
Total Volume	150	1	284	435	1	442	102	545	5	7	2	14	406	452	1	859
% App. Total	34.5	0.2	65.3		0.2	81.1	18.7		35.7	50	14.3		47.3	52.6	0.1	
PHF	.781	.250	.866	.837	.250	.929	.773	.960	.417	.583	.500	.583	.949	.904	.250	.946

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City of Jurupa Valley
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Weather: Clear

File Name : 05_JVYAGMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	42	0	63	105	0	71	34	105	0	1	1	2	64	96	0	160	372
03:45 PM	31	0	65	96	2	88	13	103	1	0	0	1	68	112	0	180	380
Total	73	0	128	201	2	159	47	208	1	1	1	3	132	208	0	340	752
04:00 PM	36	1	48	85	0	70	27	97	0	3	1	4	62	112	1	175	361
04:15 PM	30	0	53	83	1	96	18	115	2	3	0	5	63	104	0	167	370
04:30 PM	20	1	45	66	0	90	22	112	1	0	0	1	64	92	1	157	336
04:45 PM	34	0	62	96	0	93	27	120	0	0	0	0	88	121	0	209	425
Total	120	2	208	330	1	349	94	444	3	6	1	10	277	429	2	708	1492
05:00 PM	36	0	69	105	0	108	21	129	0	0	1	1	80	108	0	188	423
05:15 PM	29	0	48	77	1	112	18	131	0	1	0	1	90	94	1	185	394
05:30 PM	19	0	53	72	0	113	13	126	0	0	0	0	79	117	0	196	394
05:45 PM	15	0	43	58	0	93	17	110	1	0	0	1	69	101	1	171	340
Total	99	0	213	312	1	426	69	496	1	1	1	3	318	420	2	740	1551
06:00 PM	21	0	39	60	0	89	10	99	0	0	0	0	58	65	0	123	282
06:15 PM	13	0	37	50	1	94	12	107	0	1	0	1	37	80	0	117	275
Grand Total	326	2	625	953	5	1117	232	1354	5	9	3	17	822	1202	4	2028	4352
Apprch %	34.2	0.2	65.6		0.4	82.5	17.1		29.4	52.9	17.6		40.5	59.3	0.2		
Total %	7.5	0	14.4	21.9	0.1	25.7	5.3	31.1	0.1	0.2	0.1	0.4	18.9	27.6	0.1	46.6	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	34	0	62	96	0	93	**27**	120	0	0	0	0	88	**121**	0	**209**	**425**
05:00 PM	**36**	0	**69**	**105**	0	108	21	129	0	0	**1**	**1**	80	108	0	188	423
05:15 PM	29	0	48	77	**1**	112	18	**131**	0	**1**	0	1	**90**	94	**1**	185	394
05:30 PM	19	0	53	72	0	**113**	13	126	0	0	0	0	79	117	0	196	394
Total Volume	118	0	232	350	1	426	79	506	0	1	1	2	337	440	1	778	1636
% App. Total	33.7	0	66.3		0.2	84.2	15.6		0	50	50		43.3	56.6	0.1		
PHF	.819	.000	.841	.833	.250	.942	.731	.966	.000	.250	.250	.500	.936	.909	.250	.931	.962

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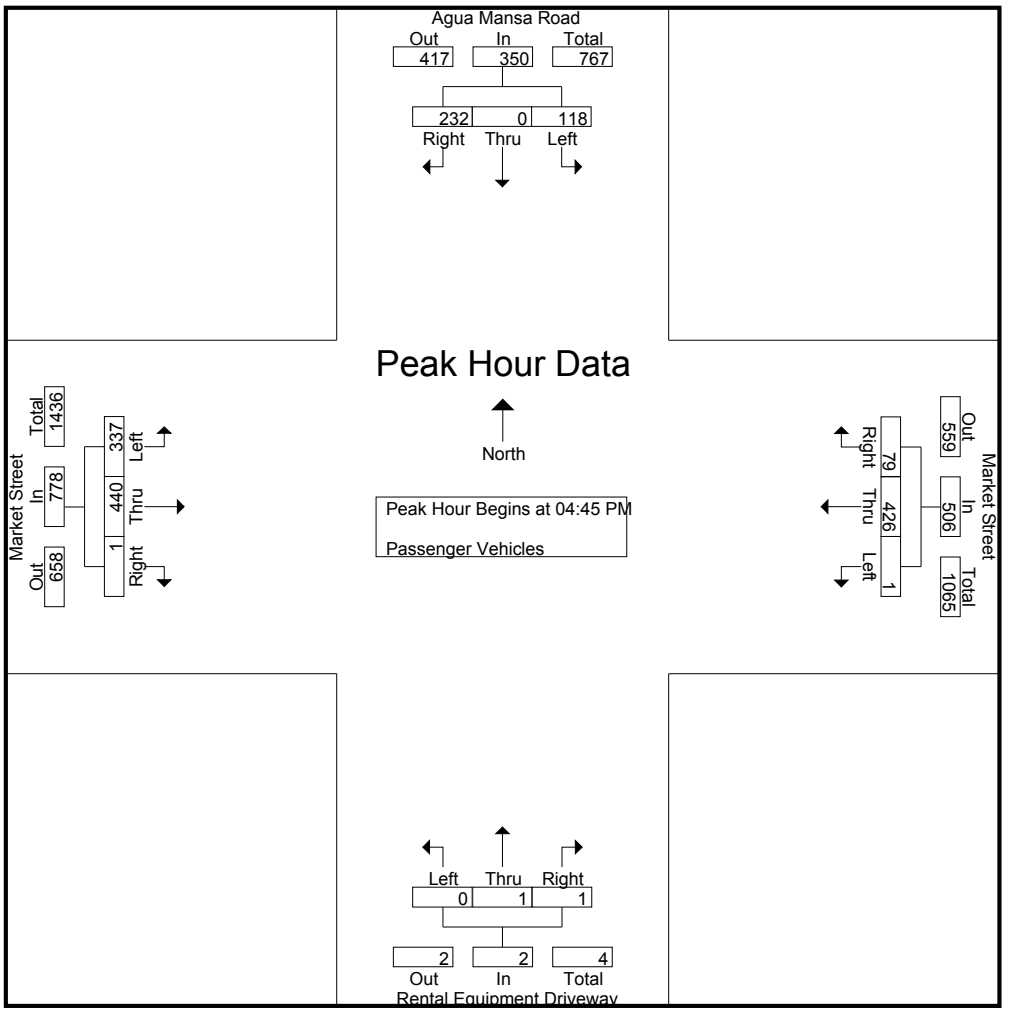
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	34	0	62	96	0	93	**27**	120	0	0	0	0	88	**121**	0	**209**
+15 mins.	**36**	0	**69**	**105**	0	108	21	129	0	0	**1**	**1**	80	108	0	188
+30 mins.	29	0	48	77	**1**	112	18	**131**	0	**1**	0	1	**90**	94	**1**	185
+45 mins.	19	0	53	72	0	**113**	13	126	0	0	0	0	79	117	0	196
Total Volume	118	0	232	350	1	426	79	506	0	1	1	2	337	440	1	778
% App. Total	33.7	0	66.3		0.2	84.2	15.6		0	50	50		43.3	56.6	0.1	
PHF	.819	.000	.841	.833	.250	.942	.731	.966	.000	.250	.250	.500	.936	.909	.250	.931

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Site Code : 05117022
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	1	0	5	6	0	4	1	5	0	0	0	0	7	3	0	10	21
03:45 PM	0	0	5	5	0	6	3	9	0	0	0	0	3	1	0	4	18
Total	1	0	10	11	0	10	4	14	0	0	0	0	10	4	0	14	39
04:00 PM	0	0	3	3	0	0	1	1	1	0	0	1	5	2	1	8	13
04:15 PM	0	0	2	2	0	1	0	1	0	0	0	0	2	0	0	2	5
04:30 PM	0	0	2	2	0	2	1	3	0	0	0	0	5	2	1	8	13
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	4	1	0	5	6
Total	0	0	7	7	0	3	3	6	1	0	0	1	16	5	2	23	37
05:00 PM	0	0	1	1	0	2	2	4	0	0	0	0	1	0	0	1	6
05:15 PM	0	0	1	1	0	1	2	3	0	0	0	0	2	0	0	2	6
05:30 PM	0	0	3	3	0	0	1	1	0	0	0	0	3	3	0	6	10
05:45 PM	0	0	4	4	0	1	1	2	0	0	0	0	0	0	0	0	6
Total	0	0	9	9	0	4	6	10	0	0	0	0	6	3	0	9	28
06:00 PM	2	0	2	4	0	1	2	3	0	0	0	0	2	0	0	2	9
06:15 PM	1	0	1	2	0	0	1	1	0	0	0	0	3	0	0	3	6
Grand Total	4	0	29	33	0	18	16	34	1	0	0	1	37	12	2	51	119
Apprch %	12.1	0	87.9		0	52.9	47.1		100	0	0		72.5	23.5	3.9		
Total %	3.4	0	24.4	27.7	0	15.1	13.4	28.6	0.8	0	0	0.8	31.1	10.1	1.7	42.9	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	**4**	1	0	5	6
05:00 PM	0	0	1	1	0	**2**	**2**	**4**	0	0	0	0	1	0	0	1	6
05:15 PM	0	0	1	1	0	1	2	3	0	0	0	0	2	0	0	2	6
05:30 PM	0	0	**3**	**3**	0	0	1	1	0	0	0	0	3	**3**	0	**6**	**10**
Total Volume	0	0	5	5	0	3	6	9	0	0	0	0	10	4	0	14	28
% App. Total	0	0	100		0	33.3	66.7		0	0	0		71.4	28.6	0		
PHF	.000	.000	.417	.417	.000	.375	.750	.563	.000	.000	.000	.000	.625	.333	.000	.583	.700

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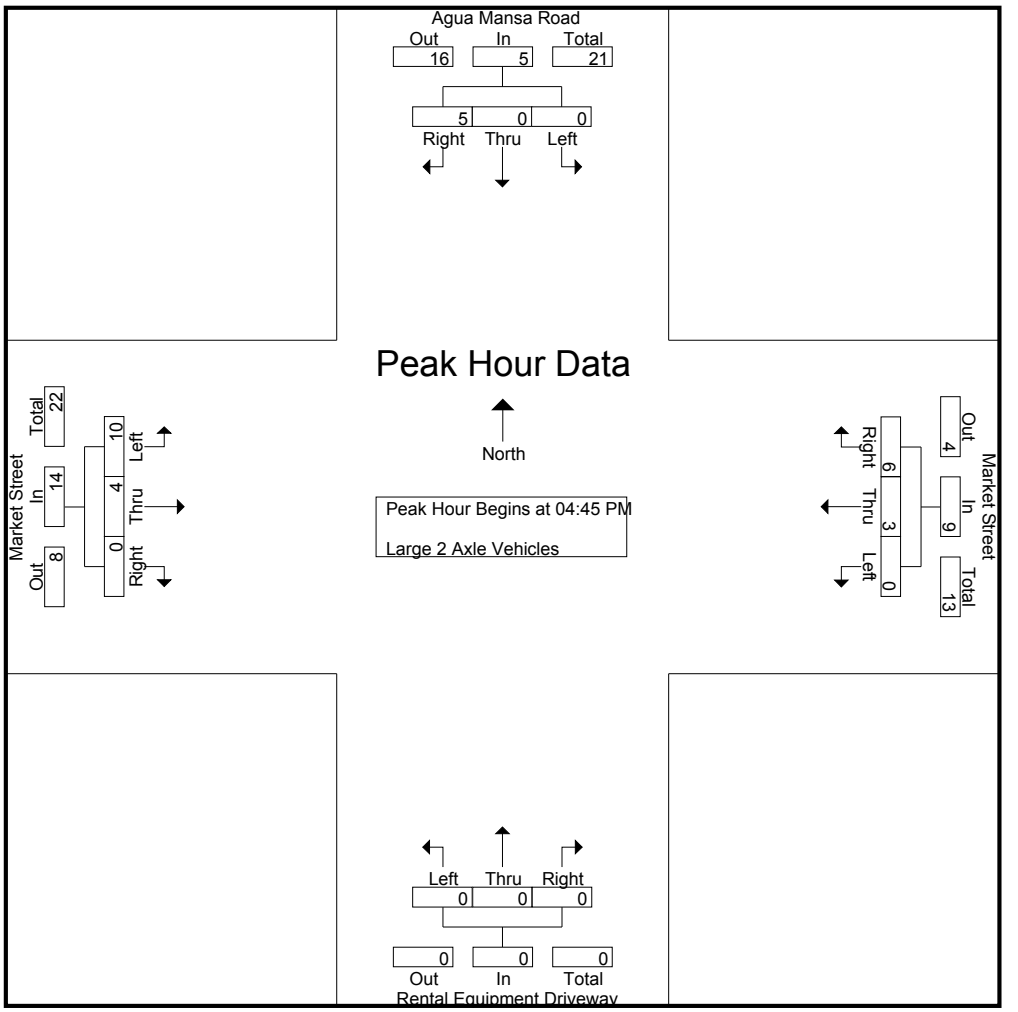
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	**4**	1	0	5
+15 mins.	0	0	1	1	0	**2**	**2**	**4**	0	0	0	0	1	0	0	1
+30 mins.	0	0	1	1	0	1	2	3	0	0	0	0	2	0	0	2
+45 mins.	0	0	**3**	**3**	0	0	1	1	0	0	0	0	3	**3**	0	**6**
Total Volume	0	0	5	5	0	3	6	9	0	0	0	0	10	4	0	14
% App. Total	0	0	100		0	33.3	66.7		0	0	0		71.4	28.6	0	
PHF	.000	.000	.417	.417	.000	.375	.750	.563	.000	.000	.000	.000	.625	.333	.000	.583

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Page No : 1

Groups Printed- 3 Axle Vehicles

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	4	0	5	9	0	1	3	4	0	0	0	0	7	1	0	8	21
03:45 PM	3	0	2	5	1	1	5	7	0	0	0	0	11	1	0	12	24
Total	7	0	7	14	1	2	8	11	0	0	0	0	18	2	0	20	45
04:00 PM	0	0	3	3	0	1	2	3	0	0	0	0	7	1	0	8	14
04:15 PM	0	0	2	2	0	2	7	9	1	0	0	1	3	3	1	7	19
04:30 PM	3	0	3	6	0	1	2	3	1	0	0	1	13	0	0	13	23
04:45 PM	2	0	1	3	0	1	3	4	0	0	0	0	6	2	0	8	15
Total	5	0	9	14	0	5	14	19	2	0	0	2	29	6	1	36	71
05:00 PM	0	0	2	2	0	0	2	2	0	0	0	0	7	2	0	9	13
05:15 PM	2	0	1	3	0	1	2	3	0	0	0	0	5	0	0	5	11
05:30 PM	0	0	1	1	0	1	2	3	0	0	0	0	10	1	0	11	15
05:45 PM	1	0	1	2	0	2	0	2	0	0	0	0	5	0	0	5	9
Total	3	0	5	8	0	4	6	10	0	0	0	0	27	3	0	30	48
06:00 PM	1	0	4	5	0	2	1	3	0	0	0	0	6	1	0	7	15
06:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3
Grand Total	16	0	25	41	1	13	29	43	2	0	1	3	82	12	1	95	182
Apprch %	39	0	61		2.3	30.2	67.4		66.7	0	33.3		86.3	12.6	1.1		
Total %	8.8	0	13.7	22.5	0.5	7.1	15.9	23.6	1.1	0	0.5	1.6	45.1	6.6	0.5	52.2	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**2**	0	1	**3**	0	**1**	**3**	**4**	0	0	0	0	6	**2**	0	8	**15**
05:00 PM	0	0	**2**	2	0	0	2	2	0	0	0	0	7	2	0	9	13
05:15 PM	2	0	1	3	0	1	2	3	0	0	0	0	5	0	0	5	11
05:30 PM	0	0	1	1	0	1	2	3	0	0	0	0	**10**	1	0	**11**	15
Total Volume	4	0	5	9	0	3	9	12	0	0	0	0	28	5	0	33	54
% App. Total	44.4	0	55.6		0	25	75		0	0	0		84.8	15.2	0		
PHF	.500	.000	.625	.750	.000	.750	.750	.750	.000	.000	.000	.000	.700	.625	.000	.750	.900

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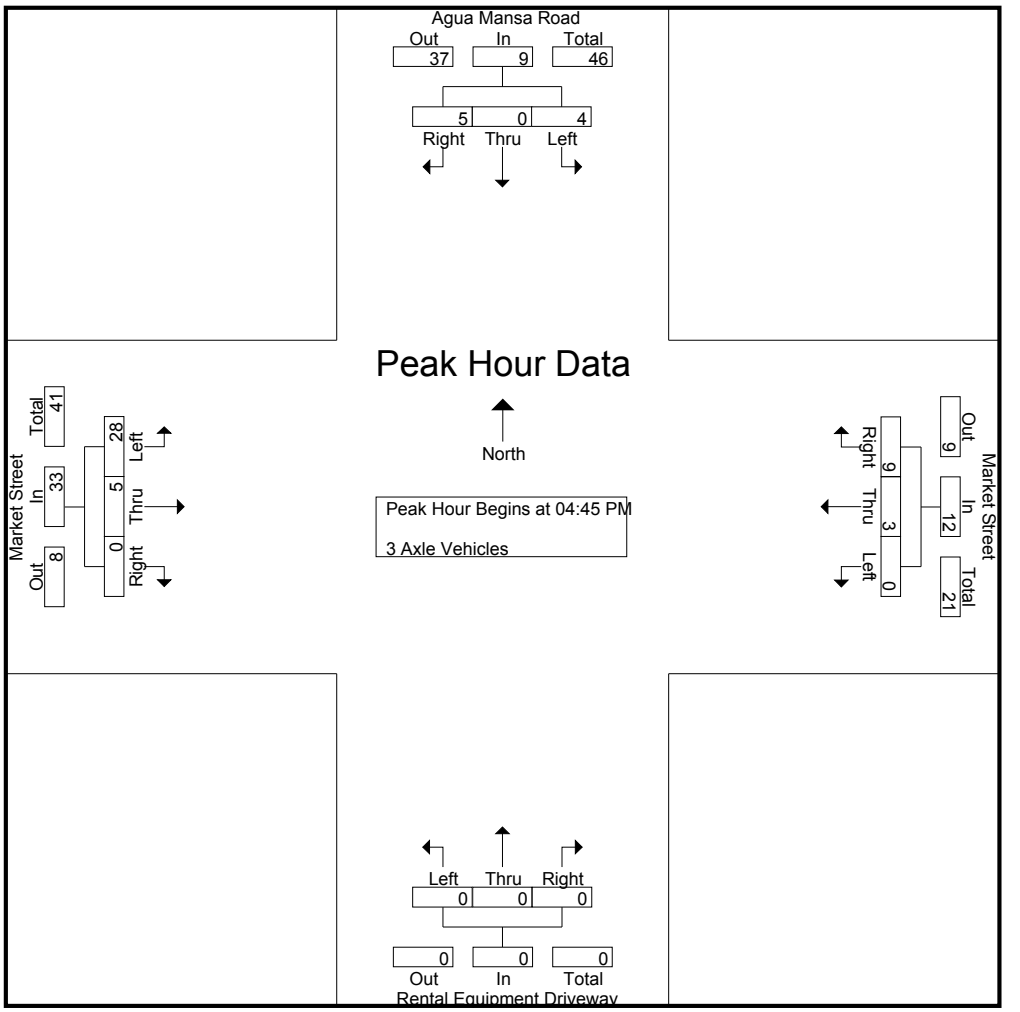
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**2**	0	1	**3**	0	**1**	**3**	**4**	0	0	0	0	6	**2**	0	8
+15 mins.	0	0	**2**	2	0	0	2	2	0	0	0	0	7	2	0	9
+30 mins.	2	0	1	3	0	1	2	3	0	0	0	0	5	0	0	5
+45 mins.	0	0	1	1	0	1	2	3	0	0	0	0	**10**	1	0	**11**
Total Volume	4	0	5	9	0	3	9	12	0	0	0	0	28	5	0	33
% App. Total	44.4	0	55.6		0	25	75		0	0	0		84.8	15.2	0	
PHF	.500	.000	.625	.750	.000	.750	.750	.750	.000	.000	.000	.000	.700	.625	.000	.750

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Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

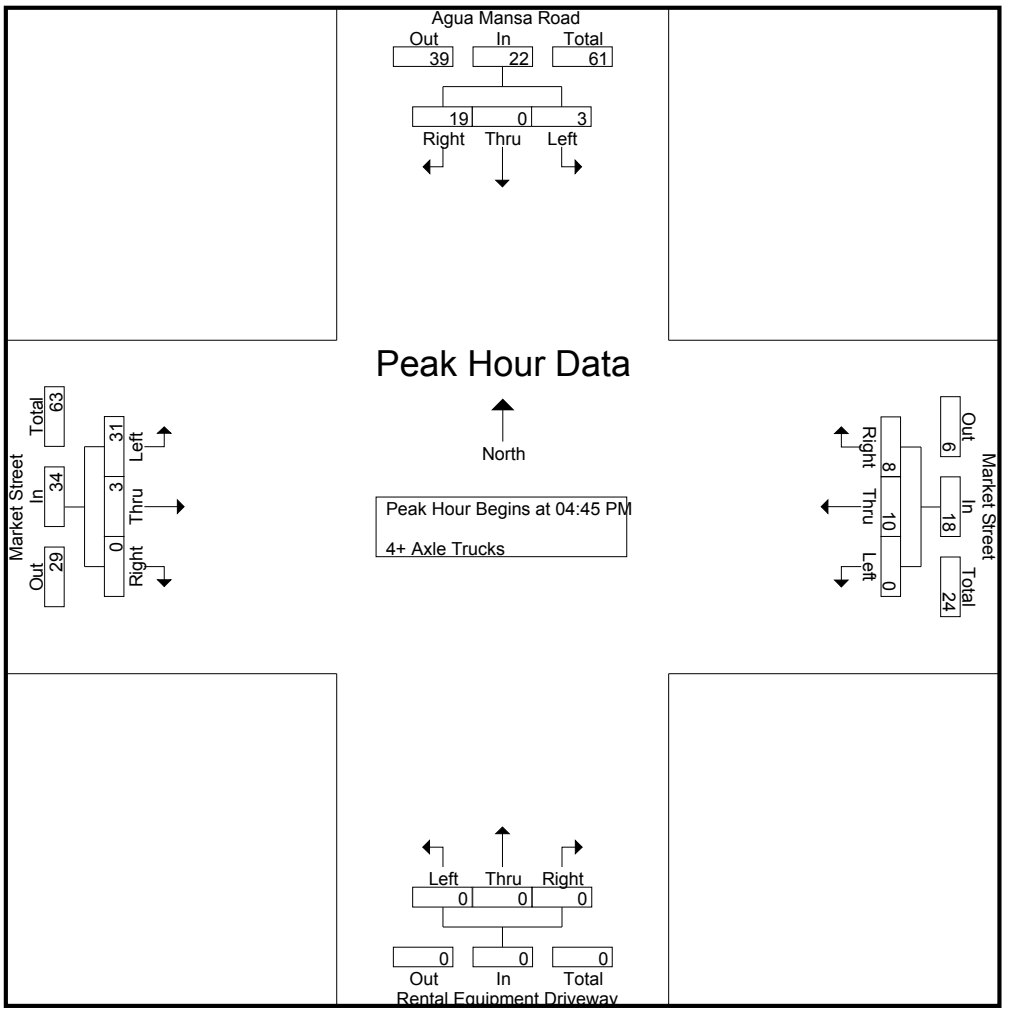
	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:30 PM	1	0	9	10	0	3	9	12	0	0	0	0	14	2	0	16	38
03:45 PM	1	0	7	8	0	3	7	10	0	0	0	0	11	2	0	13	31
Total	2	0	16	18	0	6	16	22	0	0	0	0	25	4	0	29	69
04:00 PM	0	0	8	8	0	3	1	4	0	0	0	0	9	2	0	11	23
04:15 PM	1	0	4	5	0	3	6	9	0	0	0	0	11	1	0	12	26
04:30 PM	1	0	8	9	0	5	7	12	0	0	0	0	5	0	0	5	26
04:45 PM	1	0	6	7	0	3	2	5	0	0	0	0	4	1	0	5	17
Total	3	0	26	29	0	14	16	30	0	0	0	0	29	4	0	33	92
05:00 PM	2	0	6	8	0	2	5	7	0	0	0	0	10	1	0	11	26
05:15 PM	0	0	2	2	0	0	1	1	0	0	0	0	10	1	0	11	14
05:30 PM	0	0	5	5	0	5	0	5	0	0	0	0	7	0	0	7	17
05:45 PM	0	0	6	6	0	1	2	3	0	0	0	0	8	2	0	10	19
Total	2	0	19	21	0	8	8	16	0	0	0	0	35	4	0	39	76
06:00 PM	1	0	4	5	0	2	1	3	0	0	0	0	11	1	0	12	20
06:15 PM	0	0	3	3	0	1	3	4	0	0	0	0	10	2	0	12	19
Grand Total	8	0	68	76	0	31	44	75	0	0	0	0	110	15	0	125	276
Apprch %	10.5	0	89.5		0	41.3	58.7		0	0	0		88	12	0		
Total %	2.9	0	24.6	27.5	0	11.2	15.9	27.2	0	0	0	0	39.9	5.4	0	45.3	

	Agua Mansa Road Southbound				Market Street Westbound				Rental Equipment Driveway Northbound				Market Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	0	**6**	7	0	3	2	5	0	0	0	0	4	**1**	0	5	17
05:00 PM	**2**	0	6	**8**	0	2	**5**	**7**	0	0	0	0	**10**	1	0	**11**	**26**
05:15 PM	0	0	2	2	0	0	1	1	0	0	0	0	10	1	0	11	14
05:30 PM	0	0	5	5	0	**5**	0	5	0	0	0	0	7	0	0	7	17
Total Volume	3	0	19	22	0	10	8	18	0	0	0	0	31	3	0	34	74
% App. Total	13.6	0	86.4		0	55.6	44.4		0	0	0		91.2	8.8	0		
PHF	.375	.000	.792	.688	.000	.500	.400	.643	.000	.000	.000	.000	.775	.750	.000	.773	.712

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Jurupa Valley
N/S: Agua Mansa Road
E/W: Market Street
Weather: Clear

File Name : 05_JVYAGMAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	0	**6**	7	0	3	2	5	0	0	0	0	4	**1**	0	5
+15 mins.	**2**	0	6	**8**	0	2	**5**	**7**	0	0	0	0	**10**	1	0	**11**
+30 mins.	0	0	2	2	0	0	1	1	0	0	0	0	10	1	0	11
+45 mins.	0	0	5	5	0	**5**	0	5	0	0	0	0	7	0	0	7
Total Volume	3	0	19	22	0	10	8	18	0	0	0	0	31	3	0	34
% App. Total	13.6	0	86.4		0	55.6	44.4		0	0	0		91.2	8.8	0	
PHF	.375	.000	.792	.688	.000	.500	.400	.643	.000	.000	.000	.000	.775	.750	.000	.773

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

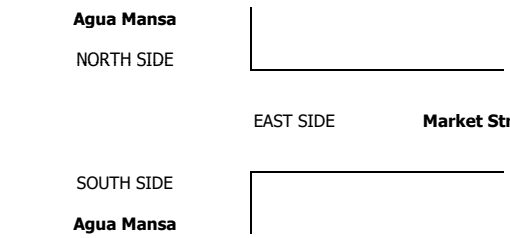
LOCATION: Jurupa Valley
NORTH & SOUTH: Agua Mansa
EAST & WEST: Market Street

PROJECT #: SC1439
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

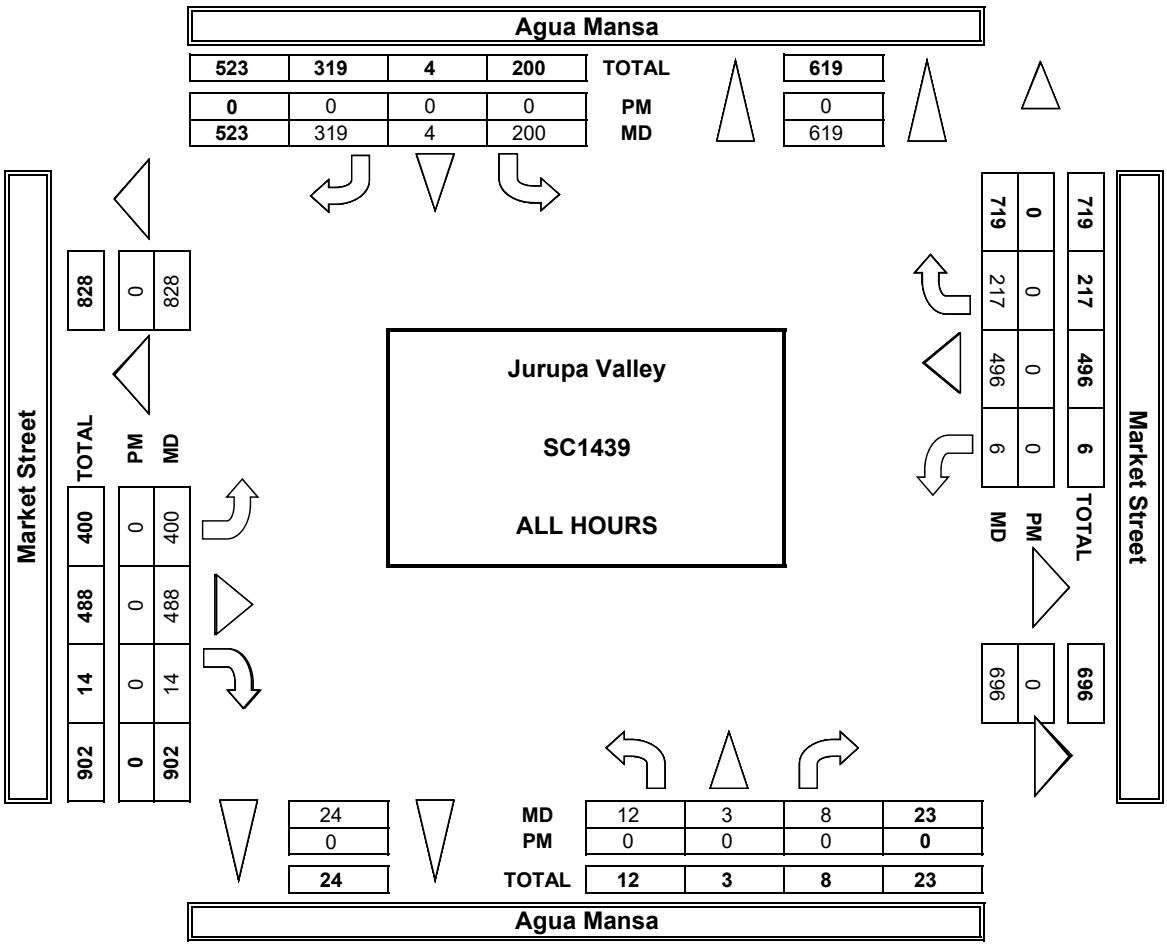
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

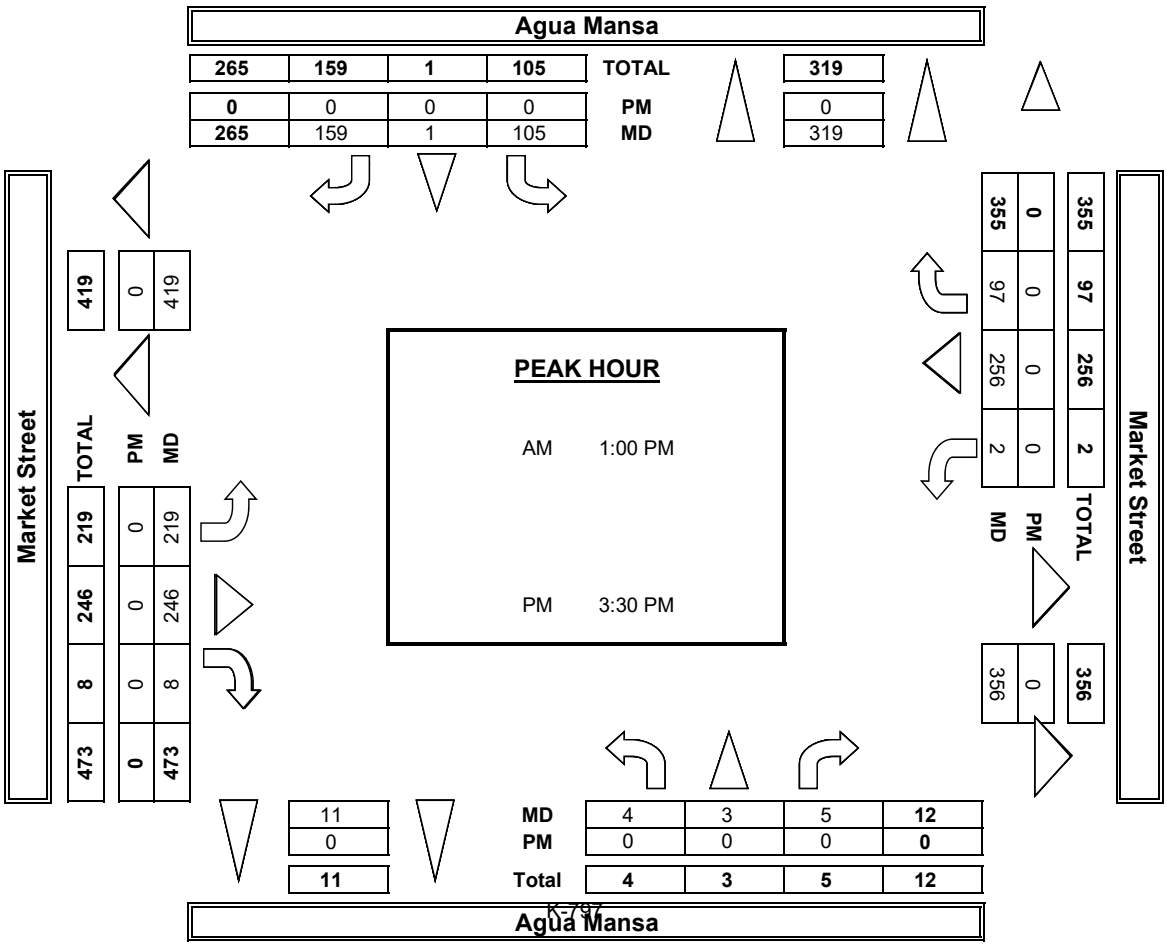
		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	2	0	1	24	1	37	54	69	3	3	52	21	267	0	0	0	0	0
	12:15 PM	2	0	2	21	1	53	35	60	1	1	67	33	276	0	0	0	0	0
	12:30 PM	2	0	0	31	0	35	52	62	1	0	57	36	276	0	0	1	0	1
	12:45 PM	2	0	0	19	1	35	40	51	1	0	64	30	243	0	0	0	0	0
	1:00 PM	0	1	0	18	1	45	49	51	2	0	58	21	246	0	0	0	0	0
	1:15 PM	1	1	3	22	0	33	42	75	2	1	64	22	266	0	0	0	0	0
	1:30 PM	1	1	2	29	0	48	59	46	1	0	66	32	285	0	0	0	0	0
	1:45 PM	2	0	0	36	0	33	69	74	3	1	68	22	308	0	0	0	0	0
	VOLUMES	12	3	8	200	4	319	400	488	14	6	496	217	2,167	0	0	1	0	1
	APPROACH %	52%	13%	35%	38%	1%	61%	44%	54%	2%	1%	69%	30%						
	APP/DEPART	23	/	619	523	/	24	902	/	696	719	/	828	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	4	3	5	105	1	159	219	246	8	2	256	97	1,105					
	APPROACH %	33%	25%	42%	40%	0%	60%	46%	52%	2%	1%	72%	27%						
	PEAK HR FACTOR		0.600			0.860			0.810			0.906		0.897					
	APP/DEPART	12	/	319	265	/	11	473	/	356	355	/	419	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





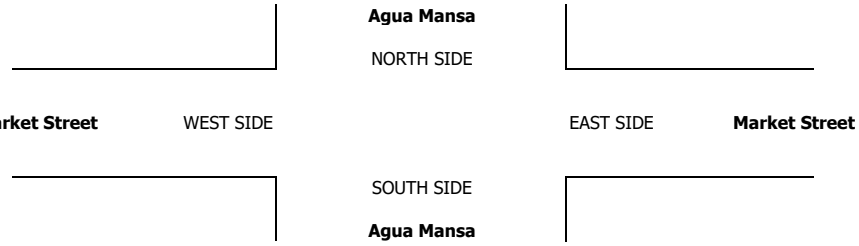
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

	NOTES:											
PCE	Class	1	2	3	4	5	6			AM		▲ N
Adjusted	Factor	1	1.5	2	3	2	2			PM		
										MD	◄ W	E ►
										OTHER		S
										OTHER		▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
MD 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	4	0	2	34	1	58	90	84	8	4	64	44	391
8:15 AM	4	0	5	31	3	99	65	75	3	1	87	66	438
8:30 AM	3	0	0	44	0	59	97	79	2	0	65	56	403
8:45 AM	5	0	0	29	3	49	58	67	2	0	75	53	340
9:00 AM	0	1	0	30	3	69	76	66	3	0	77	32	355
9:15 AM	2	3	6	44	0	55	70	83	2	2	84	31	381
9:30 AM	1	1	3	48	0	82	86	51	1	0	80	49	401
9:45 AM	3	0	0	48	0	62	119	83	6	1	85	35	440
VOLUMES	21	5	16	306	10	531	661	586	26	8	615	365	3,147
APPROACH %	50%	12%	38%	36%	1%	63%	52%	46%	2%	1%	62%	37%	
APP/DEPART	41	/	1,030	847	/	44	1,272	/	907	988	/	1,167	0
BEGIN PEAK HR		9:00 AM											
VOLUMES	6	5	9	169	3	267	351	282	12	3	326	146	1,576
APPROACH %	28%	26%	46%	39%	1%	61%	54%	44%	2%	1%	69%	31%	
PEAK HR FACTOR		0.464			0.847			0.775			0.923		0.895
APP/DEPART	20	/	502	439	/	18	644	/	460	475	/	598	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		5:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

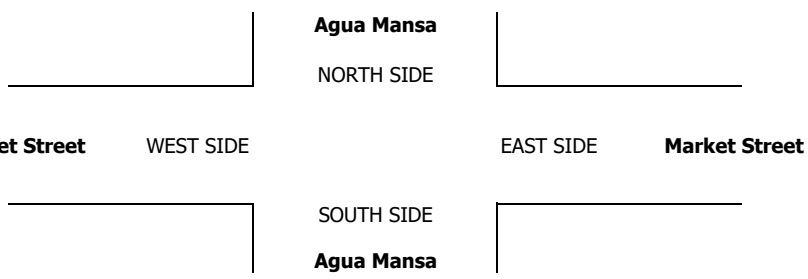
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	0	0	16	1	21	22	60	0	2	41	8	172	0	0	0	0	0
12:15 PM	1	0	0	15	0	23	17	49	0	1	54	12	172	0	0	0	0	0
12:30 PM	1	0	0	22	0	19	24	51	0	0	51	22	190	0	0	1	0	1
12:45 PM	0	0	0	12	0	23	26	38	0	0	55	13	167	0	0	0	0	0
1:00 PM	0	1	0	10	0	27	30	41	1	0	43	13	166	0	0	0	0	0
1:15 PM	0	0	1	9	0	16	21	66	2	0	49	16	180	0	0	0	0	0
1:30 PM	1	1	1	15	0	27	38	42	1	0	53	19	198	0	0	0	0	0
1:45 PM	1	0	0	26	0	16	34	62	1	1	54	11	206	0	0	0	0	0
VOLUMES	5	2	2	125	1	172	212	409	5	4	400	114	1,451	0	0	1	0	1
APPROACH %	56%	22%	22%	42%	0%	58%	34%	65%	1%	1%	77%	22%						
APP/DEPART	9	/	327	298	/	10	626	/	536	518	/	578	0					
BEGIN PEAK HR		1:00 PM																
VOLUMES	2	2	2	60	0	86	123	211	5	1	199	59	750					
APPROACH %	33%	33%	33%	41%	0%	59%	36%	62%	1%	0%	77%	23%						
PEAK HR FACTOR		0.500			0.869			0.874			0.899		0.910					
APP/DEPART	6	/	184	146	/	6	339	/	273	259	/	287	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	1	3	0	6	12	1	1	0	5	0	29
	12:15 PM	0	0	0	1	0	4	2	4	0	0	3	3	17
	12:30 PM	1	0	0	2	0	0	2	1	1	0	1	2	10
	12:45 PM	1	0	0	1	0	5	4	4	0	0	4	4	23
	1:00 PM	0	0	0	1	0	5	4	3	1	0	5	2	21
	1:15 PM	1	0	0	0	0	4	5	4	0	0	4	2	20
	1:30 PM	0	0	0	4	0	3	4	1	0	0	6	3	21
	1:45 PM	0	0	0	3	0	3	6	9	0	0	2	3	26
	VOLUMES	3	0	1	15	0	30	39	27	3	0	30	19	167
	APPROACH %	75%	0%	25%	33%	0%	67%	57%	39%	4%	0%	61%	39%	
	APP/DEPART	4	/	58	45	/	3	69	/	43	49	/	63	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	1	0	0	8	0	15	19	17	1	0	17	10	88
	APPROACH %	100%	0%	0%	35%	0%	65%	51%	46%	3%	0%	63%	37%	
	PEAK HR FACTOR		0.250			0.821			0.617			0.750		0.846
	APP/DEPART	1	/	29	23	/	1	37	/	25	27	/	33	0
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Agua Mansa
NORTH SIDE

Market Street WEST SIDE EAST SIDE **Market Street**

SOUTH SIDE
Agua Mansa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

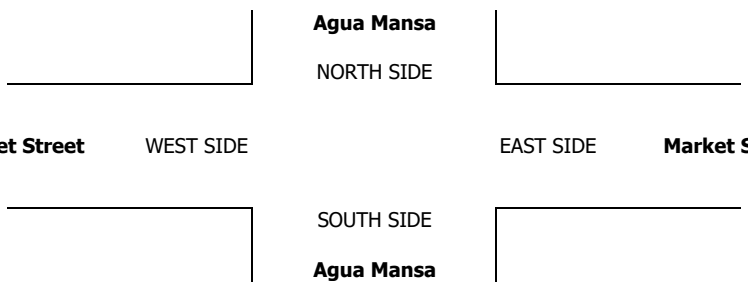
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	2	0	2	10	2	0	1	3	3	23	0	0	0	0	0
	12:15 PM	0	0	1	1	0	8	2	1	0	0	2	5	20	0	0	0	0	0
	12:30 PM	0	0	0	2	0	8	8	4	0	0	3	5	30	0	0	0	0	0
	12:45 PM	0	0	0	3	0	3	4	4	1	0	0	5	20	0	0	0	0	0
	1:00 PM	0	0	0	3	0	5	5	1	0	0	4	2	20	0	0	0	0	0
	1:15 PM	0	0	1	4	0	6	7	4	0	1	4	0	27	0	0	0	0	0
	1:30 PM	0	0	1	3	0	4	9	2	0	0	3	5	27	0	0	0	0	0
	1:45 PM	1	0	0	4	0	1	11	2	1	0	7	5	32	0	0	0	0	0
	VOLUMES	1	0	3	22	0	37	56	20	2	2	26	30	199	0	0	0	0	0
	APPROACH %	25%	0%	75%	37%	0%	63%	72%	26%	3%	3%	45%	52%						
	APP/DEPART	4	/	86	59	/	4	78	/	45	58	/	64	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	0	2	14	0	16	32	9	1	1	18	12	106					
	APPROACH %	33%	0%	67%	47%	0%	53%	76%	21%	2%	3%	58%	39%						
	PEAK HR FACTOR		0.750			0.750			0.750			0.646		0.828					
	APP/DEPART	3	/	44	30	/	2	42	/	25	31	/	35	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

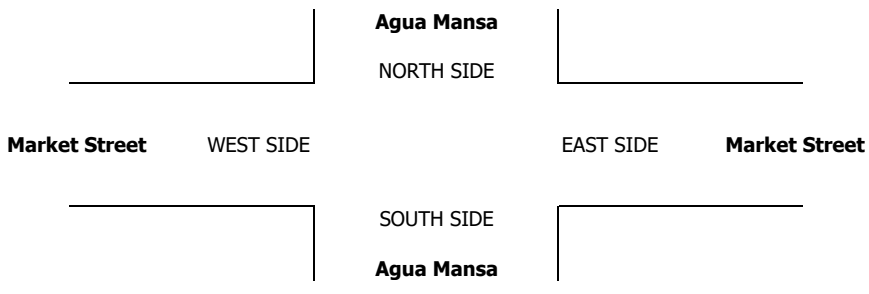
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	0	0	3	0	8	10	6	2	0	3	10	43	0	0	0	0	0
	12:15 PM	1	0	1	4	1	18	13	6	1	0	8	13	66	0	0	0	0	0
	12:30 PM	0	0	0	5	0	8	18	6	0	0	2	7	46	0	0	0	0	0
	12:45 PM	1	0	0	3	1	4	6	5	0	0	4	8	32	0	0	0	0	0
	1:00 PM	0	0	0	4	1	8	10	6	0	0	6	4	39	0	0	0	0	0
	1:15 PM	0	1	1	9	0	7	9	1	0	0	7	4	39	0	0	0	0	0
	1:30 PM	0	0	0	7	0	14	8	1	0	0	4	5	39	0	0	0	0	0
	1:45 PM	0	0	0	3	0	13	18	1	1	0	4	3	43	0	0	0	0	0
	VOLUMES	3	1	2	38	3	80	92	32	4	0	38	54	347	0	0	0	0	0
	APPROACH %	50%	17%	33%	31%	2%	66%	72%	25%	3%	0%	41%	59%						
	APP/DEPART	6	/	147	121	/	7	128	/	72	92	/	121	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	3	0	1	15	2	38	47	23	3	0	17	38	187					
	APPROACH %	75%	0%	25%	27%	4%	69%	64%	32%	4%	0%	31%	69%						
	PEAK HR FACTOR		0.500			0.598			0.760			0.655		0.708					
	APP/DEPART	4	/	85	55	/	5	73	/	39	55	/	58	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

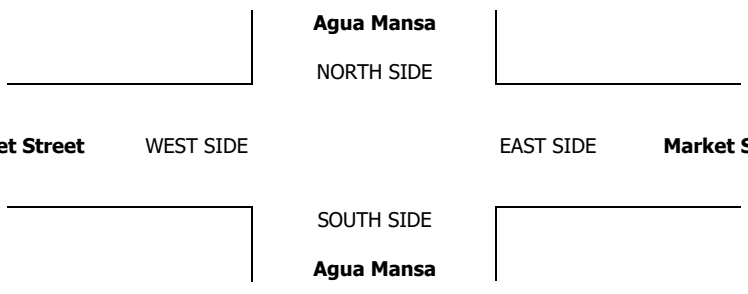
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



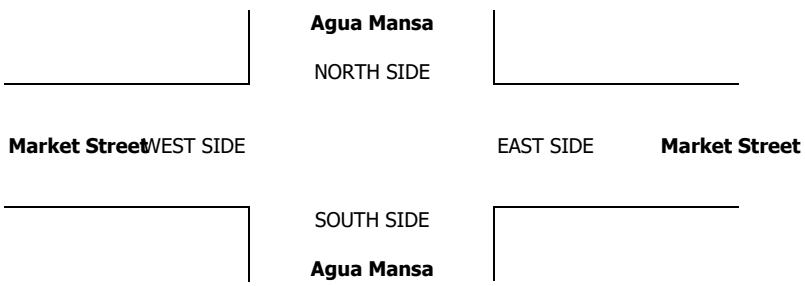
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Agua Mansa	LOCATION #:	10
WEDNESDAY	EAST & WEST:	Market Street	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market Street			WESTBOUND Market Street				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	1	0	0	0	2	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%						
	APP/DEPART	0	/	1	0	/	0	1	/	0	2	/	2	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	1	0	0	0	1	0	2					
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.250		0.500					
	APP/DEPART	0	/	1	0	/	0	1	/	0	1	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Market
EAST & WEST: Hall

PROJECT #: SC1321
LOCATION #: 16
CONTROL: STOP E

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

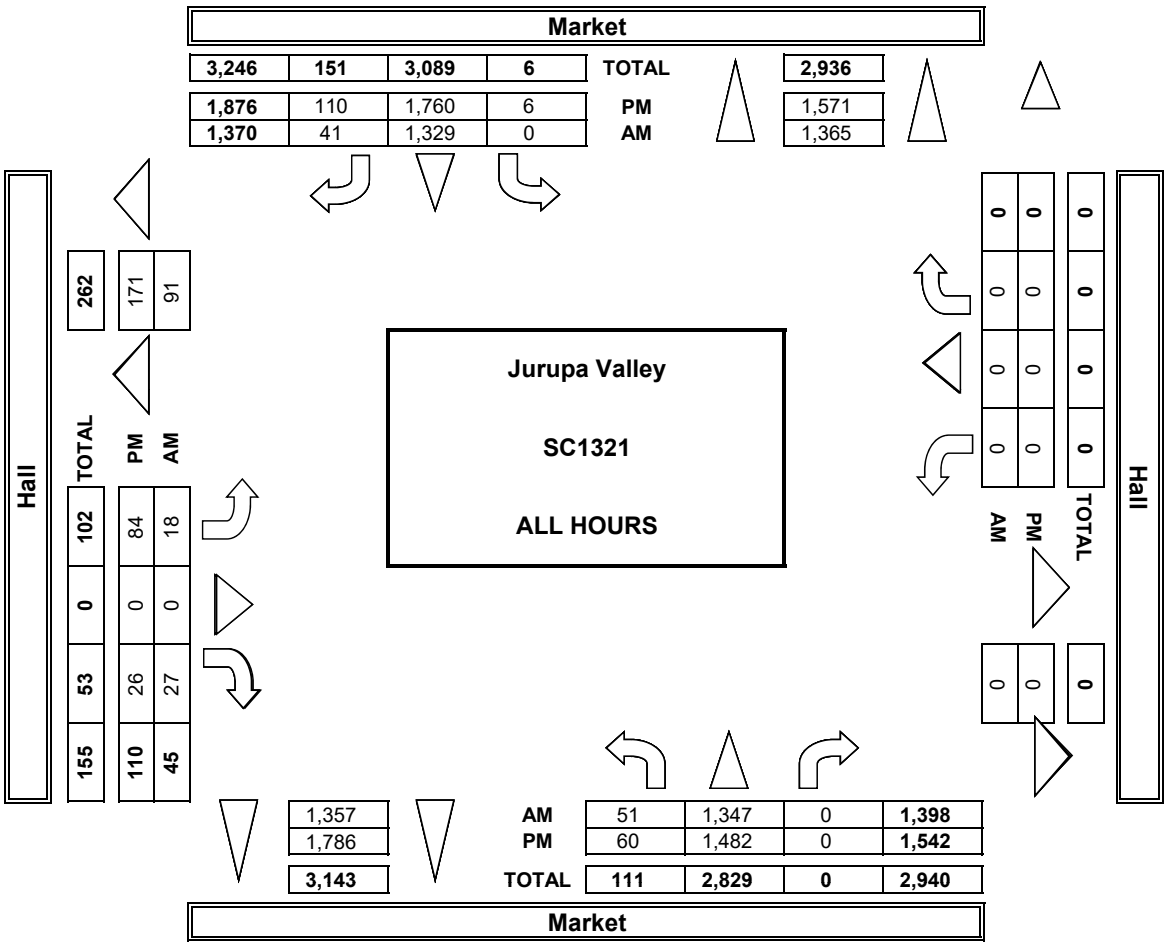
		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	4	140	0	0	83	6	2	0	1	0	0	0	236	0	0	0	0	0
	6:45 AM	6	146	0	0	114	4	2	0	1	0	0	0	273	0	0	0	0	0
	7:00 AM	3	125	0	0	106	2	1	0	0	0	0	0	237	1	0	0	0	1
	7:15 AM	1	110	0	0	121	5	1	0	2	0	0	0	240	0	0	0	0	0
	7:30 AM	4	108	0	0	134	3	2	0	2	0	0	0	253	0	0	0	0	0
	7:45 AM	2	120	0	0	137	8	2	0	5	0	0	0	274	0	0	0	0	0
	8:00 AM	4	111	0	0	124	3	2	0	1	0	0	0	245	0	0	0	0	0
	8:15 AM	6	106	0	0	101	1	3	0	3	0	0	0	220	0	0	0	0	0
	8:30 AM	3	97	0	0	108	3	0	0	3	0	0	0	214	0	0	0	0	0
	8:45 AM	5	114	0	0	111	1	0	0	5	0	0	0	236	0	0	0	0	0
	9:00 AM	7	92	0	0	81	5	3	0	3	0	0	0	191	0	0	0	0	0
	9:15 AM	6	78	0	0	109	0	0	0	1	0	0	0	194	0	0	0	0	0
	VOLUMES	51	1,347	0	0	1,329	41	18	0	27	0	0	0	2,813	1	0	0	0	1
	APPROACH %	4%	96%	0%	0%	97%	3%	40%	0%	60%	0%	0%	0%						
	APP/DEPART	1,398	/	1,365	1,370	/	1,357	45	/	0	0	/	91	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	11	449	0	0	516	19	7	0	10	0	0	0	1,012					
	APPROACH %	2%	98%	0%	0%	96%	4%	41%	0%	59%	0%	0%	0%						
	PEAK HR FACTOR		0.943			0.922			0.607			0.000		0.923					
	APP/DEPART	460	/	456	535	/	526	17	/	0	0	/	30	0					
PM	03:30 PM	6	111	0	1	149	4	6	0	4	0	0	0	281	0	1	0	0	1
	3:45 PM	3	131	0	1	151	11	10	0	1	0	0	0	308	0	1	0	0	1
	4:00 PM	11	123	0	1	149	17	10	0	7	0	0	0	318	0	1	1	0	2
	4:15 PM	7	135	0	0	171	14	11	0	2	0	0	0	340	0	0	0	0	0
	4:30 PM	2	129	0	0	162	13	12	0	3	0	0	0	321	0	0	0	0	0
	4:45 PM	5	130	0	1	190	15	5	0	2	0	0	0	348	0	1	0	0	1
	5:00 PM	4	140	0	2	161	8	5	0	3	0	0	0	323	0	2	0	0	2
	5:15 PM	6	157	0	0	182	10	5	0	0	0	0	0	360	0	0	0	0	0
	5:30 PM	2	131	0	0	122	4	3	0	0	0	0	0	262	0	0	0	0	0
	5:45 PM	5	111	0	0	124	5	6	0	2	0	0	0	253	0	0	0	0	0
	6:00 PM	3	91	0	0	106	5	7	0	0	0	0	0	212	0	0	0	0	0
	6:15 PM	6	93	0	0	93	4	4	0	2	0	0	0	202	0	0	0	0	0
	VOLUMES	60	1,482	0	6	1,760	110	84	0	26	0	0	0	3,528	0	6	1	0	7
	APPROACH %	4%	96%	0%	0%	94%	6%	76%	0%	24%	0%	0%	0%						
	APP/DEPART	1,542	/	1,571	1,876	/	1,786	110	/	0	0	/	171	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	17	556	0	3	695	46	27	0	8	0	0	0	1,352					
	APPROACH %	3%	97%	0%	0%	93%	6%	77%	0%	23%	0%	0%	0%						
	PEAK HR FACTOR		0.879			0.903			0.583			0.000		0.939					
	APP/DEPART	573	/	586	744	/	703	35	/	0	0	/	63	0					

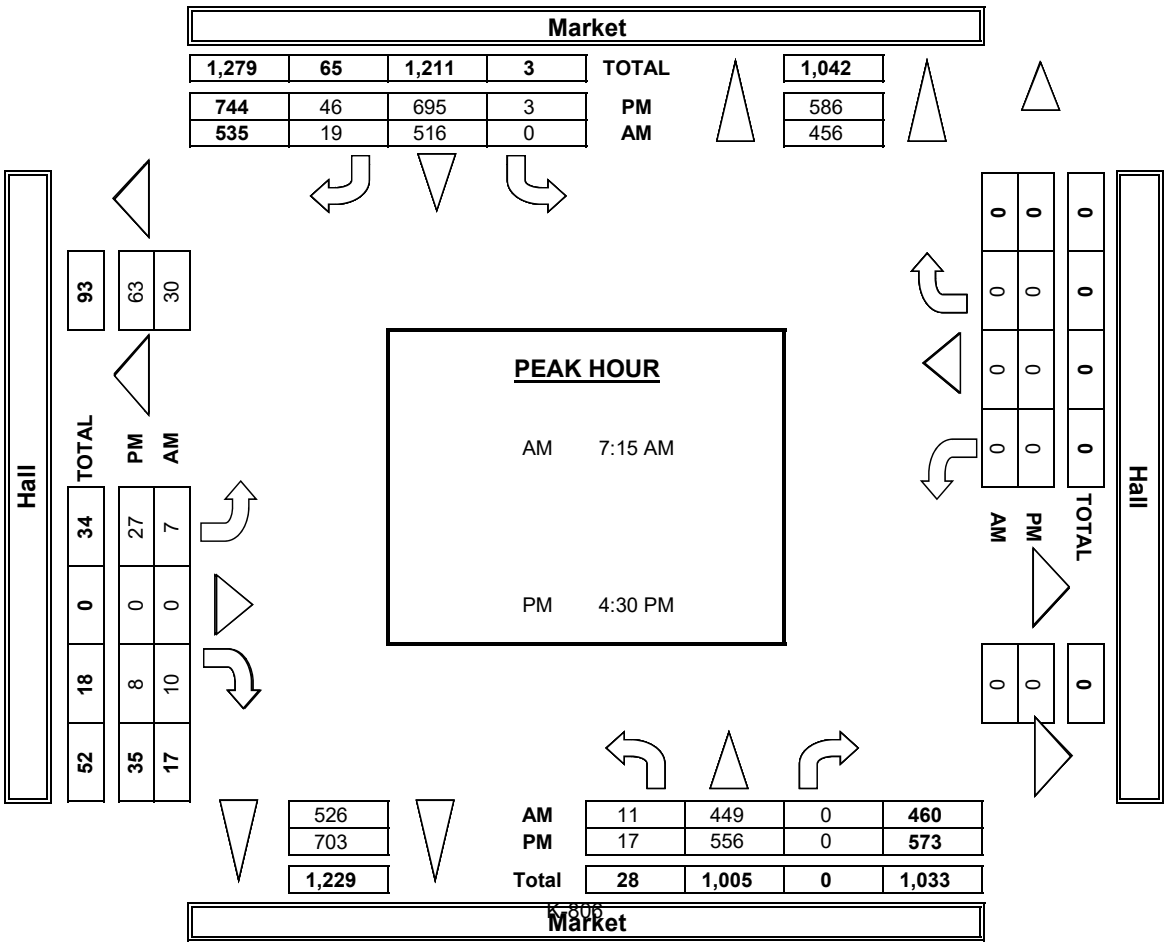


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / S ▼ / E ►	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall			
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL
AM	6:30 AM	5	156	0	0	101	6	2	0	1	0	0	0	271
	6:45 AM	6	175	0	0	142	4	2	0	2	0	0	0	331
	7:00 AM	4	146	0	0	127	3	2	0	0	0	0	0	281
	7:15 AM	1	141	0	0	142	5	2	0	2	0	0	0	292
	7:30 AM	5	124	0	0	158	4	2	0	3	0	0	0	295
	7:45 AM	5	152	0	0	180	10	2	0	7	0	0	0	355
	8:00 AM	8	132	0	0	154	3	3	0	1	0	0	0	300
	8:15 AM	10	131	0	0	131	1	6	0	4	0	0	0	282
	8:30 AM	6	130	0	0	139	4	0	0	8	0	0	0	286
	8:45 AM	9	171	0	0	146	1	0	0	8	0	0	0	334
	9:00 AM	9	129	0	0	106	6	4	0	6	0	0	0	260
	9:15 AM	9	106	0	0	155	0	0	0	3	0	0	0	272
	VOLUMES	76	1,689	0	0	1,681	45	23	0	42	0	0	0	3,556
	APPROACH %	4%	96%	0%	0%	97%	3%	35%	0%	65%	0%	0%	0%	
	APP/DEPART	1,765	/	1,712	1,726	/	1,723	65	/	0	0	/	121	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	19	548	0	0	634	21	8	0	13	0	0	0	1,242
	APPROACH %	3%	97%	0%	0%	97%	3%	39%	0%	61%	0%	0%	0%	
	PEAK HR FACTOR		0.901			0.864			0.603			0.000		0.874
	APP/DEPART	566	/	556	655	/	647	21	/	0	0	/	40	0
PM	03:30 PM	9	145	0	1	182	5	7	0	7	0	0	0	354
	3:45 PM	4	165	0	1	187	13	10	0	1	0	0	0	380
	4:00 PM	12	160	0	1	181	21	13	0	9	0	0	0	396
	4:15 PM	9	159	0	0	212	20	14	0	2	0	0	0	415
	4:30 PM	2	163	0	0	200	16	15	0	3	0	0	0	398
	4:45 PM	6	150	0	1	232	19	5	0	3	0	0	0	415
	5:00 PM	5	168	0	2	196	8	5	0	3	0	0	0	387
	5:15 PM	6	173	0	0	207	11	5	0	0	0	0	0	401
	5:30 PM	3	148	0	0	129	4	3	0	0	0	0	0	287
	5:45 PM	6	127	0	0	140	6	6	0	2	0	0	0	286
	6:00 PM	4	103	0	0	110	5	8	0	0	0	0	0	229
	6:15 PM	6	101	0	0	96	4	4	0	2	0	0	0	212
	VOLUMES	71	1,759	0	6	2,069	130	93	0	32	0	0	0	4,160
	APPROACH %	4%	96%	0%	0%	94%	6%	74%	0%	26%	0%	0%	0%	
	APP/DEPART	1,830	/	1,852	2,205	/	2,101	125	/	6	0	/	201	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	29	631	0	2	824	75	46	0	17	0	0	0	1,624
	APPROACH %	4%	96%	0%	0%	91%	8%	73%	0%	27%	0%	0%	0%	
	PEAK HR FACTOR		0.959			0.896			0.733			0.000		0.978
	APP/DEPART	660	/	677	901	/	841	63	/	2	0	/	104	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

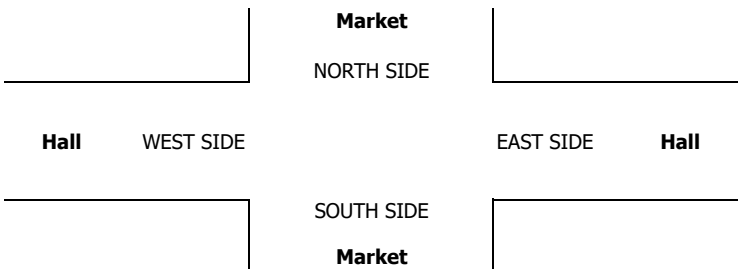
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	3	123	0	0	67	6	2	0	1	0	0	0	202	0	0	0	0	0
	6:45 AM	6	117	0	0	89	4	2	0	0	0	0	0	218	0	0	0	0	0
	7:00 AM	2	109	0	0	86	1	0	0	0	0	0	0	198	1	0	0	0	1
	7:15 AM	1	88	0	0	106	5	0	0	2	0	0	0	202	0	0	0	0	0
	7:30 AM	3	93	0	0	115	2	2	0	1	0	0	0	216	0	0	0	0	0
	7:45 AM	0	97	0	0	108	5	2	0	3	0	0	0	215	0	0	0	0	0
	8:00 AM	2	91	0	0	100	3	1	0	1	0	0	0	198	0	0	0	0	0
	8:15 AM	2	84	0	0	83	1	1	0	2	0	0	0	173	0	0	0	0	0
	8:30 AM	1	73	0	0	81	2	0	0	0	0	0	0	157	0	0	0	0	0
	8:45 AM	3	65	0	0	85	1	0	0	3	0	0	0	157	0	0	0	0	0
	9:00 AM	3	67	0	0	60	3	1	0	1	0	0	0	135	0	0	0	0	0
	9:15 AM	4	53	0	0	75	0	0	0	0	0	0	0	132	0	0	0	0	0
	VOLUMES	30	1,060	0	0	1,055	33	11	0	14	0	0	0	2,203	1	0	0	0	1
	APPROACH %	3%	97%	0%	0%	97%	3%	44%	0%	56%	0%	0%	0%						
	APP/DEPART	1,090	/	1,071	1,088	/	1,070	25	/	0	0	/	62	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	11	407	0	0	396	12	4	0	3	0	0	0	834					
	APPROACH %	3%	97%	0%	0%	97%	3%	57%	0%	43%	0%	0%	0%						
	PEAK HR FACTOR		0.852			0.872			0.583			0.000		0.956					
	APP/DEPART	419	/	411	408	/	400	7	/	0	0	/	23	0					
PM	03:30 PM	3	85	0	1	122	3	5	0	1	0	0	0	220	0	1	0	0	1
	3:45 PM	2	103	0	1	116	10	10	0	1	0	0	0	243	0	1	0	0	1
	4:00 PM	10	95	0	1	122	12	8	0	6	0	0	0	254	0	1	1	0	2
	4:15 PM	5	114	0	0	139	9	8	0	2	0	0	0	277	0	0	0	0	0
	4:30 PM	2	102	0	0	128	11	10	0	3	0	0	0	256	0	0	0	0	0
	4:45 PM	4	110	0	1	155	11	5	0	1	0	0	0	287	0	1	0	0	1
	5:00 PM	3	119	0	2	134	8	5	0	3	0	0	0	274	0	2	0	0	2
	5:15 PM	6	142	0	0	160	9	5	0	0	0	0	0	322	0	0	0	0	0
	5:30 PM	1	112	0	0	115	4	3	0	0	0	0	0	235	0	0	0	0	0
	5:45 PM	4	97	0	0	108	4	6	0	2	0	0	0	221	0	0	0	0	0
	6:00 PM	2	80	0	0	102	5	6	0	0	0	0	0	195	0	0	0	0	0
	6:15 PM	6	83	0	0	91	4	4	0	2	0	0	0	190	0	0	0	0	0
	VOLUMES	48	1,242	0	6	1,492	90	75	0	21	0	0	0	2,974	0	6	1	0	7
	APPROACH %	4%	96%	0%	0%	94%	6%	78%	0%	22%	0%	0%	0%						
	APP/DEPART	1,290	/	1,322	1,588	/	1,513	96	/	0	0	/	139	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	15	473	0	0	577	39	25	0	7	0	0	0	1,139					
	APPROACH %	3%	97%	0%	0%	93%	6%	78%	0%	22%	0%	0%	0%						
	PEAK HR FACTOR		0.824			0.916			0.615			0.000		0.884					
	APP/DEPART	488	/	501	619	/	584	32	/	0	0	/	54	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

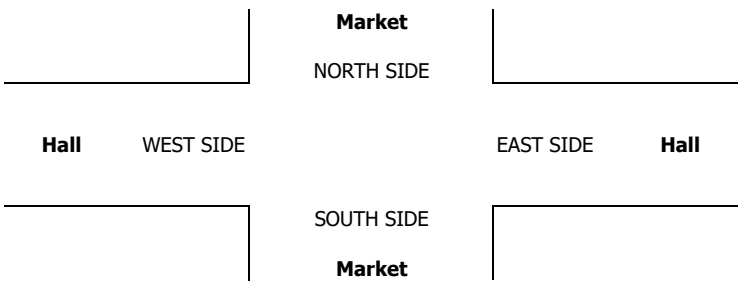
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	9	0	0	6	0	0	0	0	0	0	0	15	0	0	0	0	0
	6:45 AM	0	12	0	0	12	0	0	0	1	0	0	0	25	0	0	0	0	0
	7:00 AM	0	5	0	0	12	1	1	0	0	0	0	0	19	0	0	0	0	0
	7:15 AM	0	7	0	0	4	0	1	0	0	0	0	0	12	0	0	0	0	0
	7:30 AM	1	7	0	0	6	1	0	0	0	0	0	0	15	0	0	0	0	0
	7:45 AM	0	6	0	0	8	3	0	0	1	0	0	0	18	0	0	0	0	0
	8:00 AM	0	9	0	0	10	0	1	0	0	0	0	0	20	0	0	0	0	0
	8:15 AM	2	7	0	0	2	0	1	0	1	0	0	0	13	0	0	0	0	0
	8:30 AM	0	7	0	0	12	1	0	0	1	0	0	0	21	0	0	0	0	0
	8:45 AM	0	15	0	0	8	0	0	0	1	0	0	0	24	0	0	0	0	0
	9:00 AM	4	4	0	0	8	2	2	0	1	0	0	0	21	0	0	0	0	0
	9:15 AM	1	10	0	0	7	0	0	0	0	0	0	0	18	0	0	0	0	0
	VOLUMES	8	98	0	0	95	8	6	0	6	0	0	0	221	0	0	0	0	0
	APPROACH %	8%	92%	0%	0%	92%	8%	50%	0%	50%	0%	0%	0%						
	APP/DEPART	106	/	104	103	/	101	12	/	0	0	/	16	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	5	36	0	0	35	3	2	0	3	0	0	0	84					
	APPROACH %	12%	88%	0%	0%	92%	8%	40%	0%	60%	0%	0%	0%						
	PEAK HR FACTOR		0.683			0.731			0.417			0.000		0.875					
	APP/DEPART	41	/	38	38	/	38	5	/	0	0	/	8	0					
PM	03:30 PM	2	5	0	0	11	1	1	0	2	0	0	0	22	0	0	0	0	0
	3:45 PM	0	13	0	0	19	0	0	0	0	0	0	0	32	0	0	0	0	0
	4:00 PM	0	10	0	0	13	4	1	0	0	0	0	0	28	0	0	0	0	0
	4:15 PM	1	9	0	0	10	3	2	0	0	0	0	0	25	0	0	0	0	0
	4:30 PM	0	10	0	0	16	1	1	0	0	0	0	0	28	0	0	0	0	0
	4:45 PM	0	9	0	0	13	0	0	0	0	0	0	0	22	0	0	0	0	0
	5:00 PM	0	6	0	0	10	0	0	0	0	0	0	0	16	0	0	0	0	0
	5:15 PM	0	9	0	0	9	0	0	0	0	0	0	0	18	0	0	0	0	0
	5:30 PM	0	12	0	0	4	0	0	0	0	0	0	0	16	0	0	0	0	0
	5:45 PM	0	7	0	0	8	1	0	0	0	0	0	0	16	0	0	0	0	0
	6:00 PM	1	6	0	0	2	0	1	0	0	0	0	0	10	0	0	0	0	0
	6:15 PM	0	7	0	0	1	0	0	0	0	0	0	0	8	0	0	0	0	0
	VOLUMES	4	103	0	0	116	10	6	0	2	0	0	0	241	0	0	0	0	0
	APPROACH %	4%	96%	0%	0%	92%	8%	75%	0%	25%	0%	0%	0%						
	APP/DEPART	107	/	109	126	/	118	8	/	0	0	/	14	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	1	42	0	0	58	8	4	0	0	0	0	0	113					
	APPROACH %	2%	98%	0%	0%	88%	12%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.827			0.868			0.500			0.000		0.883					
	APP/DEPART	43	/	46	66	/	58	4	/	0	0	/	9	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

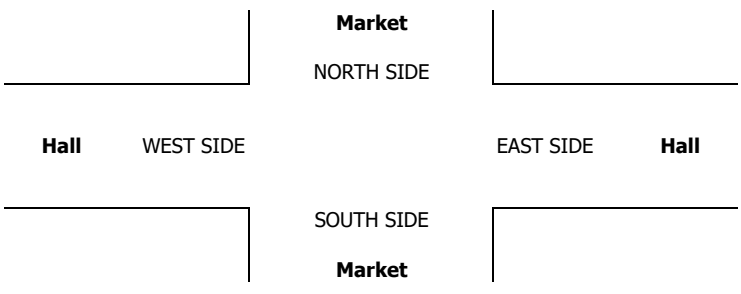
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Hall)			WESTBOUND (Hall)				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0
	6:45 AM	0	10	0	0	4	0	0	0	0	0	0	0	14	0	0	0	0	0
	7:00 AM	1	4	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
	7:15 AM	0	2	0	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0
	7:30 AM	0	4	0	0	5	0	0	0	1	0	0	0	10	0	0	0	0	0
	7:45 AM	0	4	0	0	3	0	0	0	1	0	0	0	8	0	0	0	0	0
	8:00 AM	0	6	0	0	3	0	0	0	0	0	0	0	9	0	0	0	0	0
	8:15 AM	0	9	0	0	3	0	0	0	0	0	0	0	12	0	0	0	0	0
	8:30 AM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0
	8:45 AM	0	19	0	0	5	0	0	0	0	0	0	0	24	0	0	0	0	0
	9:00 AM	0	7	0	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0
	9:15 AM	0	7	0	0	12	0	0	0	0	0	0	0	19	0	0	0	0	0
	VOLUMES	1	80	0	0	53	0	0	0	2	0	0	0	136	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	81	/	80	53	/	55	2	/	0	0	/	1	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	0	37	0	0	27	0	0	0	0	0	0	0	64					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.487			0.563			0.000			0.000		0.667					
	APP/DEPART	37	/	37	27	/	27	0	/	0	0	/	0	0					
PM	03:30 PM	0	11	0	0	4	0	0	0	0	0	0	0	15	0	0	0	0	0
	3:45 PM	0	2	0	0	5	0	0	0	0	0	0	0	7	0	0	0	0	0
	4:00 PM	1	3	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0
	4:15 PM	1	5	0	0	8	0	0	0	0	0	0	0	14	0	0	0	0	0
	4:30 PM	0	5	0	0	6	0	0	0	0	0	0	0	11	0	0	0	0	0
	4:45 PM	1	7	0	0	9	4	0	0	1	0	0	0	22	0	0	0	0	0
	5:00 PM	0	4	0	0	4	0	0	0	0	0	0	0	8	0	0	0	0	0
	5:15 PM	0	1	0	0	6	1	0	0	0	0	0	0	8	0	0	0	0	0
	5:30 PM	1	3	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	5:45 PM	0	1	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0
	6:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	6:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	VOLUMES	4	45	0	0	51	5	0	0	1	0	0	0	106	0	0	0	0	0
	APPROACH %	8%	92%	0%	0%	91%	9%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	49	/	45	56	/	52	1	/	0	0	/	9	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	2	21	0	0	27	4	0	0	1	0	0	0	55					
	APPROACH %	9%	91%	0%	0%	87%	13%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.719			0.596			0.250			0.000		0.625					
	APP/DEPART	23	/	21	31	/	28	1	/	0	0	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

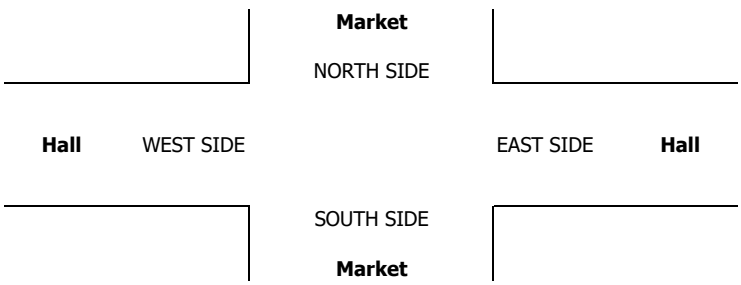
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	3	0	0	5	0	0	0	0	0	0	0	8	0	0	0	0	0
	6:45 AM	0	6	0	0	9	0	0	0	0	0	0	0	15	0	0	0	0	0
	7:00 AM	0	7	0	0	7	0	0	0	0	0	0	0	14	0	0	0	0	0
	7:15 AM	0	12	0	0	8	0	0	0	0	0	0	0	20	0	0	0	0	0
	7:30 AM	0	4	0	0	8	0	0	0	0	0	0	0	12	0	0	0	0	0
	7:45 AM	1	12	0	0	18	0	0	0	0	0	0	0	31	0	0	0	0	0
	8:00 AM	2	5	0	0	11	0	0	0	0	0	0	0	18	0	0	0	0	0
	8:15 AM	1	6	0	0	13	0	1	0	0	0	0	0	21	0	0	0	0	0
	8:30 AM	1	12	0	0	10	0	0	0	2	0	0	0	25	0	0	0	0	0
	8:45 AM	2	15	0	0	13	0	0	0	1	0	0	0	31	0	0	0	0	0
	9:00 AM	0	14	0	0	8	0	0	0	1	0	0	0	23	0	0	0	0	0
	9:15 AM	1	8	0	0	15	0	0	0	1	0	0	0	25	0	0	0	0	0
	VOLUMES	8	104	0	0	125	0	1	0	5	0	0	0	243	0	0	0	0	0
	APPROACH %	7%	93%	0%	0%	100%	0%	17%	0%	83%	0%	0%	0%						
	APP/DEPART	112	/	105	125	/	130	6	/	0	0	/	8	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	4	49	0	0	46	0	0	0	5	0	0	0	104					
	APPROACH %	8%	92%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.779			0.767			0.625			0.000		0.839					
	APP/DEPART	53	/	49	46	/	51	5	/	0	0	/	4	0					
PM	03:30 PM	1	10	0	0	11	0	0	0	1	0	0	0	23	0	0	0	0	0
	3:45 PM	0	12	0	0	10	1	0	0	0	0	0	0	23	0	0	0	0	0
	4:00 PM	0	14	0	0	11	1	1	0	1	0	0	0	28	0	0	0	0	0
	4:15 PM	0	7	0	0	14	2	1	0	0	0	0	0	24	0	0	0	0	0
	4:30 PM	0	12	0	0	12	1	1	0	0	0	0	0	26	0	0	0	0	0
	4:45 PM	0	4	0	0	13	0	0	0	0	0	0	0	17	0	0	0	0	0
	5:00 PM	0	10	0	0	13	0	0	0	0	0	0	0	23	0	0	0	0	0
	5:15 PM	0	5	0	0	7	0	0	0	0	0	0	0	12	0	0	0	0	0
	5:30 PM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
	5:45 PM	0	5	0	0	4	0	0	0	0	0	0	0	9	0	0	0	0	0
	6:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	6:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	VOLUMES	1	88	0	0	99	5	3	0	2	0	0	0	198	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	95%	5%	60%	0%	40%	0%	0%	0%						
	APP/DEPART	89	/	91	104	/	101	5	/	0	0	/	6	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	0	45	0	0	47	5	3	0	1	0	0	0	101					
	APPROACH %	0%	100%	0%	0%	90%	10%	75%	0%	25%	0%	0%	0%						
	PEAK HR FACTOR		0.804			0.813			0.500			0.000		0.902					
	APP/DEPART	45	/	48	52	/	48	4	/	0	0	/	5	0					



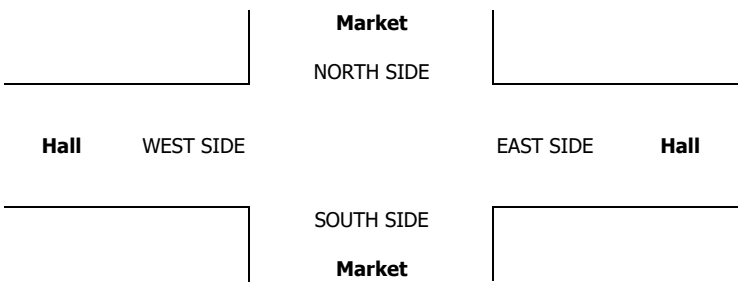
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 5:	NOTES:	AM / PM / MD / OTHER / OTHER
RV		▲ N ◄ W E ► S ▼

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Hall)			WESTBOUND (Hall)				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.250			0.000			0.000		0.500					
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.250			0.000			0.000		0.500					
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

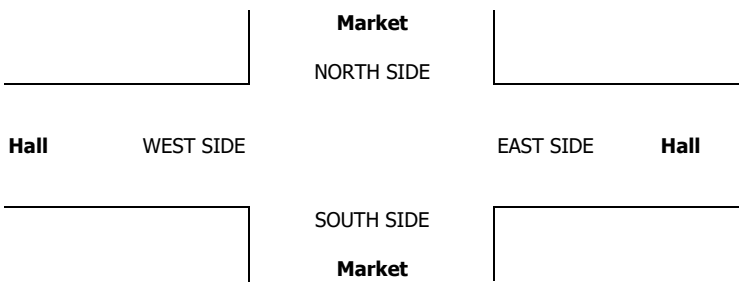
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	16
THURSDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	4	4	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0
	APPROACH %	50%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	8	/	4	0	/	0	0	/	0	0	/	4	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	3	2	0	0	0	0	0	0	0	0	0	0	5					
	APPROACH %	60%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.625			0.000			0.000			0.000		0.625					
	APP/DEPART	5	/	2	0	/	0	0	/	0	0	/	3	0					
PM	03:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	3:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	3	3	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0
	APPROACH %	50%	50%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	6	/	3	1	/	1	0	/	0	0	/	3	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	2	2	0	0	0	0	0	0	0	0	0	0	4					
	APPROACH %	50%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.000			0.000			0.000		0.500					
	APP/DEPART	4	/	2	0	/	0	0	/	0	0	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 23, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Market
EAST & WEST: Hall

PROJECT #: SC1439
LOCATION #: 17
CONTROL: STOP E

NOTES:

AM
PM
MD
OTHER
OTHER

N ▲ | ◄ W | E ► | S ▼



		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	5	99	0	0	97	3	2	0	4	0	0	0	210	0	0	0	0	0
	12:15 PM	6	85	0	0	72	3	3	0	2	0	0	0	171	0	0	0	0	0
	12:30 PM	4	91	0	0	97	2	4	0	3	0	0	0	201	1	0	0	0	1
	12:45 PM	3	90	0	0	70	1	2	1	3	0	0	0	170	0	0	0	0	0
	1:00 PM	3	71	0	0	69	1	4	0	4	0	0	0	152	0	0	0	0	0
	1:15 PM	3	83	0	0	90	5	5	0	0	0	0	0	186	0	0	0	0	0
	1:30 PM	8	92	0	0	86	10	5	0	6	0	0	0	207	0	0	0	0	0
	1:45 PM	12	101	0	0	90	3	0	0	3	0	0	0	209	0	0	0	0	0
	VOLUMES	44	712	0	0	671	28	25	1	25	0	0	0	1,506	1	0	0	0	1
	APPROACH %	6%	94%	0%	0%	96%	4%	49%	2%	49%	0%	0%	0%						
	APP/DEPART	756	/	737	699	/	697	51	/	1	0	/	71	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	26	347	0	0	335	19	14	0	13	0	0	0	754					
	APPROACH %	7%	93%	0%	0%	95%	5%	52%	0%	48%	0%	0%	0%						
	PEAK HR FACTOR		0.825			0.922			0.614			0.000		0.902					
	APP/DEPART	373	/	361	354	/	348	27	/	0	0	/	45	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Market

NORTH SIDE

Hall WEST SIDE EAST SIDE **Hall**

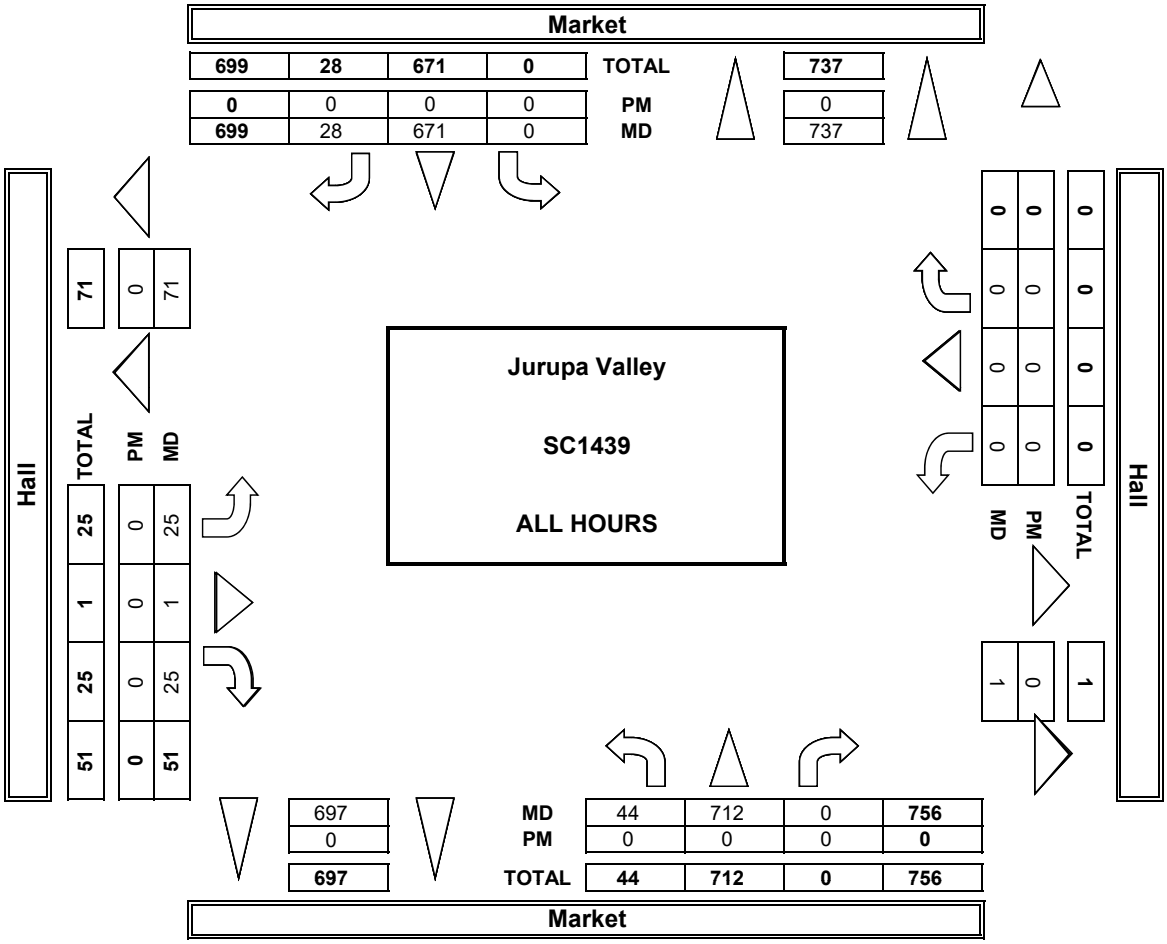
SOUTH SIDE

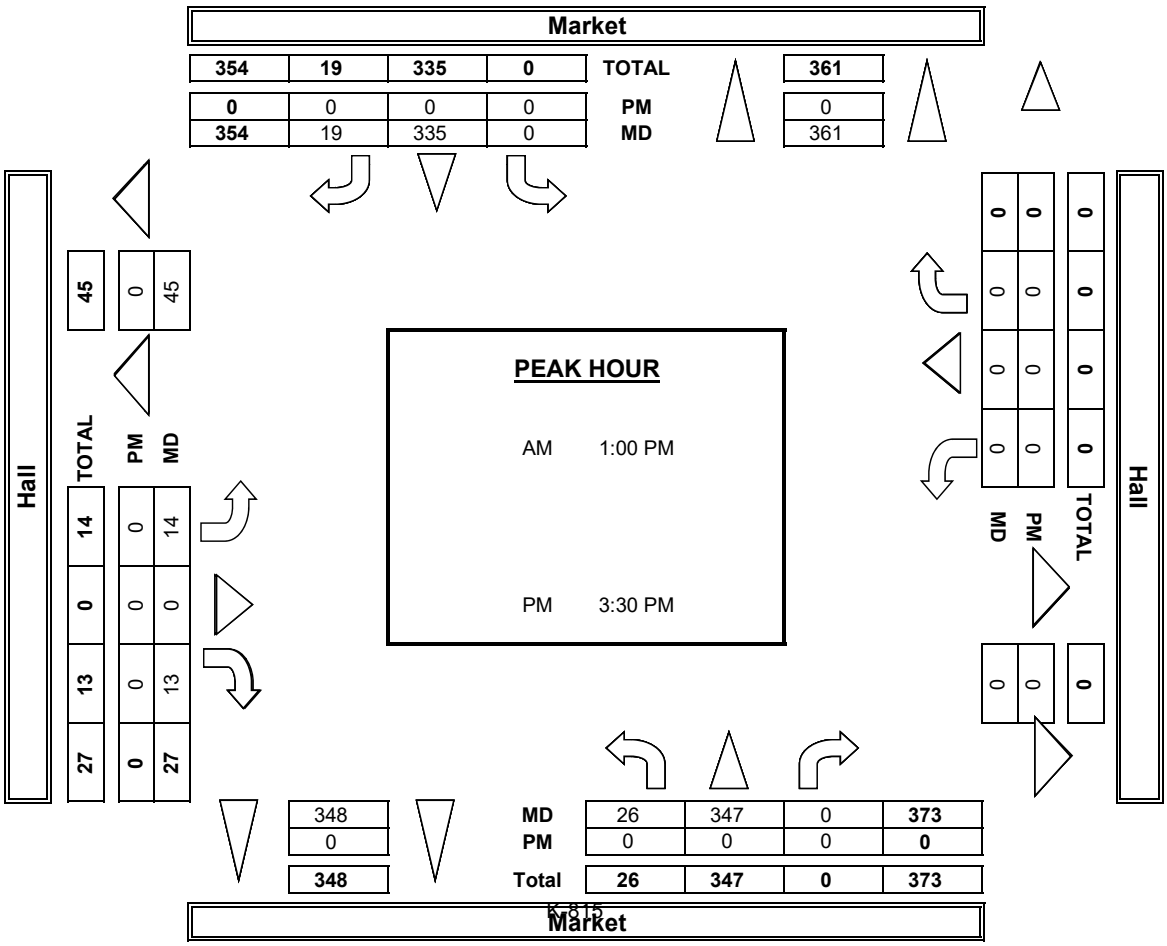
Market

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Hall)			WESTBOUND (Hall)			
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL
MD	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	7	161	0	0	127	3	2	0	7	0	0	0	306
	8:15 AM	6	111	0	0	94	4	3	0	4	0	0	0	221
	8:30 AM	6	119	0	0	122	3	5	0	6	0	0	0	259
	8:45 AM	3	117	0	0	98	2	3	1	9	0	0	0	232
	9:00 AM	3	97	0	0	94	3	4	0	10	0	0	0	211
	9:15 AM	5	115	0	0	121	8	5	0	0	0	0	0	254
	9:30 AM	13	117	0	0	110	12	5	0	13	0	0	0	269
	9:45 AM	18	144	0	0	109	3	0	0	5	0	0	0	279
	VOLUMES	60	980	0	0	872	37	27	1	53	0	0	0	2,030
	APPROACH %	6%	94%	0%	0%	96%	4%	33%	1%	65%	0%	0%	0%	
	APP/DEPART	1,040	/	1,007	909	/	925	81	/	1	0	/	97	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	22	507	0	0	439	11	13	1	26	0	0	0	1,018
	APPROACH %	4%	96%	0%	0%	98%	2%	33%	3%	65%	0%	0%	0%	
	PEAK HR FACTOR		0.786			0.869			0.760			0.000		0.832
	APP/DEPART	529	/	520	450	/	465	40	/	1	0	/	33	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

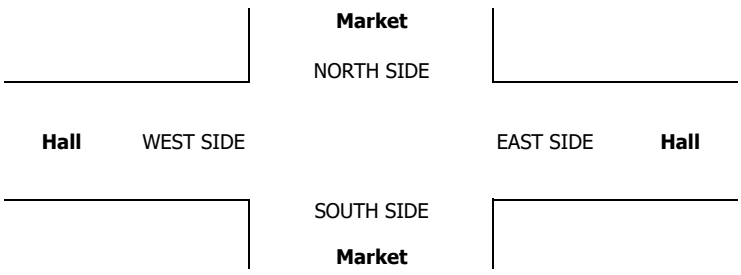
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Hall)			WESTBOUND (Hall)				U-TURNS				
LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	4	60	0	0	75	3	2	0	2	0	0	0	146	0	0	0	0	0
12:15 PM	6	65	0	0	58	2	3	0	1	0	0	0	135	0	0	0	0	0
12:30 PM	2	70	0	0	79	1	2	0	1	0	0	0	155	1	0	0	0	1
12:45 PM	3	69	0	0	51	0	1	1	0	0	0	0	125	0	0	0	0	0
1:00 PM	3	54	0	0	50	0	4	0	1	0	0	0	112	0	0	0	0	0
1:15 PM	2	59	0	0	67	3	5	0	0	0	0	0	136	0	0	0	0	0
1:30 PM	5	68	0	0	67	7	5	0	2	0	0	0	154	0	0	0	0	0
1:45 PM	8	71	0	0	72	3	0	0	2	0	0	0	156	0	0	0	0	0
VOLUMES	33	516	0	0	519	19	22	1	9	0	0	0	1,119	1	0	0	0	1
APPROACH %	6%	94%	0%	0%	96%	4%	69%	3%	28%	0%	0%	0%						
APP/DEPART	549	/	538	538	/	529	32	/	1	0	/	51	0					
BEGIN PEAK HR		12:00 PM																
VOLUMES	14	264	0	0	263	6	8	1	4	0	0	0	561					
APPROACH %	5%	95%	0%	0%	98%	2%	62%	8%	31%	0%	0%	0%						
PEAK HR FACTOR		0.969			0.841			0.813			0.000		0.905					
APP/DEPART	279	/	272	269	/	268	13	/	1	0	/	20	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

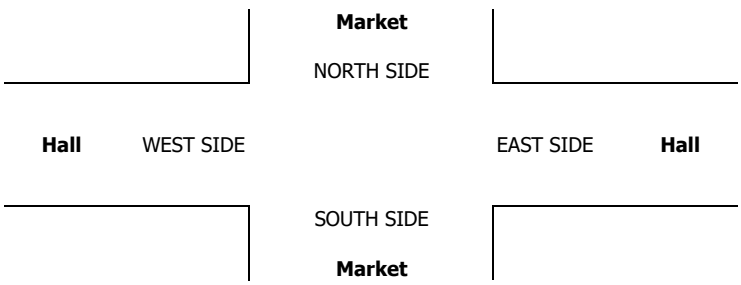
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	6	0	0	5	0	0	0	1	0	0	0	12	0	0	0	0	0
	12:15 PM	0	4	0	0	1	1	0	0	0	0	0	0	6	0	0	0	0	0
	12:30 PM	1	5	0	0	3	1	2	0	0	0	0	0	12	0	0	0	0	0
	12:45 PM	0	5	0	0	5	0	0	0	0	0	0	0	10	0	0	0	0	0
	1:00 PM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0
	1:15 PM	0	6	0	0	5	0	0	0	0	0	0	0	11	0	0	0	0	0
	1:30 PM	0	9	0	0	8	2	0	0	1	0	0	0	20	0	0	0	0	0
	1:45 PM	1	4	0	0	8	0	0	0	0	0	0	0	13	0	0	0	0	0
	VOLUMES	2	43	0	0	40	4	2	0	2	0	0	0	93	0	0	0	0	0
	APPROACH %	4%	96%	0%	0%	91%	9%	50%	0%	50%	0%	0%	0%						
	APP/DEPART	45	/	45	44	/	42	4	/	0	0	/	6	0					
	BEGIN PEAK HR		1:00 PM																
	VOLUMES	1	23	0	0	26	2	0	0	1	0	0	0	53					
	APPROACH %	4%	96%	0%	0%	93%	7%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.667			0.700			0.250			0.000		0.663					
	APP/DEPART	24	/	23	28	/	27	1	/	0	0	/	3	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

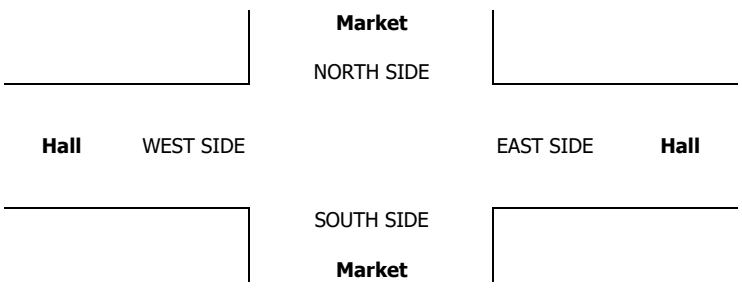
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	7	0	0	7	0	0	0	0	0	0	0	14	0	0	0	0	0
	12:15 PM	0	8	0	0	5	0	0	0	0	0	0	0	13	0	0	0	0	0
	12:30 PM	0	6	0	0	7	0	0	0	1	0	0	0	14	0	0	0	0	0
	12:45 PM	0	8	0	0	3	1	1	0	0	0	0	0	13	0	0	0	0	0
	1:00 PM	0	2	0	0	6	0	0	0	0	0	0	0	8	0	0	0	0	0
	1:15 PM	0	7	0	0	8	1	0	0	0	0	0	0	16	0	0	0	0	0
	1:30 PM	0	9	0	0	2	1	0	0	0	0	0	0	12	0	0	0	0	0
	1:45 PM	0	11	0	0	5	0	0	0	0	0	0	0	16	0	0	0	0	0
	VOLUMES	0	58	0	0	43	3	1	0	1	0	0	0	106	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	93%	7%	50%	0%	50%	0%	0%	0%						
	APP/DEPART	58	/	59	46	/	44	2	/	0	0	/	3	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	29	0	0	22	1	1	0	1	0	0	0	54					
	APPROACH %	0%	100%	0%	0%	96%	4%	50%	0%	50%	0%	0%	0%						
	PEAK HR FACTOR		0.906			0.821			0.500			0.000		0.964					
	APP/DEPART	29	/	30	23	/	23	2	/	0	0	/	1	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

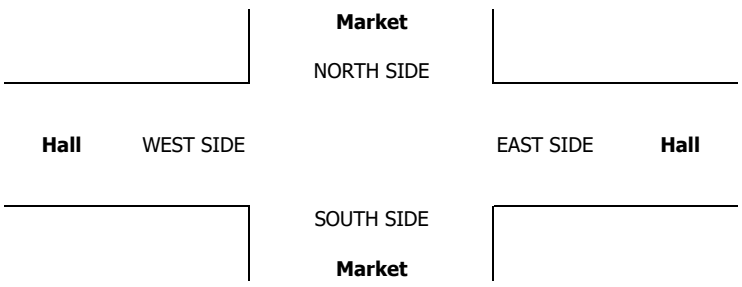
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Hall			WESTBOUND Hall				U-TURNS				
LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	26	0	0	10	0	0	0	1	0	0	0	38	0	0	0	0	0
12:15 PM	0	8	0	0	8	0	0	0	1	0	0	0	17	0	0	0	0	0
12:30 PM	0	9	0	0	8	0	0	0	1	0	0	0	18	0	0	0	0	0
12:45 PM	0	8	0	0	11	0	0	0	3	0	0	0	22	0	0	0	0	0
1:00 PM	0	11	0	0	8	1	0	0	3	0	0	0	23	0	0	0	0	0
1:15 PM	1	11	0	0	10	1	0	0	0	0	0	0	23	0	0	0	0	0
1:30 PM	2	5	0	0	9	0	0	0	3	0	0	0	19	0	0	0	0	0
1:45 PM	2	15	0	0	5	0	0	0	1	0	0	0	23	0	0	0	0	0
VOLUMES	6	93	0	0	69	2	0	0	13	0	0	0	183	0	0	0	0	0
APPROACH %	6%	94%	0%	0%	97%	3%	0%	0%	100%	0%	0%	0%						
APP/DEPART	99	/	93	71	/	82	13	/	0	0	/	8	0					
BEGIN PEAK HR		12:00 PM																
VOLUMES	1	51	0	0	37	0	0	0	6	0	0	0	95					
APPROACH %	2%	98%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
PEAK HR FACTOR		0.481			0.841			0.500			0.000		0.625					
APP/DEPART	52	/	51	37	/	43	6	/	0	0	/	1	0					
PM																		
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:30 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

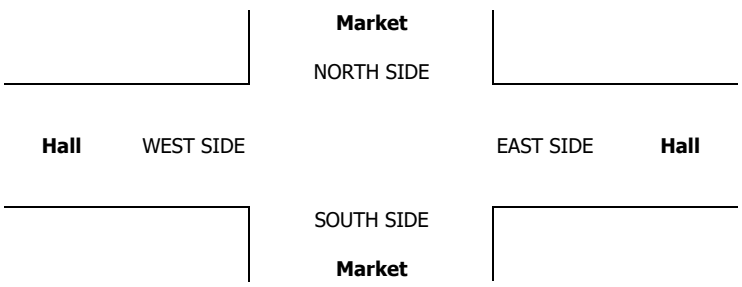
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Hall)			WESTBOUND (Hall)				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

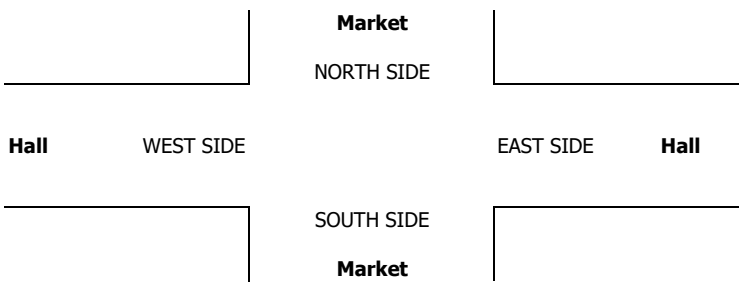
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1439
8/23/17	NORTH & SOUTH:	Market	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Hall	CONTROL:	STOP E

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Hall)			WESTBOUND (Hall)			
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	2
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	2
	1:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
	VOLUMES	3	2	0	0	0	0	0	0	0	0	0	0	5
	APPROACH %	60%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	5	/	2	0	/	0	0	/	0	0	/	3	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	2	1	0	0	0	0	0	0	0	0	0	0	3
	APPROACH %	67%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.375			0.000			0.000			0.000		0.375
	APP/DEPART	3	/	1	0	/	0	0	/	0	0	/	2	0
PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Market
EAST & WEST: Rivera

PROJECT #: SC1321
LOCATION #: 24
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

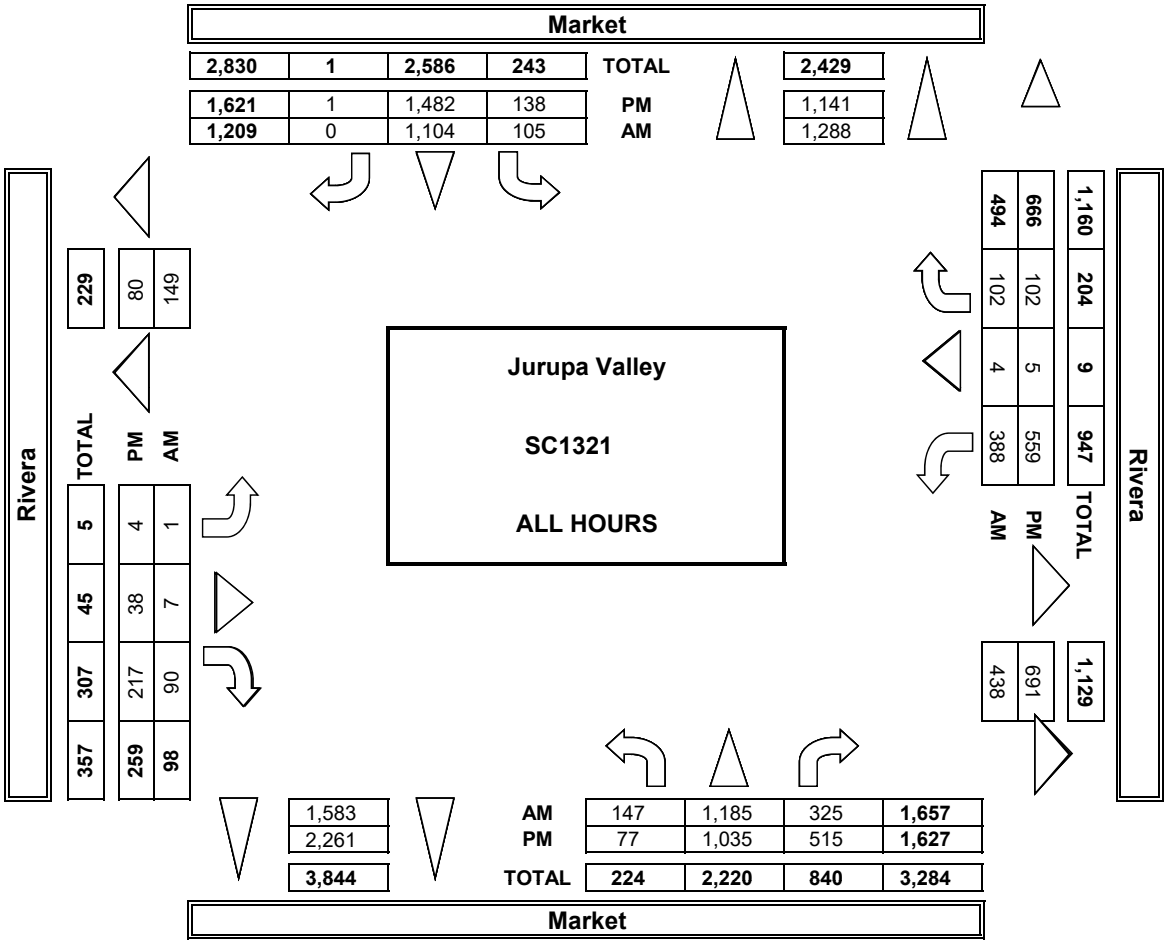
		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	23	145	27	12	125	0	0	0	7	38	0	9	386	0	0	0	0	0
	7:15 AM	25	135	22	11	142	0	0	2	14	53	0	10	414	0	0	0	0	0
	7:30 AM	10	154	37	13	148	0	0	2	23	54	0	19	460	0	0	0	0	0
	7:45 AM	13	196	47	15	165	0	0	0	18	45	2	15	516	1	0	0	0	1
	8:00 AM	23	152	54	11	152	0	1	1	10	37	0	9	450	0	0	0	1	1
	8:15 AM	16	154	38	14	128	0	0	0	11	46	2	13	422	1	0	0	0	1
	8:30 AM	21	113	49	14	132	0	0	0	5	57	0	12	403	0	0	0	0	0
	8:45 AM	16	136	51	15	112	0	0	2	2	58	0	15	407	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	147	1,185	325	105	1,104	0	1	7	90	388	4	102	3,458	2	0	0	1	3
	APPROACH %	9%	72%	20%	9%	91%	0%	1%	7%	92%	79%	1%	21%						
	APP/DEPART	1,657	/	1,288	1,209	/	1,583	98	/	438	494	/	149	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	62	656	176	53	593	0	1	3	62	182	4	56	1,848					
	APPROACH %	7%	73%	20%	8%	92%	0%	2%	5%	94%	75%	2%	23%						
	PEAK HR FACTOR		0.873			0.897			0.660			0.829		0.895					
	APP/DEPART	894	/	713	646	/	838	66	/	233	242	/	64	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	4	144	52	16	206	0	0	0	26	54	0	12	514	0	0	0	0	0
	4:15 PM	10	135	71	18	193	0	0	4	31	59	0	13	534	0	0	0	0	0
	4:30 PM	12	119	63	22	245	0	1	3	47	77	0	14	603	1	0	0	0	1
	4:45 PM	14	126	74	19	170	0	0	6	27	79	3	12	530	0	0	0	0	0
	5:00 PM	10	131	67	21	172	0	2	7	29	97	2	11	549	2	0	0	0	2
	5:15 PM	12	141	68	14	167	1	0	5	25	78	0	15	526	0	0	0	0	0
	5:30 PM	10	118	63	17	184	0	1	9	21	60	0	14	497	0	0	0	0	0
	5:45 PM	5	121	57	11	145	0	0	4	11	55	0	11	420	0	0	0	0	0
	VOLUMES	77	1,035	515	138	1,482	1	4	38	217	559	5	102	4,173	3	0	0	0	3
	APPROACH %	5%	64%	32%	9%	91%	0%	2%	15%	84%	84%	1%	15%						
	APP/DEPART	1,627	/	1,141	1,621	/	2,261	259	/	691	666	/	80	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	46	511	275	80	780	0	3	20	134	312	5	50	2,216					
	APPROACH %	6%	61%	33%	9%	91%	0%	2%	13%	85%	85%	1%	14%						
	PEAK HR FACTOR		0.963			0.805			0.770			0.834		0.919					
	APP/DEPART	832	/	564	860	/	1,229	157	/	375	367	/	48	0					

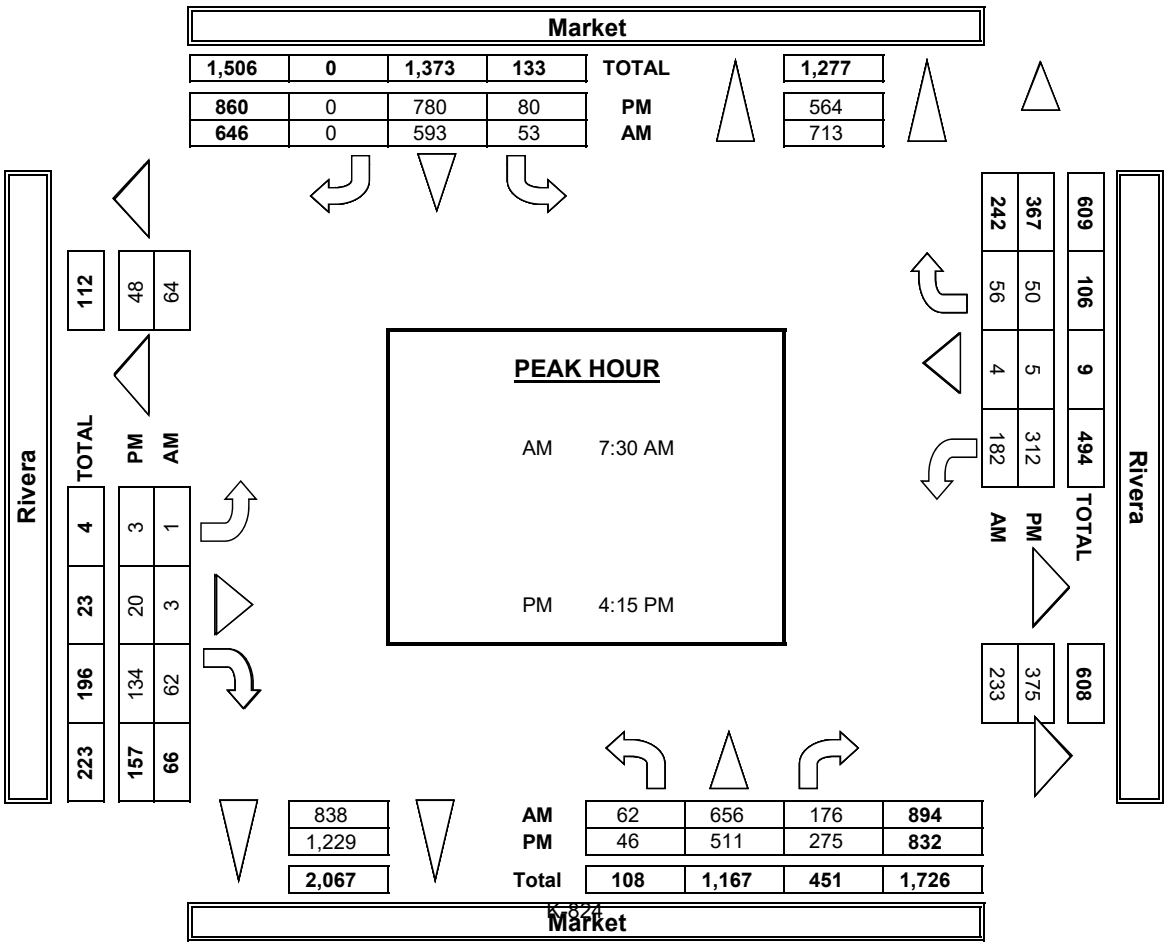


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL
AM	7:00 AM	23	178	28	12	143	0	0	0	10	39	0	10	442
	7:15 AM	26	168	23	11	188	0	0	3	17	58	0	10	502
	7:30 AM	10	178	38	14	181	0	0	2	28	58	0	21	528
	7:45 AM	14	234	47	15	210	0	0	0	24	47	2	15	607
	8:00 AM	24	179	55	12	186	0	2	1	13	37	0	10	517
	8:15 AM	16	199	38	15	162	0	0	0	15	47	2	14	506
	8:30 AM	21	155	50	14	170	0	0	0	8	58	0	12	486
	8:45 AM	16	189	52	15	147	0	0	2	2	58	0	16	495
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	149	1,479	329	107	1,385	0	2	8	115	400	4	107	4,082
	APPROACH %	8%	76%	17%	7%	93%	0%	1%	6%	93%	78%	1%	21%	
	APP/DEPART	1,957	/	1,587	1,491	/	1,899	124	/	443	511	/	153	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	63	790	178	55	738	0	2	3	79	188	4	59	2,157
	APPROACH %	6%	77%	17%	7%	93%	0%	2%	4%	95%	75%	2%	24%	
	PEAK HR FACTOR		0.874			0.881			0.696			0.799		0.888
	APP/DEPART	1,030	/	850	793	/	1,005	84	/	235	251	/	67	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	4	175	54	16	226	0	0	0	26	55	0	13	568
	4:15 PM	10	173	72	19	215	0	0	4	32	61	0	14	598
	4:30 PM	13	150	64	22	261	0	1	3	48	78	0	15	653
	4:45 PM	14	159	75	20	186	0	0	6	27	81	3	14	584
	5:00 PM	10	151	67	21	185	0	2	7	31	98	2	12	585
	5:15 PM	13	153	71	15	182	1	0	5	26	79	0	15	557
	5:30 PM	10	137	64	18	195	0	1	9	22	60	0	14	529
	5:45 PM	5	137	58	12	164	0	0	4	11	56	0	12	457
	VOLUMES	78	1,232	523	141	1,612	1	4	38	222	566	5	107	4,529
	APPROACH %	4%	67%	29%	8%	92%	0%	2%	14%	84%	83%	1%	16%	
	APP/DEPART	1,833	/	1,343	1,754	/	2,400	264	/	702	678	/	84	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	47	632	278	81	847	0	3	20	138	317	5	54	2,419
	APPROACH %	5%	66%	29%	9%	91%	0%	2%	12%	86%	84%	1%	14%	
	PEAK HR FACTOR		0.940			0.819			0.779			0.841		0.927
	APP/DEPART	956	/	688	928	/	1,301	161	/	379	375	/	52	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

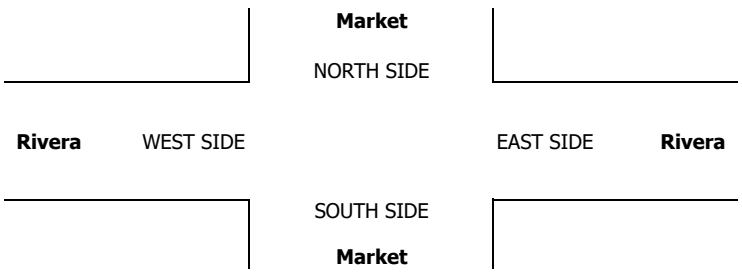
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	23	124	25	12	111	0	0	0	3	36	0	8	342	0	0	0	0	0
7:15 AM	23	111	21	11	108	0	0	1	11	46	0	10	342	0	0	0	0	0
7:30 AM	10	133	36	12	125	0	0	2	15	48	0	17	398	0	0	0	0	0
7:45 AM	12	169	47	15	138	0	0	0	10	41	2	15	449	1	0	0	0	1
8:00 AM	22	129	53	10	130	0	0	1	5	37	0	8	395	0	0	0	1	1
8:15 AM	16	112	38	13	103	0	0	0	7	45	2	12	348	1	0	0	0	1
8:30 AM	21	79	48	14	108	0	0	0	3	56	0	12	341	0	0	0	0	0
8:45 AM	16	96	50	15	91	0	0	2	2	58	0	14	344	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	143	953	318	102	914	0	0	6	56	367	4	96	2,959	2	0	0	1	3
APPROACH %	10%	67%	22%	10%	90%	0%	0%	10%	90%	79%	1%	21%						
APP/DEPART	1,414	/	1,049	1,016	/	1,338	62	/	427	467	/	145	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	58	543	174	50	496	0	0	3	37	170	4	52	1,590					
APPROACH %	7%	70%	22%	9%	91%	0%	0%	8%	93%	75%	2%	23%						
PEAK HR FACTOR		0.852			0.892			0.588			0.873		0.885					
APP/DEPART	777	/	595	546	/	705	40	/	228	227	/	62	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4	116	49	16	193	0	0	0	26	52	0	10	466	0	0	0	0	0
4:15 PM	10	103	70	17	176	0	0	4	29	56	0	12	477	0	0	0	0	0
4:30 PM	11	94	61	22	233	0	1	3	46	76	0	13	560	1	0	0	0	1
4:45 PM	14	97	73	18	157	0	0	6	27	77	3	9	481	0	0	0	0	0
5:00 PM	10	114	67	21	163	0	2	7	27	96	2	10	519	2	0	0	0	2
5:15 PM	11	132	65	12	157	1	0	5	24	77	0	15	499	0	0	0	0	0
5:30 PM	10	100	62	16	174	0	1	9	20	60	0	14	466	0	0	0	0	0
5:45 PM	5	104	56	10	132	0	0	4	11	54	0	10	386	0	0	0	0	0
VOLUMES	75	860	503	132	1,385	1	4	38	210	548	5	93	3,854	3	0	0	0	3
APPROACH %	5%	60%	35%	9%	91%	0%	2%	15%	83%	85%	1%	14%						
APP/DEPART	1,438	/	957	1,518	/	2,146	252	/	673	646	/	78	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	43	437	266	73	710	1	3	21	124	326	5	47	2,059					
APPROACH %	6%	58%	36%	9%	91%	0%	2%	14%	84%	86%	1%	12%						
PEAK HR FACTOR		0.900			0.769			0.740			0.875		0.919					
APP/DEPART	749	/	487	784	/	1,163	148	/	360	378	/	49	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

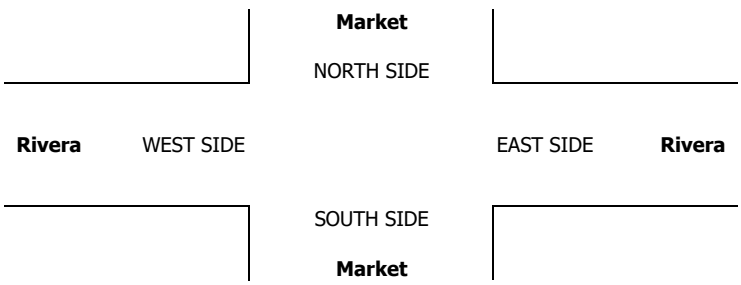
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	1	2	0	4	0	0	0	3	2	0	0	12	0	0	0	0	0
7:15 AM	2	6	1	0	9	0	0	1	1	5	0	0	25	0	0	0	0	0
7:30 AM	0	5	1	1	7	0	0	0	6	5	0	0	25	0	0	0	0	0
7:45 AM	1	4	0	0	2	0	0	0	5	4	0	0	16	0	0	0	0	0
8:00 AM	1	8	0	1	5	0	1	0	4	0	0	1	21	0	0	0	0	0
8:15 AM	0	16	0	1	6	0	0	0	3	1	0	1	28	0	0	0	0	0
8:30 AM	0	12	1	0	3	0	0	0	1	1	0	0	18	0	0	0	0	0
8:45 AM	0	7	1	0	1	0	0	0	0	0	0	1	10	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	4	59	6	3	37	0	1	1	23	18	0	3	155	0	0	0	0	0
APPROACH %	6%	86%	9%	8%	93%	0%	4%	4%	92%	86%	0%	14%						
APP/DEPART	69	/	63	40	/	78	25	/	10	21	/	4	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	2	33	1	3	20	0	1	0	18	10	0	2	90					
APPROACH %	6%	92%	3%	13%	87%	0%	5%	0%	95%	83%	0%	17%						
PEAK HR FACTOR		0.563			0.719			0.792			0.600		0.804					
APP/DEPART	36	/	36	23	/	48	19	/	4	12	/	2	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	14	3	0	1	0	0	0	0	2	0	2	22	0	0	0	0	0
4:15 PM	0	9	1	1	4	0	0	0	2	3	0	0	20	0	0	0	0	0
4:30 PM	1	3	2	0	2	0	0	0	1	1	0	1	11	0	0	0	0	0
4:45 PM	0	10	0	1	4	0	0	0	0	1	0	3	19	0	0	0	0	0
5:00 PM	0	7	0	0	3	0	0	0	0	0	0	1	11	0	0	0	0	0
5:15 PM	1	1	1	2	1	0	0	0	1	1	0	0	8	0	0	0	0	0
5:30 PM	0	9	0	1	5	0	0	0	0	0	0	0	15	0	0	0	0	0
5:45 PM	0	9	1	1	2	0	0	0	0	1	0	1	15	0	0	0	0	0
VOLUMES	2	62	8	6	22	0	0	0	4	9	0	8	121	0	0	0	0	0
APPROACH %	3%	86%	11%	21%	79%	0%	0%	0%	100%	53%	0%	47%						
APP/DEPART	72	/	70	28	/	35	4	/	14	17	/	2	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	1	36	6	2	11	0	0	0	3	7	0	6	72					
APPROACH %	2%	84%	14%	15%	85%	0%	0%	0%	100%	54%	0%	46%						
PEAK HR FACTOR		0.632			0.650			0.375			0.813		0.818					
APP/DEPART	43	/	42	13	/	21	3	/	8	13	/	1	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

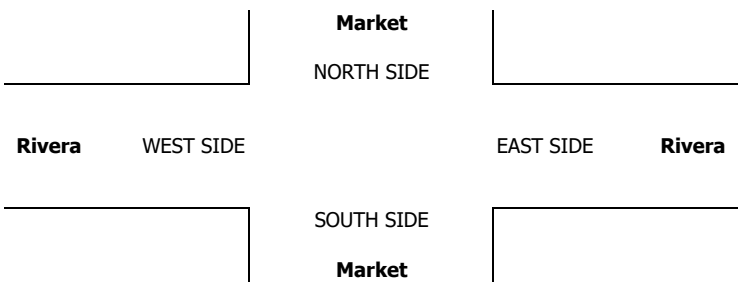
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	8	0	0	2	0	0	0	1	0	0	1	12	0	0	0	0	0
7:15 AM	0	4	0	0	8	0	0	0	2	2	0	0	16	0	0	0	0	0
7:30 AM	0	10	0	0	3	0	0	0	2	1	0	2	18	0	0	0	0	0
7:45 AM	0	9	0	0	6	0	0	0	3	0	0	0	18	0	0	0	0	0
8:00 AM	0	5	1	0	3	0	0	0	1	0	0	0	10	0	0	0	0	0
8:15 AM	0	12	0	0	5	0	0	0	0	0	0	0	17	0	0	0	0	0
8:30 AM	0	6	0	0	5	0	0	0	0	0	0	0	11	0	0	0	0	0
8:45 AM	0	17	0	0	6	0	0	0	0	0	0	0	23	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	71	1	0	38	0	0	0	9	3	0	3	125	0	0	0	0	0
APPROACH %	0%	99%	1%	0%	100%	0%	0%	0%	100%	50%	0%	50%						
APP/DEPART	72	/	74	38	/	50	9	/	1	6	/	0	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	31	0	0	19	0	0	0	8	3	0	3	64					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	50%	0%	50%						
PEAK HR FACTOR		0.775			0.594			0.667			0.500		0.889					
APP/DEPART	31	/	34	19	/	30	8	/	0	6	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0
4:15 PM	0	12	0	0	6	0	0	0	0	0	0	1	19	0	0	0	0	0
4:30 PM	0	15	0	0	3	0	0	0	0	0	0	0	18	0	0	0	0	0
4:45 PM	0	10	0	0	4	0	0	0	0	0	0	0	14	0	0	0	0	0
5:00 PM	0	4	0	0	1	0	0	0	2	1	0	0	8	0	0	0	0	0
5:15 PM	0	5	0	0	4	0	0	0	0	0	0	0	9	0	0	0	0	0
5:30 PM	0	4	0	0	1	0	0	0	1	0	0	0	6	0	0	0	0	0
5:45 PM	0	4	0	0	4	0	0	0	0	0	0	0	8	0	0	0	0	0
VOLUMES	0	58	0	0	28	0	0	0	3	1	0	1	91	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	50%	0%	50%						
APP/DEPART	58	/	59	28	/	32	3	/	0	2	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	41	0	0	18	0	0	0	0	0	0	1	60					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.683			0.750			0.000			0.250		0.789					
APP/DEPART	41	/	42	18	/	18	0	/	0	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

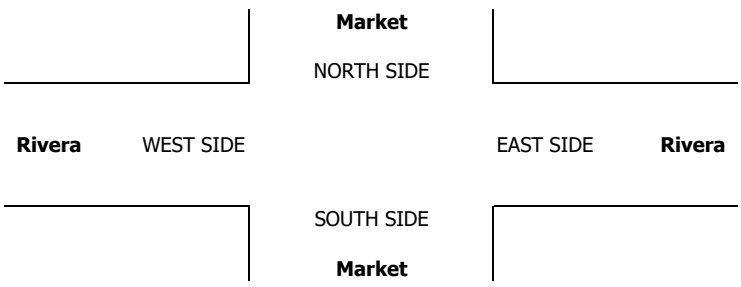
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	12	0	0	6	0	0	0	0	0	0	0	18	0	0	0	0	0
	7:15 AM	0	12	0	0	16	0	0	0	0	0	0	0	28	0	0	0	0	0
	7:30 AM	0	5	0	0	13	0	0	0	0	0	0	0	18	0	0	0	0	0
	7:45 AM	0	13	0	0	19	0	0	0	0	0	0	0	32	0	0	0	0	0
	8:00 AM	0	8	0	0	14	0	0	0	0	0	0	0	22	0	0	0	0	0
	8:15 AM	0	11	0	0	12	0	0	0	1	0	0	0	24	0	0	0	0	0
	8:30 AM	0	14	0	0	15	0	0	0	1	0	0	0	30	0	0	0	0	0
	8:45 AM	0	16	0	0	14	0	0	0	0	0	0	0	30	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	91	0	0	109	0	0	0	2	0	0	0	202	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	91	/	91	109	/	111	2	/	0	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	46	0	0	60	0	0	0	2	0	0	0	108					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.821			0.789			0.500			0.000		0.844					
	APP/DEPART	46	/	46	60	/	62	2	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	10	0	0	7	0	0	0	0	0	0	0	17	0	0	0	0	0
	4:15 PM	0	10	0	0	7	0	0	0	0	0	0	0	17	0	0	0	0	0
	4:30 PM	0	7	0	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0
	4:45 PM	0	9	0	0	5	0	0	0	0	0	0	0	14	0	0	0	0	0
	5:00 PM	0	6	0	0	5	0	0	0	0	0	0	0	11	0	0	0	0	0
	5:15 PM	0	3	0	0	5	0	0	0	0	0	0	0	8	0	0	0	0	0
	5:30 PM	0	5	0	0	3	0	0	0	0	0	0	0	8	0	0	0	0	0
	5:45 PM	0	3	0	0	7	0	0	0	0	0	0	0	10	0	0	0	0	0
	VOLUMES	0	53	0	0	44	0	0	0	0	0	0	0	97	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	53	/	53	44	/	44	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	36	0	0	24	0	0	0	0	0	0	0	60					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.900			0.857			0.000			0.000		0.882					
	APP/DEPART	36	/	36	24	/	24	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

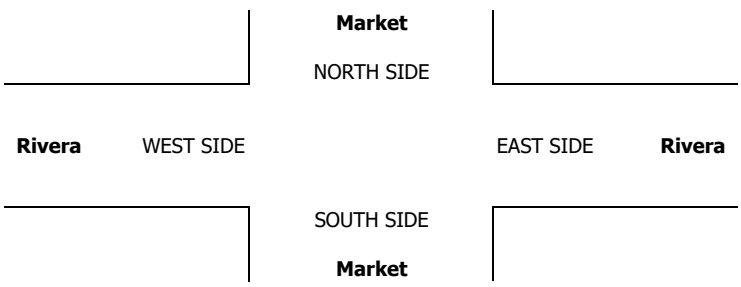
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (Rivera)			WESTBOUND (Rivera)				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

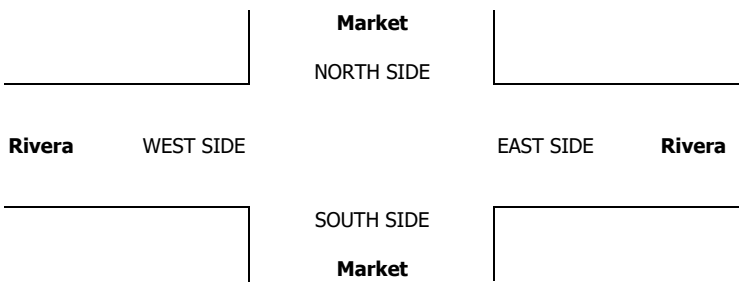
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	24
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:30 AM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	10	0	0	6	0	0	0	0	0	0	0	16	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	10	/	10	6	/	6	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	7	0	0	3	0	0	0	0	0	0	0	10					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.875			0.375			0.000			0.000		0.625					
	APP/DEPART	7	/	7	3	/	3	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	4	0	2	0	0	0	0	1	0	0	9	0	0	0	0	0
	APPROACH %	0%	33%	67%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	APP/DEPART	6	/	2	2	/	3	0	/	4	1	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	4	0	1	0	0	0	0	1	0	0	6					
	APPROACH %	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.500			0.250			0.000			0.250		0.750					
	APP/DEPART	4	/	0	1	/	2	0	/	4	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Market
EAST & WEST: SR-60 WB Ramps

PROJECT #: SC1321
LOCATION #: 25
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER



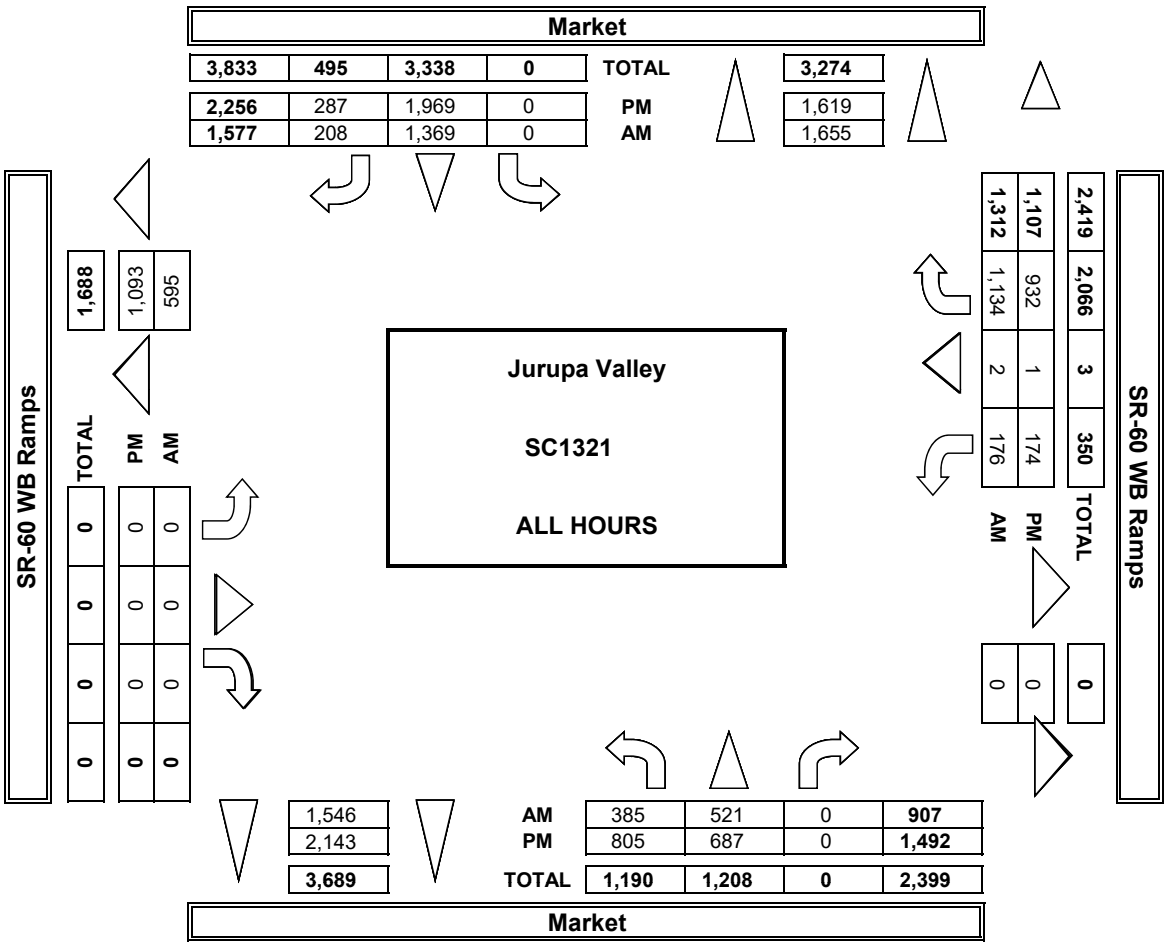
	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	54	59	0	0	154	17	0	0	0	18	1	136	439	0	0	0	0	0
7:15 AM	51	69	0	0	176	34	0	0	0	25	0	113	468	0	0	0	0	0
7:30 AM	54	72	0	0	196	30	0	0	0	23	0	127	502	0	0	0	0	0
7:45 AM	62	73	0	0	219	29	0	0	0	21	0	184	588	1	0	0	0	1
8:00 AM	47	62	0	0	180	26	0	0	0	27	0	157	499	0	0	0	0	0
8:15 AM	42	77	0	0	158	27	0	0	0	27	0	140	471	0	0	0	0	0
8:30 AM	40	49	0	0	146	29	0	0	0	13	1	134	412	0	0	0	0	0
8:45 AM	35	60	0	0	140	16	0	0	0	22	0	143	416	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	385	521	0	0	1,369	208	0	0	0	176	2	1,134	3,796	1	0	0	0	1
APPROACH %	42%	57%	0%	0%	87%	13%	0%	0%	0%	13%	0%	86%						
APP/DEPART	907	/	1,655	1,577	/	1,546	0	/	0	1,312	/	595	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	205	284	0	0	753	112	0	0	0	98	0	608	2,061					
APPROACH %	42%	58%	0%	0%	87%	13%	0%	0%	0%	14%	0%	86%						
PEAK HR FACTOR		0.901			0.872			0.000			0.861		0.875					
APP/DEPART	490	/	892	865	/	852	0	/	0	706	/	317	0					
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	76	76	0	0	245	40	0	0	0	22	0	122	581	0	0	0	0	0
4:15 PM	71	86	0	0	249	32	0	0	0	26	0	129	593	0	0	0	0	0
4:30 PM	97	54	0	0	334	34	0	0	0	22	0	138	679	0	0	0	0	0
4:45 PM	106	92	0	0	231	43	0	0	0	26	0	120	618	0	0	0	0	0
5:00 PM	135	102	0	0	254	47	0	0	0	21	0	104	663	0	0	0	0	0
5:15 PM	125	92	0	0	232	39	0	0	0	16	0	129	633	0	0	0	0	0
5:30 PM	116	91	0	0	236	28	0	0	0	19	1	100	591	0	0	0	0	0
5:45 PM	79	94	0	0	188	24	0	0	0	22	0	90	497	0	0	0	0	0
VOLUMES	805	687	0	0	1,969	287	0	0	0	174	1	932	4,855	0	0	0	0	0
APPROACH %	54%	46%	0%	0%	87%	13%	0%	0%	0%	16%	0%	84%						
APP/DEPART	1,492	/	1,619	2,256	/	2,143	0	/	0	1,107	/	1,093	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	463	340	0	0	1,051	163	0	0	0	85	0	491	2,593					
APPROACH %	58%	42%	0%	0%	87%	13%	0%	0%	0%	15%	0%	85%						
PEAK HR FACTOR		0.847			0.825			0.000			0.900		0.955					
APP/DEPART	803	/	831	1,214	/	1,136	0	/	0	576	/	626	0					

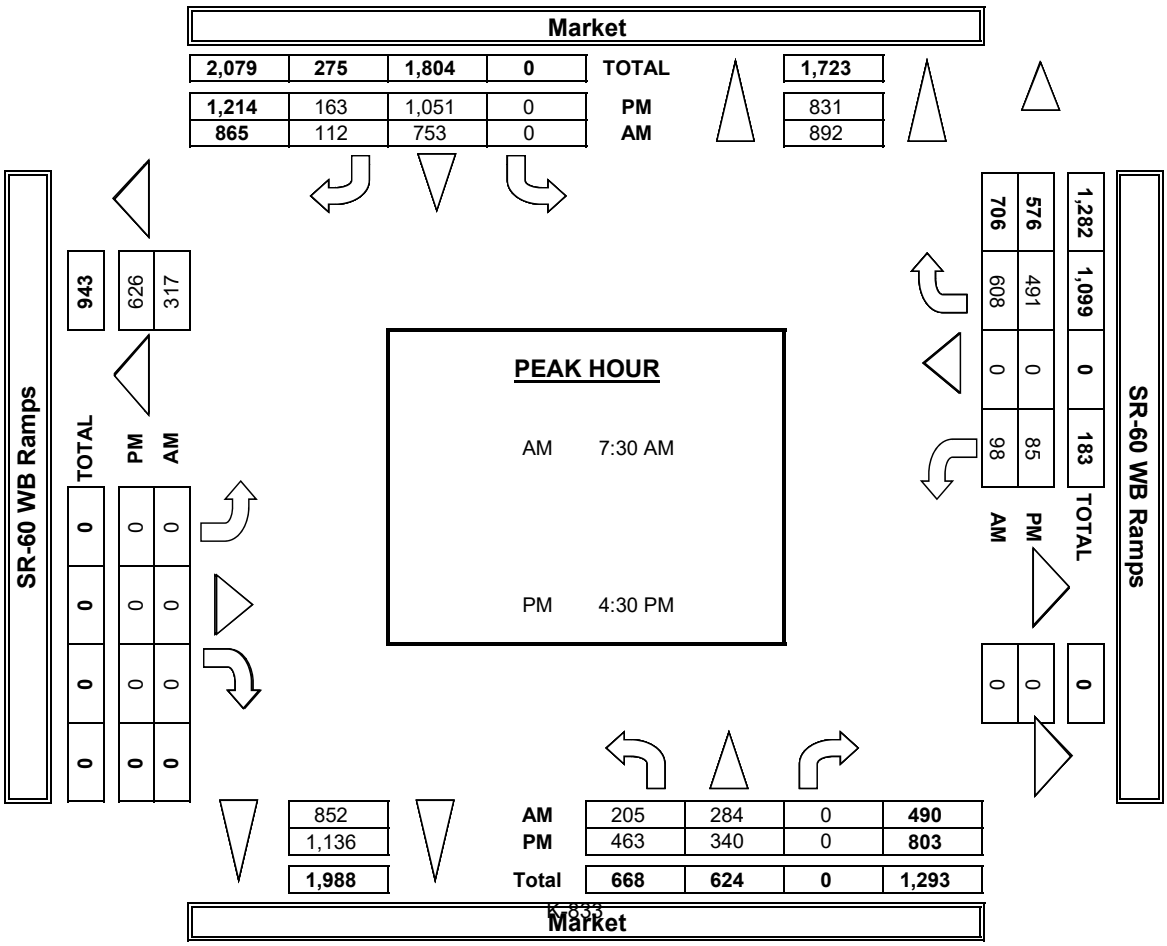


	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





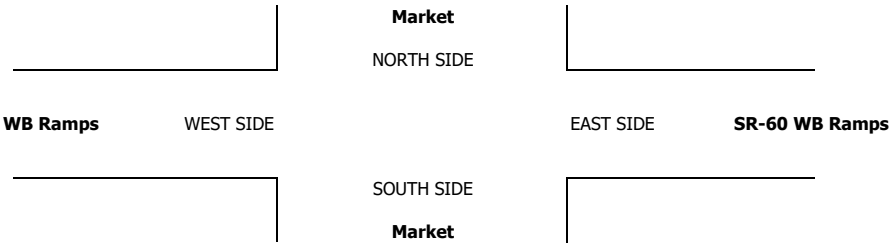
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps			
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL
AM	7:00 AM	56	67	0	0	176	18	0	0	0	20	1	162	500
	7:15 AM	52	79	0	0	214	46	0	0	0	26	0	139	555
	7:30 AM	55	79	0	0	226	42	0	0	0	27	0	145	572
	7:45 AM	63	78	0	0	253	45	0	0	0	23	0	217	678
	8:00 AM	50	70	0	0	211	33	0	0	0	31	0	178	572
	8:15 AM	46	87	0	0	188	31	0	0	0	30	0	176	557
	8:30 AM	46	62	0	0	175	44	0	0	0	13	1	164	503
	8:45 AM	38	71	0	0	171	24	0	0	0	24	0	186	513
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	405	590	0	0	1,613	281	0	0	0	194	2	1,365	4,448
	APPROACH %	41%	59%	0%	0%	85%	15%	0%	0%	0%	12%	0%	87%	
	APP/DEPART	995	/	1,955	1,894	/	1,806	0	/	0	1,560	/	688	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	214	313	0	0	877	151	0	0	0	111	0	715	2,379
	APPROACH %	41%	59%	0%	0%	85%	15%	0%	0%	0%	13%	0%	87%	
	PEAK HR FACTOR		0.939			0.863			0.000			0.859		0.878
	APP/DEPART	526	/	1,027	1,028	/	988	0	/	0	825	/	364	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	80	80	0	0	259	47	0	0	0	22	0	151	638
	4:15 PM	73	93	0	0	270	35	0	0	0	27	0	161	658
	4:30 PM	99	58	0	0	344	41	0	0	0	24	0	167	733
	4:45 PM	107	99	0	0	247	46	0	0	0	27	0	151	675
	5:00 PM	139	104	0	0	263	51	0	0	0	21	0	122	699
	5:15 PM	127	95	0	0	244	45	0	0	0	16	0	139	664
	5:30 PM	117	95	0	0	244	31	0	0	0	19	1	115	621
	5:45 PM	79	97	0	0	197	34	0	0	0	22	0	103	532
	VOLUMES	820	719	0	0	2,067	329	0	0	0	178	1	1,108	5,220
	APPROACH %	53%	47%	0%	0%	86%	14%	0%	0%	0%	14%	0%	86%	
	APP/DEPART	1,538	/	1,826	2,396	/	2,244	0	/	0	1,286	/	1,150	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	471	355	0	0	1,097	183	0	0	0	88	0	579	2,771
	APPROACH %	57%	43%	0%	0%	86%	14%	0%	0%	0%	13%	0%	87%	
	PEAK HR FACTOR		0.851			0.831			0.000			0.872		0.945
	APP/DEPART	826	/	933	1,280	/	1,185	0	/	0	666	/	654	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

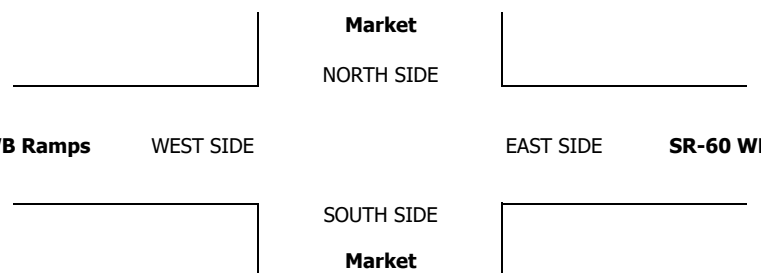
NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps			
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL
7:00 AM	52	53	0	0	132	15	0	0	0	17	1	119	389
7:15 AM	50	59	0	0	149	25	0	0	0	24	0	95	402
7:30 AM	53	66	0	0	172	22	0	0	0	20	0	111	444
7:45 AM	61	68	0	0	192	20	0	0	0	20	0	162	523
8:00 AM	45	54	0	0	159	21	0	0	0	25	0	140	444
8:15 AM	37	64	0	0	135	25	0	0	0	23	0	111	395
8:30 AM	36	39	0	0	122	18	0	0	0	13	1	109	338
8:45 AM	32	51	0	0	116	11	0	0	0	18	0	111	339
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	366	454	0	0	1,177	157	0	0	0	160	2	958	3,275
APPROACH %	45%	55%	0%	0%	88%	12%	0%	0%	0%	14%	0%	86%	
APP/DEPART	821	/	1,412	1,334	/	1,338	0	/	0	1,120	/	525	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	209	247	0	0	672	88	0	0	0	89	0	508	1,814
APPROACH %	46%	54%	0%	0%	88%	12%	0%	0%	0%	15%	0%	85%	
PEAK HR FACTOR		0.879			0.896			0.000			0.820		0.865
APP/DEPART	457	/	755	760	/	762	0	/	0	597	/	297	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	73	71	0	0	233	36	0	0	0	22	0	96	531
4:15 PM	68	79	0	0	231	30	0	0	0	25	0	103	536
4:30 PM	96	50	0	0	324	30	0	0	0	21	0	113	634
4:45 PM	105	86	0	0	217	41	0	0	0	25	0	93	567
5:00 PM	133	99	0	0	247	45	0	0	0	21	0	90	635
5:15 PM	123	89	0	0	222	35	0	0	0	16	0	121	606
5:30 PM	114	87	0	0	228	26	0	0	0	19	1	86	561
5:45 PM	79	89	0	0	180	19	0	0	0	22	0	77	466
VOLUMES	791	650	0	0	1,882	262	0	0	0	171	1	779	4,536
APPROACH %	55%	45%	0%	0%	88%	12%	0%	0%	0%	18%	0%	82%	
APP/DEPART	1,441	/	1,429	2,144	/	2,053	0	/	0	951	/	1,054	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	457	324	0	0	1,010	151	0	0	0	83	0	417	2,442
APPROACH %	59%	41%	0%	0%	87%	13%	0%	0%	0%	17%	0%	83%	
PEAK HR FACTOR		0.842			0.820			0.000			0.912		0.961
APP/DEPART	781	/	741	1,161	/	1,093	0	/	0	500	/	608	0

U-TURNS

	NB	SB	EB	WB	TTL
AM 7:00 AM	0	0	0	0	0
AM 7:15 AM	0	0	0	0	0
AM 7:30 AM	0	0	0	0	0
AM 7:45 AM	1	0	0	0	1
AM 8:00 AM	0	0	0	0	0
AM 8:15 AM	0	0	0	0	0
AM 8:30 AM	0	0	0	0	0
AM 8:45 AM	0	0	0	0	0
AM 9:00 AM	0	0	0	0	0
AM 9:15 AM	0	0	0	0	0
AM 9:30 AM	0	0	0	0	0
AM 9:45 AM	0	0	0	0	0
AM VOLUMES	1	0	0	0	1
PM 03:00 PM	0	0	0	0	0
PM 3:15 PM	0	0	0	0	0
PM 3:30 PM	0	0	0	0	0
PM 3:45 PM	0	0	0	0	0
PM 4:00 PM	0	0	0	0	0
PM 4:15 PM	0	0	0	0	0
PM 4:30 PM	0	0	0	0	0
PM 4:45 PM	0	0	0	0	0
PM 5:00 PM	0	0	0	0	0
PM 5:15 PM	0	0	0	0	0
PM 5:30 PM	0	0	0	0	0
PM 5:45 PM	0	0	0	0	0
PM VOLUMES	0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

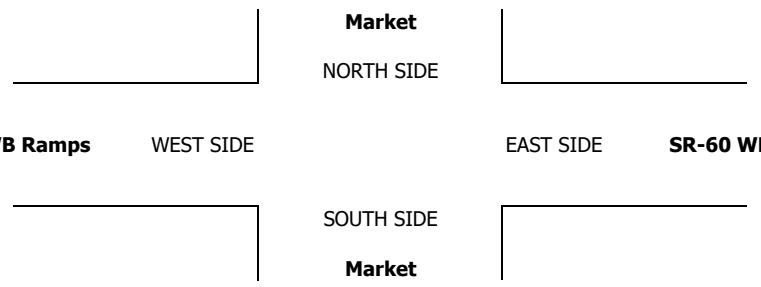
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (SR-60 WB Ramps)			WESTBOUND (SR-60 WB Ramps)				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	1	0	0	12	2	0	0	0	0	0	2	17	0	0	0	0	0
7:15 AM	1	4	0	0	6	3	0	0	0	0	0	5	19	0	0	0	0	0
7:30 AM	0	1	0	0	6	1	0	0	0	1	0	5	14	0	0	0	0	0
7:45 AM	1	3	0	0	11	0	0	0	0	0	0	2	17	0	0	0	0	0
8:00 AM	0	4	0	0	5	0	0	0	0	0	0	5	14	0	0	0	0	0
8:15 AM	4	7	0	0	6	0	0	0	0	2	0	9	28	0	0	0	0	0
8:30 AM	1	3	0	0	11	3	0	0	0	0	0	10	28	0	0	0	0	0
8:45 AM	2	3	0	0	8	1	0	0	0	4	0	5	23	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	9	26	0	0	65	10	0	0	0	7	0	43	160	0	0	0	0	0
APPROACH %	26%	74%	0%	0%	87%	13%	0%	0%	0%	14%	0%	86%						
APP/DEPART	35	/	69	75	/	72	0	/	0	50	/	19	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	7	17	0	0	30	4	0	0	0	6	0	29	93					
APPROACH %	29%	71%	0%	0%	88%	12%	0%	0%	0%	17%	0%	83%						
PEAK HR FACTOR		0.545			0.607			0.000			0.795		0.830					
APP/DEPART	24	/	46	34	/	36	0	/	0	35	/	11	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	3	0	0	4	0	0	0	0	0	0	14	22	0	0	0	0	0
4:15 PM	2	3	0	0	7	0	0	0	0	0	0	7	19	0	0	0	0	0
4:30 PM	0	0	0	0	4	0	0	0	0	0	0	6	10	0	0	0	0	0
4:45 PM	1	3	0	0	4	0	0	0	0	1	0	7	16	0	0	0	0	0
5:00 PM	0	3	0	0	3	0	0	0	0	0	0	4	10	0	0	0	0	0
5:15 PM	1	1	0	0	3	1	0	0	0	0	0	2	8	0	0	0	0	0
5:30 PM	2	2	0	0	4	1	0	0	0	0	0	7	16	0	0	0	0	0
5:45 PM	0	4	0	0	2	0	0	0	0	0	0	6	12	0	0	0	0	0
VOLUMES	7	19	0	0	31	2	0	0	0	1	0	53	113	0	0	0	0	0
APPROACH %	27%	73%	0%	0%	94%	6%	0%	0%	0%	2%	0%	98%						
APP/DEPART	26	/	72	33	/	32	0	/	0	54	/	9	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	4	9	0	0	19	0	0	0	0	1	0	34	67					
APPROACH %	31%	69%	0%	0%	100%	0%	0%	0%	0%	3%	0%	97%						
PEAK HR FACTOR		0.650			0.679			0.000			0.625		0.761					
APP/DEPART	13	/	43	19	/	20	0	/	0	35	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

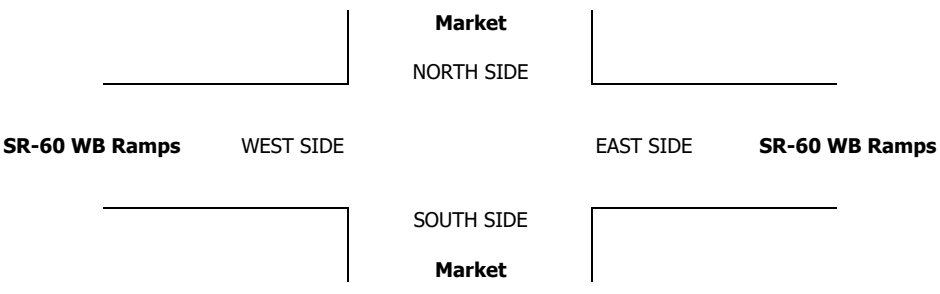
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	1	3	0	0	2	0	0	0	0	0	0	5	11	0	0	0	0	0
7:15 AM	0	1	0	0	6	2	0	0	0	1	0	3	13	0	0	0	0	0
7:30 AM	0	3	0	0	9	3	0	0	0	1	0	7	23	0	0	0	0	0
7:45 AM	0	1	0	0	4	2	0	0	0	0	0	8	15	0	0	0	0	0
8:00 AM	1	2	0	0	4	3	0	0	0	0	0	4	14	0	0	0	0	0
8:15 AM	0	5	0	0	5	0	0	0	0	0	0	7	17	0	0	0	0	0
8:30 AM	0	1	0	0	3	2	0	0	0	0	0	5	11	0	0	0	0	0
8:45 AM	0	3	0	0	5	1	0	0	0	0	0	14	23	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	2	19	0	0	38	13	0	0	0	2	0	53	127	0	0	0	0	0
APPROACH %	10%	90%	0%	0%	75%	25%	0%	0%	0%	4%	0%	96%						
APP/DEPART	21	/	72	51	/	40	0	/	0	55	/	15	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	1	11	0	0	22	8	0	0	0	1	0	26	69					
APPROACH %	8%	92%	0%	0%	73%	27%	0%	0%	0%	4%	0%	96%						
PEAK HR FACTOR		0.600			0.625			0.000			0.844		0.750					
APP/DEPART	12	/	37	30	/	23	0	/	0	27	/	9	0					
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	2	0	0	4	1	0	0	0	0	0	2	9	0	0	0	0	0
4:15 PM	1	3	0	0	5	1	0	0	0	1	0	9	20	0	0	0	0	0
4:30 PM	0	4	0	0	3	0	0	0	0	0	0	12	19	0	0	0	0	0
4:45 PM	0	0	0	0	6	1	0	0	0	0	0	10	17	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	4	5	0	0	0	0	0
5:15 PM	0	2	0	0	4	0	0	0	0	0	0	3	9	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	3	5	0	0	0	0	0
5:45 PM	0	0	0	0	4	0	0	0	0	0	0	4	8	0	0	0	0	0
VOLUMES	1	12	0	0	28	3	0	0	0	1	0	47	92	0	0	0	0	0
APPROACH %	8%	92%	0%	0%	90%	10%	0%	0%	0%	2%	0%	98%						
APP/DEPART	13	/	59	31	/	29	0	/	0	48	/	4	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	1	9	0	0	18	3	0	0	0	1	0	33	65					
APPROACH %	10%	90%	0%	0%	86%	14%	0%	0%	0%	3%	0%	97%						
PEAK HR FACTOR		0.625			0.750			0.000			0.708		0.813					
APP/DEPART	10	/	42	21	/	19	0	/	0	34	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

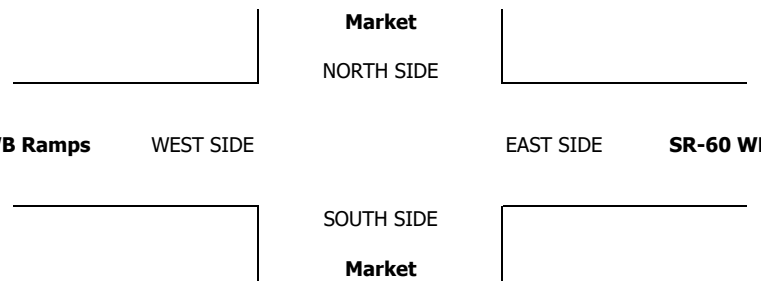
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	0	2	0	0	6	0	0	0	0	1	0	10	19	0	0	0	0	0
7:15 AM	0	2	0	0	14	4	0	0	0	0	0	10	30	0	0	0	0	0
7:30 AM	0	1	0	0	9	4	0	0	0	1	0	4	19	0	0	0	0	0
7:45 AM	0	1	0	0	12	7	0	0	0	1	0	12	33	0	0	0	0	0
8:00 AM	1	2	0	0	12	2	0	0	0	2	0	6	25	0	0	0	0	0
8:15 AM	1	0	0	0	10	2	0	0	0	0	0	11	24	0	0	0	0	0
8:30 AM	2	4	0	0	10	5	0	0	0	0	0	10	31	0	0	0	0	0
8:45 AM	1	3	0	0	11	3	0	0	0	0	0	13	31	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	5	15	0	0	84	27	0	0	0	5	0	76	212	0	0	0	0	0
APPROACH %	25%	75%	0%	0%	76%	24%	0%	0%	0%	6%	0%	94%						
APP/DEPART	20	/	91	111	/	89	0	/	0	81	/	32	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	4	7	0	0	44	16	0	0	0	3	0	39	113					
APPROACH %	36%	64%	0%	0%	73%	27%	0%	0%	0%	7%	0%	93%						
PEAK HR FACTOR		0.458			0.789			0.000			0.808		0.856					
APP/DEPART	11	/	46	60	/	47	0	/	0	42	/	20	0					
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	0	0	0	4	3	0	0	0	0	0	10	18	0	0	0	0	0
4:15 PM	0	1	0	0	6	1	0	0	0	0	0	9	17	0	0	0	0	0
4:30 PM	1	0	0	0	2	3	0	0	0	1	0	7	14	0	0	0	0	0
4:45 PM	0	2	0	0	4	1	0	0	0	0	0	7	14	0	0	0	0	0
5:00 PM	2	0	0	0	3	2	0	0	0	0	0	6	13	0	0	0	0	0
5:15 PM	0	0	0	0	3	2	0	0	0	0	0	3	8	0	0	0	0	0
5:30 PM	0	1	0	0	2	1	0	0	0	0	0	4	8	0	0	0	0	0
5:45 PM	0	0	0	0	2	5	0	0	0	0	0	3	10	0	0	0	0	0
VOLUMES	4	4	0	0	26	18	0	0	0	1	0	49	102	0	0	0	0	0
APPROACH %	50%	50%	0%	0%	59%	41%	0%	0%	0%	2%	0%	98%						
APP/DEPART	8	/	53	44	/	27	0	/	0	50	/	22	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	2	3	0	0	16	8	0	0	0	1	0	33	63					
APPROACH %	40%	60%	0%	0%	67%	33%	0%	0%	0%	3%	0%	97%						
PEAK HR FACTOR		0.625			0.857			0.000			0.850		0.875					
APP/DEPART	5	/	36	24	/	17	0	/	0	34	/	10	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

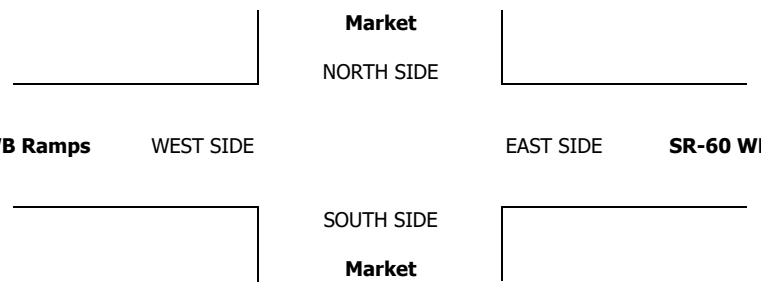
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%						
APP/DEPART	0	/	1	0	/	0	0	/	0	1	/	0	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	1	1					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250					
APP/DEPART	0	/	1	0	/	0	0	/	0	1	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:45 PM																
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					



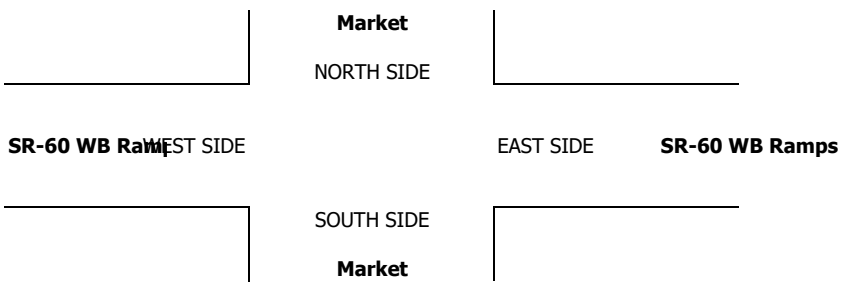
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	1	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
	7:15 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	7:30 AM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0
	8:15 AM	0	1	0	0	2	0	0	0	0	2	0	1	6	0	0	0	0	0
	8:30 AM	1	2	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	3	7	0	0	5	1	0	0	0	2	0	3	21	0	0	0	0	0
	APPROACH %	30%	70%	0%	0%	83%	17%	0%	0%	0%	40%	0%	60%						
	APP/DEPART	10	/	10	6	/	7	0	/	0	5	/	4	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	1	3	0	0	2	1	0	0	0	2	0	3	12					
	APPROACH %	25%	75%	0%	0%	67%	33%	0%	0%	0%	40%	0%	60%						
	PEAK HR FACTOR		0.333			0.375			0.000			0.417		0.500					
	APP/DEPART	4	/	6	3	/	4	0	/	0	5	/	2	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	2	2	0	0	1	2	0	0	0	0	0	4	11	0	0	0	0	0
	APPROACH %	50%	50%	0%	0%	33%	67%	0%	0%	0%	0%	0%	100%						
	APP/DEPART	4	/	6	3	/	1	0	/	0	4	/	4	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	1	1	0	0	1	1	0	0	0	0	0	3	7					
	APPROACH %	50%	50%	0%	0%	50%	50%	0%	0%	0%	0%	0%	100%						
	PEAK HR FACTOR		0.500			0.500			0.000			0.250		0.438					
	APP/DEPART	2	/	4	2	/	1	0	/	0	3	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 4, 17

LOCATION: Jurupa Valley
NORTH & SOUTH: Market
EAST & WEST: SR-60 EB Ramps

PROJECT #: SC1321
LOCATION #: 26
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N S E W

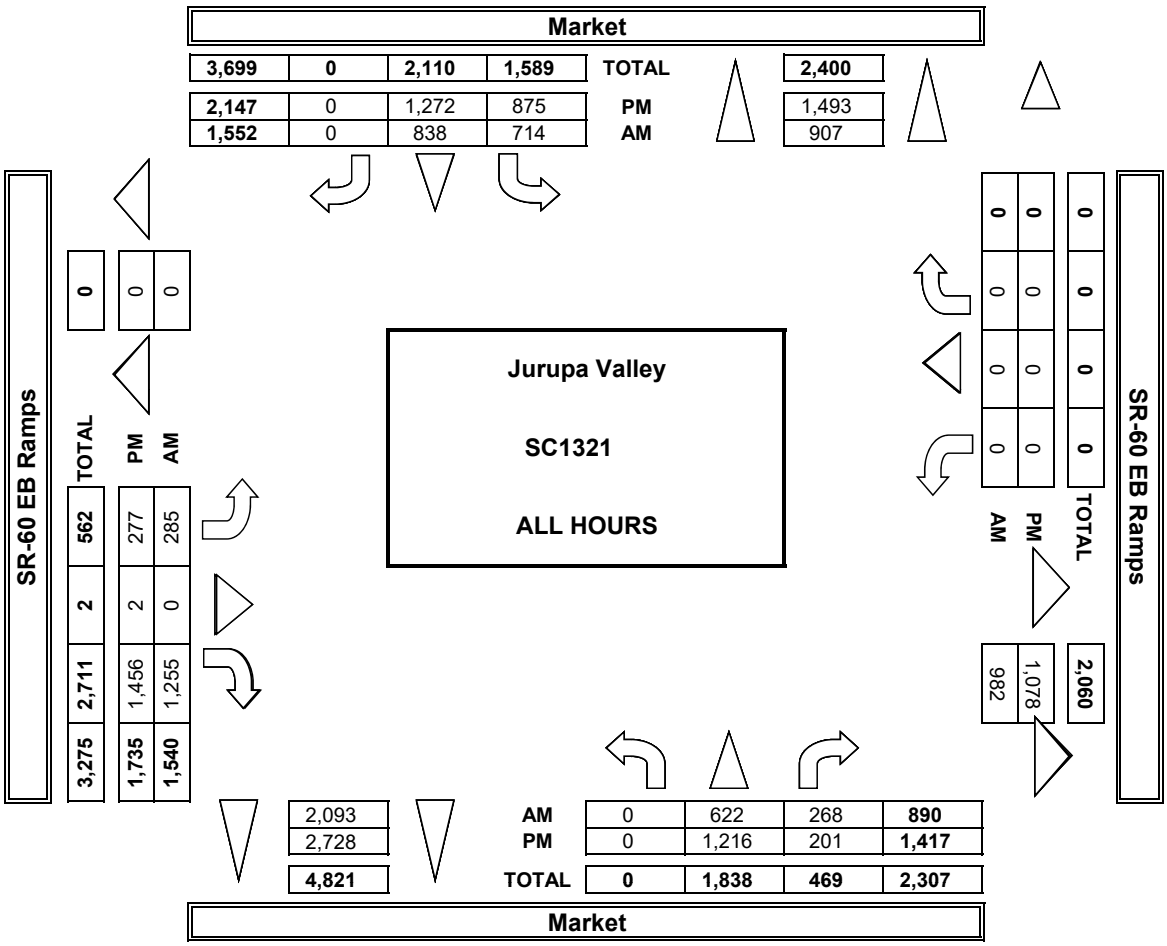
		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
	LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	78	30	72	101	0	37	0	164	0	0	0	482	0	0	0	0	0
	7:15 AM	0	74	28	98	104	0	47	0	183	0	0	0	534	0	0	0	0	0
	7:30 AM	0	92	40	96	124	0	36	0	186	0	0	0	574	0	0	0	0	0
	7:45 AM	0	98	47	90	152	0	39	0	174	0	0	0	600	0	0	0	0	0
	8:00 AM	0	69	37	85	122	0	41	0	155	0	0	0	509	0	0	0	0	0
	8:15 AM	0	80	27	90	96	0	33	0	139	0	0	0	465	0	0	0	0	0
	8:30 AM	0	56	26	98	62	0	32	0	130	0	0	0	404	0	0	0	0	0
	8:45 AM	0	75	33	85	77	0	20	0	124	0	0	0	414	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	622	268	714	838	0	285	0	1,255	0	0	0	3,982	0	0	0	0	0
	APPROACH %	0%	70%	30%	46%	54%	0%	19%	0%	81%	0%	0%	0%						
	APP/DEPART	890	/	907	1,552	/	2,093	1,540	/	982	0	/	0	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	333	152	369	502	0	163	0	698	0	0	0	2,217					
	APPROACH %	0%	69%	31%	42%	58%	0%	19%	0%	81%	0%	0%	0%						
	PEAK HR FACTOR		0.836			0.900			0.936			0.000		0.924					
	APP/DEPART	485	/	496	871	/	1,200	861	/	521	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	120	22	129	138	0	31	0	157	0	0	0	597	0	0	0	0	0
	4:15 PM	0	115	21	102	175	0	41	0	174	0	0	0	628	0	0	0	0	0
	4:30 PM	0	121	17	114	243	0	31	0	164	0	0	0	690	0	0	0	0	0
	4:45 PM	0	164	15	123	133	0	36	0	208	0	0	0	679	0	0	0	0	0
	5:00 PM	0	204	31	121	156	0	34	0	192	0	0	0	738	0	0	0	0	0
	5:15 PM	0	185	22	103	144	0	32	2	197	0	0	0	685	0	0	0	0	0
	5:30 PM	0	167	39	92	162	0	40	0	188	0	0	0	688	0	0	0	0	0
	5:45 PM	0	140	34	91	121	0	32	0	176	0	0	0	594	0	0	0	0	0
	VOLUMES	0	1,216	201	875	1,272	0	277	2	1,456	0	0	0	5,299	0	0	0	0	0
	APPROACH %	0%	86%	14%	41%	59%	0%	16%	0%	84%	0%	0%	0%						
	APP/DEPART	1,417	/	1,493	2,147	/	2,728	1,735	/	1,078	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	674	85	461	676	0	133	2	761	0	0	0	2,792					
	APPROACH %	0%	89%	11%	41%	59%	0%	15%	0%	85%	0%	0%	0%						
	PEAK HR FACTOR		0.807			0.796			0.918			0.000		0.946					
	APP/DEPART	759	/	807	1,137	/	1,437	896	/	548	0	/	0	0					

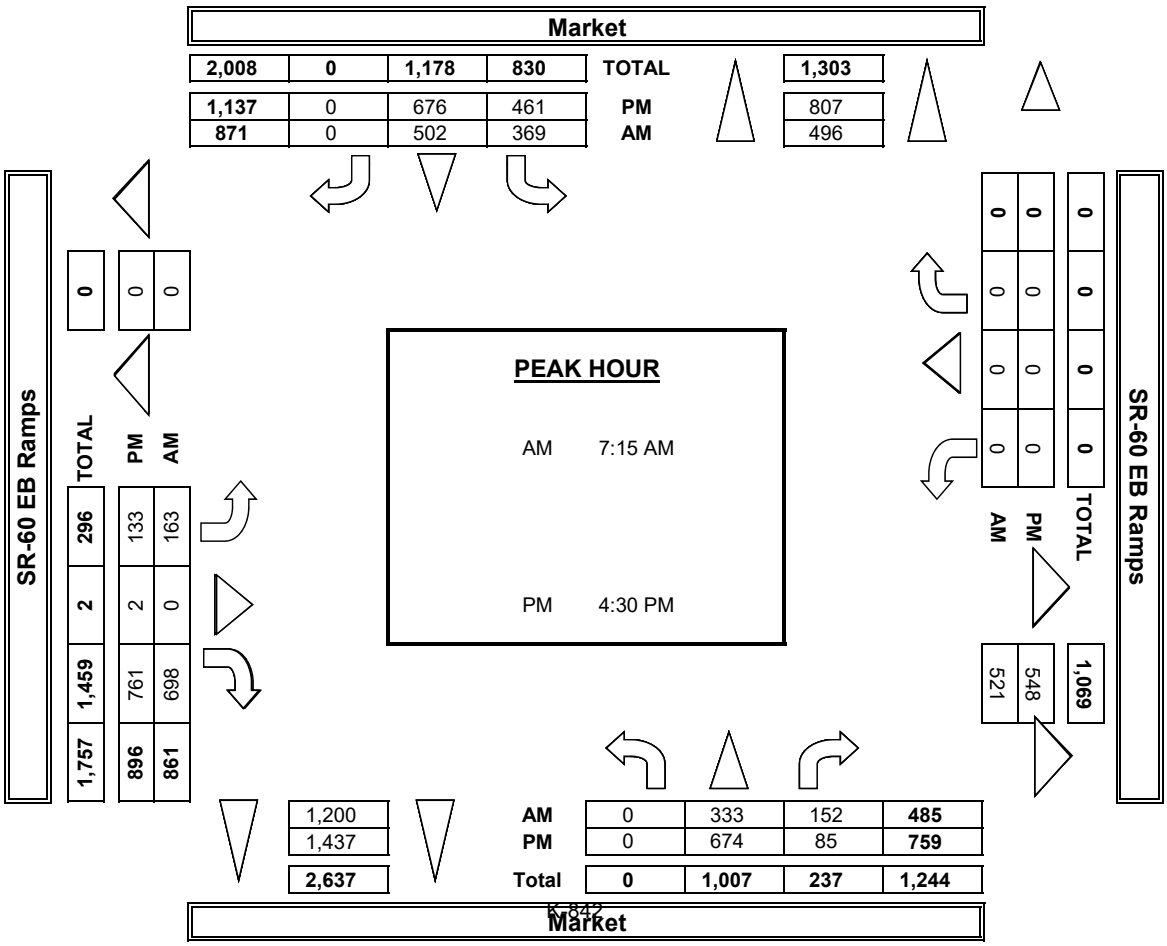


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





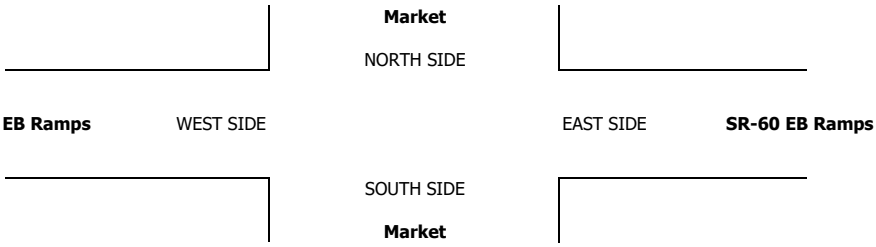
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER		▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2						

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
	LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	86	30	85	113	0	39	0	179	0	0	0	531
	7:15 AM	0	83	28	123	121	0	50	0	191	0	0	0	595
	7:30 AM	0	97	40	116	132	0	40	0	189	0	0	0	613
	7:45 AM	0	100	51	106	172	0	42	0	180	0	0	0	651
	8:00 AM	0	79	38	98	144	0	43	0	162	0	0	0	563
	8:15 AM	0	88	30	102	115	0	38	0	148	0	0	0	519
	8:30 AM	0	70	27	120	72	0	37	0	132	0	0	0	457
	8:45 AM	0	89	35	99	101	0	21	0	128	0	0	0	472
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	691	278	848	968	0	308	0	1,308	0	0	0	4,399
	APPROACH %	0%	71%	29%	47%	53%	0%	19%	0%	81%	0%	0%	0%	
	APP/DEPART	969	/	999	1,815	/	2,275	1,616	/	1,126	0	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	359	157	443	568	0	174	0	722	0	0	0	2,421
	APPROACH %	0%	70%	30%	44%	56%	0%	19%	0%	81%	0%	0%	0%	
	PEAK HR FACTOR		0.853			0.910			0.929			0.000		0.930
	APP/DEPART	515	/	533	1,011	/	1,290	896	/	599	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	124	23	135	147	0	34	0	159	0	0	0	621
	4:15 PM	0	119	22	109	185	0	41	0	179	0	0	0	654
	4:30 PM	0	125	17	120	251	0	36	0	169	0	0	0	717
	4:45 PM	0	167	18	130	146	0	40	0	218	0	0	0	718
	5:00 PM	0	207	31	132	157	0	38	0	200	0	0	0	763
	5:15 PM	0	189	23	110	149	0	32	2	201	0	0	0	705
	5:30 PM	0	169	39	96	166	0	44	0	194	0	0	0	706
	5:45 PM	0	142	36	95	126	0	34	0	182	0	0	0	613
	VOLUMES	0	1,241	208	924	1,324	0	297	2	1,500	0	0	0	5,496
	APPROACH %	0%	86%	14%	41%	59%	0%	17%	0%	83%	0%	0%	0%	
	APP/DEPART	1,449	/	1,538	2,248	/	2,824	1,799	/	1,134	0	/	0	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	688	89	491	702	0	145	2	787	0	0	0	2,902
	APPROACH %	0%	89%	11%	41%	59%	0%	16%	0%	84%	0%	0%	0%	
	PEAK HR FACTOR		0.816			0.805			0.906			0.000		0.951
	APP/DEPART	777	/	833	1,192	/	1,488	934	/	581	0	/	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL
7:00 AM	0	72	30	60	90	0	34	0	150	0	0	0	436
7:15 AM	0	66	28	78	91	0	42	0	176	0	0	0	481
7:30 AM	0	87	40	79	118	0	32	0	181	0	0	0	537
7:45 AM	0	95	42	76	139	0	36	0	166	0	0	0	554
8:00 AM	0	61	36	74	110	0	38	0	146	0	0	0	465
8:15 AM	0	71	25	77	83	0	30	0	128	0	0	0	414
8:30 AM	0	46	24	83	51	0	26	0	126	0	0	0	356
8:45 AM	0	63	32	72	60	0	19	0	117	0	0	0	363
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	561	257	599	742	0	257	0	1,190	0	0	0	3,606
APPROACH %	0%	69%	31%	45%	55%	0%	18%	0%	82%	0%	0%	0%	
APP/DEPART	818	/	818	1,341	/	1,932	1,447	/	856	0	/	0	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	309	146	307	458	0	148	0	669	0	0	0	2,037
APPROACH %	0%	68%	32%	40%	60%	0%	18%	0%	82%	0%	0%	0%	
PEAK HR FACTOR		0.830			0.890			0.937			0.000		0.919
APP/DEPART	455	/	457	765	/	1,127	817	/	453	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	116	20	125	130	0	28	0	153	0	0	0	572
4:15 PM	0	111	19	95	167	0	41	0	167	0	0	0	600
4:30 PM	0	117	17	110	237	0	27	0	158	0	0	0	666
4:45 PM	0	161	13	118	120	0	31	0	193	0	0	0	636
5:00 PM	0	201	31	113	155	0	31	0	182	0	0	0	713
5:15 PM	0	180	21	98	139	0	32	2	192	0	0	0	664
5:30 PM	0	165	39	88	159	0	36	0	181	0	0	0	668
5:45 PM	0	138	32	87	116	0	29	0	171	0	0	0	573
VOLUMES	0	1,189	192	834	1,223	0	255	2	1,397	0	0	0	5,092
APPROACH %	0%	86%	14%	41%	59%	0%	15%	0%	84%	0%	0%	0%	
APP/DEPART	1,381	/	1,444	2,057	/	2,620	1,654	/	1,028	0	/	0	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	707	104	417	573	0	130	2	748	0	0	0	2,681
APPROACH %	0%	87%	13%	42%	58%	0%	15%	0%	85%	0%	0%	0%	
PEAK HR FACTOR		0.874			0.924			0.973			0.000		0.940
APP/DEPART	811	/	837	990	/	1,321	880	/	523	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Market

NORTH SIDE

SR-60 EB Ramps WEST SIDE EAST SIDE **SR-60 EB Ramps**

SOUTH SIDE

Market

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

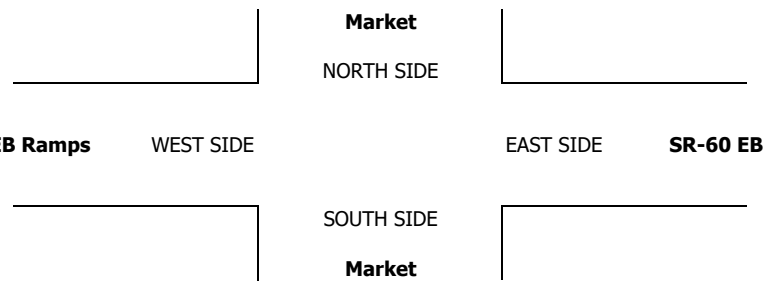
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
	LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	7	5	0	2	0	7	0	0	0	21	0	0	0	0	0
	7:15 AM	0	3	0	9	2	0	4	0	2	0	0	0	20	0	0	0	0	0
	7:30 AM	0	0	0	8	2	0	3	0	5	0	0	0	18	0	0	0	0	0
	7:45 AM	0	2	4	6	3	0	2	0	6	0	0	0	23	0	0	0	0	0
	8:00 AM	0	2	1	4	1	0	3	0	4	0	0	0	15	0	0	0	0	0
	8:15 AM	0	3	1	8	2	0	1	0	7	0	0	0	22	0	0	0	0	0
	8:30 AM	0	2	2	3	7	0	4	0	4	0	0	0	22	0	0	0	0	0
	8:45 AM	0	5	0	2	5	0	1	0	6	0	0	0	19	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	17	8	47	27	0	20	0	41	0	0	0	160	0	0	0	0	0
	APPROACH %	0%	68%	32%	64%	36%	0%	33%	0%	67%	0%	0%	0%						
	APP/DEPART	25	/	37	74	/	68	61	/	55	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	9	8	21	13	0	10	0	21	0	0	0	82					
	APPROACH %	0%	53%	47%	62%	38%	0%	32%	0%	68%	0%	0%	0%						
	PEAK HR FACTOR		0.708			0.708			0.861			0.000		0.891					
	APP/DEPART	17	/	19	34	/	34	31	/	29	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	2	1	3	0	2	0	4	0	0	0	14	0	0	0	0	0
	4:15 PM	0	0	2	3	2	0	0	0	5	0	0	0	12	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	2	0	5	0	0	0	9	0	0	0	0	0
	4:45 PM	0	2	0	2	5	0	3	0	10	0	0	0	22	0	0	0	0	0
	5:00 PM	0	2	0	3	1	0	1	0	7	0	0	0	14	0	0	0	0	0
	5:15 PM	0	2	1	1	2	0	0	0	3	0	0	0	9	0	0	0	0	0
	5:30 PM	0	1	0	2	1	0	3	0	5	0	0	0	12	0	0	0	0	0
	5:45 PM	0	1	1	3	1	0	3	0	2	0	0	0	11	0	0	0	0	0
	VOLUMES	0	10	6	16	16	0	14	0	41	0	0	0	103	0	0	0	0	0
	APPROACH %	0%	63%	38%	50%	50%	0%	25%	0%	75%	0%	0%	0%						
	APP/DEPART	16	/	24	32	/	57	55	/	22	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	7	1	8	9	0	7	0	25	0	0	0	57					
	APPROACH %	0%	88%	13%	47%	53%	0%	22%	0%	78%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.607			0.615			0.000		0.648					
	APP/DEPART	8	/	14	17	/	34	32	/	9	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

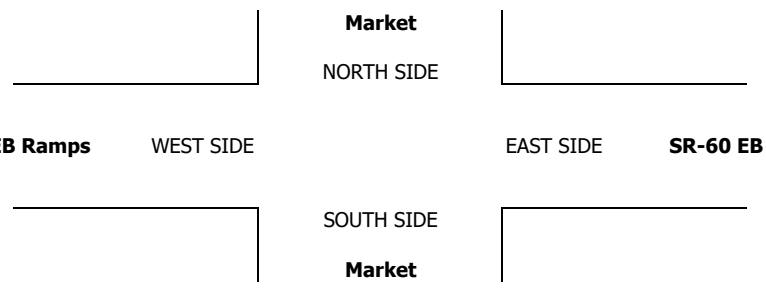
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	3	0	1	1	0	1	0	2	0	0	0	8	0	0	0	0	0
7:15 AM	0	0	0	2	5	0	1	0	1	0	0	0	9	0	0	0	0	0
7:30 AM	0	3	0	2	1	0	0	0	0	0	0	0	6	0	0	0	0	0
7:45 AM	0	1	0	2	2	0	0	0	1	0	0	0	6	0	0	0	0	0
8:00 AM	0	3	0	3	1	0	0	0	5	0	0	0	12	0	0	0	0	0
8:15 AM	0	5	0	2	1	0	0	0	3	0	0	0	11	0	0	0	0	0
8:30 AM	0	0	0	4	2	0	1	0	0	0	0	0	7	0	0	0	0	0
8:45 AM	0	3	0	9	3	0	0	0	0	0	0	0	15	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	18	0	25	16	0	3	0	12	0	0	0	74	0	0	0	0	0
APPROACH %	0%	100%	0%	61%	39%	0%	20%	0%	80%	0%	0%	0%						
APP/DEPART	18	/	21	41	/	28	15	/	25	0	/	0	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	11	0	18	7	0	1	0	8	0	0	0	45					
APPROACH %	0%	100%	0%	72%	28%	0%	11%	0%	89%	0%	0%	0%						
PEAK HR FACTOR		0.550			0.521			0.450			0.000		0.750					
APP/DEPART	11	/	12	25	/	15	9	/	18	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	1	3	0	0	0	0	0	0	0	4	0	0	0	0	0
4:15 PM	0	4	0	3	3	0	0	0	2	0	0	0	12	0	0	0	0	0
4:30 PM	0	4	0	1	2	0	0	0	0	0	0	0	7	0	0	0	0	0
4:45 PM	0	0	1	0	6	0	1	0	3	0	0	0	11	0	0	0	0	0
5:00 PM	0	0	0	1	0	0	1	0	1	0	0	0	3	0	0	0	0	0
5:15 PM	0	2	0	2	2	0	0	0	0	0	0	0	6	0	0	0	0	0
5:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	0	1	0	4	0	0	0	1	0	0	0	6	0	0	0	0	0
VOLUMES	0	11	2	9	20	0	2	0	7	0	0	0	51	0	0	0	0	0
APPROACH %	0%	85%	15%	31%	69%	0%	22%	0%	78%	0%	0%	0%						
APP/DEPART	13	/	13	29	/	27	9	/	11	0	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	8	1	5	14	0	1	0	5	0	0	0	34					
APPROACH %	0%	89%	11%	26%	74%	0%	17%	0%	83%	0%	0%	0%						
PEAK HR FACTOR		0.563			0.792			0.375			0.000		0.708					
APP/DEPART	9	/	9	19	/	19	6	/	6	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

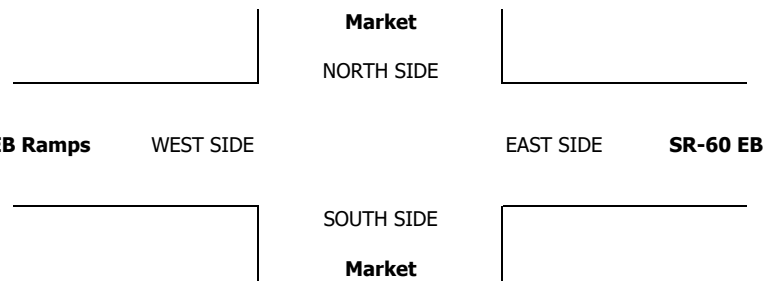
CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	2	0	4	3	0	0	0	4	0	0	0	13	0	0	0	0	0
7:15 AM	0	2	0	9	5	0	0	0	2	0	0	0	18	0	0	0	0	0
7:30 AM	0	0	0	7	3	0	1	0	0	0	0	0	11	0	0	0	0	0
7:45 AM	0	0	1	5	8	0	1	0	1	0	0	0	16	0	0	0	0	0
8:00 AM	0	3	0	4	10	0	0	0	0	0	0	0	17	0	0	0	0	0
8:15 AM	0	0	1	3	7	0	2	0	1	0	0	0	14	0	0	0	0	0
8:30 AM	0	5	0	8	2	0	1	0	0	0	0	0	16	0	0	0	0	0
8:45 AM	0	4	1	2	9	0	0	0	0	0	0	0	16	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	16	3	42	47	0	5	0	8	0	0	0	121	0	0	0	0	0
APPROACH %	0%	84%	16%	47%	53%	0%	38%	0%	62%	0%	0%	0%						
APP/DEPART	19	/	21	89	/	55	13	/	45	0	/	0	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	0	12	2	17	28	0	3	0	1	0	0	0	63					
APPROACH %	0%	86%	14%	38%	62%	0%	75%	0%	25%	0%	0%	0%						
PEAK HR FACTOR		0.700			0.804			0.333			0.000		0.926					
APP/DEPART	14	/	15	45	/	29	4	/	19	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	0	2	2	0	1	0	0	0	0	0	6	0	0	0	0	0
4:15 PM	0	0	0	1	3	0	0	0	0	0	0	0	4	0	0	0	0	0
4:30 PM	0	0	0	2	2	0	2	0	1	0	0	0	7	0	0	0	0	0
4:45 PM	0	1	1	3	2	0	0	0	0	0	0	0	7	0	0	0	0	0
5:00 PM	0	1	0	4	0	0	1	0	1	0	0	0	7	0	0	0	0	0
5:15 PM	0	0	0	2	1	0	0	0	0	0	0	0	3	0	0	0	0	0
5:30 PM	0	0	0	1	1	0	1	0	1	0	0	0	4	0	0	0	0	0
5:45 PM	0	0	0	1	0	0	0	0	2	0	0	0	3	0	0	0	0	0
VOLUMES	0	3	1	16	11	0	5	0	5	0	0	0	41	0	0	0	0	0
APPROACH %	0%	75%	25%	59%	41%	0%	50%	0%	50%	0%	0%	0%						
APP/DEPART	4	/	8	27	/	16	10	/	17	0	/	0	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	0	2	1	10	7	0	3	0	2	0	0	0	25					
APPROACH %	0%	67%	33%	59%	41%	0%	60%	0%	40%	0%	0%	0%						
PEAK HR FACTOR		0.375			0.850			0.417			0.000		0.893					
APP/DEPART	3	/	5	17	/	9	5	/	11	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

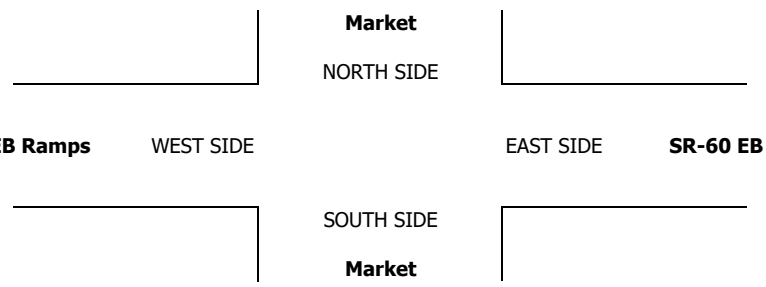
CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ▼ S ◄ W E ►

	NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
BEGIN PEAK HR		3:45 PM																
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					



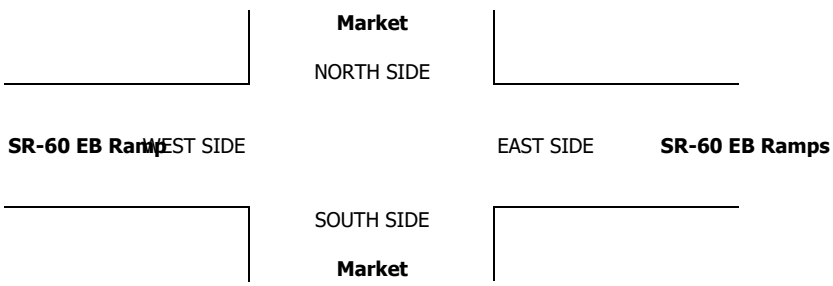
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/4/17	NORTH & SOUTH:	Market	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
	LANES:	NL X	NT 2	NR 1	SL 0	ST 3	SR X	EL 1	ET 0	ER 2	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	1	0	0	2	0	0	0	1	0	0	0	4	0	0	0	0	0
	7:15 AM	0	3	0	0	1	0	0	0	2	0	0	0	6	0	0	0	0	0
	7:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	8:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	10	0	1	6	0	0	0	4	0	0	0	21	0	0	0	0	0
	APPROACH %	0%	100%	0%	14%	86%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	10	/	10	7	/	10	4	/	1	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	6	0	1	3	0	0	0	3	0	0	0	13					
	APPROACH %	0%	100%	0%	25%	75%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.500			0.375			0.000		0.542					
	APP/DEPART	6	/	6	4	/	6	3	/	1	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	1	0	2	0	0	0	3	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	5:15 PM	0	1	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
	5:30 PM	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	3	0	0	1	0	1	0	6	0	0	0	11	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	14%	0%	86%	0%	0%	0%						
	APP/DEPART	3	/	4	1	/	7	7	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	1	0	0	1	0	1	0	6	0	0	0	9					
	APPROACH %	0%	100%	0%	0%	100%	0%	14%	0%	86%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.250			0.583			0.000		0.750					
	APP/DEPART	1	/	2	1	/	7	7	/	0	0	/	0	0					



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	229	103	42	332	99	0	111	61	210	44	170	0	0	214	0	0	0	0	0	103	756	859
07:15 AM	0	314	197	52	511	105	0	122	68	227	38	210	0	0	248	0	0	0	0	0	120	986	1106
07:30 AM	0	331	157	40	488	93	0	112	57	205	46	210	0	0	256	0	0	0	0	0	97	949	1046
07:45 AM	0	311	132	32	443	77	0	89	47	166	41	189	0	0	230	0	0	0	0	0	79	839	918
Total	0	1185	589	166	1774	374	0	434	233	808	169	779	0	0	948	0	0	0	0	0	399	3530	3929
08:00 AM	0	178	109	27	287	69	0	76	48	145	38	172	0	0	210	0	0	0	0	0	75	642	717
08:15 AM	0	235	99	32	334	79	0	64	36	143	55	138	0	0	193	0	0	0	0	0	68	670	738
08:30 AM	0	192	98	28	290	62	0	81	46	143	54	164	0	0	218	0	0	0	0	0	74	651	725
08:45 AM	0	194	101	21	295	64	0	110	59	174	56	162	0	0	218	0	0	0	0	0	80	687	767
Total	0	799	407	108	1206	274	0	331	189	605	203	636	0	0	839	0	0	0	0	0	297	2650	2947
Grand Total	0	1984	996	274	2980	648	0	765	422	1413	372	1415	0	0	1787	0	0	0	0	0	696	6180	6876
Apprch %	0	66.6	33.4			45.9	0	54.1			20.8	79.2	0			0	0	0					
Total %	0	32.1	16.1		48.2	10.5	0	12.4		22.9	6	22.9	0		28.9	0	0	0		0	10.1	89.9	
Passenger Vehicles	0	1915	938		3115	535	0	733		1677	186	1299	0		1485	0	0	0		0	0	0	6277
% Passenger Vehicles	0	96.5	94.2	95.6	95.7	82.6	0	95.8	96.9	91.4	50	91.8	0	0	83.1	0	0	0	0	0	0	0	91.3
Large 2 Axle Vehicles	0	41	21		70	25	0	21		56	48	54	0		102	0	0	0		0	0	0	228
% Large 2 Axle Vehicles	0	2.1	2.1	2.9	2.2	3.9	0	2.7	2.4	3.1	12.9	3.8	0	0	5.7	0	0	0	0	0	0	0	3.3
3 Axle Vehicles	0	6	9		15	29	0	3		34	38	28	0		66	0	0	0		0	0	0	115
% 3 Axle Vehicles	0	0.3	0.9	0	0.5	4.5	0	0.4	0.5	1.9	10.2	2	0	0	3.7	0	0	0	0	0	0	0	1.7
4+ Axle Trucks	0	22	28		54	59	0	8		68	100	34	0		134	0	0	0		0	0	0	256
% 4+ Axle Trucks	0	1.1	2.8	1.5	1.7	9.1	0	1	0.2	3.7	26.9	2.4	0	0	7.5	0	0	0	0	0	0	0	3.7

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	229	103	332	99	0	111	210	44	170	0	214	0	0	0	0	756
07:15 AM	0	314	**197**	**511**	**105**	0	**122**	**227**	38	**210**	0	248	0	0	0	0	**986**
07:30 AM	0	**331**	157	488	93	0	112	205	**46**	210	0	**256**	0	0	0	0	949
07:45 AM	0	311	132	443	77	0	89	166	41	189	0	230	0	0	0	0	839
Total Volume	0	1185	589	1774	374	0	434	808	169	779	0	948	0	0	0	0	3530
% App. Total	0	66.8	33.2		46.3	0	53.7		17.8	82.2	0		0	0	0		
PHF	.000	.895	.747	.868	.890	.000	.889	.890	.918	.927	.000	.926	.000	.000	.000	.000	.895

Counts Unlimited
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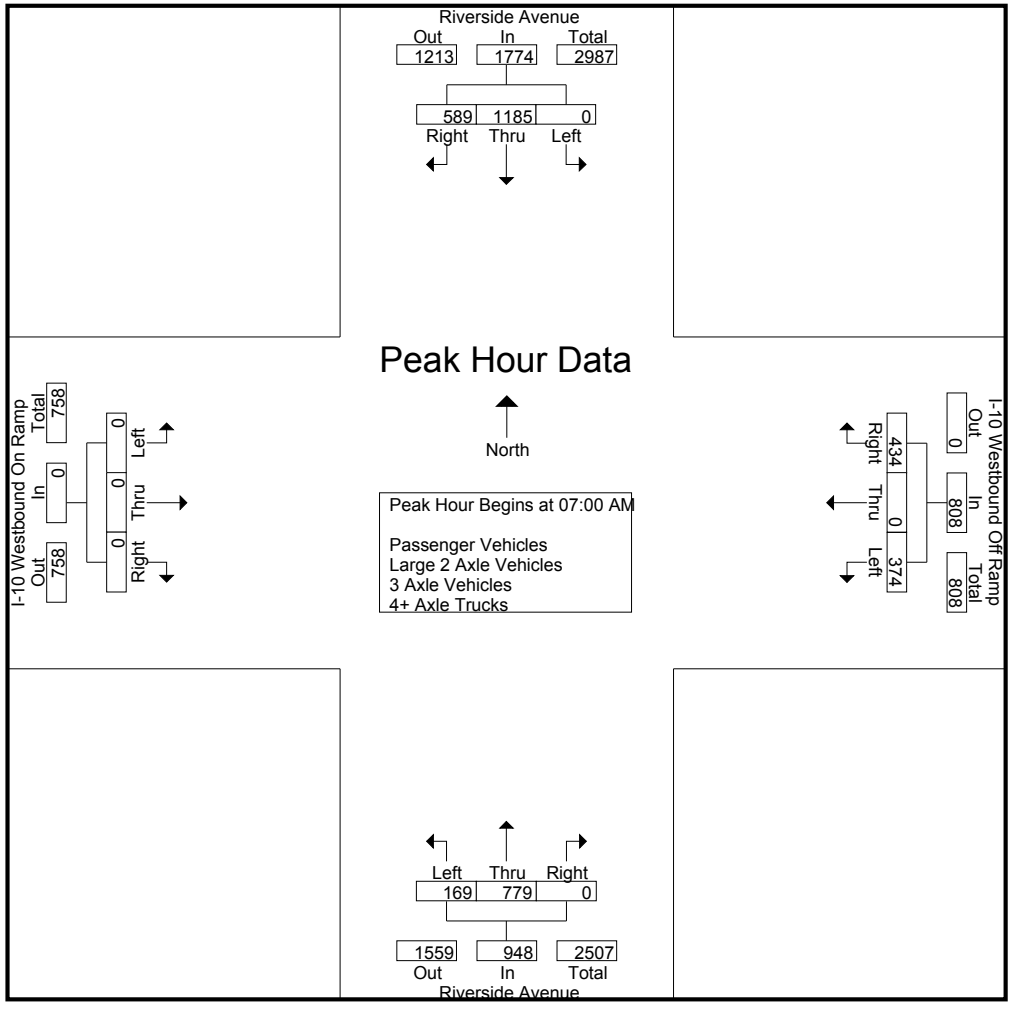
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	229	103	332	99	0	111	210	44	170	0	214	0	0	0	0	
+15 mins.	0	314	**197**	**511**	**105**	0	**122**	**227**	38	**210**	0	248	0	0	0	0	
+30 mins.	0	**331**	157	488	93	0	112	205	**46**	210	0	**256**	0	0	0	0	
+45 mins.	0	311	132	443	77	0	89	166	41	189	0	230	0	0	0	0	
Total Volume	0	1185	589	1774	374	0	434	808	169	779	0	948	0	0	0	0	
% App. Total	0	66.8	33.2		46.3	0	53.7		17.8	82.2	0		0	0	0		
PHF	.000	.895	.747	.868	.890	.000	.889	.890	.918	.927	.000	.926	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
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File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

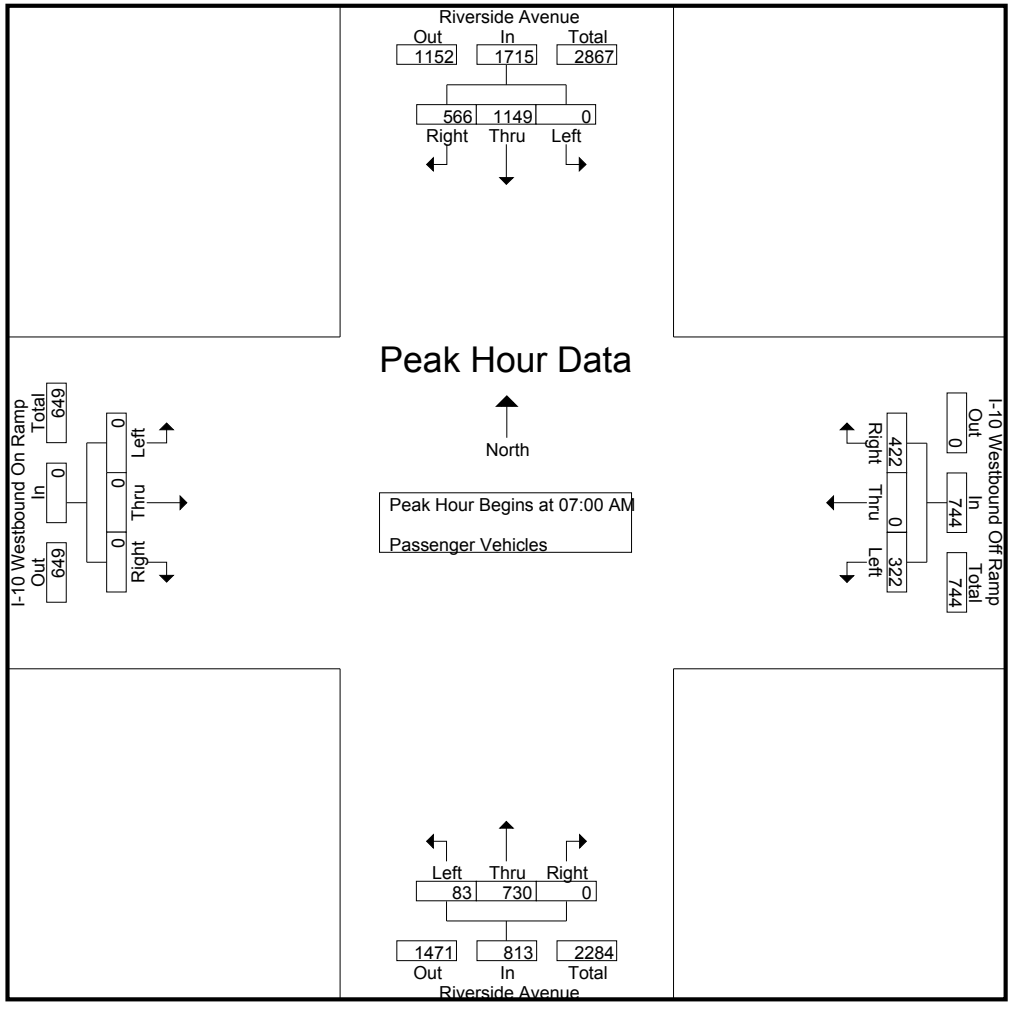
	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	223	100	42	323	88	0	110	61	198	17	153	0	0	170	0	0	0	0	0	103	691	794
07:15 AM	0	303	190	50	493	91	0	119	68	210	24	201	0	0	225	0	0	0	0	0	118	928	1046
07:30 AM	0	321	154	38	475	78	0	108	55	186	26	197	0	0	223	0	0	0	0	0	93	884	977
07:45 AM	0	302	122	29	424	65	0	85	46	150	16	179	0	0	195	0	0	0	0	0	75	769	844
Total	0	1149	566	159	1715	322	0	422	230	744	83	730	0	0	813	0	0	0	0	0	389	3272	3661
08:00 AM	0	172	104	26	276	60	0	70	45	130	21	151	0	0	172	0	0	0	0	0	71	578	649
08:15 AM	0	223	93	32	316	55	0	59	33	114	28	125	0	0	153	0	0	0	0	0	65	583	648
08:30 AM	0	187	84	26	271	48	0	79	45	127	29	151	0	0	180	0	0	0	0	0	71	578	649
08:45 AM	0	184	91	19	275	50	0	103	56	153	25	142	0	0	167	0	0	0	0	0	75	595	670
Total	0	766	372	103	1138	213	0	311	179	524	103	569	0	0	672	0	0	0	0	0	282	2334	2616
Grand Total	0	1915	938	262	2853	535	0	733	409	1268	186	1299	0	0	1485	0	0	0	0	0	671	5606	6277
Apprch %	0	67.1	32.9			42.2	0	57.8			12.5	87.5	0			0	0	0					
Total %	0	34.2	16.7		50.9	9.5	0	13.1		22.6	3.3	23.2	0		26.5	0	0	0		0	10.7	89.3	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	223	100	323	88	0	110	198	17	153	0	170	0	0	0	0	691
07:15 AM	0	303	**190**	**493**	**91**	0	**119**	**210**	24	**201**	0	**225**	0	0	0	0	**928**
07:30 AM	0	**321**	154	475	78	0	108	186	**26**	197	0	223	0	0	0	0	884
07:45 AM	0	302	122	424	65	0	85	150	16	179	0	195	0	0	0	0	769
Total Volume	0	1149	566	1715	322	0	422	744	83	730	0	813	0	0	0	0	3272
% App. Total	0	67	33		43.3	0	56.7		10.2	89.8	0		0	0	0		
PHF	.000	.895	.745	.870	.885	.000	.887	.886	.798	.908	.000	.903	.000	.000	.000	.000	.881

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	223	100	323	88	0	110	198	17	153	0	170	0	0	0	0	
+15 mins.	0	303	**190**	**493**	**91**	0	**119**	**210**	24	**201**	0	**225**	0	0	0	0	
+30 mins.	0	**321**	154	475	78	0	108	186	**26**	197	0	223	0	0	0	0	
+45 mins.	0	302	122	424	65	0	85	150	16	179	0	195	0	0	0	0	
Total Volume	0	1149	566	1715	322	0	422	744	83	730	0	813	0	0	0	0	
% App. Total	0	67	33		43.3	0	56.7		10.2	89.8	0		0	0	0		
PHF	.000	.895	.745	.870	.885	.000	.887	.886	.798	.908	.000	.903	.000	.000	.000	.000	

Counts Unlimited
PO Box 1178
Corona, CA 92878
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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

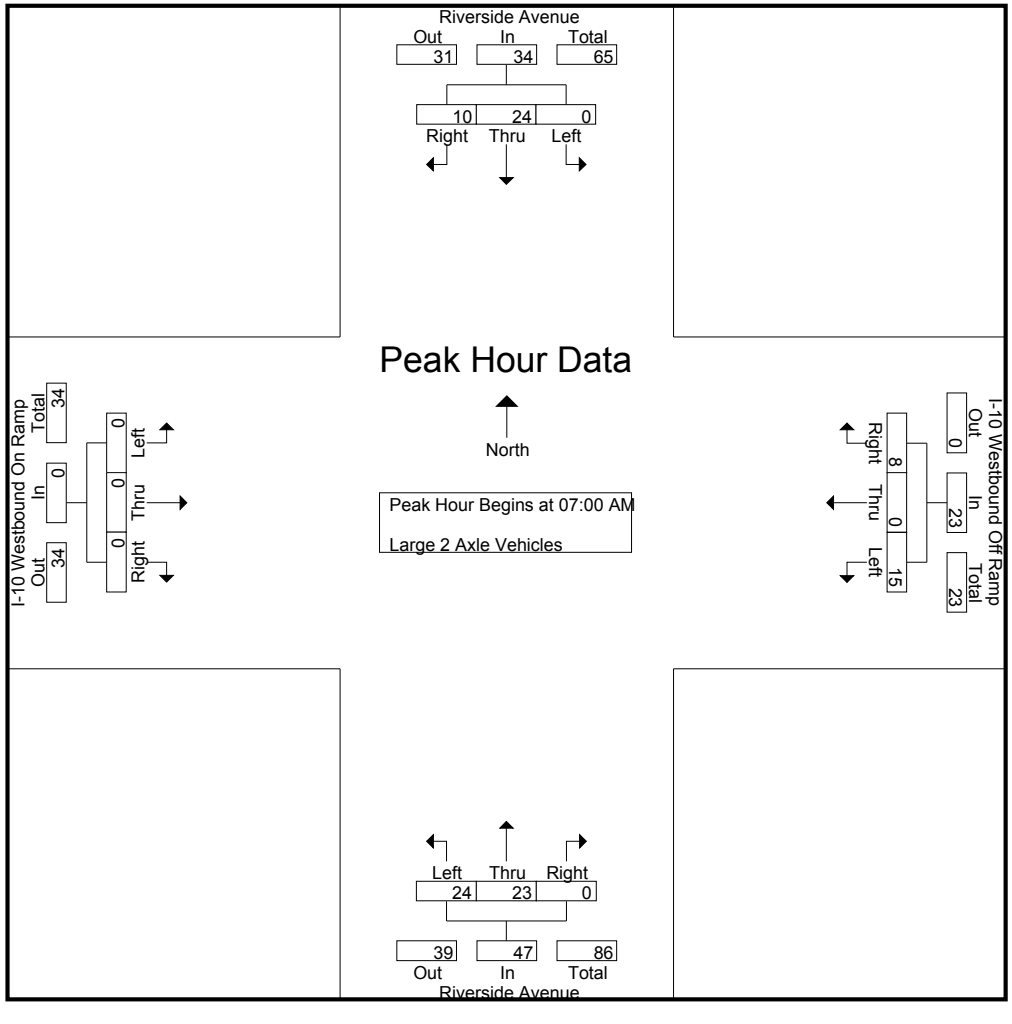
	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	4	1	0	5	5	0	1	0	6	8	3	0	0	11	0	0	0	0	0	0	22	22
07:15 AM	0	6	3	1	9	4	0	2	0	6	2	7	0	0	9	0	0	0	0	0	1	24	25
07:30 AM	0	7	1	1	8	4	0	3	1	7	8	9	0	0	17	0	0	0	0	0	2	32	34
07:45 AM	0	7	5	3	12	2	0	2	1	4	6	4	0	0	10	0	0	0	0	0	4	26	30
Total	0	24	10	5	34	15	0	8	2	23	24	23	0	0	47	0	0	0	0	0	7	104	111
08:00 AM	0	4	2	0	6	1	0	4	2	5	8	8	0	0	16	0	0	0	0	0	2	27	29
08:15 AM	0	9	0	0	9	7	0	4	3	11	5	8	0	0	13	0	0	0	0	0	3	33	36
08:30 AM	0	1	5	1	6	1	0	1	1	2	5	6	0	0	11	0	0	0	0	0	2	19	21
08:45 AM	0	3	4	2	7	1	0	4	2	5	6	9	0	0	15	0	0	0	0	0	4	27	31
Total	0	17	11	3	28	10	0	13	8	23	24	31	0	0	55	0	0	0	0	0	11	106	117
Grand Total	0	41	21	8	62	25	0	21	10	46	48	54	0	0	102	0	0	0	0	0	18	210	228
Apprch %	0	66.1	33.9			54.3	0	45.7			47.1	52.9	0			0	0	0					
Total %	0	19.5	10		29.5	11.9	0	10		21.9	22.9	25.7	0		48.6	0	0	0		0	7.9	92.1	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	4	1	5	**5**	0	1	6	**8**	3	0	11	0	0	0	0	22
07:15 AM	0	6	3	9	4	0	2	6	2	7	0	9	0	0	0	0	24
07:30 AM	0	**7**	1	8	4	0	**3**	**7**	8	**9**	0	**17**	0	0	0	0	**32**
07:45 AM	0	7	**5**	**12**	2	0	2	4	6	4	0	10	0	0	0	0	26
Total Volume	0	24	10	34	15	0	8	23	24	23	0	47	0	0	0	0	104
% App. Total	0	70.6	29.4		65.2	0	34.8		51.1	48.9	0		0	0	0		
PHF	.000	.857	.500	.708	.750	.000	.667	.821	.750	.639	.000	.691	.000	.000	.000	.000	.813

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	4	1	5	**5**	0	1	6	**8**	3	0	11	0	0	0	0	
+15 mins.	0	6	3	9	4	0	2	6	2	7	0	9	0	0	0	0	
+30 mins.	0	**7**	1	8	4	0	**3**	**7**	8	**9**	0	**17**	0	0	0	0	
+45 mins.	0	7	**5**	**12**	2	0	2	4	6	4	0	10	0	0	0	0	
Total Volume	0	24	10	34	15	0	8	23	24	23	0	47	0	0	0	0	
% App. Total	0	70.6	29.4		65.2	0	34.8		51.1	48.9	0		0	0	0		
PHF	.000	.857	.500	.708	.750	.000	.667	.821	.750	.639	.000	.691	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	0	0	1	7	4	0	0	11	0	0	0	0	0	0	12	12
07:15 AM	0	2	1	0	3	1	0	0	0	1	4	2	0	0	6	0	0	0	0	0	0	10	10
07:30 AM	0	0	0	0	0	4	0	0	0	4	4	2	0	0	6	0	0	0	0	0	0	10	10
07:45 AM	0	0	0	0	0	3	0	0	0	3	8	5	0	0	13	0	0	0	0	0	0	16	16
Total	0	2	1	0	3	9	0	0	0	9	23	13	0	0	36	0	0	0	0	0	0	48	48
08:00 AM	0	1	1	0	2	4	0	1	1	5	2	10	0	0	12	0	0	0	0	0	1	19	20
08:15 AM	0	0	3	0	3	6	0	0	0	6	4	1	0	0	5	0	0	0	0	0	0	14	14
08:30 AM	0	1	1	0	2	6	0	1	0	7	3	2	0	0	5	0	0	0	0	0	0	14	14
08:45 AM	0	2	3	0	5	4	0	1	1	5	6	2	0	0	8	0	0	0	0	0	1	18	19
Total	0	4	8	0	12	20	0	3	2	23	15	15	0	0	30	0	0	0	0	0	2	65	67
Grand Total	0	6	9	0	15	29	0	3	2	32	38	28	0	0	66	0	0	0	0	0	2	113	115
Apprch %	0	40	60			90.6	0	9.4			57.6	42.4	0			0	0	0					
Total %	0	5.3	8		13.3	25.7	0	2.7		28.3	33.6	24.8	0		58.4	0	0	0		0	1.7	98.3	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	1	0	0	1	7	4	0	11	0	0	0	0	12
07:15 AM	0	**2**	**1**	**3**	1	0	0	1	4	2	0	6	0	0	0	0	10
07:30 AM	0	0	0	0	**4**	0	0	**4**	4	2	0	6	0	0	0	0	10
07:45 AM	0	0	0	0	3	0	0	3	**8**	**5**	0	**13**	0	0	0	0	**16**
Total Volume	0	2	1	3	9	0	0	9	23	13	0	36	0	0	0	0	48
% App. Total	0	66.7	33.3		100	0	0		63.9	36.1	0		0	0	0		
PHF	.000	.250	.250	.250	.563	.000	.000	.563	.719	.650	.000	.692	.000	.000	.000	.000	.750

Counts Unlimited
PO Box 1178
Corona, CA 92878
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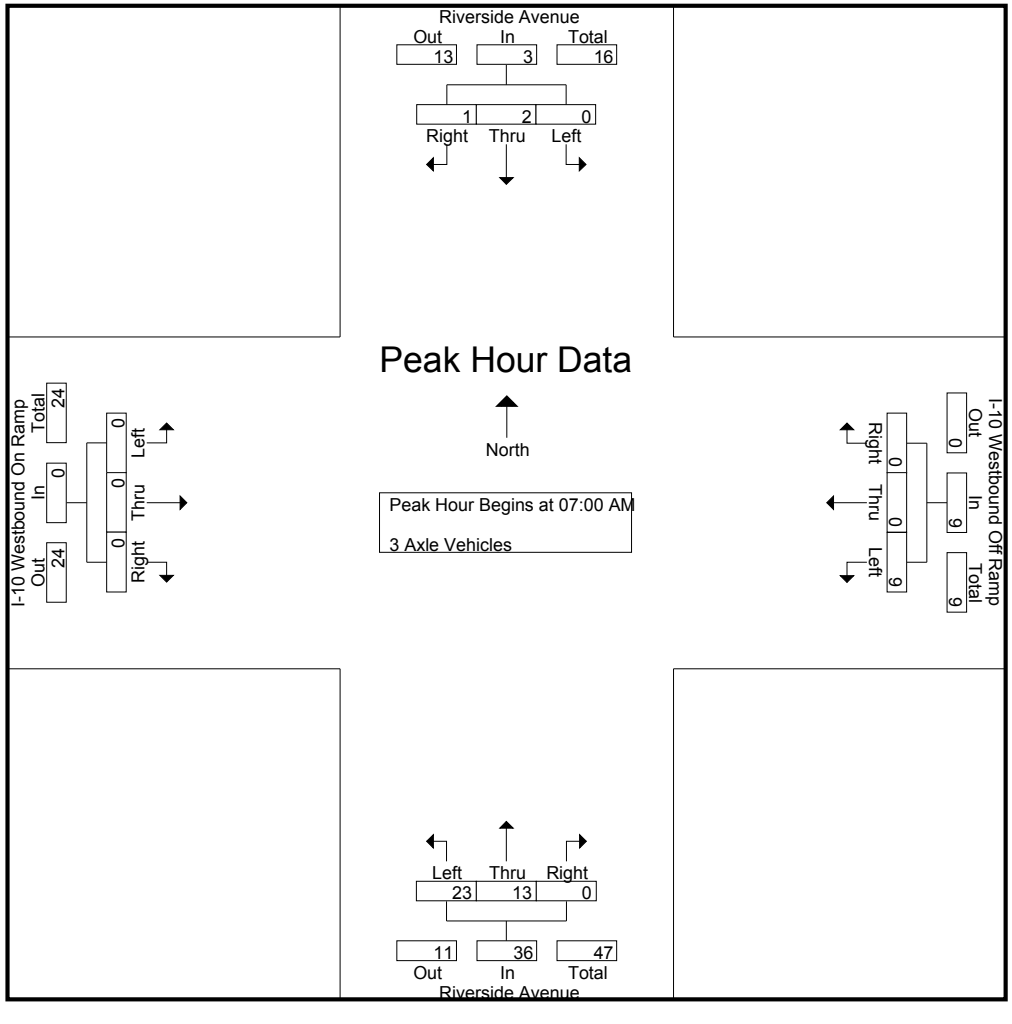
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	1	0	0	1	7	4	0	11	0	0	0	0	
+15 mins.	0	**2**	**1**	**3**	1	0	0	1	4	2	0	6	0	0	0	0	
+30 mins.	0	0	0	0	**4**	0	0	**4**	4	2	0	6	0	0	0	0	
+45 mins.	0	0	0	0	3	0	0	3	**8**	**5**	0	**13**	0	0	0	0	
Total Volume	0	2	1	3	9	0	0	9	23	13	0	36	0	0	0	0	
% App. Total	0	66.7	33.3		100	0	0		63.9	36.1	0		0	0	0		
PHF	.000	.250	.250	.250	.563	.000	.000	.563	.719	.650	.000	.692	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	2	2	0	4	5	0	0	0	5	12	10	0	0	22	0	0	0	0	0	0	31	31
07:15 AM	0	3	3	1	6	9	0	1	0	10	8	0	0	0	8	0	0	0	0	0	1	24	25
07:30 AM	0	3	2	1	5	7	0	1	1	8	8	2	0	0	10	0	0	0	0	0	2	23	25
07:45 AM	0	2	5	0	7	7	0	2	0	9	11	1	0	0	12	0	0	0	0	0	0	28	28
Total	0	10	12	2	22	28	0	4	1	32	39	13	0	0	52	0	0	0	0	0	3	106	109
08:00 AM	0	1	2	1	3	4	0	1	0	5	7	3	0	0	10	0	0	0	0	0	1	18	19
08:15 AM	0	3	3	0	6	11	0	1	0	12	18	4	0	0	22	0	0	0	0	0	0	40	40
08:30 AM	0	3	8	1	11	7	0	0	0	7	17	5	0	0	22	0	0	0	0	0	1	40	41
08:45 AM	0	5	3	0	8	9	0	2	0	11	19	9	0	0	28	0	0	0	0	0	0	47	47
Total	0	12	16	2	28	31	0	4	0	35	61	21	0	0	82	0	0	0	0	0	2	145	147
Grand Total	0	22	28	4	50	59	0	8	1	67	100	34	0	0	134	0	0	0	0	0	5	251	256
Apprch %	0	44	56			88.1	0	11.9			74.6	25.4	0			0	0	0					
Total %	0	8.8	11.2		19.9	23.5	0	3.2		26.7	39.8	13.5	0		53.4	0	0	0		0	2	98	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	2	2	4	5	0	0	5	**12**	**10**	0	**22**	0	0	0	0	**31**
07:15 AM	0	**3**	3	6	**9**	0	1	**10**	8	0	0	8	0	0	0	0	24
07:30 AM	0	3	2	5	7	0	1	8	8	2	0	10	0	0	0	0	23
07:45 AM	0	2	**5**	**7**	7	0	**2**	9	11	1	0	12	0	0	0	0	28
Total Volume	0	10	12	22	28	0	4	32	39	13	0	52	0	0	0	0	106
% App. Total	0	45.5	54.5		87.5	0	12.5		75	25	0		0	0	0		
PHF	.000	.833	.600	.786	.778	.000	.500	.800	.813	.325	.000	.591	.000	.000	.000	.000	.855

Counts Unlimited
PO Box 1178
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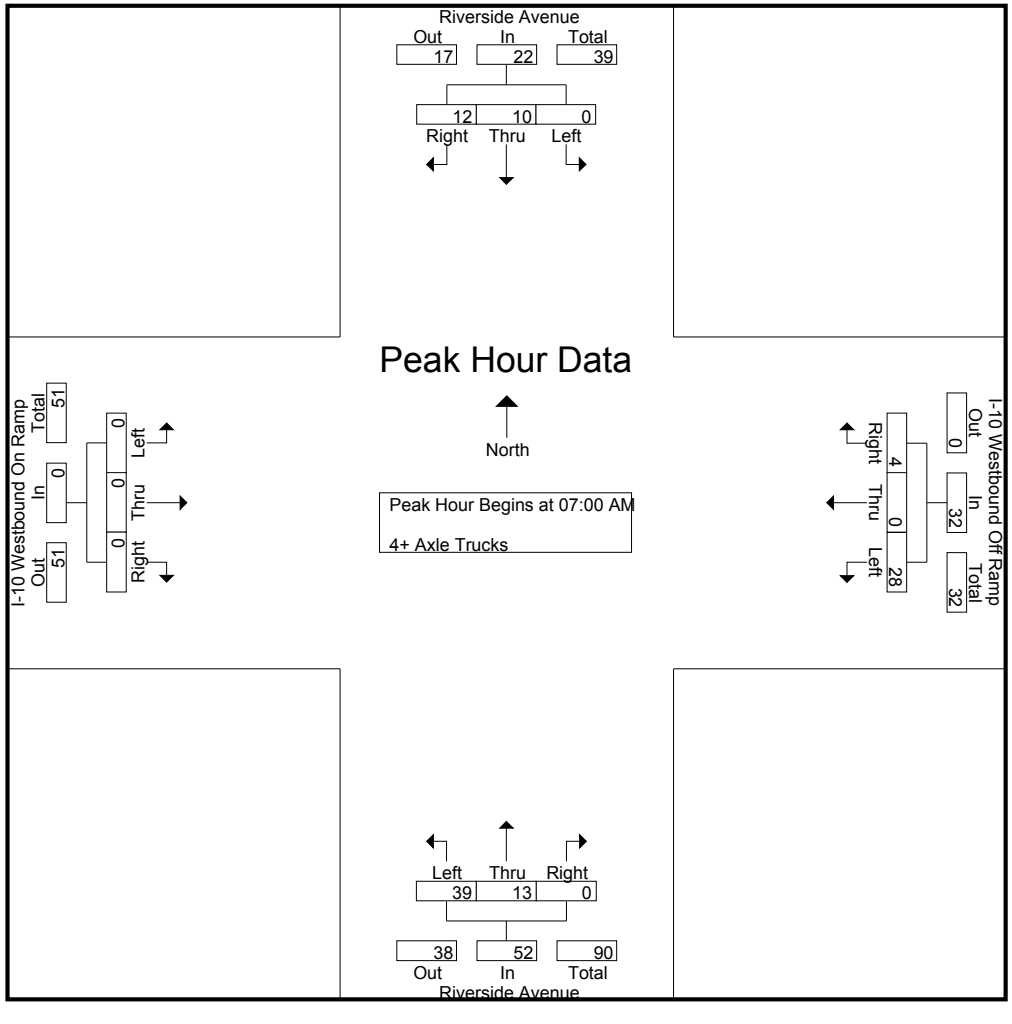
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	2	2	4	5	0	0	5	**12**	**10**	0	**22**	0	0	0	0	
+15 mins.	0	**3**	3	6	**9**	0	1	**10**	8	0	0	8	0	0	0	0	
+30 mins.	0	3	2	5	7	0	1	8	8	2	0	10	0	0	0	0	
+45 mins.	0	2	**5**	**7**	7	0	**2**	9	11	1	0	12	0	0	0	0	
Total Volume	0	10	12	22	28	0	4	32	39	13	0	52	0	0	0	0	
% App. Total	0	45.5	54.5		87.5	0	12.5		75	25	0		0	0	0		
PHF	.000	.833	.600	.786	.778	.000	.500	.800	.813	.325	.000	.591	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	233	54	0	287	62	0	132	23	194	70	327	0	0	397	0	0	0	0	0	23	878	901
04:15 PM	0	220	96	28	316	71	0	130	22	201	69	334	0	0	403	0	0	0	0	0	50	920	970
04:30 PM	0	229	83	27	312	58	0	127	23	185	58	326	0	0	384	0	0	0	0	0	50	881	931
04:45 PM	0	259	93	23	352	63	4	149	25	216	66	300	0	0	366	0	0	0	0	0	48	934	982
Total	0	941	326	78	1267	254	4	538	93	796	263	1287	0	0	1550	0	0	0	0	0	171	3613	3784
05:00 PM	0	226	84	35	310	61	1	123	23	185	66	347	0	0	413	0	0	0	0	0	58	908	966
05:15 PM	0	247	93	31	340	66	0	131	12	197	59	351	0	0	410	0	0	0	0	0	43	947	990
05:30 PM	0	236	84	29	320	71	2	136	20	209	49	324	0	0	373	0	0	0	0	0	49	902	951
05:45 PM	0	211	92	25	303	83	0	110	14	193	59	364	0	0	423	0	0	0	0	0	39	919	958
Total	0	920	353	120	1273	281	3	500	69	784	233	1386	0	0	1619	0	0	0	0	0	189	3676	3865
Grand Total	0	1861	679	198	2540	535	7	1038	162	1580	496	2673	0	0	3169	0	0	0	0	0	360	7289	7649
Apprch %	0	73.3	26.7			33.9	0.4	65.7			15.7	84.3	0			0	0	0					
Total %	0	25.5	9.3		34.8	7.3	0.1	14.2		21.7	6.8	36.7	0		43.5	0	0	0		0	4.7	95.3	
Passenger Vehicles	0	1794	655		2640	378	6	1003		1544	382	2588	0		2970	0	0	0		0	0	0	7154
% Passenger Vehicles	0	96.4	96.5	96.5	96.4	70.7	85.7	96.6	96.9	88.6	77	96.8	0	0	93.7	0	0	0	0	0	0	0	93.5
Large 2 Axle Vehicles	0	38	11		53	30	1	16		48	25	37	0		62	0	0	0		0	0	0	163
% Large 2 Axle Vehicles	0	2	1.6	2	1.9	5.6	14.3	1.5	0.6	2.8	5	1.4	0	0	2	0	0	0	0	0	0	0	2.1
3 Axle Vehicles	0	9	4		15	33	0	4		37	32	12	0		44	0	0	0		0	0	0	96
% 3 Axle Vehicles	0	0.5	0.6	1	0.5	6.2	0	0.4	0	2.1	6.5	0.4	0	0	1.4	0	0	0	0	0	0	0	1.3
4+ Axle Trucks	0	20	9		30	94	0	15		113	57	36	0		93	0	0	0		0	0	0	236
% 4+ Axle Trucks	0	1.1	1.3	0.5	1.1	17.6	0	1.4	2.5	6.5	11.5	1.3	0	0	2.9	0	0	0	0	0	0	0	3.1

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**259**	**93**	**352**	63	**4**	**149**	**216**	**66**	300	0	366	0	0	0	0	934
05:00 PM	0	226	84	310	61	1	123	185	66	347	0	**413**	0	0	0	0	908
05:15 PM	0	247	93	340	66	0	131	197	59	**351**	0	410	0	0	0	0	**947**
05:30 PM	0	236	84	320	**71**	2	136	209	49	324	0	373	0	0	0	0	902
Total Volume	0	968	354	1322	261	7	539	807	240	1322	0	1562	0	0	0	0	3691
% App. Total	0	73.2	26.8		32.3	0.9	66.8		15.4	84.6	0		0	0	0		
PHF	.000	.934	.952	.939	.919	.438	.904	.934	.909	.942	.000	.946	.000	.000	.000	.000	.974

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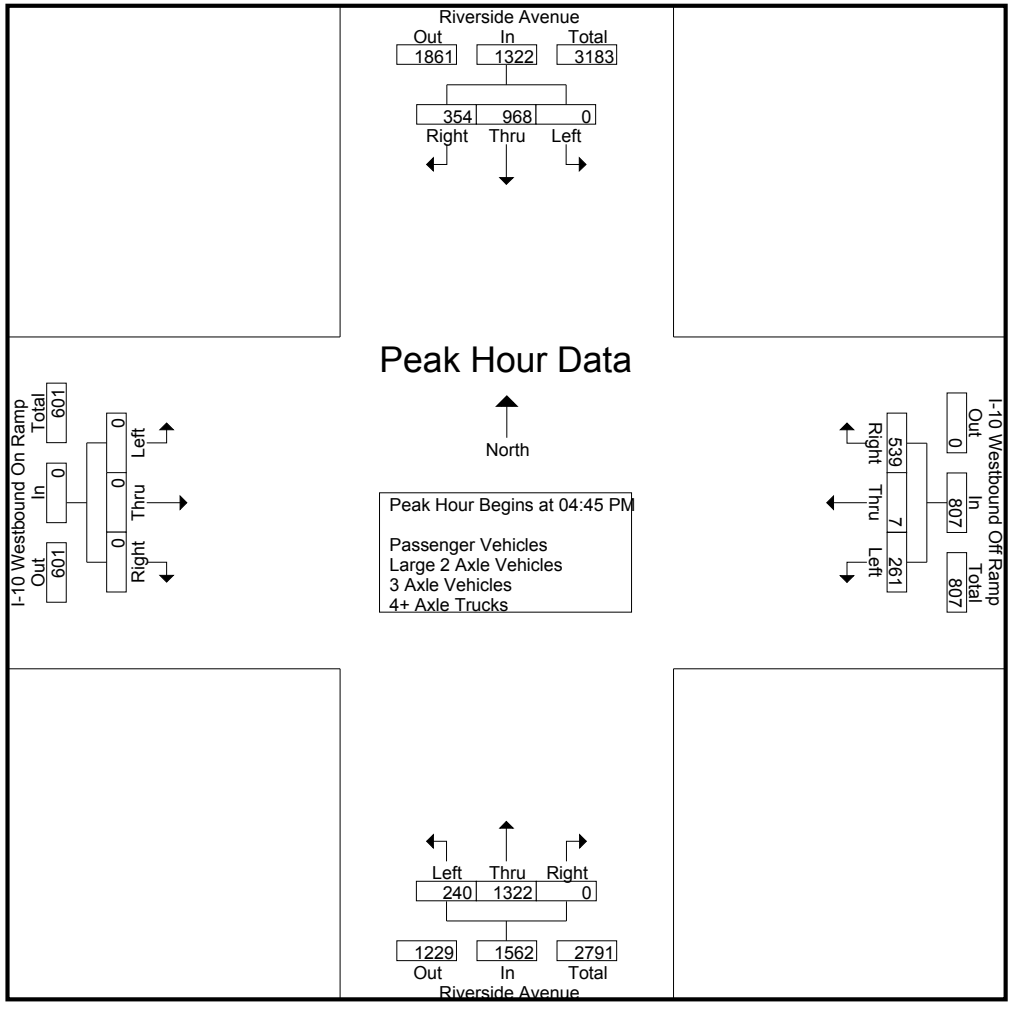
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
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File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				05:00 PM				04:00 PM				
+0 mins.	0	**259**	**93**	**352**	63	**4**	**149**	**216**	**66**	347	0	413	0	0	0	0	
+15 mins.	0	226	84	310	61	1	123	185	59	351	0	410	0	0	0	0	
+30 mins.	0	247	93	340	66	0	131	197	49	324	0	373	0	0	0	0	
+45 mins.	0	236	84	320	**71**	2	136	209	59	**364**	0	**423**	0	0	0	0	
Total Volume	0	968	354	1322	261	7	539	807	233	1386	0	1619	0	0	0	0	
% App. Total	0	73.2	26.8		32.3	0.9	66.8		14.4	85.6	0		0	0	0		
PHF	.000	.934	.952	.939	.919	.438	.904	.934	.883	.952	.000	.957	.000	.000	.000	.000	

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City of Rialto
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E/W: I-10 Westbound Ramps
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File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	224	49	0	273	39	0	126	21	165	54	313	0	0	367	0	0	0	0	0	21	805	826
04:15 PM	0	214	90	25	304	50	0	127	22	177	55	321	0	0	376	0	0	0	0	0	47	857	904
04:30 PM	0	225	82	27	307	40	0	120	22	160	48	311	0	0	359	0	0	0	0	0	49	826	875
04:45 PM	0	247	93	23	340	51	3	142	25	196	50	291	0	0	341	0	0	0	0	0	48	877	925
Total	0	910	314	75	1224	180	3	515	90	698	207	1236	0	0	1443	0	0	0	0	0	165	3365	3530
05:00 PM	0	220	80	33	300	45	1	120	23	166	50	338	0	0	388	0	0	0	0	0	56	854	910
05:15 PM	0	238	87	29	325	48	0	126	11	174	44	340	0	0	384	0	0	0	0	0	40	883	923
05:30 PM	0	225	83	29	308	53	2	132	19	187	35	319	0	0	354	0	0	0	0	0	48	849	897
05:45 PM	0	201	91	25	292	52	0	110	14	162	46	355	0	0	401	0	0	0	0	0	39	855	894
Total	0	884	341	116	1225	198	3	488	67	689	175	1352	0	0	1527	0	0	0	0	0	183	3441	3624
Grand Total	0	1794	655	191	2449	378	6	1003	157	1387	382	2588	0	0	2970	0	0	0	0	0	348	6806	7154
Apprch %	0	73.3	26.7			27.3	0.4	72.3			12.9	87.1	0			0	0	0					
Total %	0	26.4	9.6		36	5.6	0.1	14.7		20.4	5.6	38	0		43.6	0	0	0		0	4.9	95.1	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**247**	**93**	**340**	51	**3**	**142**	**196**	**50**	291	0	341	0	0	0	0	877
05:00 PM	0	220	80	300	45	1	120	166	50	338	0	**388**	0	0	0	0	854
05:15 PM	0	238	87	325	48	0	126	174	44	**340**	0	384	0	0	0	0	**883**
05:30 PM	0	225	83	308	**53**	2	132	187	35	319	0	354	0	0	0	0	849
Total Volume	0	930	343	1273	197	6	520	723	179	1288	0	1467	0	0	0	0	3463
% App. Total	0	73.1	26.9		27.2	0.8	71.9		12.2	87.8	0		0	0	0		
PHF	.000	.941	.922	.936	.929	.500	.915	.922	.895	.947	.000	.945	.000	.000	.000	.000	.980

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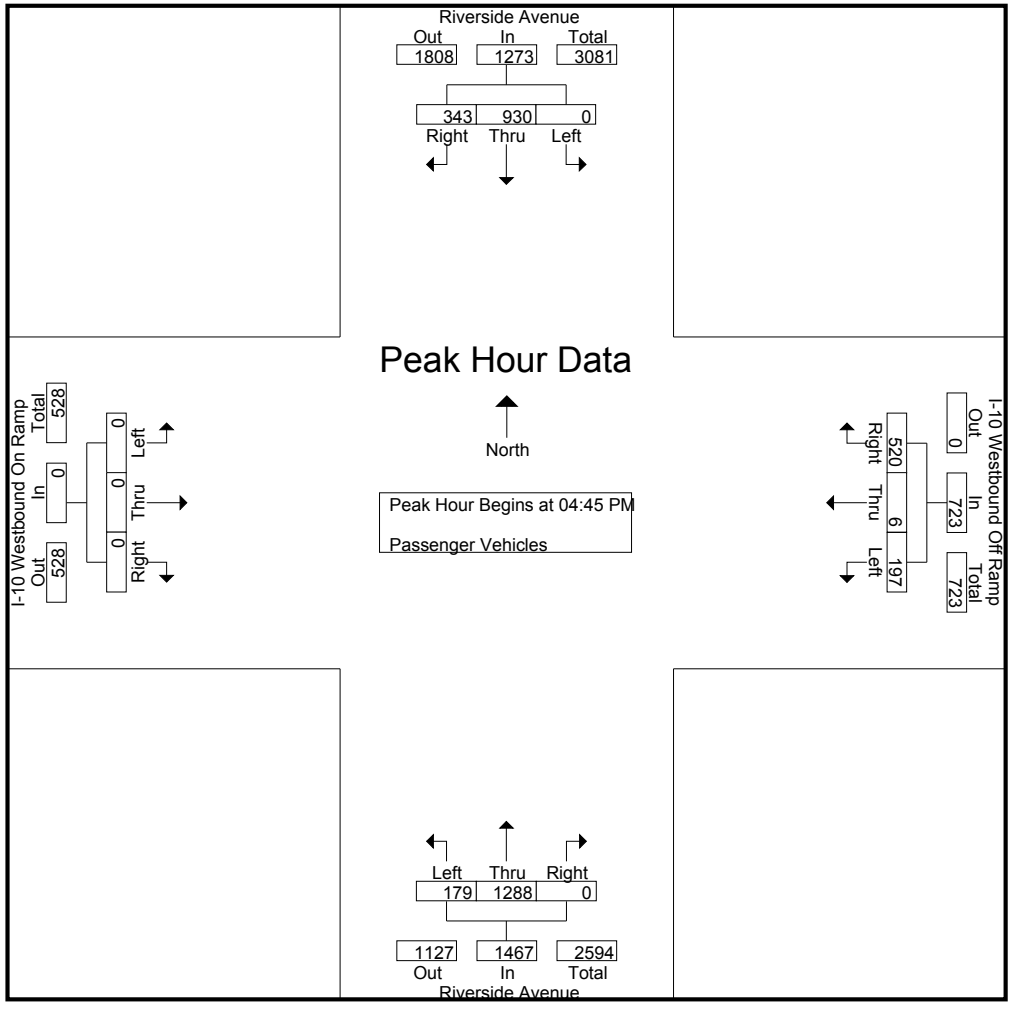
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
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File Name : RLTRI10WPM
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Page No : 3

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	**247**	**93**	**340**	51	**3**	**142**	**196**	**50**	291	0	341	0	0	0	0	
+15 mins.	0	220	80	300	45	1	120	166	50	338	0	**388**	0	0	0	0	
+30 mins.	0	238	87	325	48	0	126	174	44	**340**	0	384	0	0	0	0	
+45 mins.	0	225	83	308	**53**	2	132	187	35	319	0	354	0	0	0	0	
Total Volume	0	930	343	1273	197	6	520	723	179	1288	0	1467	0	0	0	0	
% App. Total	0	73.1	26.9		27.2	0.8	71.9		12.2	87.8	0		0	0	0		
PHF	.000	.941	.922	.936	.929	.500	.915	.922	.895	.947	.000	.945	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	5	3	0	8	4	0	1	0	5	6	6	0	0	12	0	0	0	0	0	0	25	25
04:15 PM	0	3	2	2	5	3	0	2	0	5	1	5	0	0	6	0	0	0	0	0	2	16	18
04:30 PM	0	3	0	0	3	5	0	5	1	10	2	8	0	0	10	0	0	0	0	0	1	23	24
04:45 PM	0	6	0	0	6	4	1	2	0	7	0	6	0	0	6	0	0	0	0	0	0	19	19
Total	0	17	5	2	22	16	1	10	1	27	9	25	0	0	34	0	0	0	0	0	3	83	86
05:00 PM	0	3	3	2	6	2	0	0	0	2	5	5	0	0	10	0	0	0	0	0	2	18	20
05:15 PM	0	7	2	0	9	3	0	3	0	6	2	3	0	0	5	0	0	0	0	0	0	20	20
05:30 PM	0	6	1	0	7	5	0	3	0	8	4	2	0	0	6	0	0	0	0	0	0	21	21
05:45 PM	0	5	0	0	5	4	0	0	0	4	5	2	0	0	7	0	0	0	0	0	0	16	16
Total	0	21	6	2	27	14	0	6	0	20	16	12	0	0	28	0	0	0	0	0	2	75	77
Grand Total	0	38	11	4	49	30	1	16	1	47	25	37	0	0	62	0	0	0	0	0	5	158	163
Apprch %	0	77.6	22.4			63.8	2.1	34			40.3	59.7	0			0	0	0					
Total %	0	24.1	7		31	19	0.6	10.1		29.7	15.8	23.4	0		39.2	0	0	0		0	3.1	96.9	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	6	0	6	4	**1**	2	7	0	**6**	0	6	0	0	0	0	19
05:00 PM	0	3	**3**	6	2	0	0	2	**5**	5	0	**10**	0	0	0	0	18
05:15 PM	0	**7**	2	**9**	3	0	**3**	6	2	3	0	5	0	0	0	0	20
05:30 PM	0	6	1	7	**5**	0	3	**8**	4	2	0	6	0	0	0	0	**21**
Total Volume	0	22	6	28	14	1	8	23	11	16	0	27	0	0	0	0	78
% App. Total	0	78.6	21.4		60.9	4.3	34.8		40.7	59.3	0		0	0	0		
PHF	.000	.786	.500	.778	.700	.250	.667	.719	.550	.667	.000	.675	.000	.000	.000	.000	.929

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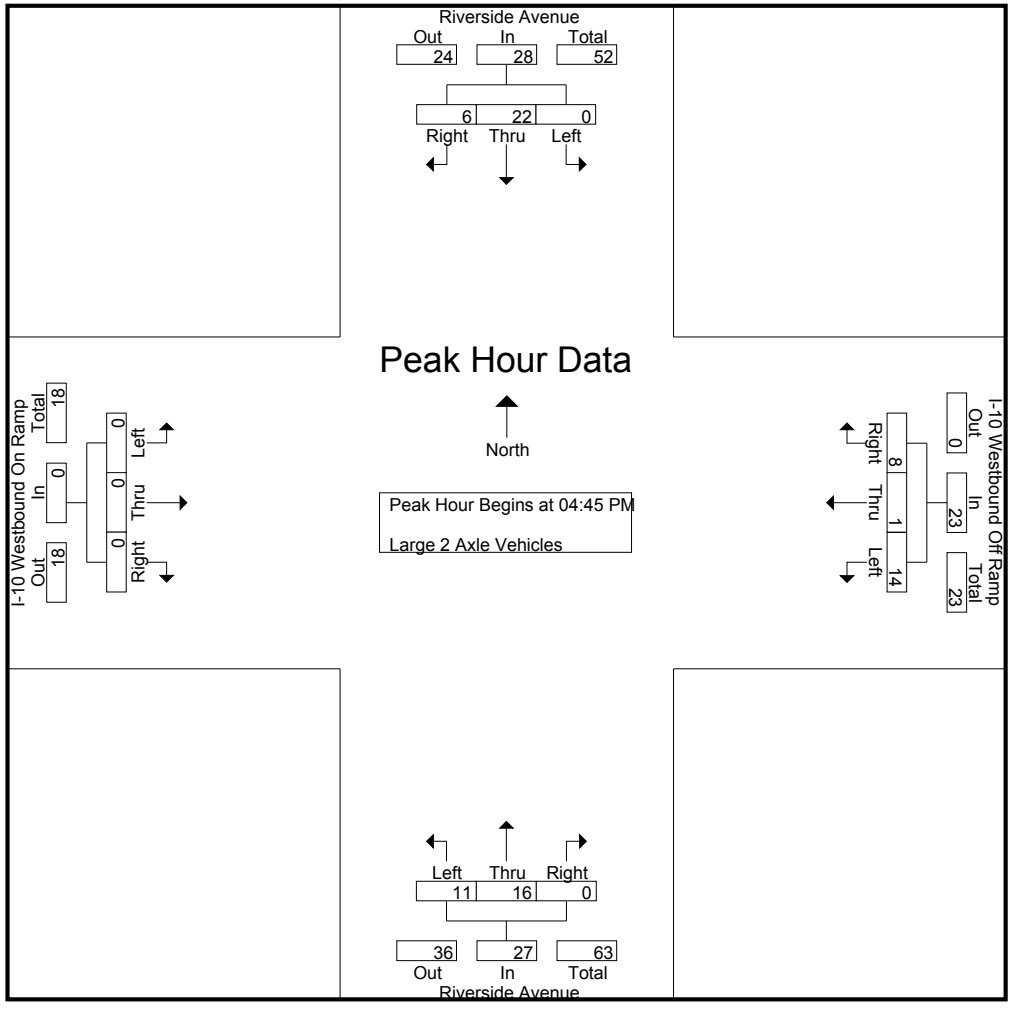
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	6	0	6	4	**1**	2	7	0	**6**	0	6	0	0	0	0	
+15 mins.	0	3	**3**	6	2	0	0	2	**5**	5	0	**10**	0	0	0	0	
+30 mins.	0	**7**	2	**9**	3	0	**3**	6	2	3	0	5	0	0	0	0	
+45 mins.	0	6	1	7	**5**	0	3	**8**	4	2	0	6	0	0	0	0	
Total Volume	0	22	6	28	14	1	8	23	11	16	0	27	0	0	0	0	
% App. Total	0	78.6	21.4		60.9	4.3	34.8		40.7	59.3	0		0	0	0		
PHF	.000	.786	.500	.778	.700	.250	.667	.719	.550	.667	.000	.675	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
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File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

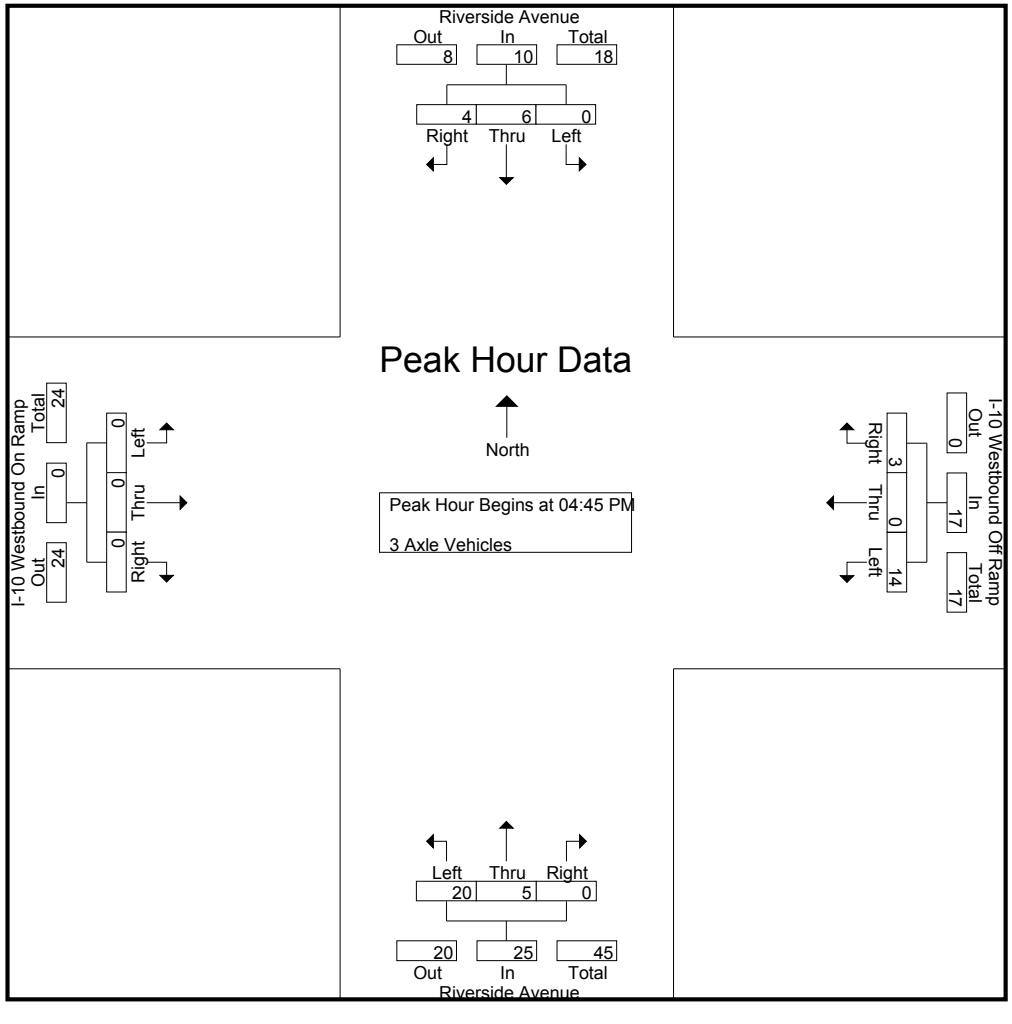
	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	7	0	0	0	7	3	2	0	0	5	0	0	0	0	0	0	12	12
04:15 PM	0	2	0	0	2	1	0	0	0	1	4	2	0	0	6	0	0	0	0	0	0	9	9
04:30 PM	0	0	0	0	0	2	0	1	0	3	2	2	0	0	4	0	0	0	0	0	0	7	7
04:45 PM	0	2	0	0	2	3	0	3	0	6	6	0	0	0	6	0	0	0	0	0	0	14	14
Total	0	4	0	0	4	13	0	4	0	17	15	6	0	0	21	0	0	0	0	0	0	42	42
05:00 PM	0	1	1	0	2	3	0	0	0	3	4	0	0	0	4	0	0	0	0	0	0	9	9
05:15 PM	0	1	3	2	4	5	0	0	0	5	8	5	0	0	13	0	0	0	0	0	2	22	24
05:30 PM	0	2	0	0	2	3	0	0	0	3	2	0	0	0	2	0	0	0	0	0	0	7	7
05:45 PM	0	1	0	0	1	9	0	0	0	9	3	1	0	0	4	0	0	0	0	0	0	14	14
Total	0	5	4	2	9	20	0	0	0	20	17	6	0	0	23	0	0	0	0	0	2	52	54
Grand Total	0	9	4	2	13	33	0	4	0	37	32	12	0	0	44	0	0	0	0	0	2	94	96
Apprch %	0	69.2	30.8			89.2	0	10.8			72.7	27.3	0			0	0	0					
Total %	0	9.6	4.3		13.8	35.1	0	4.3		39.4	34	12.8	0		46.8	0	0	0		0	2.1	97.9	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**2**	0	2	3	0	**3**	**6**	6	0	0	6	0	0	0	0	14
05:00 PM	0	1	1	2	3	0	0	3	4	0	0	4	0	0	0	0	9
05:15 PM	0	1	**3**	**4**	**5**	0	0	5	**8**	**5**	0	**13**	0	0	0	0	**22**
05:30 PM	0	2	0	2	3	0	0	3	2	0	0	2	0	0	0	0	7
Total Volume	0	6	4	10	14	0	3	17	20	5	0	25	0	0	0	0	52
% App. Total	0	60	40		82.4	0	17.6		80	20	0		0	0	0		
PHF	.000	.750	.333	.625	.700	.000	.250	.708	.625	.250	.000	.481	.000	.000	.000	.000	.591

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	**2**	0	2	3	0	**3**	**6**	6	0	0	6	0	0	0	0	
+15 mins.	0	1	1	2	3	0	0	3	4	0	0	4	0	0	0	0	
+30 mins.	0	1	**3**	**4**	**5**	0	0	5	**8**	**5**	0	**13**	0	0	0	0	
+45 mins.	0	2	0	2	3	0	0	3	2	0	0	2	0	0	0	0	
Total Volume	0	6	4	10	14	0	3	17	20	5	0	25	0	0	0	0	
% App. Total	0	60	40		82.4	0	17.6		80	20	0		0	0	0		
PHF	.000	.750	.333	.625	.700	.000	.250	.708	.625	.250	.000	.481	.000	.000	.000	.000	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

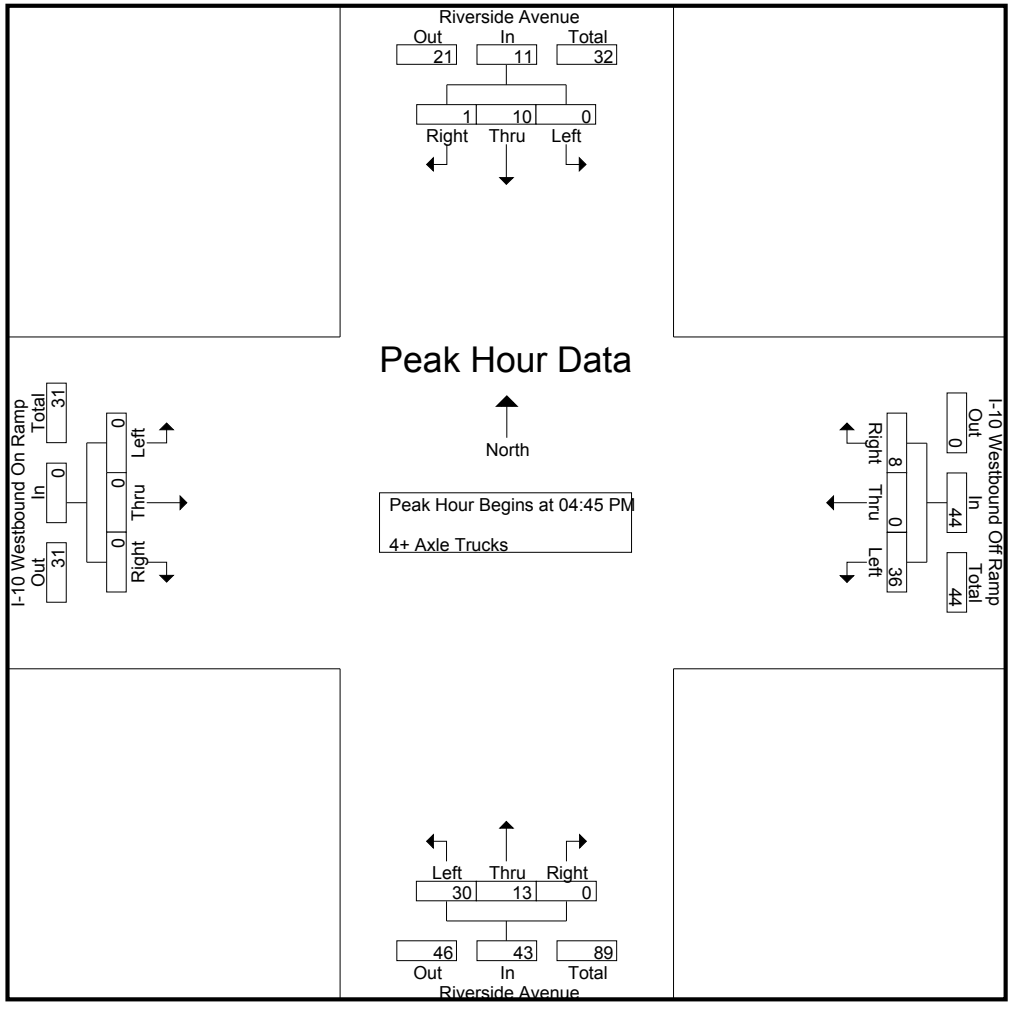
	Riverside Avenue Southbound					I-10 Westbound Off Ramp Westbound					Riverside Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	4	2	0	6	12	0	5	2	17	7	6	0	0	13	0	0	0	0	0	2	36	38
04:15 PM	0	1	4	1	5	17	0	1	0	18	9	6	0	0	15	0	0	0	0	0	1	38	39
04:30 PM	0	1	1	0	2	11	0	1	0	12	6	5	0	0	11	0	0	0	0	0	0	25	25
04:45 PM	0	4	0	0	4	5	0	2	0	7	10	3	0	0	13	0	0	0	0	0	0	24	24
Total	0	10	7	1	17	45	0	9	2	54	32	20	0	0	52	0	0	0	0	0	3	123	126
05:00 PM	0	2	0	0	2	11	0	3	0	14	7	4	0	0	11	0	0	0	0	0	0	27	27
05:15 PM	0	1	1	0	2	10	0	2	1	12	5	3	0	0	8	0	0	0	0	0	1	22	23
05:30 PM	0	3	0	0	3	10	0	1	1	11	8	3	0	0	11	0	0	0	0	0	1	25	26
05:45 PM	0	4	1	0	5	18	0	0	0	18	5	6	0	0	11	0	0	0	0	0	0	34	34
Total	0	10	2	0	12	49	0	6	2	55	25	16	0	0	41	0	0	0	0	0	2	108	110
Grand Total	0	20	9	1	29	94	0	15	4	109	57	36	0	0	93	0	0	0	0	0	5	231	236
Apprch %	0	69	31			86.2	0	13.8			61.3	38.7	0			0	0	0					
Total %	0	8.7	3.9		12.6	40.7	0	6.5		47.2	24.7	15.6	0		40.3	0	0	0		0	2.1	97.9	

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**4**	0	**4**	5	0	2	7	**10**	3	0	**13**	0	0	0	0	24
05:00 PM	0	2	0	2	**11**	0	**3**	**14**	7	**4**	0	11	0	0	0	0	**27**
05:15 PM	0	1	**1**	2	10	0	2	12	5	3	0	8	0	0	0	0	22
05:30 PM	0	3	0	3	10	0	1	11	8	3	0	11	0	0	0	0	25
Total Volume	0	10	1	11	36	0	8	44	30	13	0	43	0	0	0	0	98
% App. Total	0	90.9	9.1		81.8	0	18.2		69.8	30.2	0		0	0	0		
PHF	.000	.625	.250	.688	.818	.000	.667	.786	.750	.813	.000	.827	.000	.000	.000	.000	.907

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : RLTRI10WPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	**4**	0	**4**	5	0	2	7	**10**	3	0	**13**	0	0	0	0	
+15 mins.	0	2	0	2	**11**	0	**3**	**14**	7	**4**	0	11	0	0	0	0	
+30 mins.	0	1	**1**	2	10	0	2	12	5	3	0	8	0	0	0	0	
+45 mins.	0	3	0	3	10	0	1	11	8	3	0	11	0	0	0	0	
Total Volume	0	10	1	11	36	0	8	44	30	13	0	43	0	0	0	0	
% App. Total	0	90.9	9.1		81.8	0	18.2		69.8	30.2	0		0	0	0		
PHF	.000	.625	.250	.688	.818	.000	.667	.786	.750	.813	.000	.827	.000	.000	.000	.000	

Location: Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps

Date: 1/19/2017
Day: Thursday

PEDESTRIANS

	North Leg Riverside Avenue	East Leg I-10 Westbound Ramps	South Leg Riverside Avenue	West Leg I-10 Westbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Riverside Avenue	East Leg I-10 Westbound Ramps	South Leg Riverside Avenue	West Leg I-10 Westbound Ramps	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	1	0	1	2
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	2	4

Location: Rialto
N/S: Riverside Avenue
E/W: I-10 Westbound Ramps

Date: 1/19/2017
Day: Thursday

BICYCLES

	North Leg Riverside Avenue	East Leg I-10 Westbound Ramps	South Leg Riverside Avenue	West Leg I-10 Westbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	2	0	0	2
TOTAL VOLUMES:	0	3	0	1	4

	North Leg Riverside Avenue	East Leg I-10 Westbound Ramps	South Leg Riverside Avenue	West Leg I-10 Westbound Ramps	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	0	0	0	3	3

Counts Unlimited
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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	93	236	0	0	329	0	0	0	0	0	0	134	48	0	182	73	2	80	43	155	43	666	709
07:15 AM	116	296	0	0	412	0	0	0	0	0	0	171	70	19	241	81	2	105	42	188	61	841	902
07:30 AM	148	281	0	0	429	0	0	0	0	0	0	151	75	18	226	96	0	95	52	191	70	846	916
07:45 AM	131	259	0	0	390	0	0	0	0	0	0	153	60	14	213	85	2	92	47	179	61	782	843
Total	488	1072	0	0	1560	0	0	0	0	0	0	609	253	51	862	335	6	372	184	713	235	3135	3370
08:00 AM	85	166	0	0	251	0	0	0	0	0	0	125	52	10	177	87	0	78	40	165	50	593	643
08:15 AM	103	218	0	0	321	0	0	0	0	0	0	133	62	9	195	65	0	85	49	150	58	666	724
08:30 AM	94	169	0	0	263	0	0	0	0	0	0	141	73	7	214	77	0	54	33	131	40	608	648
08:45 AM	85	171	0	0	256	0	0	0	0	0	0	157	72	7	229	66	2	85	46	153	53	638	691
Total	367	724	0	0	1091	0	0	0	0	0	0	556	259	33	815	295	2	302	168	599	201	2505	2706
Grand Total	855	1796	0	0	2651	0	0	0	0	0	0	1165	512	84	1677	630	8	674	352	1312	436	5640	6076
Apprch %	32.3	67.7	0			0	0	0			0	69.5	30.5			48	0.6	51.4					
Total %	15.2	31.8	0		47	0	0	0		0	0	20.7	9.1		29.7	11.2	0.1	12		23.3	7.2	92.8	
Passenger Vehicles	818	1648	0		2466	0	0	0		0	0	910	325		1301	580	6	523		1410	0	0	5177
% Passenger Vehicles	95.7	91.8	0	0	93	0	0	0	0	0	0	78.1	63.5	78.6	73.9	92.1	75	77.6	85.5	84.7	0	0	85.2
Large 2 Axle Vehicles	22	48	0		70	0	0	0		0	0	77	39		121	23	1	38		80	0	0	271
% Large 2 Axle Vehicles	2.6	2.7	0	0	2.6	0	0	0	0	0	0	6.6	7.6	6	6.9	3.7	12.5	5.6	5.1	4.8	0	0	4.5
3 Axle Vehicles	5	28	0		33	0	0	0		0	0	57	37		98	7	1	32		50	0	0	181
% 3 Axle Vehicles	0.6	1.6	0	0	1.2	0	0	0	0	0	0	4.9	7.2	4.8	5.6	1.1	12.5	4.7	2.8	3	0	0	3
4+ Axle Trucks	10	72	0		82	0	0	0		0	0	121	111		241	20	0	81		124	0	0	447
% 4+ Axle Trucks	1.2	4	0	0	3.1	0	0	0	0	0	0	10.4	21.7	10.7	13.7	3.2	0	12	6.5	7.5	0	0	7.4

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	93	236	0	329	0	0	0	0	0	134	48	182	73	**2**	80	155	666
07:15 AM	116	**296**	0	412	0	0	0	0	0	**171**	70	**241**	81	2	**105**	188	841
07:30 AM	**148**	281	0	**429**	0	0	0	0	0	151	**75**	226	**96**	0	95	**191**	**846**
07:45 AM	131	259	0	390	0	0	0	0	0	153	60	213	85	2	92	179	782
Total Volume	488	1072	0	1560	0	0	0	0	0	609	253	862	335	6	372	713	3135
% App. Total	31.3	68.7	0		0	0	0		0	70.6	29.4		47	0.8	52.2		
PHF	.824	.905	.000	.909	.000	.000	.000	.000	.000	.890	.843	.894	.872	.750	.886	.933	.926

Counts Unlimited
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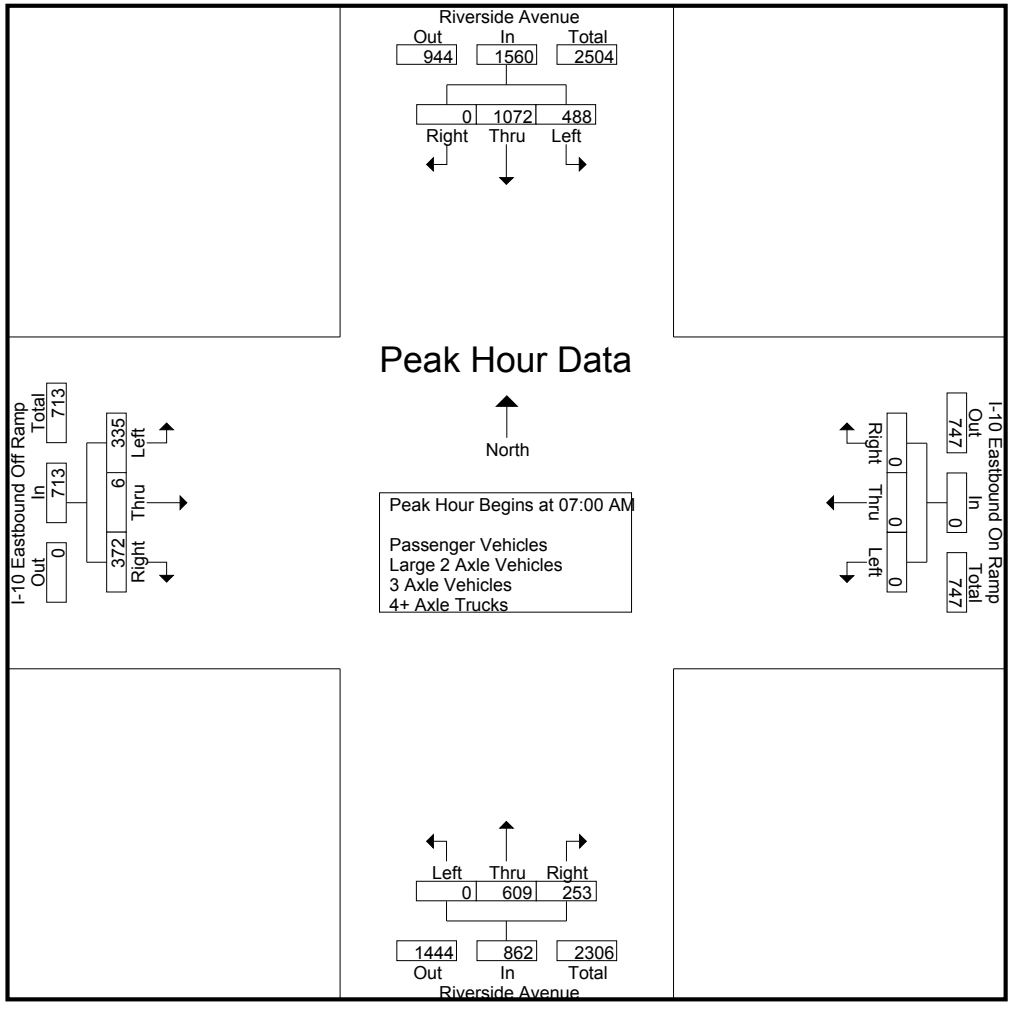
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:15 AM				
+0 mins.	93	236	0	329	0	0	0	0	0	134	48	182	81	**2**	**105**	188	
+15 mins.	116	**296**	0	412	0	0	0	0	0	**171**	70	**241**	**96**	0	95	**191**	
+30 mins.	**148**	281	0	**429**	0	0	0	0	0	151	**75**	226	85	2	92	179	
+45 mins.	131	259	0	390	0	0	0	0	0	153	60	213	87	0	78	165	
Total Volume	488	1072	0	1560	0	0	0	0	0	609	253	862	349	4	370	723	
% App. Total	31.3	68.7	0		0	0	0		0	70.6	29.4		48.3	0.6	51.2		
PHF	.824	.905	.000	.909	.000	.000	.000	.000	.000	.890	.843	.894	.909	.500	.881	.946	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

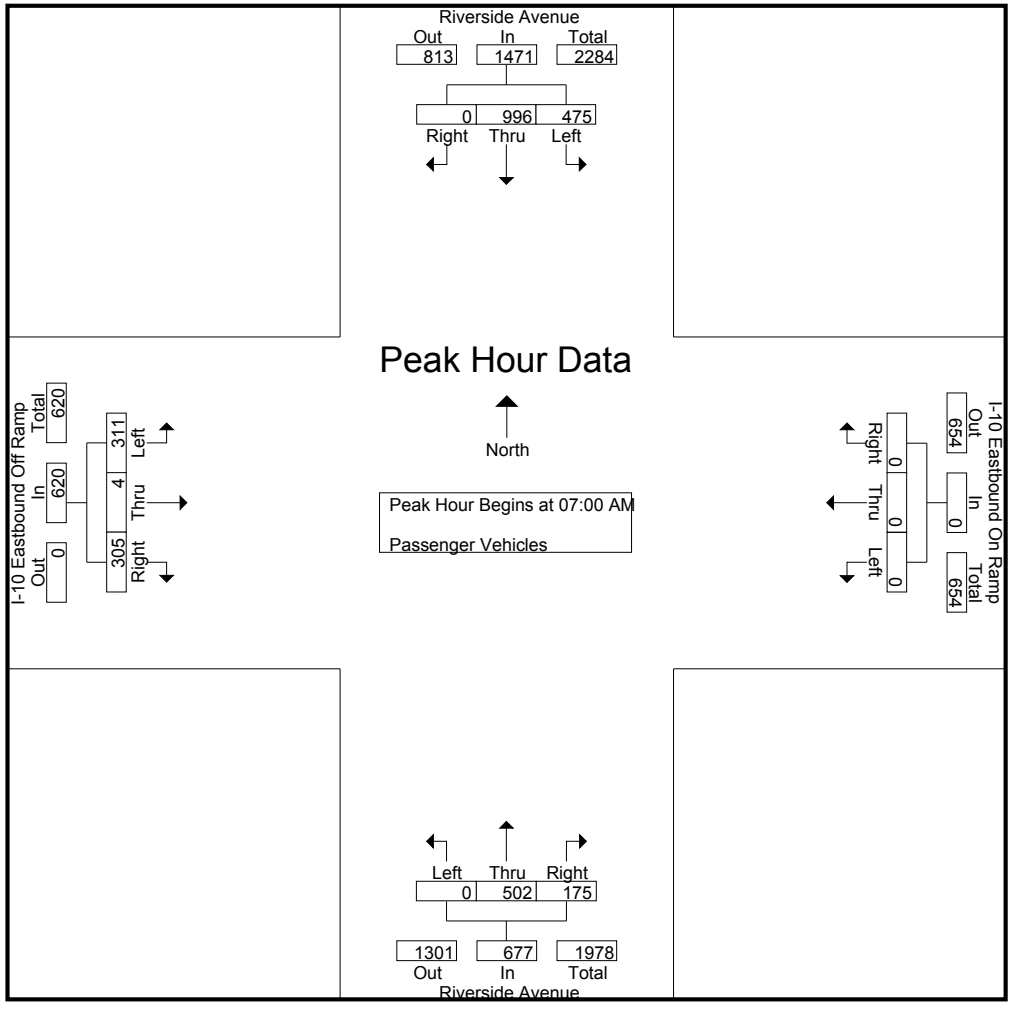
	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	90	221	0	0	311	0	0	0	0	0	0	103	31	0	134	66	1	63	38	130	38	575	613
07:15 AM	113	275	0	0	388	0	0	0	0	0	0	150	49	17	199	75	2	79	37	156	54	743	797
07:30 AM	142	260	0	0	402	0	0	0	0	0	0	129	54	12	183	90	0	83	49	173	61	758	819
07:45 AM	130	240	0	0	370	0	0	0	0	0	0	120	41	9	161	80	1	80	45	161	54	692	746
Total	475	996	0	0	1471	0	0	0	0	0	0	502	175	38	677	311	4	305	169	620	207	2768	2975
08:00 AM	80	156	0	0	236	0	0	0	0	0	0	93	32	10	125	81	0	58	31	139	41	500	541
08:15 AM	93	192	0	0	285	0	0	0	0	0	0	97	29	7	126	61	0	62	42	123	49	534	583
08:30 AM	91	152	0	0	243	0	0	0	0	0	0	102	46	6	148	72	0	37	25	109	31	500	531
08:45 AM	79	152	0	0	231	0	0	0	0	0	0	116	43	5	159	55	2	61	34	118	39	508	547
Total	343	652	0	0	995	0	0	0	0	0	0	408	150	28	558	269	2	218	132	489	160	2042	2202
Grand Total	818	1648	0	0	2466	0	0	0	0	0	0	910	325	66	1235	580	6	523	301	1109	367	4810	5177
Apprch %	33.2	66.8	0			0	0	0			0	73.7	26.3			52.3	0.5	47.2					
Total %	17	34.3	0		51.3	0	0	0		0	0	18.9	6.8		25.7	12.1	0.1	10.9		23.1	7.1	92.9	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	90	221	0	311	0	0	0	0	0	103	31	134	66	1	63	130	575
07:15 AM	113	**275**	0	388	0	0	0	0	0	**150**	49	**199**	75	**2**	79	156	743
07:30 AM	**142**	260	0	**402**	0	0	0	0	0	129	**54**	183	**90**	0	**83**	**173**	**758**
07:45 AM	130	240	0	370	0	0	0	0	0	120	41	161	80	1	80	161	692
Total Volume	475	996	0	1471	0	0	0	0	0	502	175	677	311	4	305	620	2768
% App. Total	32.3	67.7	0		0	0	0		0	74.2	25.8		50.2	0.6	49.2		
PHF	.836	.905	.000	.915	.000	.000	.000	.000	.000	.837	.810	.851	.864	.500	.919	.896	.913

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	90	221	0	311	0	0	0	0	0	103	31	134	66	1	63	130	
+15 mins.	113	**275**	0	388	0	0	0	0	0	**150**	49	**199**	75	**2**	79	156	
+30 mins.	**142**	260	0	**402**	0	0	0	0	0	129	**54**	183	**90**	0	**83**	**173**	
+45 mins.	130	240	0	370	0	0	0	0	0	120	41	161	80	1	80	161	
Total Volume	475	996	0	1471	0	0	0	0	0	502	175	677	311	4	305	620	
% App. Total	32.3	67.7	0		0	0	0		0	74.2	25.8		50.2	0.6	49.2		
PHF	.836	.905	.000	.915	.000	.000	.000	.000	.000	.837	.810	.851	.864	.500	.919	.896	

Counts Unlimited
PO Box 1178
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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

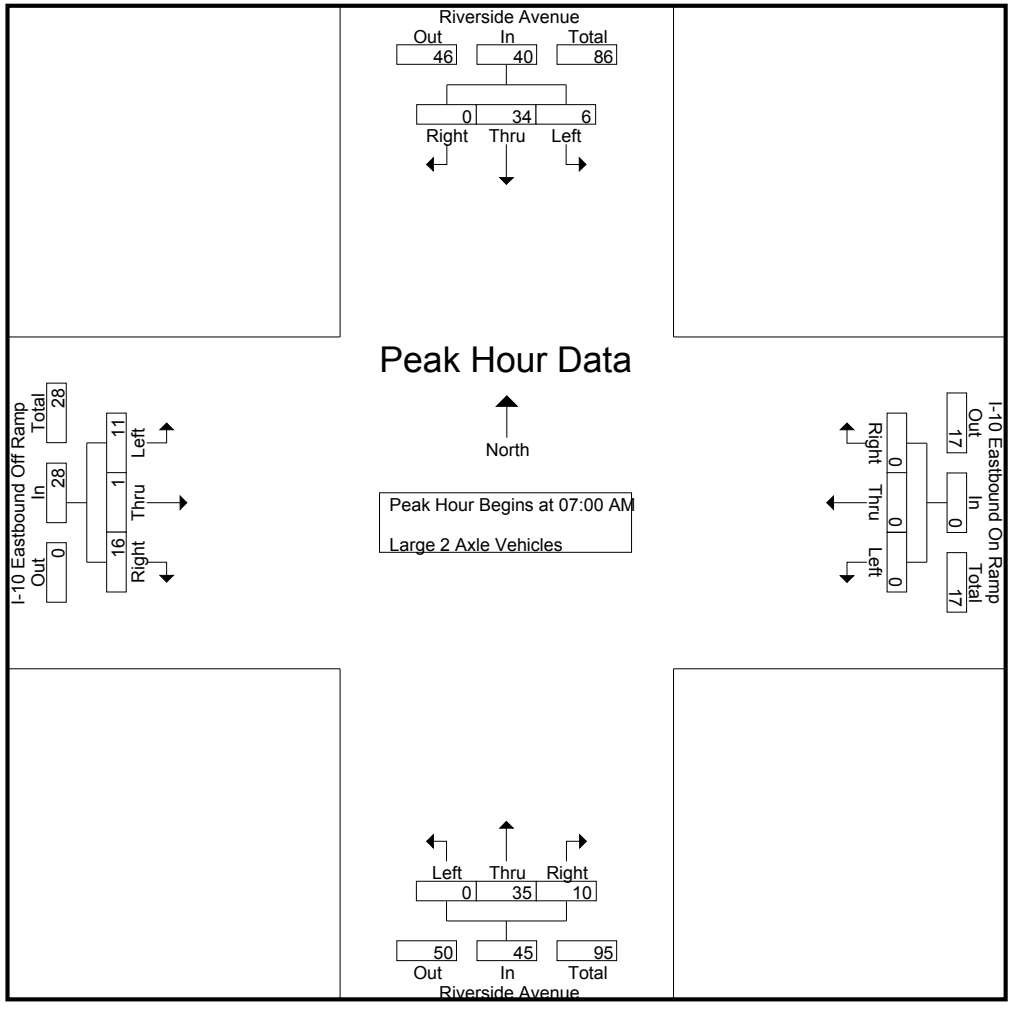
	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	9	0	0	10	0	0	0	0	0	0	10	3	0	13	0	0	3	2	3	2	26	28
07:15 AM	1	9	0	0	10	0	0	0	0	0	0	7	1	0	8	4	0	7	1	11	1	29	30
07:30 AM	4	9	0	0	13	0	0	0	0	0	0	8	5	1	13	4	0	2	0	6	1	32	33
07:45 AM	0	7	0	0	7	0	0	0	0	0	0	10	1	0	11	3	1	4	2	8	2	26	28
Total	6	34	0	0	40	0	0	0	0	0	0	35	10	1	45	11	1	16	5	28	6	113	119
08:00 AM	4	2	0	0	6	0	0	0	0	0	0	12	4	0	16	3	0	3	1	6	1	28	29
08:15 AM	8	7	0	0	15	0	0	0	0	0	0	12	8	2	20	1	0	9	4	10	6	45	51
08:30 AM	1	2	0	0	3	0	0	0	0	0	0	8	11	1	19	3	0	3	2	6	3	28	31
08:45 AM	3	3	0	0	6	0	0	0	0	0	0	10	6	1	16	5	0	7	6	12	7	34	41
Total	16	14	0	0	30	0	0	0	0	0	0	42	29	4	71	12	0	22	13	34	17	135	152
Grand Total	22	48	0	0	70	0	0	0	0	0	0	77	39	5	116	23	1	38	18	62	23	248	271
Apprch %	31.4	68.6	0			0	0	0			0	66.4	33.6			37.1	1.6	61.3					
Total %	8.9	19.4	0		28.2	0	0	0		0	0	31	15.7		46.8	9.3	0.4	15.3		25	8.5	91.5	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	**9**	0	10	0	0	0	0	0	**10**	3	**13**	0	0	3	3	26
07:15 AM	1	9	0	10	0	0	0	0	0	7	1	8	**4**	0	**7**	**11**	29
07:30 AM	**4**	9	0	**13**	0	0	0	0	0	8	**5**	13	4	0	2	6	**32**
07:45 AM	0	7	0	7	0	0	0	0	0	10	1	11	3	**1**	4	8	26
Total Volume	6	34	0	40	0	0	0	0	0	35	10	45	11	1	16	28	113
% App. Total	15	85	0		0	0	0		0	77.8	22.2		39.3	3.6	57.1		
PHF	.375	.944	.000	.769	.000	.000	.000	.000	.000	.875	.500	.865	.688	.250	.571	.636	.883

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	**9**	0	10	0	0	0	0	0	**10**	3	**13**	0	0	3	3	
+15 mins.	1	9	0	10	0	0	0	0	0	7	1	8	**4**	0	**7**	**11**	
+30 mins.	**4**	9	0	**13**	0	0	0	0	0	8	**5**	13	4	0	2	6	
+45 mins.	0	7	0	7	0	0	0	0	0	10	1	11	3	**1**	4	8	
Total Volume	6	34	0	40	0	0	0	0	0	35	10	45	11	1	16	28	
% App. Total	15	85	0		0	0	0		0	77.8	22.2		39.3	3.6	57.1		
PHF	.375	.944	.000	.769	.000	.000	.000	.000	.000	.875	.500	.865	.688	.250	.571	.636	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

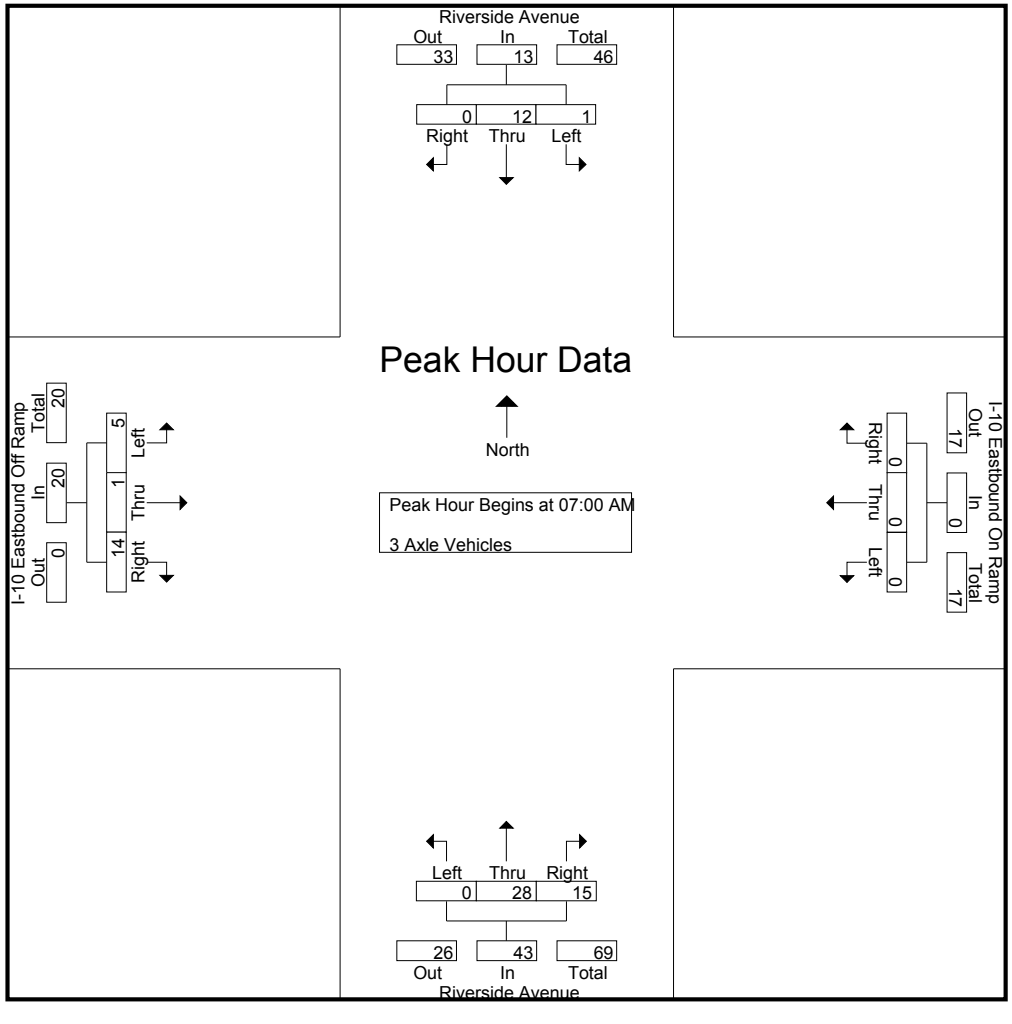
	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	7	5	0	12	1	1	2	1	4	1	17	18
07:15 AM	1	3	0	0	4	0	0	0	0	0	0	6	5	0	11	1	0	6	1	7	1	22	23
07:30 AM	0	4	0	0	4	0	0	0	0	0	0	4	3	2	7	1	0	5	1	6	3	17	20
07:45 AM	0	4	0	0	4	0	0	0	0	0	0	11	2	1	13	2	0	1	0	3	1	20	21
Total	1	12	0	0	13	0	0	0	0	0	0	28	15	3	43	5	1	14	3	20	6	76	82
08:00 AM	1	3	0	0	4	0	0	0	0	0	0	10	3	0	13	2	0	6	3	8	3	25	28
08:15 AM	1	6	0	0	7	0	0	0	0	0	0	7	7	0	14	0	0	4	1	4	1	25	26
08:30 AM	1	5	0	0	6	0	0	0	0	0	0	4	7	0	11	0	0	4	2	4	2	21	23
08:45 AM	1	2	0	0	3	0	0	0	0	0	0	8	5	1	13	0	0	4	1	4	2	20	22
Total	4	16	0	0	20	0	0	0	0	0	0	29	22	1	51	2	0	18	7	20	8	91	99
Grand Total	5	28	0	0	33	0	0	0	0	0	0	57	37	4	94	7	1	32	10	40	14	167	181
Apprch %	15.2	84.8	0			0	0	0			0	60.6	39.4			17.5	2.5	80					
Total %	3	16.8	0		19.8	0	0	0		0	0	34.1	22.2		56.3	4.2	0.6	19.2		24	7.7	92.3	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	7	**5**	12	1	**1**	2	4	17
07:15 AM	**1**	3	0	**4**	0	0	0	0	0	6	5	11	1	0	**6**	**7**	**22**
07:30 AM	0	**4**	0	4	0	0	0	0	0	4	3	7	1	0	5	6	17
07:45 AM	0	4	0	4	0	0	0	0	0	**11**	2	**13**	**2**	0	1	3	20
Total Volume	1	12	0	13	0	0	0	0	0	28	15	43	5	1	14	20	76
% App. Total	7.7	92.3	0		0	0	0		0	65.1	34.9		25	5	70		
PHF	.250	.750	.000	.813	.000	.000	.000	.000	.000	.636	.750	.827	.625	.250	.583	.714	.864

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	0	1	0	0	0	0	0	7	**5**	12	1	**1**	2	4	
+15 mins.	**1**	3	0	**4**	0	0	0	0	0	6	5	11	1	0	**6**	**7**	
+30 mins.	0	**4**	0	4	0	0	0	0	0	4	3	7	1	0	5	6	
+45 mins.	0	4	0	4	0	0	0	0	0	**11**	2	**13**	**2**	0	1	3	
Total Volume	1	12	0	13	0	0	0	0	0	28	15	43	5	1	14	20	
% App. Total	7.7	92.3	0		0	0	0		0	65.1	34.9		25	5	70		
PHF	.250	.750	.000	.813	.000	.000	.000	.000	.000	.636	.750	.827	.625	.250	.583	.714	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	2	5	0	0	7	0	0	0	0	0	0	14	9	0	23	6	0	12	2	18	2	48	50
07:15 AM	1	9	0	0	10	0	0	0	0	0	0	8	15	2	23	1	0	13	3	14	5	47	52
07:30 AM	2	8	0	0	10	0	0	0	0	0	0	10	13	3	23	1	0	5	2	6	5	39	44
07:45 AM	1	8	0	0	9	0	0	0	0	0	0	12	16	4	28	0	0	7	0	7	4	44	48
Total	6	30	0	0	36	0	0	0	0	0	0	44	53	9	97	8	0	37	7	45	16	178	194
08:00 AM	0	5	0	0	5	0	0	0	0	0	0	10	13	0	23	1	0	11	5	12	5	40	45
08:15 AM	1	13	0	0	14	0	0	0	0	0	0	17	18	0	35	3	0	10	2	13	2	62	64
08:30 AM	1	10	0	0	11	0	0	0	0	0	0	27	9	0	36	2	0	10	4	12	4	59	63
08:45 AM	2	14	0	0	16	0	0	0	0	0	0	23	18	0	41	6	0	13	5	19	5	76	81
Total	4	42	0	0	46	0	0	0	0	0	0	77	58	0	135	12	0	44	16	56	16	237	253
Grand Total	10	72	0	0	82	0	0	0	0	0	0	121	111	9	232	20	0	81	23	101	32	415	447
Apprch %	12.2	87.8	0			0	0	0			0	52.2	47.8			19.8	0	80.2					
Total %	2.4	17.3	0		19.8	0	0	0		0	0	29.2	26.7		55.9	4.8	0	19.5		24.3	7.2	92.8	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	5	0	7	0	0	0	0	0	**14**	9	23	**6**	0	12	**18**	**48**
07:15 AM	1	**9**	0	**10**	0	0	0	0	0	8	15	23	1	0	**13**	14	47
07:30 AM	2	8	0	10	0	0	0	0	0	10	13	23	1	0	5	6	39
07:45 AM	1	8	0	9	0	0	0	0	0	12	**16**	**28**	0	0	7	7	44
Total Volume	6	30	0	36	0	0	0	0	0	44	53	97	8	0	37	45	178
% App. Total	16.7	83.3	0		0	0	0		0	45.4	54.6		17.8	0	82.2		
PHF	.750	.833	.000	.900	.000	.000	.000	.000	.000	.786	.828	.866	.333	.000	.712	.625	.927

Counts Unlimited
PO Box 1178
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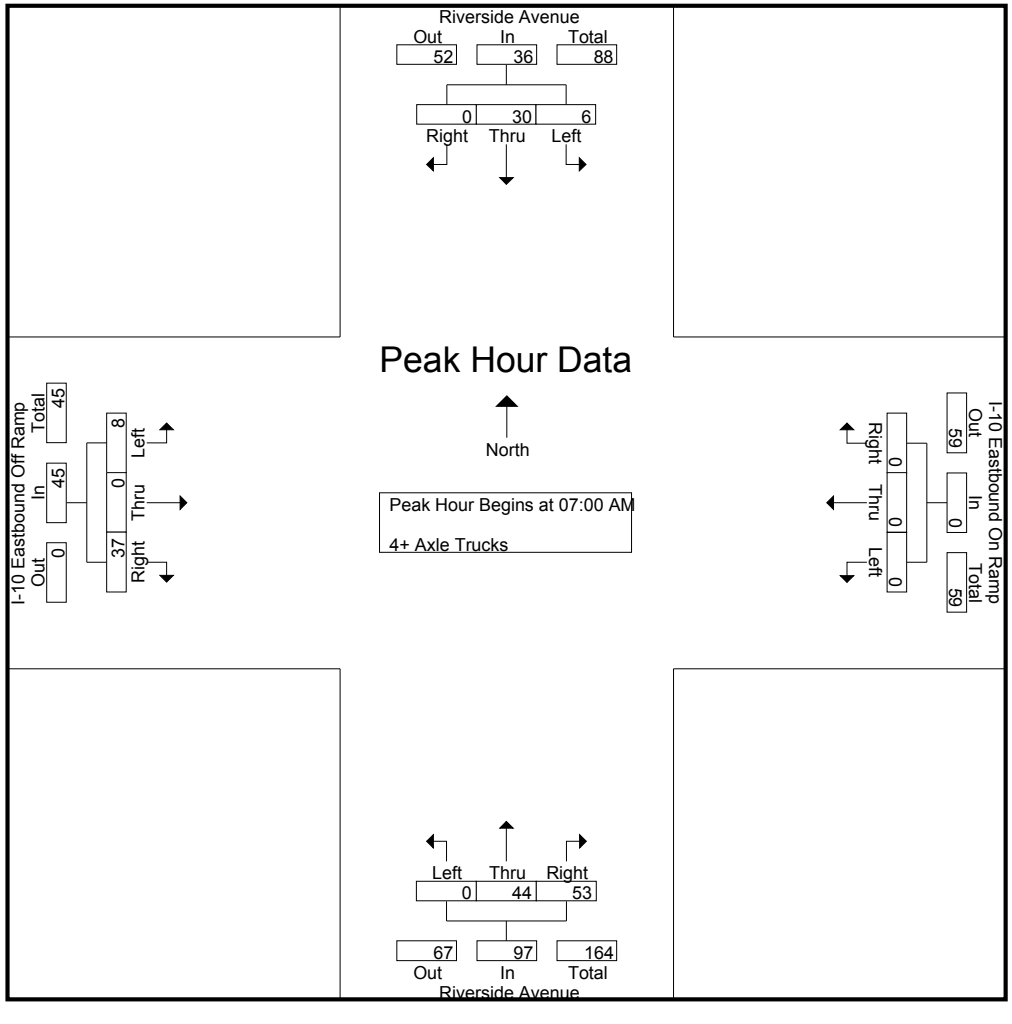
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**2**	5	0	7	0	0	0	0	0	**14**	9	23	**6**	0	12	**18**	
+15 mins.	1	**9**	0	**10**	0	0	0	0	0	8	15	23	1	0	**13**	14	
+30 mins.	2	8	0	10	0	0	0	0	0	10	13	23	1	0	5	6	
+45 mins.	1	8	0	9	0	0	0	0	0	12	**16**	**28**	0	0	7	7	
Total Volume	6	30	0	36	0	0	0	0	0	44	53	97	8	0	37	45	
% App. Total	16.7	83.3	0		0	0	0		0	45.4	54.6		17.8	0	82.2		
PHF	.750	.833	.000	.900	.000	.000	.000	.000	.000	.786	.828	.866	.333	.000	.712	.625	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	114	172	0	0	286	0	0	0	0	0	0	254	73	0	327	147	2	64	26	213	26	826	852
04:15 PM	101	191	0	0	292	0	0	0	0	0	0	255	103	20	358	150	0	63	26	213	46	863	909
04:30 PM	111	171	0	0	282	0	0	0	0	0	0	232	79	27	311	155	0	74	28	229	55	822	877
04:45 PM	109	212	0	0	321	0	0	0	0	0	0	232	81	18	313	132	0	77	32	209	50	843	893
Total	435	746	0	0	1181	0	0	0	0	0	0	973	336	65	1309	584	2	278	112	864	177	3354	3531
05:00 PM	91	192	0	0	283	0	0	0	0	0	0	257	98	15	355	159	0	61	25	220	40	858	898
05:15 PM	99	210	0	0	309	0	0	0	0	0	0	248	89	15	337	164	1	65	28	230	43	876	919
05:30 PM	111	199	0	0	310	0	0	0	0	0	0	239	76	13	315	139	1	62	33	202	46	827	873
05:45 PM	91	197	0	0	288	0	0	0	0	0	0	279	91	11	370	140	0	48	16	188	27	846	873
Total	392	798	0	0	1190	0	0	0	0	0	0	1023	354	54	1377	602	2	236	102	840	156	3407	3563
Grand Total	827	1544	0	0	2371	0	0	0	0	0	0	1996	690	119	2686	1186	4	514	214	1704	333	6761	7094
Apprch %	34.9	65.1	0			0	0	0			0	74.3	25.7			69.6	0.2	30.2					
Total %	12.2	22.8	0		35.1	0	0	0		0	0	29.5	10.2		39.7	17.5	0.1	7.6		25.2	4.7	95.3	
Passenger Vehicles	795	1352	0		2147	0	0	0		0	0	1832	523		2446	1154	4	369		1711	0	0	6304
% Passenger Vehicles	96.1	87.6	0	0	90.6	0	0	0	0	0	0	91.8	75.8	76.5	87.2	97.3	100	71.8	86	89.2	0	0	88.9
Large 2 Axle Vehicles	18	51	0		69	0	0	0		0	0	52	23		81	7	0	29		51	0	0	201
% Large 2 Axle Vehicles	2.2	3.3	0	0	2.9	0	0	0	0	0	0	2.6	3.3	5	2.9	0.6	0	5.6	7	2.7	0	0	2.8
3 Axle Vehicles	1	48	0		49	0	0	0		0	0	41	31		77	4	0	38		49	0	0	175
% 3 Axle Vehicles	0.1	3.1	0	0	2.1	0	0	0	0	0	0	2.1	4.5	4.2	2.7	0.3	0	7.4	3.3	2.6	0	0	2.5
4+ Axle Trucks	13	93	0		106	0	0	0		0	0	71	113		201	21	0	78		107	0	0	414
% 4+ Axle Trucks	1.6	6	0	0	4.5	0	0	0	0	0	0	3.6	16.4	14.3	7.2	1.8	0	15.2	3.7	5.6	0	0	5.8

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	91	192	0	283	0	0	0	0	0	257	**98**	355	159	0	61	220	858
05:15 PM	99	**210**	0	309	0	0	0	0	0	248	89	337	**164**	**1**	**65**	**230**	**876**
05:30 PM	**111**	199	0	**310**	0	0	0	0	0	239	76	315	139	1	62	202	827
05:45 PM	91	197	0	288	0	0	0	0	0	**279**	91	**370**	140	0	48	188	846
Total Volume	392	798	0	1190	0	0	0	0	0	1023	354	1377	602	2	236	840	3407
% App. Total	32.9	67.1	0		0	0	0		0	74.3	25.7		71.7	0.2	28.1		
PHF	.883	.950	.000	.960	.000	.000	.000	.000	.000	.917	.903	.930	.918	.500	.908	.913	.972

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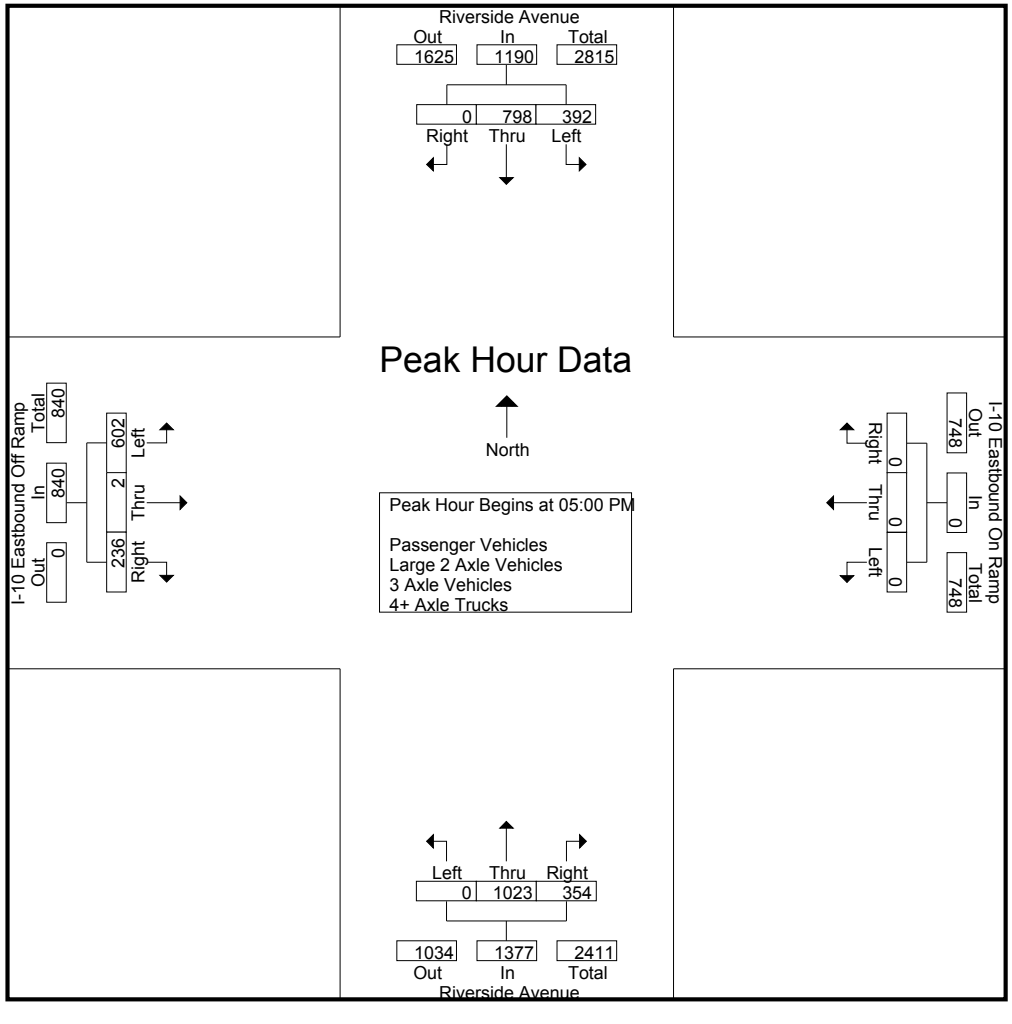
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:00 PM				05:00 PM				04:30 PM				
+0 mins.	109	**212**	0	**321**	0	0	0	0	0	257	**98**	355	155	0	74	229	
+15 mins.	91	192	0	283	0	0	0	0	0	248	89	337	132	0	**77**	209	
+30 mins.	99	210	0	309	0	0	0	0	0	239	76	315	159	0	61	220	
+45 mins.	**111**	199	0	310	0	0	0	0	0	**279**	91	**370**	**164**	**1**	65	**230**	
Total Volume	410	813	0	1223	0	0	0	0	0	1023	354	1377	610	1	277	888	
% App. Total	33.5	66.5	0		0	0	0		0	74.3	25.7		68.7	0.1	31.2		
PHF	.923	.959	.000	.952	.000	.000	.000	.000	.000	.917	.903	.930	.930	.250	.899	.965	

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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	108	148	0	0	256	0	0	0	0	0	0	229	55	0	284	142	2	43	17	187	17	727	744
04:15 PM	97	165	0	0	262	0	0	0	0	0	0	235	76	14	311	142	0	38	21	180	35	753	788
04:30 PM	108	153	0	0	261	0	0	0	0	0	0	214	58	20	272	149	0	54	26	203	46	736	782
04:45 PM	103	195	0	0	298	0	0	0	0	0	0	212	67	16	279	129	0	57	30	186	46	763	809
Total	416	661	0	0	1077	0	0	0	0	0	0	890	256	50	1146	562	2	192	94	756	144	2979	3123
05:00 PM	89	172	0	0	261	0	0	0	0	0	0	232	81	14	313	156	0	46	22	202	36	776	812
05:15 PM	95	189	0	0	284	0	0	0	0	0	0	227	65	9	292	162	1	50	24	213	33	789	822
05:30 PM	107	173	0	0	280	0	0	0	0	0	0	222	55	9	277	136	1	49	29	186	38	743	781
05:45 PM	88	157	0	0	245	0	0	0	0	0	0	261	66	9	327	138	0	32	15	170	24	742	766
Total	379	691	0	0	1070	0	0	0	0	0	0	942	267	41	1209	592	2	177	90	771	131	3050	3181
Grand Total	795	1352	0	0	2147	0	0	0	0	0	0	1832	523	91	2355	1154	4	369	184	1527	275	6029	6304
Apprch %	37	63	0			0	0	0			0	77.8	22.2			75.6	0.3	24.2					
Total %	13.2	22.4	0		35.6	0	0	0		0	0	30.4	8.7		39.1	19.1	0.1	6.1		25.3	4.4	95.6	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	89	172	0	261	0	0	0	0	0	232	**81**	313	156	0	46	202	776
05:15 PM	95	**189**	0	**284**	0	0	0	0	0	227	65	292	**162**	**1**	**50**	**213**	**789**
05:30 PM	**107**	173	0	280	0	0	0	0	0	222	55	277	136	1	49	186	743
05:45 PM	88	157	0	245	0	0	0	0	0	**261**	66	**327**	138	0	32	170	742
Total Volume	379	691	0	1070	0	0	0	0	0	942	267	1209	592	2	177	771	3050
% App. Total	35.4	64.6	0		0	0	0		0	77.9	22.1		76.8	0.3	23		
PHF	.886	.914	.000	.942	.000	.000	.000	.000	.000	.902	.824	.924	.914	.500	.885	.905	.966

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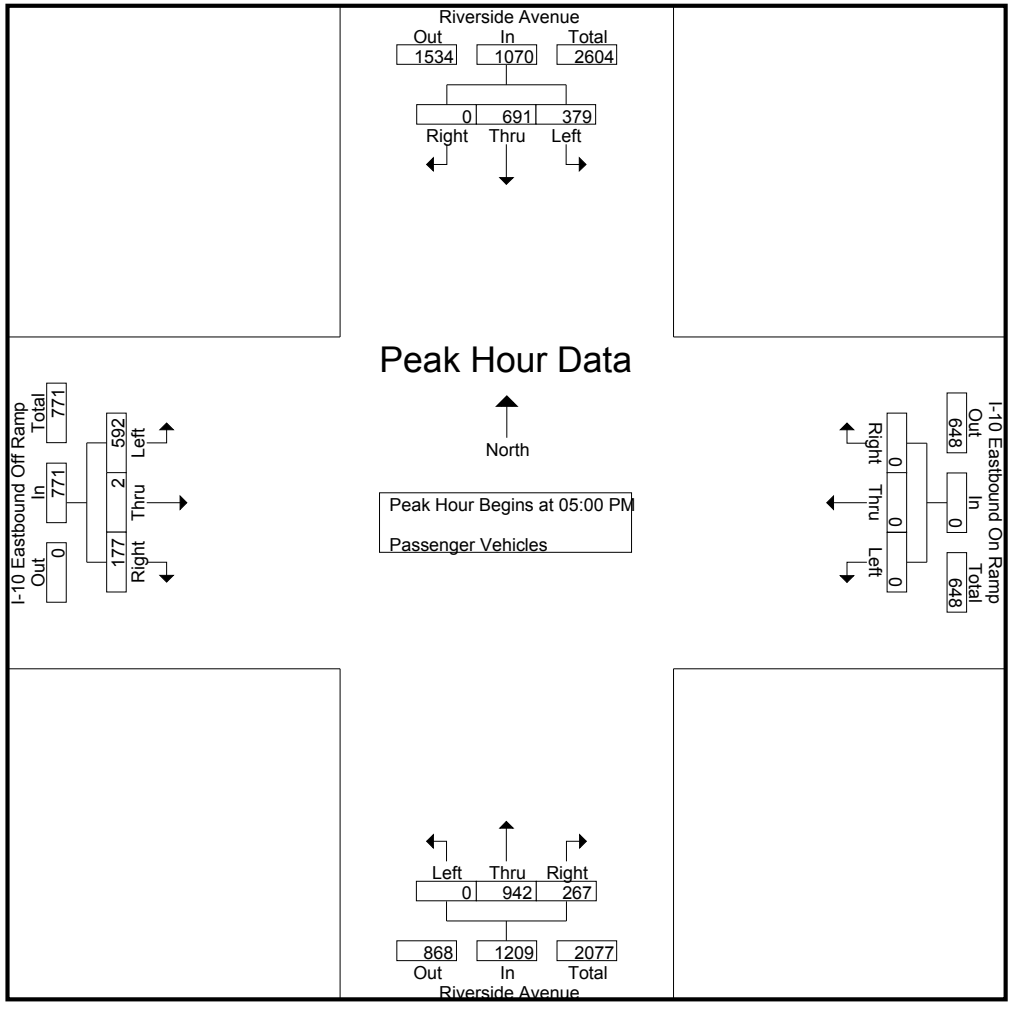
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
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File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	89	172	0	261	0	0	0	0	0	232	**81**	313	156	0	46	202	
+15 mins.	95	**189**	0	**284**	0	0	0	0	0	227	65	292	**162**	**1**	**50**	**213**	
+30 mins.	**107**	173	0	280	0	0	0	0	0	222	55	277	136	1	49	186	
+45 mins.	88	157	0	245	0	0	0	0	0	**261**	66	**327**	138	0	32	170	
Total Volume	379	691	0	1070	0	0	0	0	0	942	267	1209	592	2	177	771	
% App. Total	35.4	64.6	0		0	0	0		0	77.9	22.1		76.8	0.3	23		
PHF	.886	.914	.000	.942	.000	.000	.000	.000	.000	.902	.824	.924	.914	.500	.885	.905	

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City of Rialto
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File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	6	0	0	9	0	0	0	0	0	0	8	1	0	9	2	0	7	4	9	4	27	31
04:15 PM	2	5	0	0	7	0	0	0	0	0	0	6	3	0	9	1	0	4	1	5	1	21	22
04:30 PM	1	7	0	0	8	0	0	0	0	0	0	7	6	4	13	3	0	1	1	4	5	25	30
04:45 PM	5	5	0	0	10	0	0	0	0	0	0	3	2	0	5	1	0	3	2	4	2	19	21
Total	11	23	0	0	34	0	0	0	0	0	0	24	12	4	36	7	0	15	8	22	12	92	104
05:00 PM	1	4	0	0	5	0	0	0	0	0	0	10	2	0	12	0	0	7	2	7	2	24	26
05:15 PM	3	6	0	0	9	0	0	0	0	0	0	5	5	2	10	0	0	2	1	2	3	21	24
05:30 PM	2	9	0	0	11	0	0	0	0	0	0	6	2	0	8	0	0	4	4	4	4	23	27
05:45 PM	1	9	0	0	10	0	0	0	0	0	0	7	2	0	9	0	0	1	0	1	0	20	20
Total	7	28	0	0	35	0	0	0	0	0	0	28	11	2	39	0	0	14	7	14	9	88	97
Grand Total	18	51	0	0	69	0	0	0	0	0	0	52	23	6	75	7	0	29	15	36	21	180	201
Apprch %	26.1	73.9	0			0	0	0			0	69.3	30.7			19.4	0	80.6					
Total %	10	28.3	0		38.3	0	0	0		0	0	28.9	12.8		41.7	3.9	0	16.1		20	10.4	89.6	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	4	0	5	0	0	0	0	0	**10**	2	**12**	0	0	**7**	**7**	**24**
05:15 PM	**3**	6	0	9	0	0	0	0	0	5	**5**	10	0	0	2	2	21
05:30 PM	2	**9**	0	**11**	0	0	0	0	0	6	2	8	0	0	4	4	23
05:45 PM	1	9	0	10	0	0	0	0	0	7	2	9	0	0	1	1	20
Total Volume	7	28	0	35	0	0	0	0	0	28	11	39	0	0	14	14	88
% App. Total	20	80	0		0	0	0		0	71.8	28.2		0	0	100		
PHF	.583	.778	.000	.795	.000	.000	.000	.000	.000	.700	.550	.813	.000	.000	.500	.500	.917

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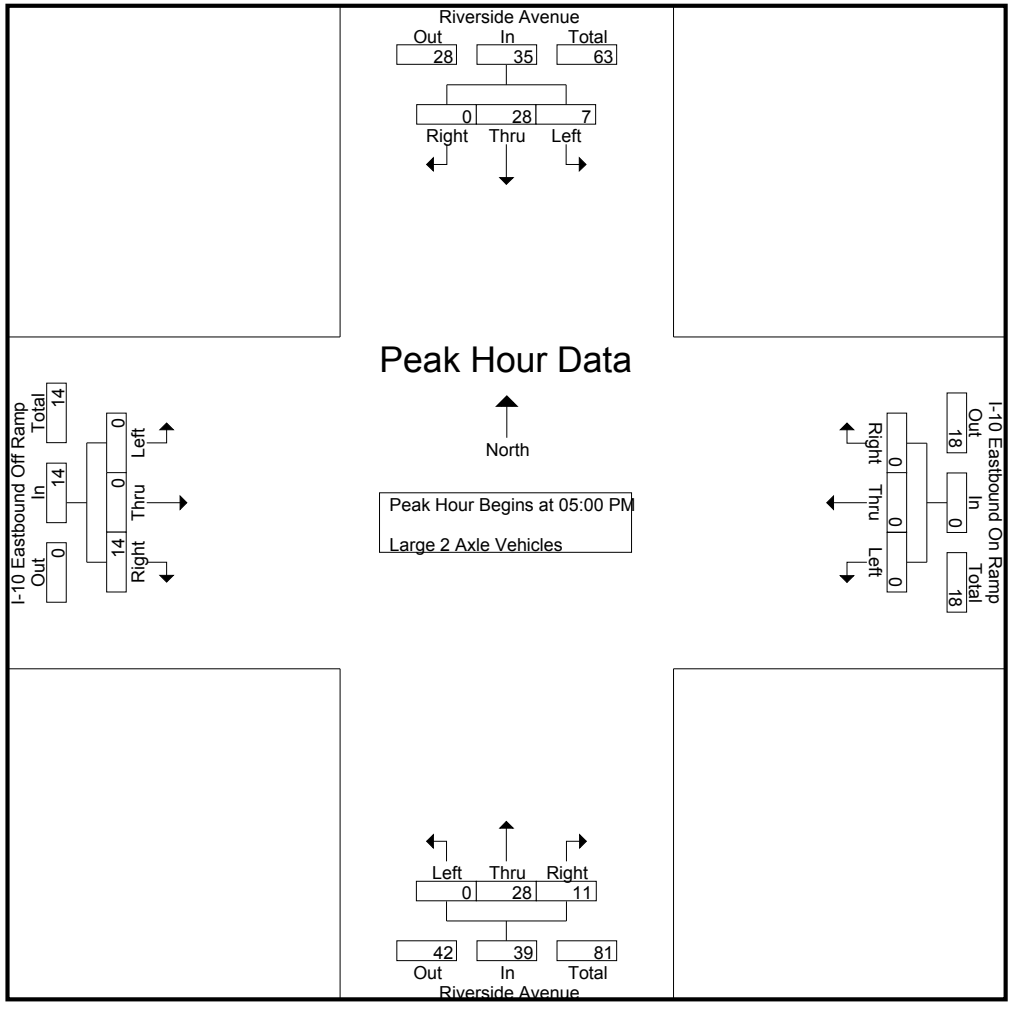
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	1	4	0	5	0	0	0	0	0	**10**	2	**12**	0	0	**7**	**7**	
+15 mins.	**3**	6	0	9	0	0	0	0	0	5	**5**	10	0	0	2	2	
+30 mins.	2	**9**	0	**11**	0	0	0	0	0	6	2	8	0	0	4	4	
+45 mins.	1	9	0	10	0	0	0	0	0	7	2	9	0	0	1	1	
Total Volume	7	28	0	35	0	0	0	0	0	28	11	39	0	0	14	14	
% App. Total	20	80	0		0	0	0		0	71.8	28.2		0	0	100		
PHF	.583	.778	.000	.795	.000	.000	.000	.000	.000	.700	.550	.813	.000	.000	.500	.500	

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City of Rialto
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File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	7	0	0	8	0	0	0	0	0	0	5	3	0	8	1	0	8	3	9	3	25	28
04:15 PM	0	7	0	0	7	0	0	0	0	0	0	5	5	1	10	1	0	7	3	8	4	25	29
04:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	2	1	4	1	0	4	0	5	1	12	13
04:45 PM	0	4	0	0	4	0	0	0	0	0	0	6	3	0	9	0	0	4	0	4	0	17	17
Total	1	21	0	0	22	0	0	0	0	0	0	18	13	2	31	3	0	23	6	26	8	79	87
05:00 PM	0	4	0	0	4	0	0	0	0	0	0	7	5	0	12	1	0	2	0	3	0	19	19
05:15 PM	0	7	0	0	7	0	0	0	0	0	0	10	7	2	17	0	0	3	0	3	2	27	29
05:30 PM	0	6	0	0	6	0	0	0	0	0	0	2	2	1	4	0	0	4	0	4	1	14	15
05:45 PM	0	10	0	0	10	0	0	0	0	0	0	4	4	0	8	0	0	6	1	6	1	24	25
Total	0	27	0	0	27	0	0	0	0	0	0	23	18	3	41	1	0	15	1	16	4	84	88
Grand Total	1	48	0	0	49	0	0	0	0	0	0	41	31	5	72	4	0	38	7	42	12	163	175
Apprch %	2	98	0			0	0	0			0	56.9	43.1			9.5	0	90.5					
Total %	0.6	29.4	0		30.1	0	0	0		0	0	25.2	19		44.2	2.5	0	23.3		25.8	6.9	93.1	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	4	0	4	0	0	0	0	0	7	5	12	**1**	0	2	3	19
05:15 PM	0	7	0	7	0	0	0	0	0	**10**	**7**	**17**	0	0	3	3	**27**
05:30 PM	0	6	0	6	0	0	0	0	0	2	2	4	0	0	4	4	14
05:45 PM	0	**10**	0	**10**	0	0	0	0	0	4	4	8	0	0	**6**	**6**	24
Total Volume	0	27	0	27	0	0	0	0	0	23	18	41	1	0	15	16	84
% App. Total	0	100	0		0	0	0		0	56.1	43.9		6.2	0	93.8		
PHF	.000	.675	.000	.675	.000	.000	.000	.000	.000	.575	.643	.603	.250	.000	.625	.667	.778

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City of Rialto
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File Name : RLTRI10EPM
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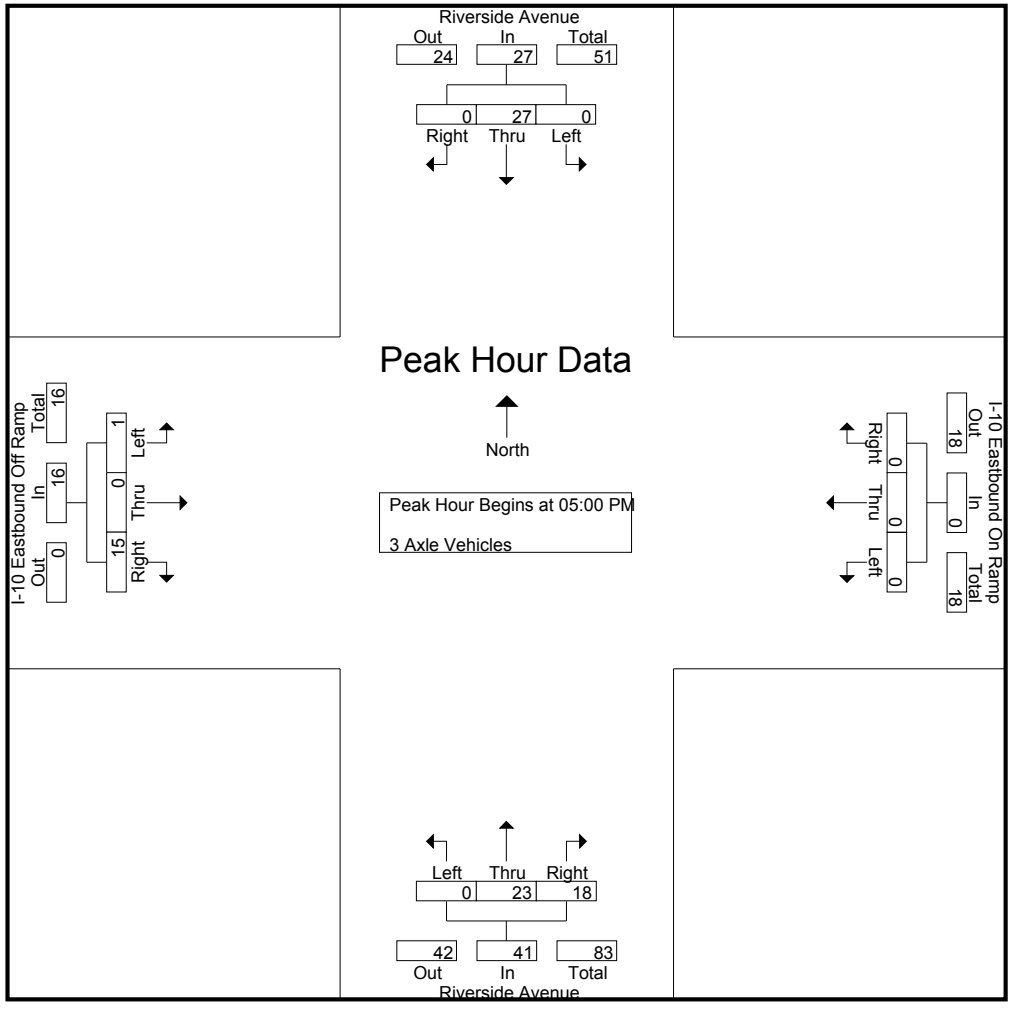
Start Date : 1/19/2017
Page No : 2



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	4	0	4	0	0	0	0	0	7	5	12	**1**	0	2	3	
+15 mins.	0	7	0	7	0	0	0	0	0	**10**	**7**	**17**	0	0	3	3	
+30 mins.	0	6	0	6	0	0	0	0	0	2	2	4	0	0	4	4	
+45 mins.	0	**10**	0	**10**	0	0	0	0	0	4	4	8	0	0	**6**	**6**	
Total Volume	0	27	0	27	0	0	0	0	0	23	18	41	1	0	15	16	
% App. Total	0	100	0		0	0	0		0	56.1	43.9		6.2	0	93.8		
PHF	.000	.675	.000	.675	.000	.000	.000	.000	.000	.575	.643	.603	.250	.000	.625	.667	

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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					I-10 Eastbound On Ramp Westbound					Riverside Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	2	11	0	0	13	0	0	0	0	0	0	12	14	0	26	2	0	6	2	8	2	47	49
04:15 PM	2	14	0	0	16	0	0	0	0	0	0	9	19	5	28	6	0	14	1	20	6	64	70
04:30 PM	2	8	0	0	10	0	0	0	0	0	0	9	13	2	22	2	0	15	1	17	3	49	52
04:45 PM	1	8	0	0	9	0	0	0	0	0	0	11	9	2	20	2	0	13	0	15	2	44	46
Total	7	41	0	0	48	0	0	0	0	0	0	41	55	9	96	12	0	48	4	60	13	204	217
05:00 PM	1	12	0	0	13	0	0	0	0	0	0	8	10	1	18	2	0	6	1	8	2	39	41
05:15 PM	1	8	0	0	9	0	0	0	0	0	0	6	12	2	18	2	0	10	3	12	5	39	44
05:30 PM	2	11	0	0	13	0	0	0	0	0	0	9	17	3	26	3	0	5	0	8	3	47	50
05:45 PM	2	21	0	0	23	0	0	0	0	0	0	7	19	2	26	2	0	9	0	11	2	60	62
Total	6	52	0	0	58	0	0	0	0	0	0	30	58	8	88	9	0	30	4	39	12	185	197
Grand Total	13	93	0	0	106	0	0	0	0	0	0	71	113	17	184	21	0	78	8	99	25	389	414
Apprch %	12.3	87.7	0			0	0	0			0	38.6	61.4			21.2	0	78.8					
Total %	3.3	23.9	0		27.2	0	0	0		0	0	18.3	29		47.3	5.4	0	20.1		25.4	6	94	

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	12	0	13	0	0	0	0	0	8	10	18	2	0	6	8	39
05:15 PM	1	8	0	9	0	0	0	0	0	6	12	18	2	0	**10**	**12**	39
05:30 PM	**2**	11	0	13	0	0	0	0	0	**9**	17	**26**	**3**	0	5	8	47
05:45 PM	2	**21**	0	**23**	0	0	0	0	0	7	**19**	26	2	0	9	11	**60**
Total Volume	6	52	0	58	0	0	0	0	0	30	58	88	9	0	30	39	185
% App. Total	10.3	89.7	0		0	0	0		0	34.1	65.9		23.1	0	76.9		
PHF	.750	.619	.000	.630	.000	.000	.000	.000	.000	.833	.763	.846	.750	.000	.750	.813	.771

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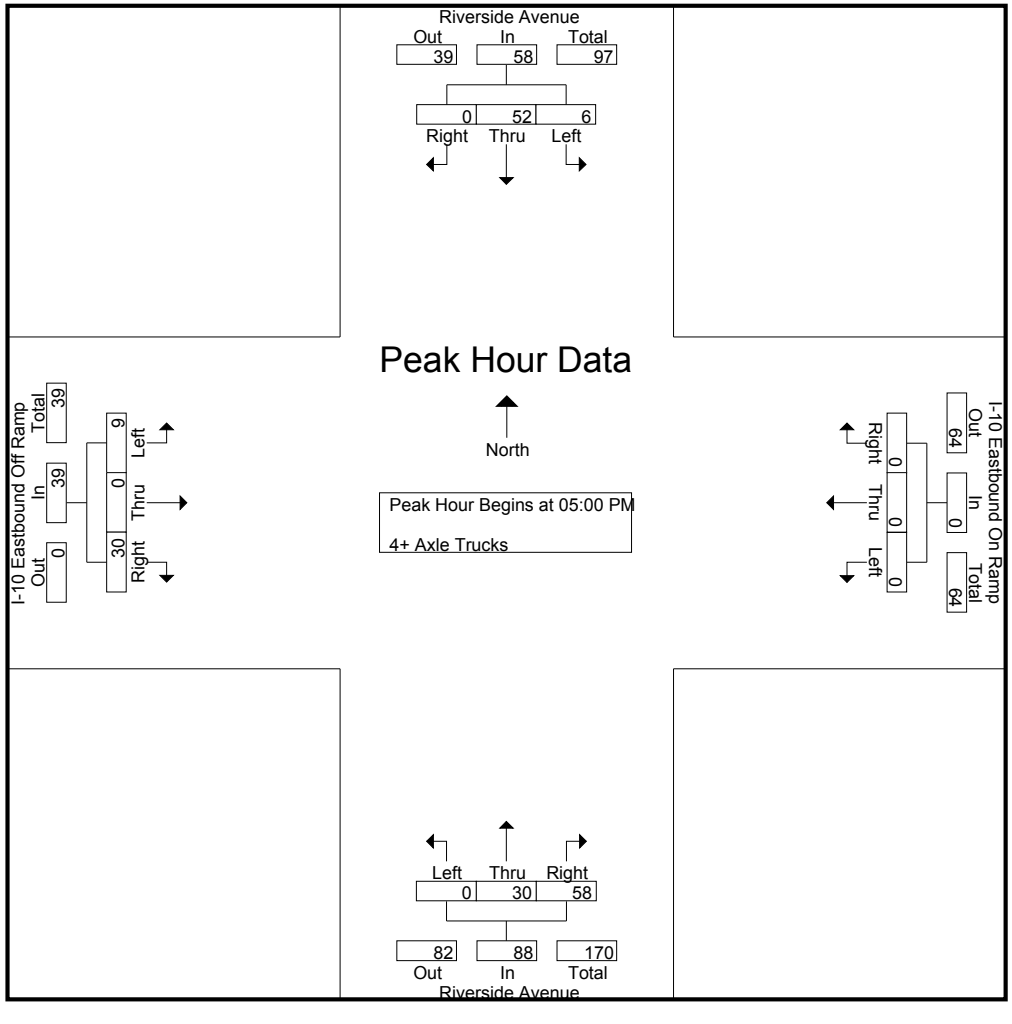
City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : RLTRI10EPM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	1	12	0	13	0	0	0	0	0	8	10	18	2	0	6	8	
+15 mins.	1	8	0	9	0	0	0	0	0	6	12	18	2	0	**10**	**12**	
+30 mins.	**2**	11	0	13	0	0	0	0	0	**9**	17	**26**	**3**	0	5	8	
+45 mins.	2	**21**	0	**23**	0	0	0	0	0	7	**19**	26	2	0	9	11	
Total Volume	6	52	0	58	0	0	0	0	0	30	58	88	9	0	30	39	
% App. Total	10.3	89.7	0		0	0	0		0	34.1	65.9		23.1	0	76.9		
PHF	.750	.619	.000	.630	.000	.000	.000	.000	.000	.833	.763	.846	.750	.000	.750	.813	

Location: Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps

Date: 1/19/2017
Day: Thursday

PEDESTRIANS

	North Leg Riverside Avenue	East Leg I-10 Eastbound Ramps	South Leg Riverside Avenue	West Leg I-10 Eastbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Riverside Avenue	East Leg I-10 Eastbound Ramps	South Leg Riverside Avenue	West Leg I-10 Eastbound Ramps	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	0	0
4:45 PM	0	3	0	1	4
5:00 PM	0	1	0	0	1
5:15 PM	0	3	0	0	3
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	7	0	2	9

Location: Rialto
N/S: Riverside Avenue
E/W: I-10 Eastbound Ramps

Date: 1/19/2017
Day: Thursday

BICYCLES

	North Leg Riverside Avenue	East Leg I-10 Eastbound Ramps	South Leg Riverside Avenue	West Leg I-10 Eastbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	1	1	0	0	2

	North Leg Riverside Avenue	East Leg I-10 Eastbound Ramps	South Leg Riverside Avenue	West Leg I-10 Eastbound Ramps	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	1	0	0	1	2

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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	4	271	85	15	360	7	5	6	4	18	6	136	2	1	144	76	4	5	1	85	21	607	628
07:15 AM	6	294	69	9	369	4	2	4	0	10	17	157	2	0	176	70	4	4	3	78	12	633	645
07:30 AM	7	301	74	18	382	5	4	6	4	15	17	153	2	0	172	68	5	13	4	86	26	655	681
07:45 AM	6	282	73	14	361	8	7	6	3	21	18	150	2	0	170	47	2	5	1	54	18	606	624
Total	23	1148	301	56	1472	24	18	22	11	64	58	596	8	1	662	261	15	27	9	303	77	2501	2578
08:00 AM	6	190	41	9	237	8	3	7	0	18	6	134	3	0	143	45	4	11	3	60	12	458	470
08:15 AM	5	252	41	3	298	2	1	11	3	14	11	154	2	1	167	39	3	9	1	51	8	530	538
08:30 AM	5	167	39	2	211	8	0	2	0	10	10	157	4	0	171	53	2	3	1	58	3	450	453
08:45 AM	5	203	46	6	254	3	3	4	0	10	10	187	2	0	199	36	2	5	2	43	8	506	514
Total	21	812	167	20	1000	21	7	24	3	52	37	632	11	1	680	173	11	28	7	212	31	1944	1975
Grand Total	44	1960	468	76	2472	45	25	46	14	116	95	1228	19	2	1342	434	26	55	16	515	108	4445	4553
Apprch %	1.8	79.3	18.9			38.8	21.6	39.7			7.1	91.5	1.4			84.3	5	10.7					
Total %	1	44.1	10.5		55.6	1	0.6	1		2.6	2.1	27.6	0.4		30.2	9.8	0.6	1.2		11.6	2.4	97.6	
Passenger Vehicles	27	1719	427		2248	17	15	14		51	78	891	16		987	353	20	38		425	0	0	3711
% Passenger Vehicles	61.4	87.7	91.2	98.7	88.2	37.8	60	30.4	35.7	39.2	82.1	72.6	84.2	100	73.4	81.3	76.9	69.1	87.5	80	0	0	81.5
Large 2 Axle Vehicles	3	75	14		93	8	5	6		22	9	78	1		88	26	2	6		35	0	0	238
% Large 2 Axle Vehicles	6.8	3.8	3	1.3	3.6	17.8	20	13	21.4	16.9	9.5	6.4	5.3	0	6.5	6	7.7	10.9	6.2	6.6	0	0	5.2
3 Axle Vehicles	5	49	6		60	8	2	7		19	3	75	0		78	18	1	7		26	0	0	183
% 3 Axle Vehicles	11.4	2.5	1.3	0	2.4	17.8	8	15.2	14.3	14.6	3.2	6.1	0	0	5.8	4.1	3.8	12.7	0	4.9	0	0	4
4+ Axle Trucks	9	117	21		147	12	3	19		38	5	184	2		191	37	3	4		45	0	0	421
% 4+ Axle Trucks	20.5	6	4.5	0	5.8	26.7	12	41.3	28.6	29.2	5.3	15	10.5	0	14.2	8.5	11.5	7.3	6.2	8.5	0	0	9.2

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	271	**85**	360	7	5	**6**	18	6	136	**2**	144	**76**	4	5	85	607
07:15 AM	6	294	69	369	4	2	4	10	17	**157**	2	**176**	70	4	4	78	633
07:30 AM	**7**	**301**	74	**382**	5	4	6	15	17	153	2	172	68	**5**	**13**	**86**	**655**
07:45 AM	6	282	73	361	**8**	**7**	6	**21**	**18**	150	2	170	47	2	5	54	606
Total Volume	23	1148	301	1472	24	18	22	64	58	596	8	662	261	15	27	303	2501
% App. Total	1.6	78	20.4		37.5	28.1	34.4		8.8	90	1.2		86.1	5	8.9		
PHF	.821	.953	.885	.963	.750	.643	.917	.762	.806	.949	1.00	.940	.859	.750	.519	.881	.955

Counts Unlimited
PO Box 1178
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City of Rialto
N/S: Riverside Avenue
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Weather: Clear

File Name : RLTRISLAM
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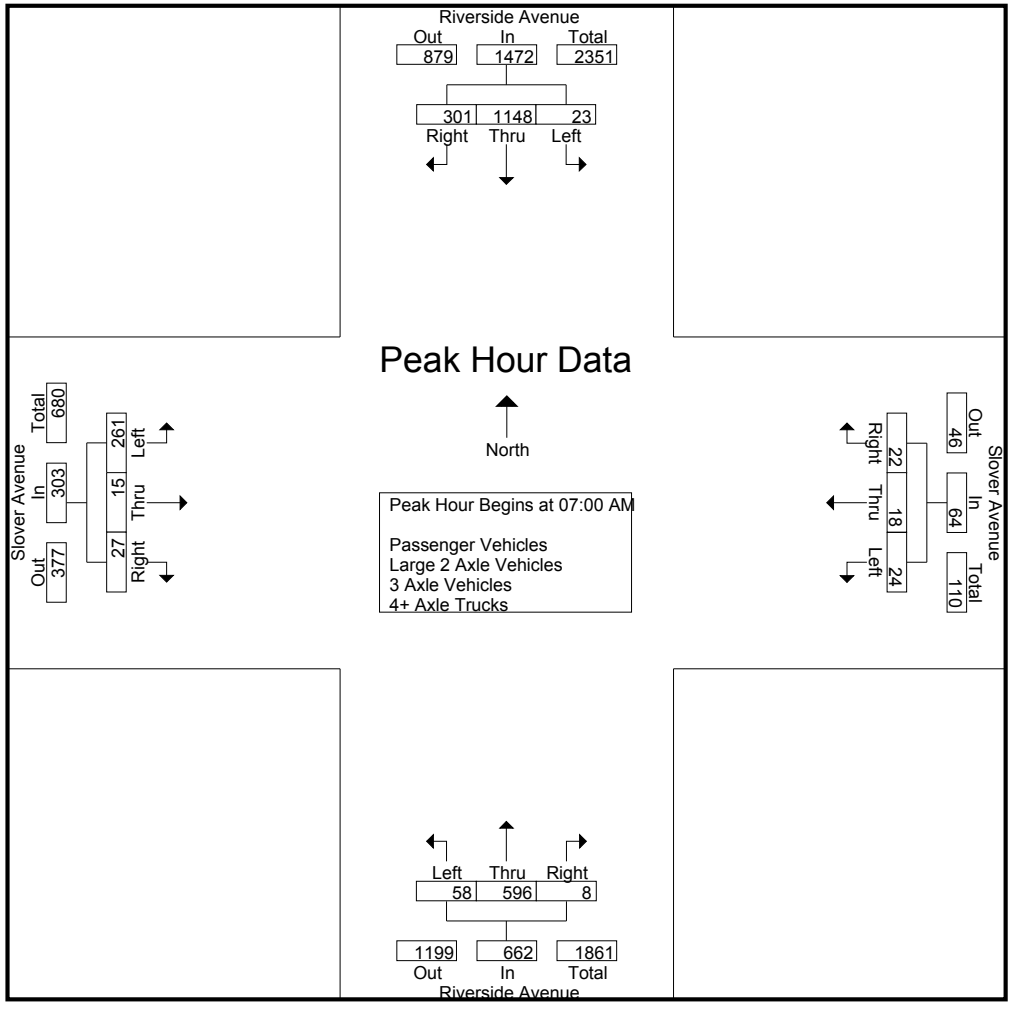
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
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Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:30 AM				08:00 AM				07:00 AM				
+0 mins.	4	271	**85**	360	5	4	6	15	6	134	3	143	**76**	4	5	85	
+15 mins.	6	294	69	369	**8**	**7**	6	**21**	**11**	154	2	167	70	4	4	78	
+30 mins.	**7**	**301**	74	**382**	8	3	7	18	10	157	**4**	171	68	**5**	**13**	**86**	
+45 mins.	6	282	73	361	2	1	**11**	14	10	**187**	2	**199**	47	2	5	54	
Total Volume	23	1148	301	1472	23	15	30	68	37	632	11	680	261	15	27	303	
% App. Total	1.6	78	20.4		33.8	22.1	44.1		5.4	92.9	1.6		86.1	5	8.9		
PHF	.821	.953	.885	.963	.719	.536	.682	.810	.841	.845	.688	.854	.859	.750	.519	.881	

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City of Rialto
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File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	238	79	15	320	2	1	2	1	5	5	97	2	1	104	61	2	5	1	68	18	497	515
07:15 AM	4	259	64	9	327	1	1	2	0	4	11	128	2	0	141	62	4	4	3	70	12	542	554
07:30 AM	5	278	66	17	349	2	3	2	2	7	15	117	2	0	134	60	4	7	3	71	22	561	583
07:45 AM	5	258	70	14	333	5	7	2	1	14	17	114	2	0	133	40	2	5	1	47	16	527	543
Total	17	1033	279	55	1329	10	12	8	4	30	48	456	8	1	512	223	12	21	8	256	68	2127	2195
08:00 AM	5	162	41	9	208	2	2	1	0	5	4	90	2	0	96	40	4	7	3	51	12	360	372
08:15 AM	1	213	35	3	249	1	0	3	1	4	8	102	1	1	111	28	2	4	1	34	6	398	404
08:30 AM	2	142	32	2	176	2	0	0	0	2	10	112	4	0	126	37	0	3	1	40	3	344	347
08:45 AM	2	169	40	6	211	2	1	2	0	5	8	131	1	0	140	25	2	3	1	30	7	386	393
Total	10	686	148	20	844	7	3	6	1	16	30	435	8	1	473	130	8	17	6	155	28	1488	1516
Grand Total	27	1719	427	75	2173	17	15	14	5	46	78	891	16	2	985	353	20	38	14	411	96	3615	3711
Apprch %	1.2	79.1	19.7			37	32.6	30.4			7.9	90.5	1.6			85.9	4.9	9.2					
Total %	0.7	47.6	11.8		60.1	0.5	0.4	0.4		1.3	2.2	24.6	0.4		27.2	9.8	0.6	1.1		11.4	2.6	97.4	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	238	**79**	320	2	1	**2**	5	5	97	**2**	104	61	2	5	68	497
07:15 AM	4	259	64	327	1	1	2	4	11	**128**	2	**141**	**62**	**4**	4	70	542
07:30 AM	**5**	**278**	66	**349**	2	3	2	7	15	117	2	134	60	4	**7**	**71**	**561**
07:45 AM	5	258	70	333	**5**	**7**	2	**14**	**17**	114	2	133	40	2	5	47	527
Total Volume	17	1033	279	1329	10	12	8	30	48	456	8	512	223	12	21	256	2127
% App. Total	1.3	77.7	21		33.3	40	26.7		9.4	89.1	1.6		87.1	4.7	8.2		
PHF	.850	.929	.883	.952	.500	.429	1.00	.536	.706	.891	1.00	.908	.899	.750	.750	.901	.948

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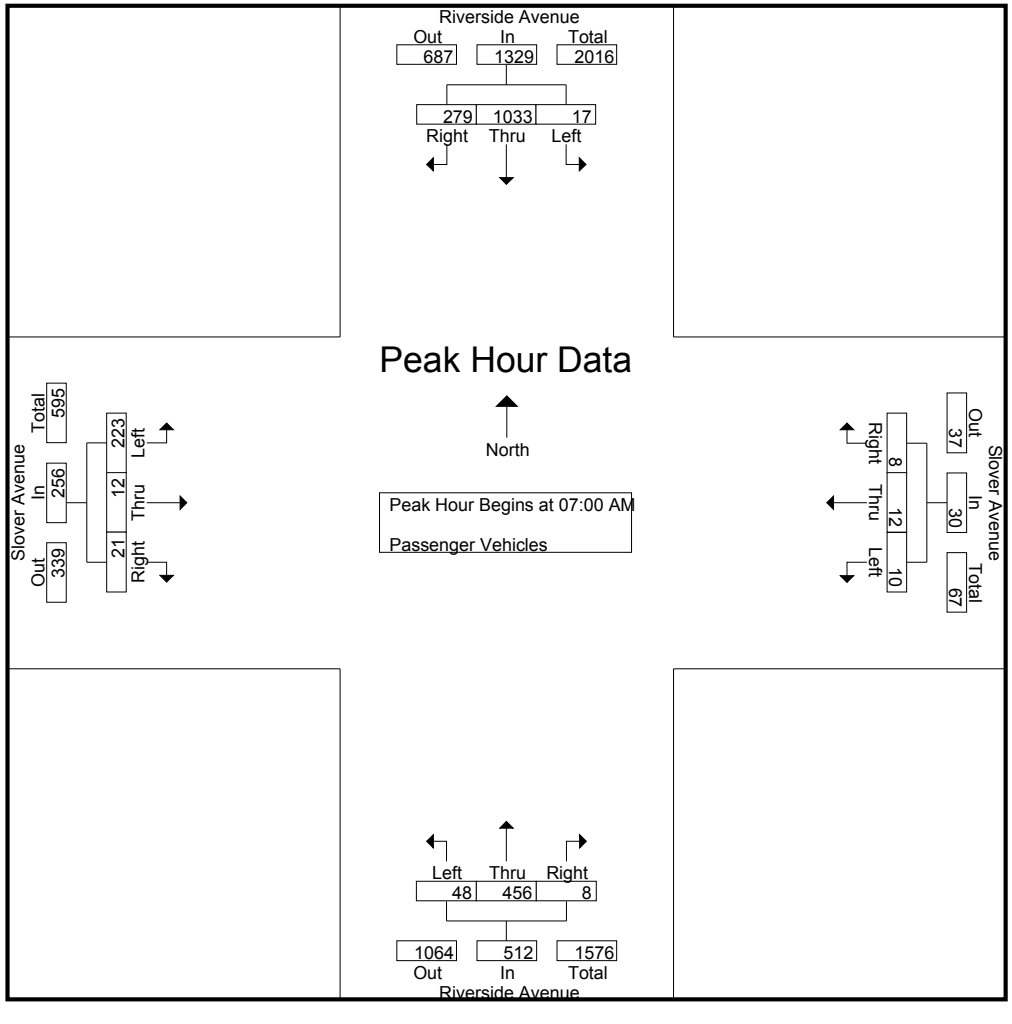

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Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	238	**79**	320	2	1	**2**	5	5	97	**2**	104	61	2	5	68	
+15 mins.	4	259	64	327	1	1	2	4	11	**128**	2	**141**	**62**	**4**	4	70	
+30 mins.	**5**	**278**	66	**349**	2	3	2	7	15	117	2	134	60	4	**7**	**71**	
+45 mins.	5	258	70	333	**5**	**7**	2	**14**	**17**	114	2	133	40	2	5	47	
Total Volume	17	1033	279	1329	10	12	8	30	48	456	8	512	223	12	21	256	
% App. Total	1.3	77.7	21		33.3	40	26.7		9.4	89.1	1.6		87.1	4.7	8.2		
PHF	.850	.929	.883	.952	.500	.429	1.000	.536	.706	.891	1.000	.908	.899	.750	.750	.901	

Counts Unlimited
PO Box 1178
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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	11	4	0	16	1	3	2	2	6	1	5	0	0	6	5	1	0	0	6	2	34	36
07:15 AM	0	10	1	0	11	0	0	0	0	0	4	5	0	0	9	2	0	0	0	2	0	22	22
07:30 AM	1	8	4	1	13	0	1	1	1	2	0	10	0	0	10	2	1	3	1	6	3	31	34
07:45 AM	0	10	1	0	11	2	0	0	0	2	1	10	0	0	11	1	0	0	0	1	0	25	25
Total	2	39	10	1	51	3	4	3	3	10	6	30	0	0	36	10	2	3	1	15	5	112	117
08:00 AM	0	7	0	0	7	3	0	0	0	3	2	16	0	0	18	0	0	2	0	2	0	30	30
08:15 AM	1	10	3	0	14	1	1	2	0	4	1	12	1	0	14	7	0	1	0	8	0	40	40
08:30 AM	0	5	0	0	5	1	0	0	0	1	0	8	0	0	8	8	0	0	0	8	0	22	22
08:45 AM	0	14	1	0	15	0	0	1	0	1	0	12	0	0	12	1	0	0	0	1	0	29	29
Total	1	36	4	0	41	5	1	3	0	9	3	48	1	0	52	16	0	3	0	19	0	121	121
Grand Total	3	75	14	1	92	8	5	6	3	19	9	78	1	0	88	26	2	6	1	34	5	233	238
Apprch %	3.3	81.5	15.2			42.1	26.3	31.6			10.2	88.6	1.1			76.5	5.9	17.6					
Total %	1.3	32.2	6		39.5	3.4	2.1	2.6		8.2	3.9	33.5	0.4		37.8	11.2	0.9	2.6		14.6	2.1	97.9	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	**11**	**4**	**16**	1	**3**	**2**	**6**	1	5	0	6	**5**	**1**	0	**6**	**34**
07:15 AM	0	10	1	11	0	0	0	0	**4**	5	0	9	2	0	0	2	22
07:30 AM	1	8	4	13	0	1	1	2	0	**10**	0	10	2	1	**3**	6	31
07:45 AM	0	10	1	11	**2**	0	0	2	1	10	0	**11**	1	0	0	1	25
Total Volume	2	39	10	51	3	4	3	10	6	30	0	36	10	2	3	15	112
% App. Total	3.9	76.5	19.6		30	40	30		16.7	83.3	0		66.7	13.3	20		
PHF	.500	.886	.625	.797	.375	.333	.375	.417	.375	.750	.000	.818	.500	.500	.250	.625	.824

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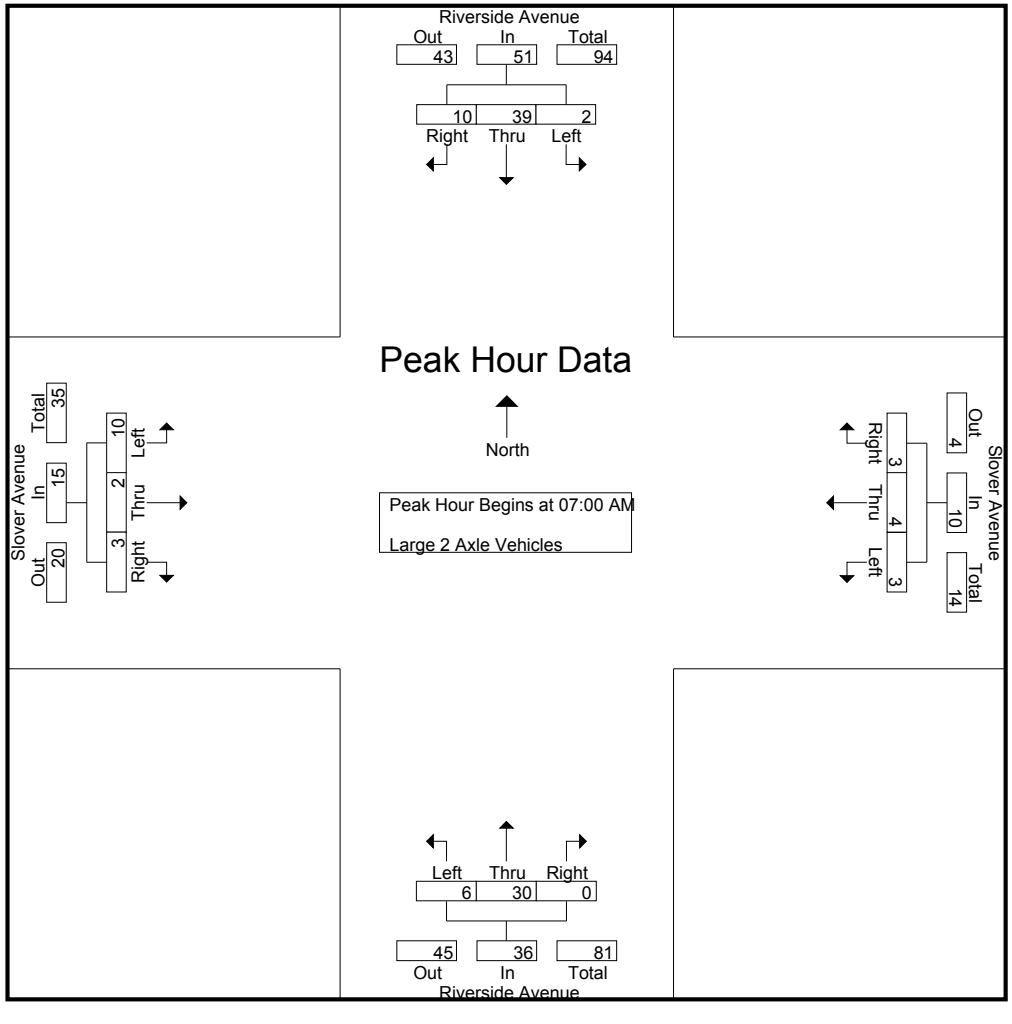
City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**1**	**11**	**4**	**16**	1	**3**	**2**	**6**	1	5	0	6	**5**	**1**	0	**6**	
+15 mins.	0	10	1	11	0	0	0	0	**4**	5	0	9	2	0	0	2	
+30 mins.	1	8	4	13	0	1	1	2	0	**10**	0	10	2	1	**3**	6	
+45 mins.	0	10	1	11	**2**	0	0	2	1	10	0	**11**	1	0	0	1	
Total Volume	2	39	10	51	3	4	3	10	6	30	0	36	10	2	3	15	
% App. Total	3.9	76.5	19.6		30	40	30		16.7	83.3	0		66.7	13.3	20		
PHF	.500	.886	.625	.797	.375	.333	.375	.417	.375	.750	.000	.818	.500	.500	.250	.625	

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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	4	0	0	4	2	0	1	0	3	0	14	0	0	14	2	1	0	0	3	0	24	24
07:15 AM	1	7	0	0	8	2	0	1	0	3	1	4	0	0	5	1	0	0	0	1	0	17	17
07:30 AM	0	7	2	0	9	2	0	0	0	2	1	7	0	0	8	2	0	2	0	4	0	23	23
07:45 AM	0	4	0	0	4	0	0	1	1	1	0	8	0	0	8	2	0	0	0	2	1	15	16
Total	1	22	2	0	25	6	0	3	1	9	2	33	0	0	35	7	1	2	0	10	1	79	80
08:00 AM	1	7	0	0	8	0	1	1	0	2	0	9	0	0	9	4	0	2	0	6	0	25	25
08:15 AM	1	8	1	0	10	0	0	2	1	2	1	15	0	0	16	1	0	2	0	3	1	31	32
08:30 AM	1	7	2	0	10	2	0	1	0	3	0	7	0	0	7	2	0	0	0	2	0	22	22
08:45 AM	1	5	1	0	7	0	1	0	0	1	0	11	0	0	11	4	0	1	0	5	0	24	24
Total	4	27	4	0	35	2	2	4	1	8	1	42	0	0	43	11	0	5	0	16	1	102	103
Grand Total	5	49	6	0	60	8	2	7	2	17	3	75	0	0	78	18	1	7	0	26	2	181	183
Apprch %	8.3	81.7	10			47.1	11.8	41.2			3.8	96.2	0			69.2	3.8	26.9					
Total %	2.8	27.1	3.3		33.1	4.4	1.1	3.9		9.4	1.7	41.4	0		43.1	9.9	0.6	3.9		14.4	1.1	98.9	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	4	0	4	**2**	0	**1**	**3**	0	**14**	0	**14**	**2**	**1**	0	3	**24**
07:15 AM	**1**	**7**	0	8	2	0	1	3	**1**	4	0	5	1	0	0	1	17
07:30 AM	0	7	**2**	**9**	2	0	0	2	1	7	0	8	2	0	**2**	**4**	23
07:45 AM	0	4	0	4	0	0	1	1	0	8	0	8	2	0	0	2	15
Total Volume	1	22	2	25	6	0	3	9	2	33	0	35	7	1	2	10	79
% App. Total	4	88	8		66.7	0	33.3		5.7	94.3	0		70	10	20		
PHF	.250	.786	.250	.694	.750	.000	.750	.750	.500	.589	.000	.625	.875	.250	.250	.625	.823

Counts Unlimited
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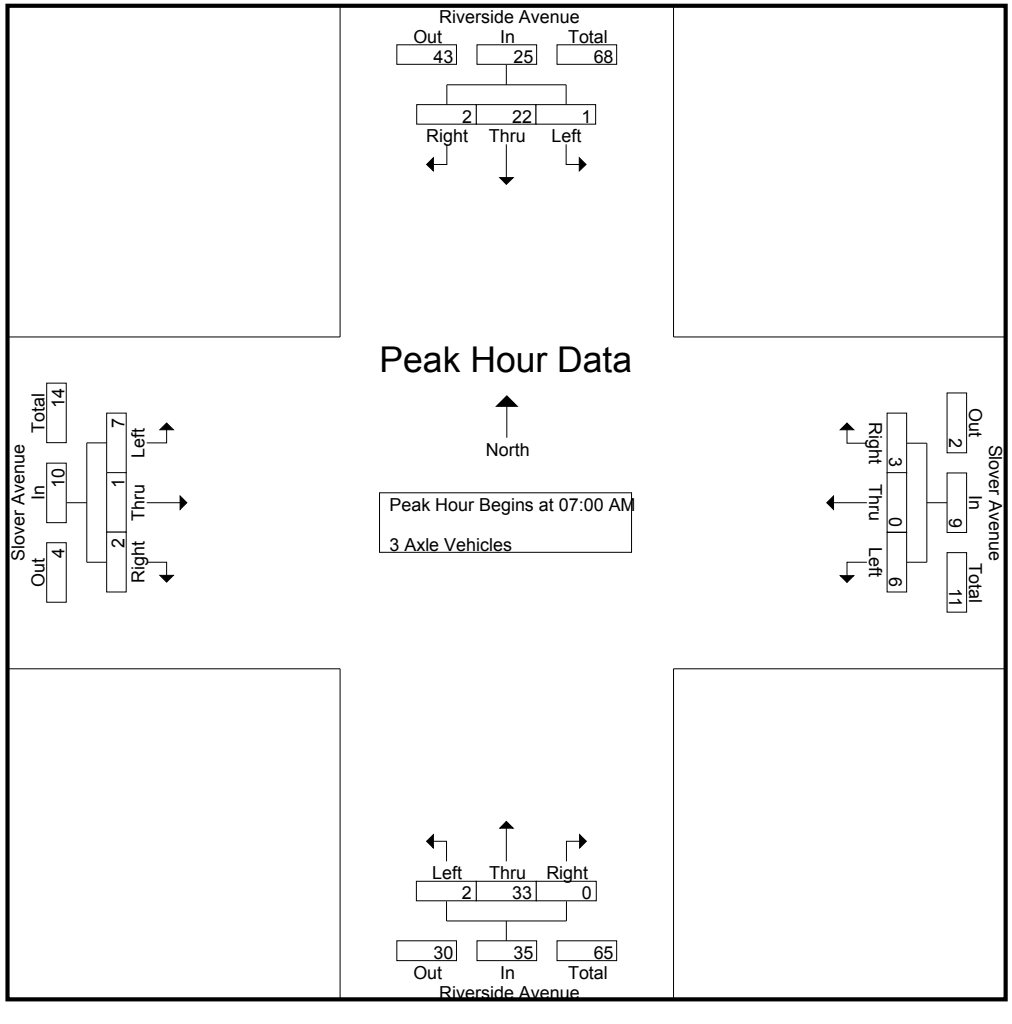
City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	4	0	4	**2**	0	**1**	**3**	0	**14**	0	**14**	**2**	**1**	0	3	
+15 mins.	**1**	**7**	0	8	2	0	1	3	**1**	4	0	5	1	0	0	1	
+30 mins.	0	7	**2**	**9**	2	0	0	2	1	7	0	8	2	0	**2**	**4**	
+45 mins.	0	4	0	4	0	0	1	1	0	8	0	8	2	0	0	2	
Total Volume	1	22	2	25	6	0	3	9	2	33	0	35	7	1	2	10	
% App. Total	4	88	8		66.7	0	33.3		5.7	94.3	0		70	10	20		
PHF	.250	.786	.250	.694	.750	.000	.750	.750	.500	.589	.000	.625	.875	.250	.250	.625	

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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	18	2	0	20	2	1	1	1	4	0	20	0	0	20	8	0	0	0	8	1	52	53
07:15 AM	1	18	4	0	23	1	1	1	0	3	1	20	0	0	21	5	0	0	0	5	0	52	52
07:30 AM	1	8	2	0	11	1	0	3	1	4	1	19	0	0	20	4	0	1	0	5	1	40	41
07:45 AM	1	10	2	0	13	1	0	3	1	4	0	18	0	0	18	4	0	0	0	4	1	39	40
Total	3	54	10	0	67	5	2	8	3	15	2	77	0	0	79	21	0	1	0	22	3	183	186
08:00 AM	0	14	0	0	14	3	0	5	0	8	0	19	1	0	20	1	0	0	0	1	0	43	43
08:15 AM	2	21	2	0	25	0	0	4	1	4	1	25	0	0	26	3	1	2	0	6	1	61	62
08:30 AM	2	13	5	0	20	3	0	1	0	4	0	30	0	0	30	6	2	0	0	8	0	62	62
08:45 AM	2	15	4	0	21	1	1	1	0	3	2	33	1	0	36	6	0	1	1	7	1	67	68
Total	6	63	11	0	80	7	1	11	1	19	3	107	2	0	112	16	3	3	1	22	2	233	235
Grand Total	9	117	21	0	147	12	3	19	4	34	5	184	2	0	191	37	3	4	1	44	5	416	421
Apprch %	6.1	79.6	14.3			35.3	8.8	55.9			2.6	96.3	1			84.1	6.8	9.1					
Total %	2.2	28.1	5		35.3	2.9	0.7	4.6		8.2	1.2	44.2	0.5		45.9	8.9	0.7	1		10.6	1.2	98.8	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**18**	2	20	**2**	**1**	1	**4**	0	**20**	0	20	**8**	0	0	**8**	**52**
07:15 AM	**1**	18	**4**	**23**	1	1	1	3	**1**	20	0	**21**	5	0	0	5	52
07:30 AM	1	8	2	11	1	0	**3**	4	1	19	0	20	4	0	**1**	5	40
07:45 AM	1	10	2	13	1	0	3	4	0	18	0	18	4	0	0	4	39
Total Volume	3	54	10	67	5	2	8	15	2	77	0	79	21	0	1	22	183
% App. Total	4.5	80.6	14.9		33.3	13.3	53.3		2.5	97.5	0		95.5	0	4.5		
PHF	.750	.750	.625	.728	.625	.500	.667	.938	.500	.963	.000	.940	.656	.000	.250	.688	.880

Counts Unlimited
PO Box 1178
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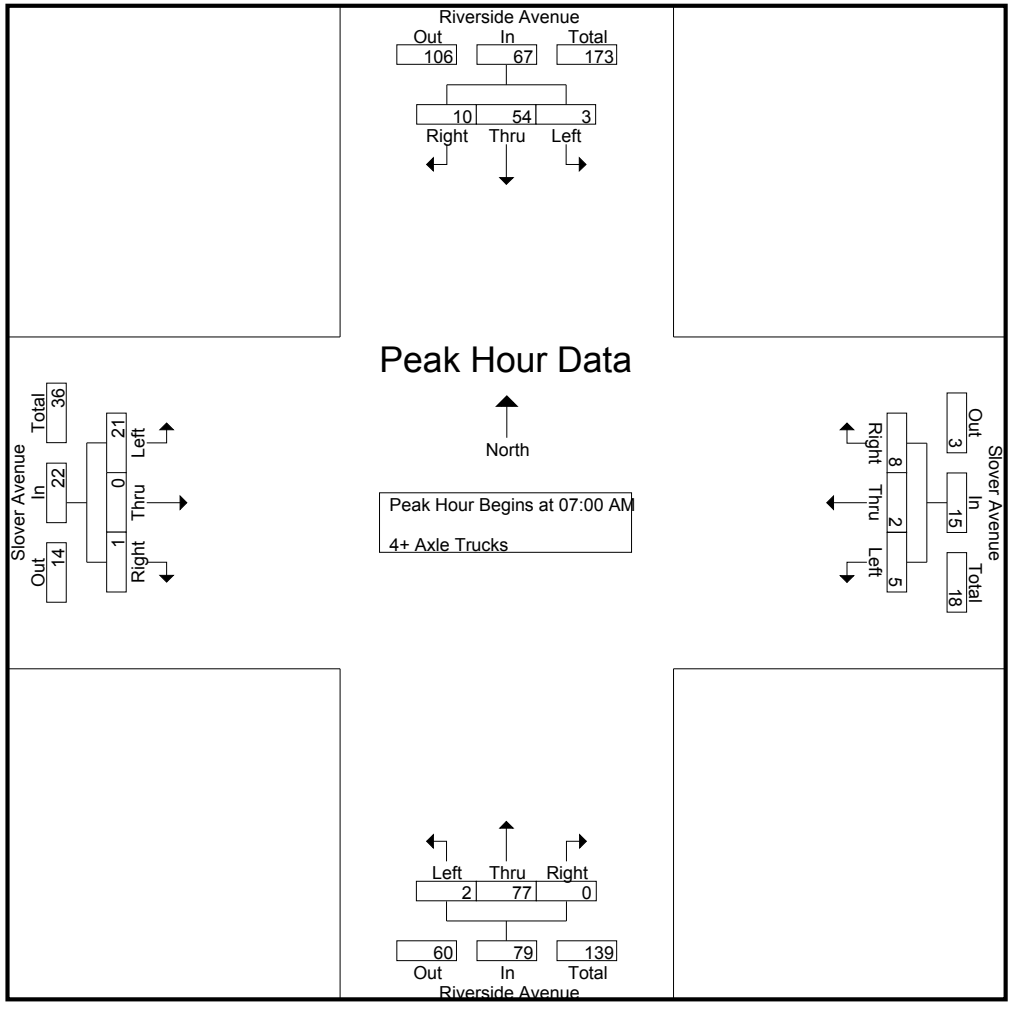
City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	**18**	2	20	**2**	**1**	1	**4**	0	**20**	0	20	**8**	0	0	**8**	
+15 mins.	**1**	18	**4**	**23**	1	1	1	3	**1**	20	0	**21**	5	0	0	5	
+30 mins.	1	8	2	11	1	0	**3**	4	1	19	0	20	4	0	**1**	5	
+45 mins.	1	10	2	13	1	0	3	4	0	18	0	18	4	0	0	4	
Total Volume	3	54	10	67	5	2	8	15	2	77	0	79	21	0	1	22	
% App. Total	4.5	80.6	14.9		33.3	13.3	53.3		2.5	97.5	0		95.5	0	4.5		
PHF	.750	.750	.625	.728	.625	.500	.667	.938	.500	.963	.000	.940	.656	.000	.250	.688	

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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	4	178	50	6	232	6	2	11	9	19	8	244	3	1	255	102	20	19	5	141	21	647	668
04:15 PM	6	197	44	6	247	2	5	6	4	13	4	231	4	0	239	94	18	17	4	129	14	628	642
04:30 PM	8	187	39	4	234	12	4	5	3	21	6	245	1	0	252	79	12	22	9	113	16	620	636
04:45 PM	3	216	63	17	282	3	2	3	1	8	9	274	4	0	287	88	14	35	14	137	32	714	746
Total	21	778	196	33	995	23	13	25	17	61	27	994	12	1	1033	363	64	93	32	520	83	2609	2692
05:00 PM	9	201	38	4	248	6	2	6	3	14	13	228	6	1	247	94	22	25	12	141	20	650	670
05:15 PM	2	234	45	1	281	6	3	5	1	14	9	261	7	0	277	77	21	33	6	131	8	703	711
05:30 PM	2	188	53	5	243	2	4	8	3	14	17	210	8	1	235	68	22	25	7	115	16	607	623
05:45 PM	7	197	62	8	266	5	2	6	1	13	7	213	5	0	225	90	12	20	7	122	16	626	642
Total	20	820	198	18	1038	19	11	25	8	55	46	912	26	2	984	329	77	103	32	509	60	2586	2646
Grand Total	41	1598	394	51	2033	42	24	50	25	116	73	1906	38	3	2017	692	141	196	64	1029	143	5195	5338
Apprch %	2	78.6	19.4			36.2	20.7	43.1			3.6	94.5	1.9			67.2	13.7	19					
Total %	0.8	30.8	7.6		39.1	0.8	0.5	1		2.2	1.4	36.7	0.7		38.8	13.3	2.7	3.8		19.8	2.7	97.3	
Passenger Vehicles	23	1357	321		1746	24	15	41		104	61	1642	32		1738	639	128	153		981	0	0	4569
% Passenger Vehicles	56.1	84.9	81.5	88.2	83.8	57.1	62.5	82	96	73.8	83.6	86.1	84.2	100	86	92.3	90.8	78.1	95.3	89.8	0	0	85.6
Large 2 Axle Vehicles	7	51	25		87	3	1	1		6	4	48	2		54	22	11	8		42	0	0	189
% Large 2 Axle Vehicles	17.1	3.2	6.3	7.8	4.2	7.1	4.2	2	4	4.3	5.5	2.5	5.3	0	2.7	3.2	7.8	4.1	1.6	3.8	0	0	3.5
3 Axle Vehicles	5	66	10		83	9	5	1		15	3	60	0		63	10	2	16		30	0	0	191
% 3 Axle Vehicles	12.2	4.1	2.5	3.9	4	21.4	20.8	2	0	10.6	4.1	3.1	0	0	3.1	1.4	1.4	8.2	3.1	2.7	0	0	3.6
4+ Axle Trucks	6	124	38		168	6	3	7		16	5	156	4		165	21	0	19		40	0	0	389
% 4+ Axle Trucks	14.6	7.8	9.6	0	8.1	14.3	12.5	14	0	11.3	6.8	8.2	10.5	0	8.2	3	0	9.7	0	3.7	0	0	7.3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	8	187	39	234	**12**	**4**	5	**21**	6	245	1	252	79	12	22	113	620
04:45 PM	3	216	**63**	**282**	3	2	3	8	9	**274**	4	**287**	88	14	**35**	137	**714**
05:00 PM	**9**	201	38	248	6	2	**6**	14	**13**	228	6	247	**94**	**22**	25	**141**	650
05:15 PM	2	**234**	45	281	6	3	5	14	9	261	**7**	277	77	21	33	131	703
Total Volume	22	838	185	1045	27	11	19	57	37	1008	18	1063	338	69	115	522	2687
% App. Total	2.1	80.2	17.7		47.4	19.3	33.3		3.5	94.8	1.7		64.8	13.2	22		
PHF	.611	.895	.734	.926	.563	.688	.792	.679	.712	.920	.643	.926	.899	.784	.821	.926	.941

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City of Rialto
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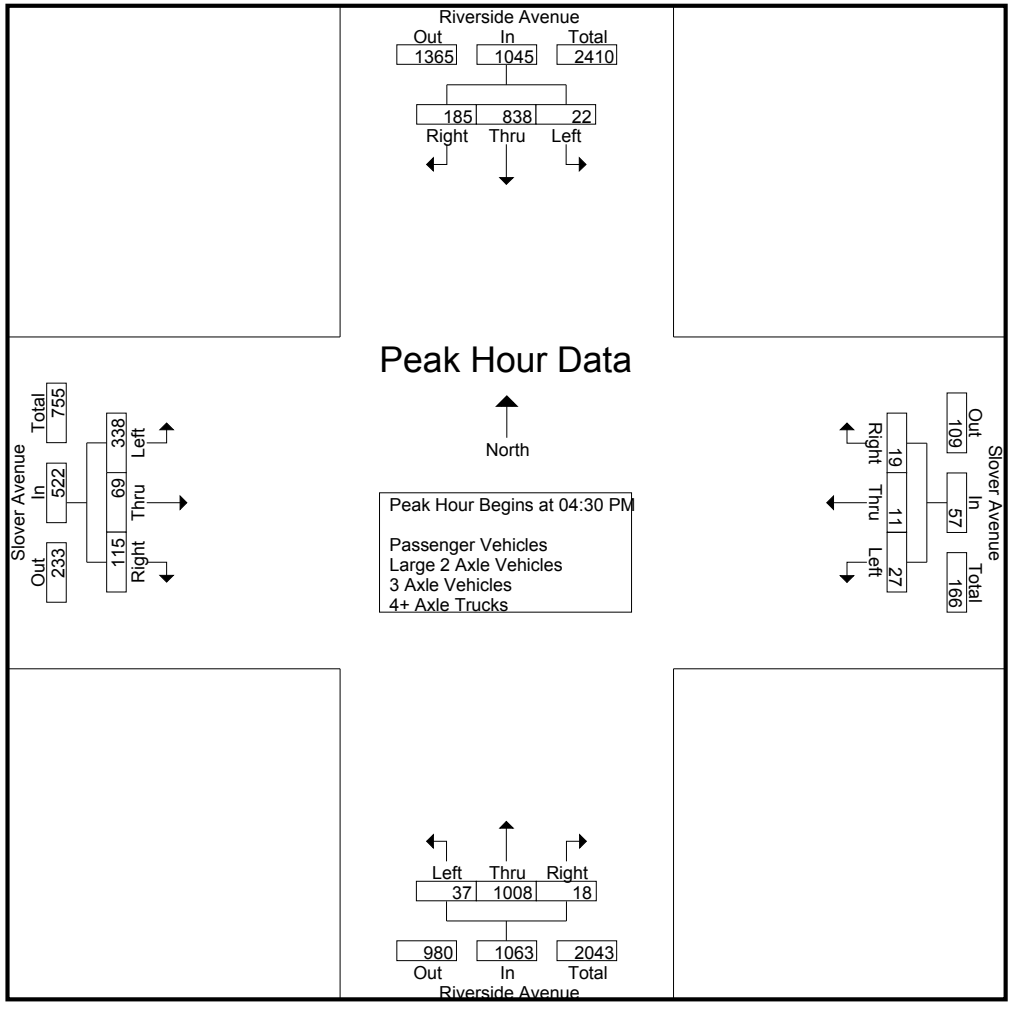
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:00 PM				04:30 PM				04:45 PM				
+0 mins.	3	216	**63**	**282**	6	2	**11**	19	6	245	1	252	88	14	**35**	137	
+15 mins.	**9**	201	38	248	2	**5**	6	13	9	**274**	4	**287**	**94**	**22**	25	**141**	
+30 mins.	2	**234**	45	281	**12**	4	5	**21**	**13**	228	6	247	77	21	33	131	
+45 mins.	2	188	53	243	3	2	3	8	9	261	**7**	277	68	22	25	115	
Total Volume	16	839	199	1054	23	13	25	61	37	1008	18	1063	327	79	118	524	
% App. Total	1.5	79.6	18.9		37.7	21.3	41		3.5	94.8	1.7		62.4	15.1	22.5		
PHF	.444	.896	.790	.934	.479	.650	.568	.726	.712	.920	.643	.926	.870	.898	.843	.929	

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Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	145	42	4	190	3	1	10	9	14	6	208	3	1	217	94	19	15	5	128	19	549	568
04:15 PM	4	161	33	6	198	2	3	4	3	9	3	194	3	0	200	88	14	13	4	115	13	522	535
04:30 PM	5	161	30	4	196	7	2	4	3	13	5	220	1	0	226	69	12	19	9	100	16	535	551
04:45 PM	2	190	54	15	246	2	1	2	1	5	7	237	4	0	248	82	14	28	14	124	30	623	653
Total	14	657	159	29	830	14	7	20	16	41	21	859	11	1	891	333	59	75	32	467	78	2229	2307
05:00 PM	5	174	33	4	212	4	2	5	3	11	11	197	4	1	212	90	18	16	10	124	18	559	577
05:15 PM	0	206	39	1	245	3	2	2	1	7	8	224	5	0	237	68	19	28	6	115	8	604	612
05:30 PM	2	164	42	5	208	2	3	8	3	13	14	175	7	1	196	62	20	18	6	100	15	517	532
05:45 PM	2	156	48	6	206	1	1	6	1	8	7	187	5	0	199	86	12	16	7	114	14	527	541
Total	9	700	162	16	871	10	8	21	8	39	40	783	21	2	844	306	69	78	29	453	55	2207	2262
Grand Total	23	1357	321	45	1701	24	15	41	24	80	61	1642	32	3	1735	639	128	153	61	920	133	4436	4569
Apprch %	1.4	79.8	18.9			30	18.8	51.2			3.5	94.6	1.8			69.5	13.9	16.6					
Total %	0.5	30.6	7.2		38.3	0.5	0.3	0.9		1.8	1.4	37	0.7		39.1	14.4	2.9	3.4		20.7	2.9	97.1	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**5**	161	30	196	**7**	**2**	4	**13**	5	220	1	226	69	12	19	100	535
04:45 PM	2	190	**54**	**246**	2	1	2	5	7	**237**	4	**248**	82	14	**28**	**124**	**623**
05:00 PM	5	174	33	212	4	2	**5**	11	**11**	197	4	212	**90**	18	16	124	559
05:15 PM	0	**206**	39	245	3	2	2	7	8	224	**5**	237	68	**19**	28	115	604
Total Volume	12	731	156	899	16	7	13	36	31	878	14	923	309	63	91	463	2321
% App. Total	1.3	81.3	17.4		44.4	19.4	36.1		3.4	95.1	1.5		66.7	13.6	19.7		
PHF	.600	.887	.722	.914	.571	.875	.650	.692	.705	.926	.700	.930	.858	.829	.813	.933	.931

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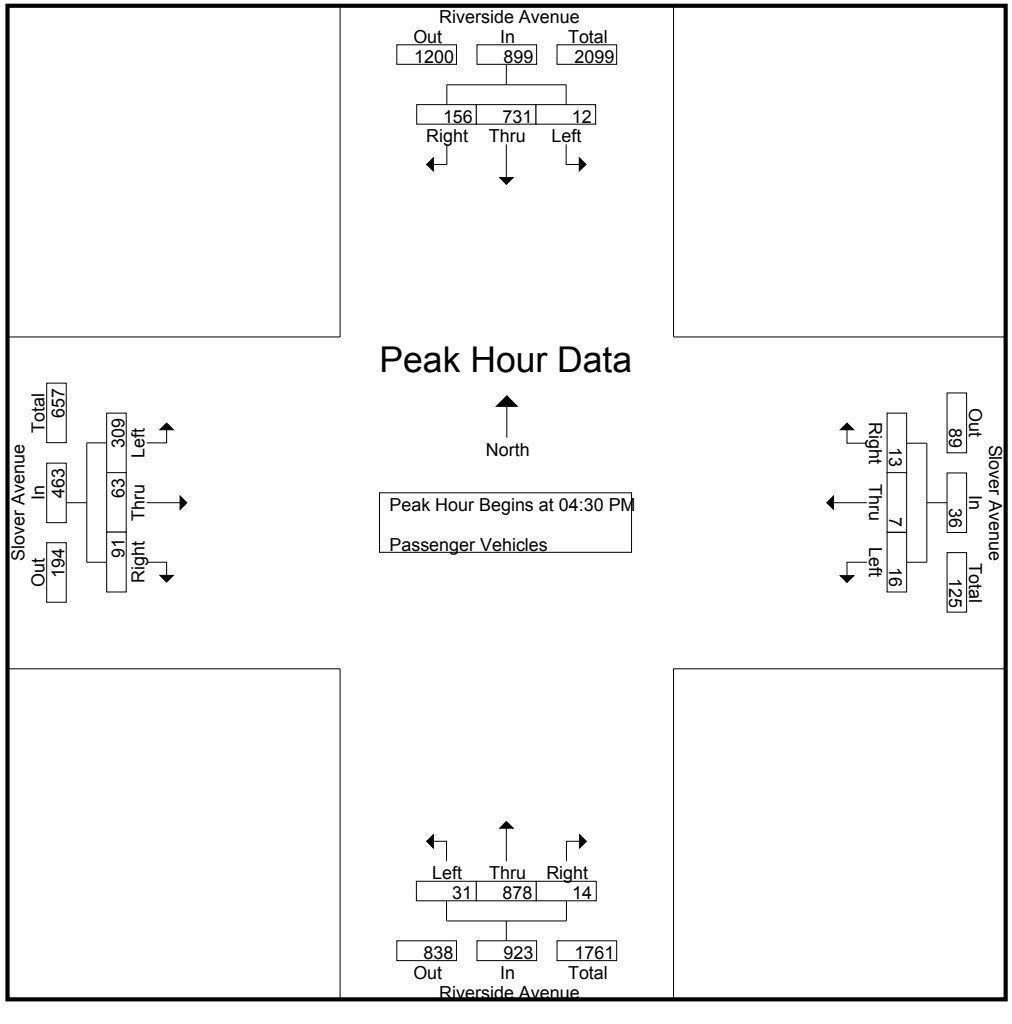

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Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	**5**	161	30	196	**7**	**2**	4	**13**	5	220	1	226	69	12	19	100	
+15 mins.	2	190	**54**	**246**	2	1	2	5	7	**237**	4	**248**	82	14	**28**	**124**	
+30 mins.	5	174	33	212	4	2	**5**	11	**11**	197	4	212	**90**	18	16	124	
+45 mins.	0	**206**	39	245	3	2	2	7	8	224	**5**	237	68	**19**	28	115	
Total Volume	12	731	156	899	16	7	13	36	31	878	14	923	309	63	91	463	
% App. Total	1.3	81.3	17.4		44.4	19.4	36.1		3.4	95.1	1.5		66.7	13.6	19.7		
PHF	.600	.887	.722	.914	.571	.875	.650	.692	.705	.926	.700	.930	.858	.829	.813	.933	

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File Name : RLTRISLPM
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Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	10	3	1	13	0	0	0	0	0	1	5	0	0	6	4	1	0	0	5	1	24	25
04:15 PM	0	6	2	0	8	0	0	1	1	1	1	3	0	0	4	4	2	2	0	8	1	21	22
04:30 PM	1	4	5	0	10	1	0	0	0	1	1	7	0	0	8	5	0	0	0	5	0	24	24
04:45 PM	1	5	4	2	10	0	0	0	0	0	0	9	0	0	9	3	0	0	0	3	2	22	24
Total	2	25	14	3	41	1	0	1	1	2	3	24	0	0	27	16	3	2	0	21	4	91	95
05:00 PM	3	7	1	0	11	0	0	0	0	0	0	7	1	0	8	1	4	1	1	6	1	25	26
05:15 PM	1	6	2	0	9	2	1	0	0	3	0	6	1	0	7	2	2	3	0	7	0	26	26
05:30 PM	0	7	3	0	10	0	0	0	0	0	1	9	0	0	10	2	2	0	0	4	0	24	24
05:45 PM	1	6	5	1	12	0	0	0	0	0	0	2	0	0	2	1	0	2	0	3	1	17	18
Total	5	26	11	1	42	2	1	0	0	3	1	24	2	0	27	6	8	6	1	20	2	92	94
Grand Total	7	51	25	4	83	3	1	1	1	5	4	48	2	0	54	22	11	8	1	41	6	183	189
Apprch %	8.4	61.4	30.1			60	20	20			7.4	88.9	3.7			53.7	26.8	19.5					
Total %	3.8	27.9	13.7		45.4	1.6	0.5	0.5		2.7	2.2	26.2	1.1		29.5	12	6	4.4		22.4	3.2	96.8	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	4	**5**	10	1	0	0	1	**1**	7	0	8	**5**	0	0	5	24
04:45 PM	1	5	4	10	0	0	0	0	0	**9**	0	**9**	3	0	0	3	22
05:00 PM	**3**	**7**	1	**11**	0	0	0	0	0	7	**1**	8	1	**4**	1	6	25
05:15 PM	1	6	2	9	**2**	**1**	0	**3**	0	6	1	7	2	2	**3**	**7**	**26**
Total Volume	6	22	12	40	3	1	0	4	1	29	2	32	11	6	4	21	97
% App. Total	15	55	30		75	25	0		3.1	90.6	6.2		52.4	28.6	19		
PHF	.500	.786	.600	.909	.375	.250	.000	.333	.250	.806	.500	.889	.550	.375	.333	.750	.933

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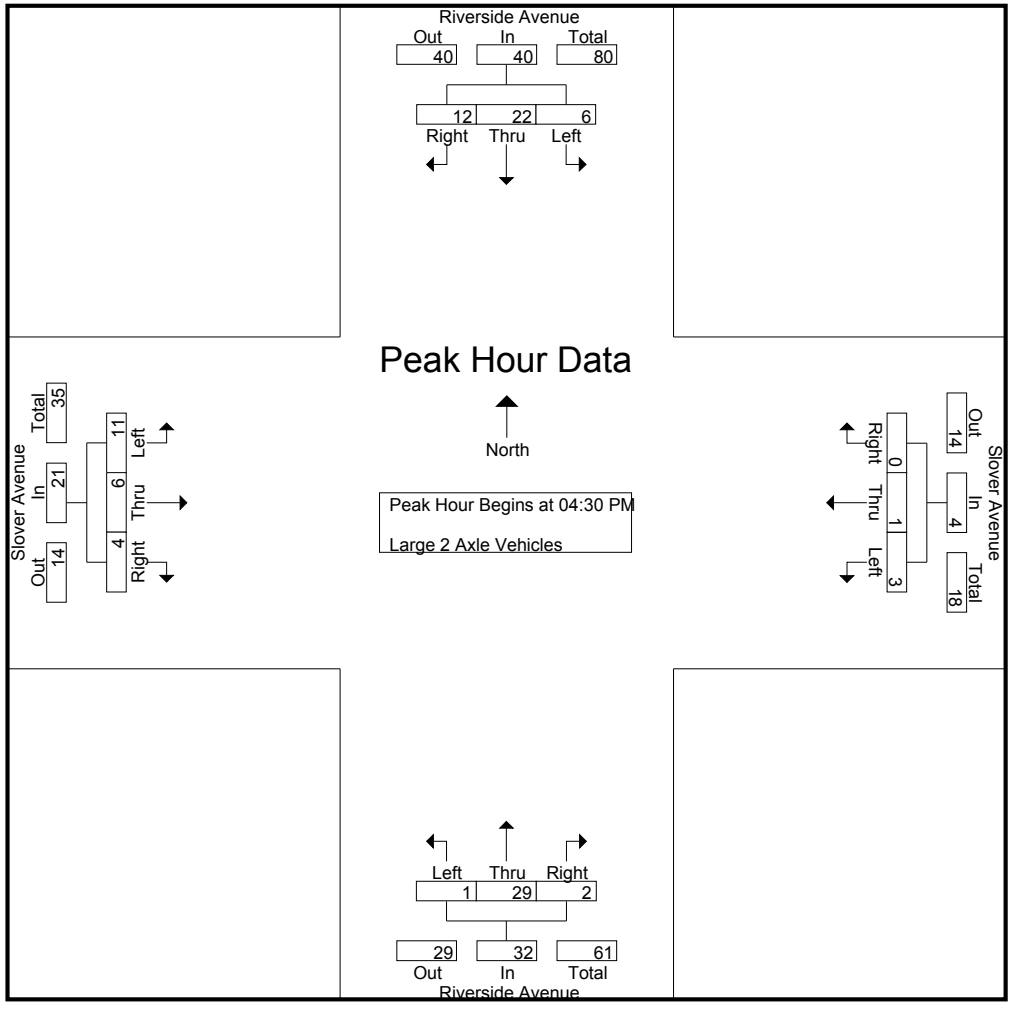
Page No : 2



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Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	4	**5**	10	1	0	0	1	**1**	7	0	8	**5**	0	0	5	
+15 mins.	1	5	4	10	0	0	0	0	0	**9**	0	**9**	3	0	0	3	
+30 mins.	**3**	**7**	1	**11**	0	0	0	0	0	7	**1**	8	1	**4**	1	6	
+45 mins.	1	6	2	9	**2**	**1**	0	**3**	0	6	1	7	2	2	**3**	**7**	
Total Volume	6	22	12	40	3	1	0	4	1	29	2	32	11	6	4	21	
% App. Total	15	55	30		75	25	0		3.1	90.6	6.2		52.4	28.6	19		
PHF	.500	.786	.600	.909	.375	.250	.000	.333	.250	.806	.500	.889	.550	.375	.333	.750	

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Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	11	2	1	13	1	1	0	0	2	1	8	0	0	9	1	0	1	0	2	1	26	27
04:15 PM	2	9	3	0	14	0	2	0	0	2	0	8	0	0	8	1	2	0	0	3	0	27	27
04:30 PM	0	6	0	0	6	4	1	0	0	5	0	3	0	0	3	2	0	3	0	5	0	19	19
04:45 PM	0	5	2	0	7	0	0	0	0	0	1	9	0	0	10	1	0	1	0	2	0	19	19
Total	2	31	7	1	40	5	4	0	0	9	2	28	0	0	30	5	2	5	0	12	1	91	92
05:00 PM	1	5	0	0	6	1	0	0	0	1	1	11	0	0	12	1	0	6	1	7	1	26	27
05:15 PM	0	10	0	0	10	0	0	1	0	1	0	11	0	0	11	3	0	1	0	4	0	26	26
05:30 PM	0	5	2	0	7	0	0	0	0	0	0	4	0	0	4	0	0	2	1	2	1	13	14
05:45 PM	2	15	1	1	18	3	1	0	0	4	0	6	0	0	6	1	0	2	0	3	1	31	32
Total	3	35	3	1	41	4	1	1	0	6	1	32	0	0	33	5	0	11	2	16	3	96	99
Grand Total	5	66	10	2	81	9	5	1	0	15	3	60	0	0	63	10	2	16	2	28	4	187	191
Apprch %	6.2	81.5	12.3			60	33.3	6.7			4.8	95.2	0			35.7	7.1	57.1					
Total %	2.7	35.3	5.3		43.3	4.8	2.7	0.5		8	1.6	32.1	0		33.7	5.3	1.1	8.6		15	2.1	97.9	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	6	0	6	**4**	**1**	0	**5**	0	3	0	3	2	0	3	5	19
04:45 PM	0	5	**2**	7	0	0	0	0	**1**	9	0	10	1	0	1	2	19
05:00 PM	**1**	5	0	6	1	0	0	1	1	**11**	0	**12**	1	0	**6**	**7**	**26**
05:15 PM	0	**10**	0	**10**	0	0	**1**	1	0	11	0	11	**3**	0	1	4	26
Total Volume	1	26	2	29	5	1	1	7	2	34	0	36	7	0	11	18	90
% App. Total	3.4	89.7	6.9		71.4	14.3	14.3		5.6	94.4	0		38.9	0	61.1		
PHF	.250	.650	.250	.725	.313	.250	.250	.350	.500	.773	.000	.750	.583	.000	.458	.643	.865

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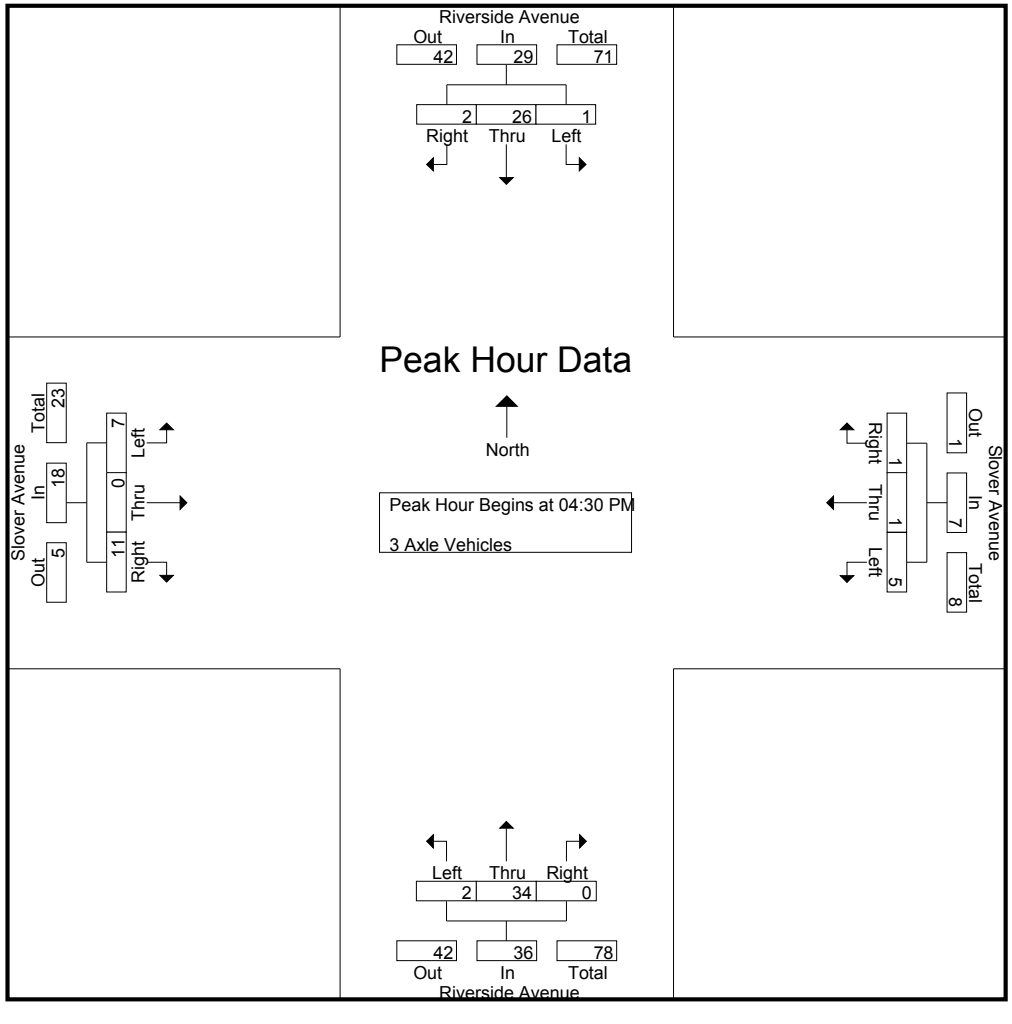

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Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	6	0	6	**4**	**1**	0	**5**	0	3	0	3	2	0	3	5	
+15 mins.	0	5	**2**	7	0	0	0	0	**1**	9	0	10	1	0	1	2	
+30 mins.	**1**	5	0	6	1	0	0	1	1	**11**	0	**12**	1	0	**6**	**7**	
+45 mins.	0	**10**	0	**10**	0	0	**1**	1	0	11	0	11	**3**	0	1	4	
Total Volume	1	26	2	29	5	1	1	7	2	34	0	36	7	0	11	18	
% App. Total	3.4	89.7	6.9		71.4	14.3	14.3		5.6	94.4	0		38.9	0	61.1		
PHF	.250	.650	.250	.725	.313	.250	.250	.350	.500	.773	.000	.750	.583	.000	.458	.643	

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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					Slover Avenue Westbound					Riverside Avenue Northbound					Slover Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	12	3	0	16	2	0	1	0	3	0	23	0	0	23	3	0	3	0	6	0	48	48
04:15 PM	0	21	6	0	27	0	0	1	0	1	0	26	1	0	27	1	0	2	0	3	0	58	58
04:30 PM	2	16	4	0	22	0	1	1	0	2	0	15	0	0	15	3	0	0	0	3	0	42	42
04:45 PM	0	16	3	0	19	1	1	1	0	3	1	19	0	0	20	2	0	6	0	8	0	50	50
Total	3	65	16	0	84	3	2	4	0	9	1	83	1	0	85	9	0	11	0	20	0	198	198
05:00 PM	0	15	4	0	19	1	0	1	0	2	1	13	1	0	15	2	0	2	0	4	0	40	40
05:15 PM	1	12	4	0	17	1	0	2	0	3	1	20	1	0	22	4	0	1	0	5	0	47	47
05:30 PM	0	12	6	0	18	0	1	0	0	1	2	22	1	0	25	4	0	5	0	9	0	53	53
05:45 PM	2	20	8	0	30	1	0	0	0	1	0	18	0	0	18	2	0	0	0	2	0	51	51
Total	3	59	22	0	84	3	1	3	0	7	4	73	3	0	80	12	0	8	0	20	0	191	191
Grand Total	6	124	38	0	168	6	3	7	0	16	5	156	4	0	165	21	0	19	0	40	0	389	389
Apprch %	3.6	73.8	22.6			37.5	18.8	43.8			3	94.5	2.4			52.5	0	47.5					
Total %	1.5	31.9	9.8		43.2	1.5	0.8	1.8		4.1	1.3	40.1	1		42.4	5.4	0	4.9		10.3	0	100	

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	**16**	**4**	**22**	0	**1**	1	2	0	15	0	15	3	0	0	3	42
04:45 PM	0	16	3	19	**1**	1	1	**3**	**1**	19	0	20	2	0	**6**	**8**	**50**
05:00 PM	0	15	4	19	1	0	1	2	1	13	**1**	15	2	0	2	4	40
05:15 PM	1	12	4	17	1	0	**2**	3	1	**20**	1	**22**	**4**	0	1	5	47
Total Volume	3	59	15	77	3	2	5	10	3	67	2	72	11	0	9	20	179
% App. Total	3.9	76.6	19.5		30	20	50		4.2	93.1	2.8		55	0	45		
PHF	.375	.922	.938	.875	.750	.500	.625	.833	.750	.838	.500	.818	.688	.000	.375	.625	.895

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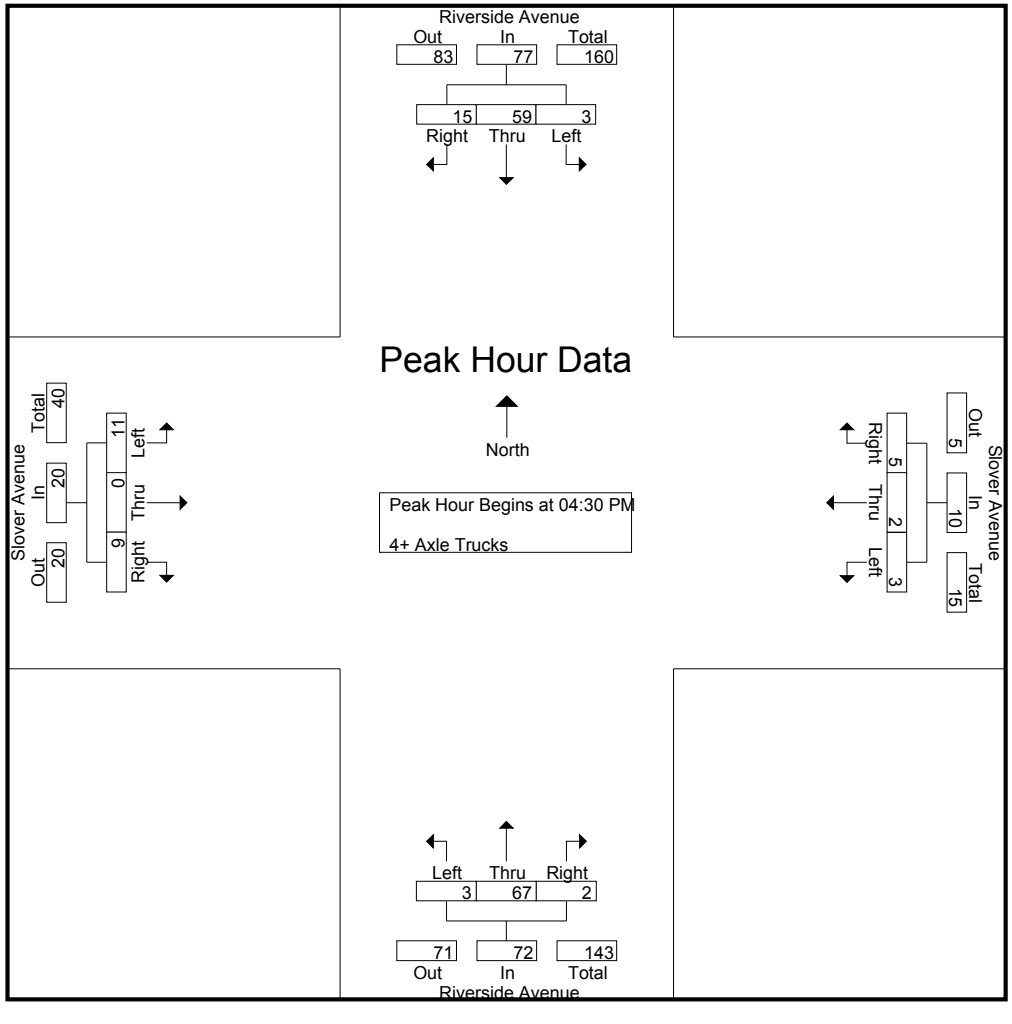
City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Slover Avenue
Weather: Clear

File Name : RLTRISLPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Slover Avenue Westbound				Riverside Avenue Northbound				Slover Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	**2**	**16**	**4**	**22**	0	**1**	1	2	0	15	0	15	3	0	0	3	
+15 mins.	0	16	3	19	**1**	1	1	**3**	**1**	19	0	20	2	0	**6**	**8**	
+30 mins.	0	15	4	19	1	0	1	2	1	13	**1**	15	2	0	2	4	
+45 mins.	1	12	4	17	1	0	**2**	3	1	**20**	1	**22**	**4**	0	1	5	
Total Volume	3	59	15	77	3	2	5	10	3	67	2	72	11	0	9	20	
% App. Total	3.9	76.6	19.5		30	20	50		4.2	93.1	2.8		55	0	45		
PHF	.375	.922	.938	.875	.750	.500	.625	.833	.750	.838	.500	.818	.688	.000	.375	.625	

Location: Rialto
N/S: Riverside Avenue
E/W: Slover Avenue

Date: 1/19/2017
Day: Thursday

PEDESTRIANS

	North Leg Riverside Avenue	East Leg Slover Avenue	South Leg Riverside Avenue	West Leg Slover Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Riverside Avenue	East Leg Slover Avenue	South Leg Riverside Avenue	West Leg Slover Avenue	TOTAL
4:00 PM	0	0	2	0	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	2	2
4:45 PM	1	0	0	0	1
5:00 PM	0	2	2	0	4
5:15 PM	0	1	0	0	1
5:30 PM	0	1	1	0	2
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	4	5	2	12

Location: Rialto
N/S: Riverside Avenue
E/W: Slover Avenue



Date: 1/19/2017
Day: Thursday

BICYCLES

	North Leg Riverside Avenue	East Leg Slover Avenue	South Leg Riverside Avenue	West Leg Slover Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	1	1	0	0	2

	North Leg Riverside Avenue	East Leg Slover Avenue	South Leg Riverside Avenue	West Leg Slover Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	11	248	22	1	281	4	3	2	0	9	8	132	3	0	143	15	3	7	3	25	4	458	462
07:15 AM	13	244	23	1	280	1	2	3	1	6	11	173	7	1	191	10	0	8	4	18	7	495	502
07:30 AM	7	279	28	2	314	6	0	7	1	13	11	159	3	1	173	26	0	12	0	38	4	538	542
07:45 AM	7	277	25	0	309	1	0	7	0	8	14	154	1	1	169	10	0	21	13	31	14	517	531
Total	38	1048	98	4	1184	12	5	19	2	36	44	618	14	3	676	61	3	48	20	112	29	2008	2037
08:00 AM	6	172	11	1	189	2	1	6	1	9	15	136	2	0	153	17	3	14	5	34	7	385	392
08:15 AM	16	220	18	4	254	4	1	8	3	13	16	135	3	1	154	22	2	5	2	29	10	450	460
08:30 AM	8	154	20	2	182	1	1	7	3	9	15	157	2	0	174	15	1	14	8	30	13	395	408
08:45 AM	16	170	25	5	211	1	1	5	3	7	9	167	7	3	183	17	1	14	5	32	16	433	449
Total	46	716	74	12	836	8	4	26	10	38	55	595	14	4	664	71	7	47	20	125	46	1663	1709
Grand Total	84	1764	172	16	2020	20	9	45	12	74	99	1213	28	7	1340	132	10	95	40	237	75	3671	3746
Apprch %	4.2	87.3	8.5			27	12.2	60.8			7.4	90.5	2.1			55.7	4.2	40.1					
Total %	2.3	48.1	4.7		55	0.5	0.2	1.2		2	2.7	33	0.8		36.5	3.6	0.3	2.6		6.5	2	98	
Passenger Vehicles	58	1578	151		1802	11	6	22		48	81	973	22		1083	80	8	70		195	0	0	3128
% Passenger Vehicles	69	89.5	87.8	93.8	88.5	55	66.7	48.9	75	55.8	81.8	80.2	78.6	100	80.4	60.6	80	73.7	92.5	70.4	0	0	83.5
Large 2 Axle Vehicles	4	46	8		58	1	0	4		6	4	38	0		42	23	0	6		29	0	0	135
% Large 2 Axle Vehicles	4.8	2.6	4.7	0	2.8	5	0	8.9	8.3	7	4	3.1	0	0	3.1	17.4	0	6.3	0	10.5	0	0	3.6
3 Axle Vehicles	5	41	3		49	5	1	8		14	10	36	4		50	5	1	12		19	0	0	132
% 3 Axle Vehicles	6	2.3	1.7	0	2.4	25	11.1	17.8	0	16.3	10.1	3	14.3	0	3.7	3.8	10	12.6	2.5	6.9	0	0	3.5
4+ Axle Trucks	17	99	10		127	3	2	11		18	4	166	2		172	24	1	7		34	0	0	351
% 4+ Axle Trucks	20.2	5.6	5.8	6.2	6.2	15	22.2	24.4	16.7	20.9	4	13.7	7.1	0	12.8	18.2	10	7.4	5	12.3	0	0	9.4

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	11	248	22	281	4	**3**	2	9	8	132	3	143	15	**3**	7	25	458
07:15 AM	**13**	244	23	280	1	2	3	6	11	**173**	**7**	**191**	10	0	8	18	495
07:30 AM	7	**279**	**28**	**314**	**6**	0	**7**	**13**	11	159	3	173	**26**	0	12	**38**	**538**
07:45 AM	7	277	25	309	1	0	7	8	**14**	154	1	169	10	0	**21**	31	517
Total Volume	38	1048	98	1184	12	5	19	36	44	618	14	676	61	3	48	112	2008
% App. Total	3.2	88.5	8.3		33.3	13.9	52.8		6.5	91.4	2.1		54.5	2.7	42.9		
PHF	.731	.939	.875	.943	.500	.417	.679	.692	.786	.893	.500	.885	.587	.250	.571	.737	.933

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City of Rialto
N/S: Riverside Avenue
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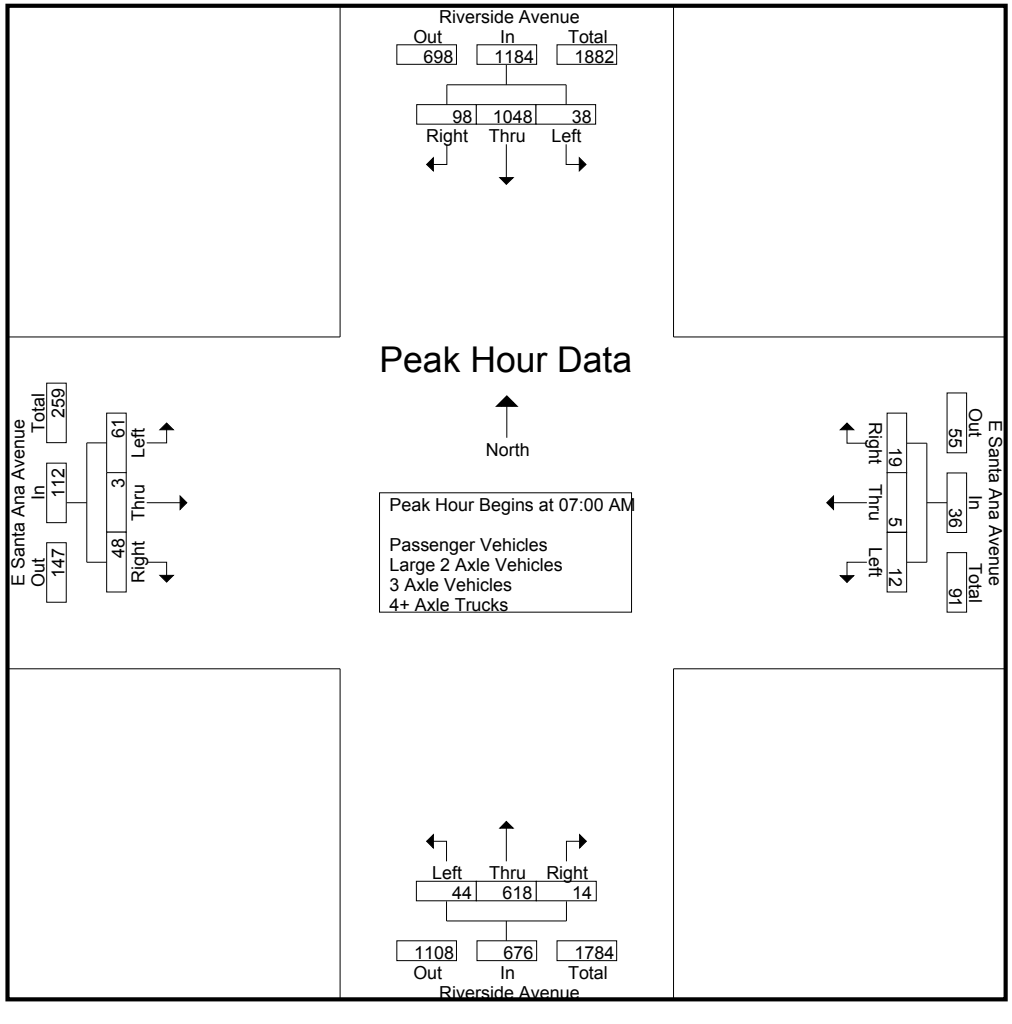
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:30 AM				07:15 AM				07:30 AM				
+0 mins.	11	248	22	281	**6**	0	7	**13**	11	**173**	**7**	**191**	**26**	0	12	**38**	
+15 mins.	**13**	244	23	280	1	0	7	8	11	159	3	173	10	0	**21**	31	
+30 mins.	7	**279**	**28**	**314**	2	**1**	6	9	14	154	1	169	17	**3**	14	34	
+45 mins.	7	277	25	309	4	1	**8**	13	**15**	136	2	153	22	2	5	29	
Total Volume	38	1048	98	1184	13	2	28	43	51	622	13	686	75	5	52	132	
% App. Total	3.2	88.5	8.3		30.2	4.7	65.1		7.4	90.7	1.9		56.8	3.8	39.4		
PHF	.731	.939	.875	.943	.542	.500	.875	.827	.850	.899	.464	.898	.721	.417	.619	.868	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	8	226	20	1	254	2	1	0	0	3	7	105	3	0	115	9	3	6	3	18	4	390	394
07:15 AM	10	219	22	1	251	0	2	1	0	3	9	141	4	1	154	7	0	6	4	13	6	421	427
07:30 AM	3	260	26	2	289	5	0	2	0	7	10	134	2	1	146	21	0	9	0	30	3	472	475
07:45 AM	6	254	23	0	283	0	0	4	0	4	11	130	1	1	142	8	0	19	12	27	13	456	469
Total	27	959	91	4	1077	7	3	7	0	17	37	510	10	3	557	45	3	40	19	88	26	1739	1765
08:00 AM	2	147	9	1	158	2	0	3	1	5	13	101	2	0	116	7	3	9	5	19	7	298	305
08:15 AM	12	194	14	4	220	1	1	3	2	5	12	108	3	1	123	9	1	1	1	11	8	359	367
08:30 AM	4	133	18	2	155	1	1	5	3	7	14	128	0	0	142	10	1	11	7	22	12	326	338
08:45 AM	13	145	19	4	177	0	1	4	3	5	5	126	7	3	138	9	0	9	5	18	15	338	353
Total	31	619	60	11	710	4	3	15	9	22	44	463	12	4	519	35	5	30	18	70	42	1321	1363
Grand Total	58	1578	151	15	1787	11	6	22	9	39	81	973	22	7	1076	80	8	70	37	158	68	3060	3128
Apprch %	3.2	88.3	8.4			28.2	15.4	56.4			7.5	90.4	2			50.6	5.1	44.3					
Total %	1.9	51.6	4.9		58.4	0.4	0.2	0.7		1.3	2.6	31.8	0.7		35.2	2.6	0.3	2.3		5.2	2.2	97.8	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	8	226	20	254	2	1	0	3	7	105	3	115	9	**3**	6	18	390
07:15 AM	**10**	219	22	251	0	**2**	1	3	9	**141**	**4**	**154**	7	0	6	13	421
07:30 AM	3	**260**	**26**	**289**	**5**	0	2	**7**	10	134	2	146	**21**	0	9	**30**	**472**
07:45 AM	6	254	23	283	0	0	**4**	4	**11**	130	1	142	8	0	**19**	27	456
Total Volume	27	959	91	1077	7	3	7	17	37	510	10	557	45	3	40	88	1739
% App. Total	2.5	89	8.4		41.2	17.6	41.2		6.6	91.6	1.8		51.1	3.4	45.5		
PHF	.675	.922	.875	.932	.350	.375	.438	.607	.841	.904	.625	.904	.536	.250	.526	.733	.921

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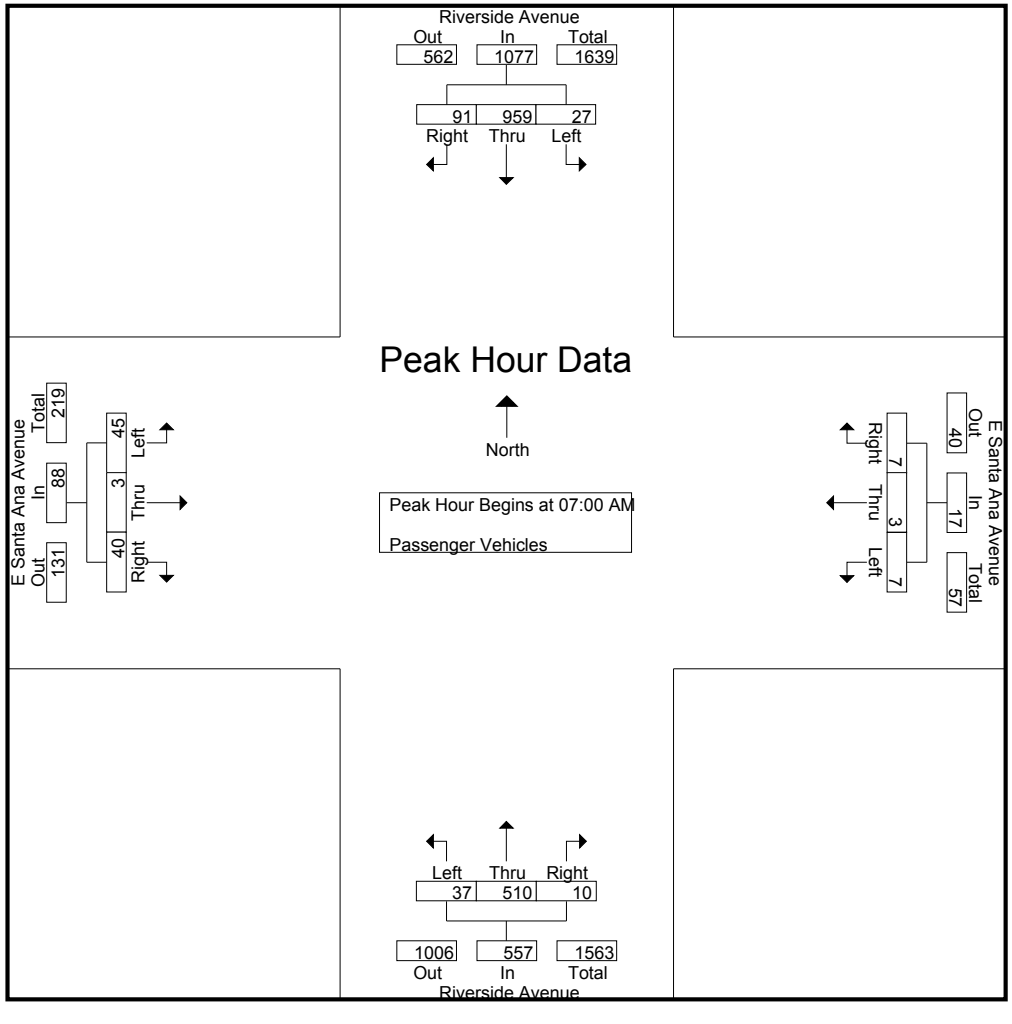
City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	8	226	20	254	2	1	0	3	7	105	3	115	9	**3**	6	18	
+15 mins.	**10**	219	22	251	0	**2**	1	3	9	**141**	**4**	**154**	7	0	6	13	
+30 mins.	3	**260**	**26**	**289**	**5**	0	2	**7**	10	134	2	146	**21**	0	9	**30**	
+45 mins.	6	254	23	283	0	0	**4**	4	**11**	130	1	142	8	0	**19**	27	
Total Volume	27	959	91	1077	7	3	7	17	37	510	10	557	45	3	40	88	
% App. Total	2.5	89	8.4		41.2	17.6	41.2		6.6	91.6	1.8		51.1	3.4	45.5		
PHF	.675	.922	.875	.932	.350	.375	.438	.607	.841	.904	.625	.904	.536	.250	.526	.733	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	4	2	0	6	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	11	11
07:15 AM	1	4	0	0	5	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	0	14	14
07:30 AM	2	6	0	0	8	0	0	2	1	2	0	5	0	0	5	3	0	1	0	4	1	19	20
07:45 AM	1	8	2	0	11	0	0	1	0	1	1	3	0	0	4	2	0	0	0	2	0	18	18
Total	4	22	4	0	30	0	0	3	1	3	2	19	0	0	21	7	0	1	0	8	1	62	63
08:00 AM	0	7	2	0	9	0	0	0	0	0	1	5	0	0	6	6	0	3	0	9	0	24	24
08:15 AM	0	6	0	0	6	1	0	1	0	2	1	6	0	0	7	5	0	1	0	6	0	21	21
08:30 AM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	0	11	11
08:45 AM	0	7	2	0	9	0	0	0	0	0	0	3	0	0	3	3	0	1	0	4	0	16	16
Total	0	24	4	0	28	1	0	1	0	2	2	19	0	0	21	16	0	5	0	21	0	72	72
Grand Total	4	46	8	0	58	1	0	4	1	5	4	38	0	0	42	23	0	6	0	29	1	134	135
Apprch %	6.9	79.3	13.8			20	0	80			9.5	90.5	0			79.3	0	20.7					
Total %	3	34.3	6		43.3	0.7	0	3		3.7	3	28.4	0		31.3	17.2	0	4.5		21.6	0.7	99.3	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	4	**2**	6	0	0	0	0	0	4	0	4	1	0	0	1	11
07:15 AM	1	4	0	5	0	0	0	0	**1**	**7**	0	**8**	1	0	0	1	14
07:30 AM	**2**	6	0	8	0	0	**2**	**2**	0	5	0	5	**3**	0	**1**	**4**	**19**
07:45 AM	1	**8**	2	**11**	0	0	1	1	1	3	0	4	2	0	0	2	18
Total Volume	4	22	4	30	0	0	3	3	2	19	0	21	7	0	1	8	62
% App. Total	13.3	73.3	13.3		0	0	100		9.5	90.5	0		87.5	0	12.5		
PHF	.500	.688	.500	.682	.000	.000	.375	.375	.500	.679	.000	.656	.583	.000	.250	.500	.816

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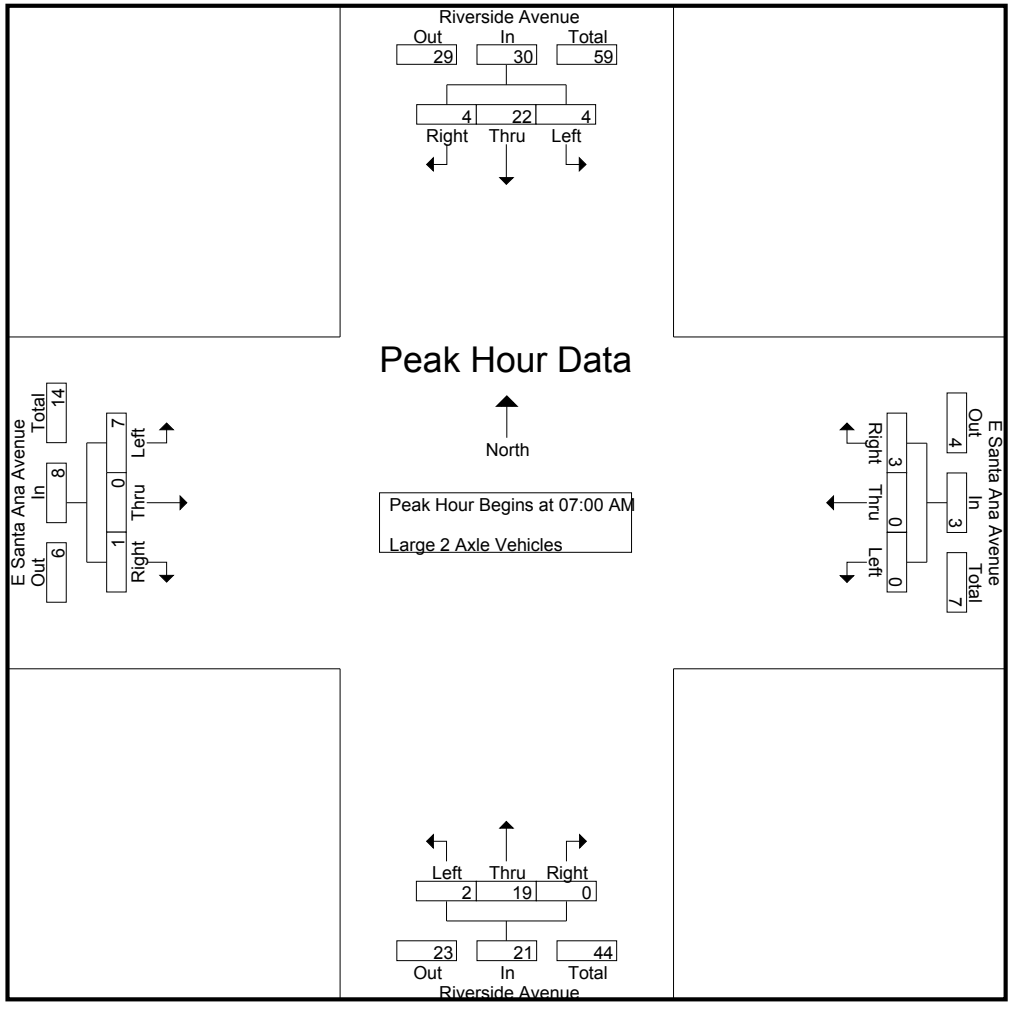
City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	4	**2**	6	0	0	0	0	0	4	0	4	1	0	0	1	
+15 mins.	1	4	0	5	0	0	0	0	**1**	**7**	0	**8**	1	0	0	1	
+30 mins.	**2**	6	0	8	0	0	**2**	**2**	0	5	0	5	**3**	0	**1**	**4**	
+45 mins.	1	**8**	2	**11**	0	0	1	1	1	3	0	4	2	0	0	2	
Total Volume	4	22	4	30	0	0	3	3	2	19	0	21	7	0	1	8	
% App. Total	13.3	73.3	13.3		0	0	100		9.5	90.5	0		87.5	0	12.5		
PHF	.500	.688	.500	.682	.000	.000	.375	.375	.500	.679	.000	.656	.583	.000	.250	.500	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	3	0	0	3	2	1	0	0	3	1	11	0	0	12	0	0	1	0	1	0	19	19
07:15 AM	1	4	0	0	5	0	0	1	0	1	0	0	2	0	2	0	0	1	0	1	0	9	9
07:30 AM	1	8	0	0	9	0	0	1	0	1	0	2	1	0	3	0	0	1	0	1	0	14	14
07:45 AM	0	5	0	0	5	1	0	0	0	1	1	4	0	0	5	0	0	1	1	1	1	12	13
Total	2	20	0	0	22	3	1	2	0	6	2	17	3	0	22	0	0	4	1	4	1	54	55
08:00 AM	0	6	0	0	6	0	0	3	0	3	1	5	0	0	6	0	0	1	0	1	0	16	16
08:15 AM	0	5	1	0	6	1	0	2	0	3	3	5	0	0	8	3	0	2	0	5	0	22	22
08:30 AM	3	3	1	0	7	0	0	0	0	0	0	4	1	0	5	0	0	1	0	1	0	13	13
08:45 AM	0	7	1	0	8	1	0	1	0	2	4	5	0	0	9	2	1	4	0	7	0	26	26
Total	3	21	3	0	27	2	0	6	0	8	8	19	1	0	28	5	1	8	0	14	0	77	77
Grand Total	5	41	3	0	49	5	1	8	0	14	10	36	4	0	50	5	1	12	1	18	1	131	132
Apprch %	10.2	83.7	6.1			35.7	7.1	57.1			20	72	8			27.8	5.6	66.7					
Total %	3.8	31.3	2.3		37.4	3.8	0.8	6.1		10.7	7.6	27.5	3.1		38.2	3.8	0.8	9.2		13.7	0.8	99.2	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	0	3	**2**	**1**	0	**3**	**1**	**11**	0	**12**	0	0	**1**	**1**	**19**
07:15 AM	**1**	4	0	5	0	0	**1**	1	0	0	**2**	2	0	0	1	1	9
07:30 AM	1	**8**	0	**9**	0	0	1	1	0	2	1	3	0	0	1	1	14
07:45 AM	0	5	0	5	1	0	0	1	1	4	0	5	0	0	1	1	12
Total Volume	2	20	0	22	3	1	2	6	2	17	3	22	0	0	4	4	54
% App. Total	9.1	90.9	0		50	16.7	33.3		9.1	77.3	13.6		0	0	100		
PHF	.500	.625	.000	.611	.375	.250	.500	.500	.500	.386	.375	.458	.000	.000	1.00	1.00	.711

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City of Rialto
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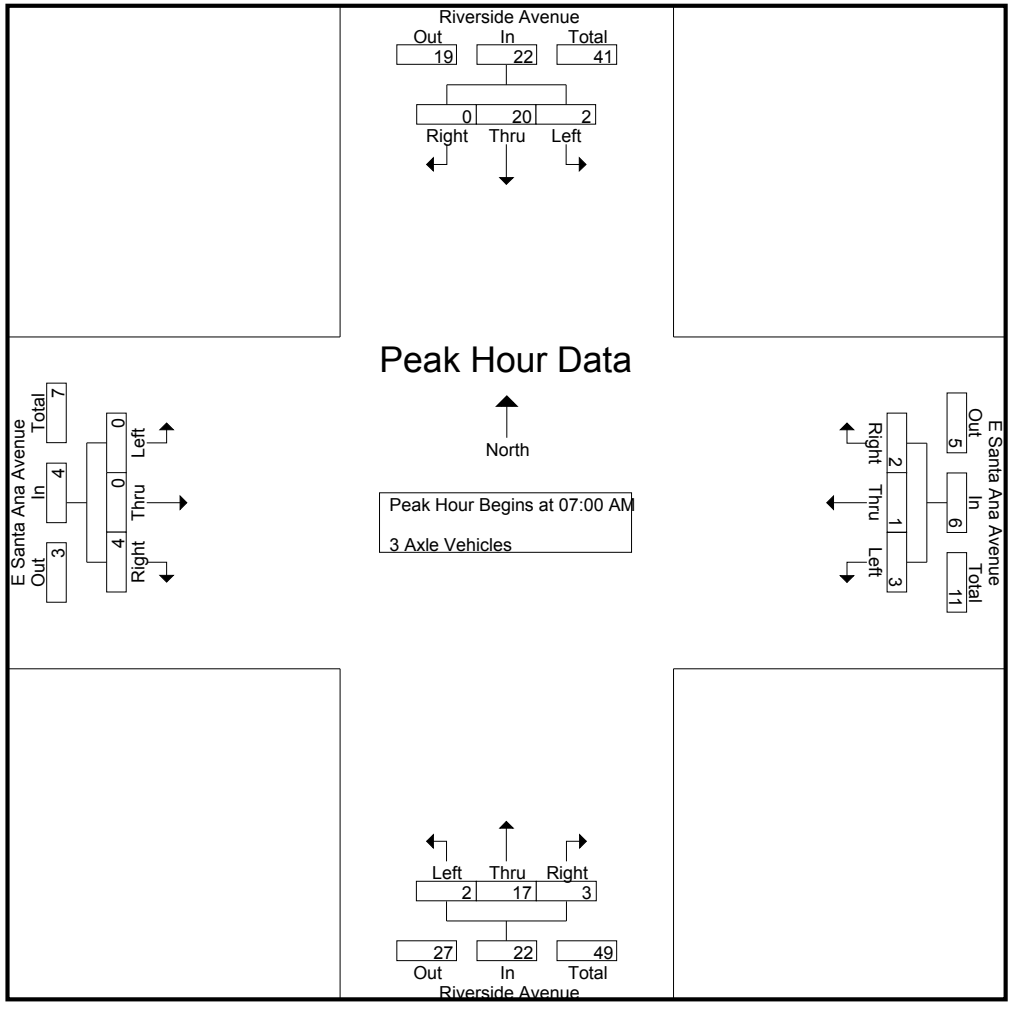
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	3	0	3	**2**	**1**	0	**3**	**1**	**11**	0	**12**	0	0	**1**	**1**	
+15 mins.	**1**	4	0	5	0	0	**1**	1	0	0	**2**	2	0	0	1	1	
+30 mins.	1	**8**	0	**9**	0	0	1	1	0	2	1	3	0	0	1	1	
+45 mins.	0	5	0	5	1	0	0	1	1	4	0	5	0	0	1	1	
Total Volume	2	20	0	22	3	1	2	6	2	17	3	22	0	0	4	4	
% App. Total	9.1	90.9	0		50	16.7	33.3		9.1	77.3	13.6		0	0	100		
PHF	.500	.625	.000	.611	.375	.250	.500	.500	.500	.386	.375	.458	.000	.000	1.000	1.000	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	15	0	0	18	0	1	2	0	3	0	12	0	0	12	5	0	0	0	5	0	38	38
07:15 AM	1	17	1	0	19	1	0	1	1	2	1	25	1	0	27	2	0	1	0	3	1	51	52
07:30 AM	1	5	2	0	8	1	0	2	0	3	1	18	0	0	19	2	0	1	0	3	0	33	33
07:45 AM	0	10	0	0	10	0	0	2	0	2	1	17	0	0	18	0	0	1	0	1	0	31	31
Total	5	47	3	0	55	2	1	7	1	10	3	72	1	0	76	9	0	3	0	12	1	153	154
08:00 AM	4	12	0	0	16	0	1	0	0	1	0	25	0	0	25	4	0	1	0	5	0	47	47
08:15 AM	4	15	3	0	22	1	0	2	1	3	0	16	0	0	16	5	1	1	1	7	2	48	50
08:30 AM	1	14	1	0	16	0	0	2	0	2	1	20	1	0	22	3	0	2	1	5	1	45	46
08:45 AM	3	11	3	1	17	0	0	0	0	0	0	33	0	0	33	3	0	0	0	3	1	53	54
Total	12	52	7	1	71	1	1	4	1	6	1	94	1	0	96	15	1	4	2	20	4	193	197
Grand Total	17	99	10	1	126	3	2	11	2	16	4	166	2	0	172	24	1	7	2	32	5	346	351
Apprch %	13.5	78.6	7.9			18.8	12.5	68.8			2.3	96.5	1.2			75	3.1	21.9					
Total %	4.9	28.6	2.9		36.4	0.9	0.6	3.2		4.6	1.2	48	0.6		49.7	6.9	0.3	2		9.2	1.4	98.6	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**3**	15	0	18	0	**1**	**2**	**3**	0	12	0	12	**5**	0	0	**5**	38
07:15 AM	1	**17**	1	**19**	**1**	0	1	2	**1**	**25**	**1**	**27**	2	0	**1**	3	**51**
07:30 AM	1	5	**2**	8	1	0	2	3	1	18	0	19	2	0	1	3	33
07:45 AM	0	10	0	10	0	0	2	2	1	17	0	18	0	0	1	1	31
Total Volume	5	47	3	55	2	1	7	10	3	72	1	76	9	0	3	12	153
% App. Total	9.1	85.5	5.5		20	10	70		3.9	94.7	1.3		75	0	25		
PHF	.417	.691	.375	.724	.500	.250	.875	.833	.750	.720	.250	.704	.450	.000	.750	.600	.750

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City of Rialto
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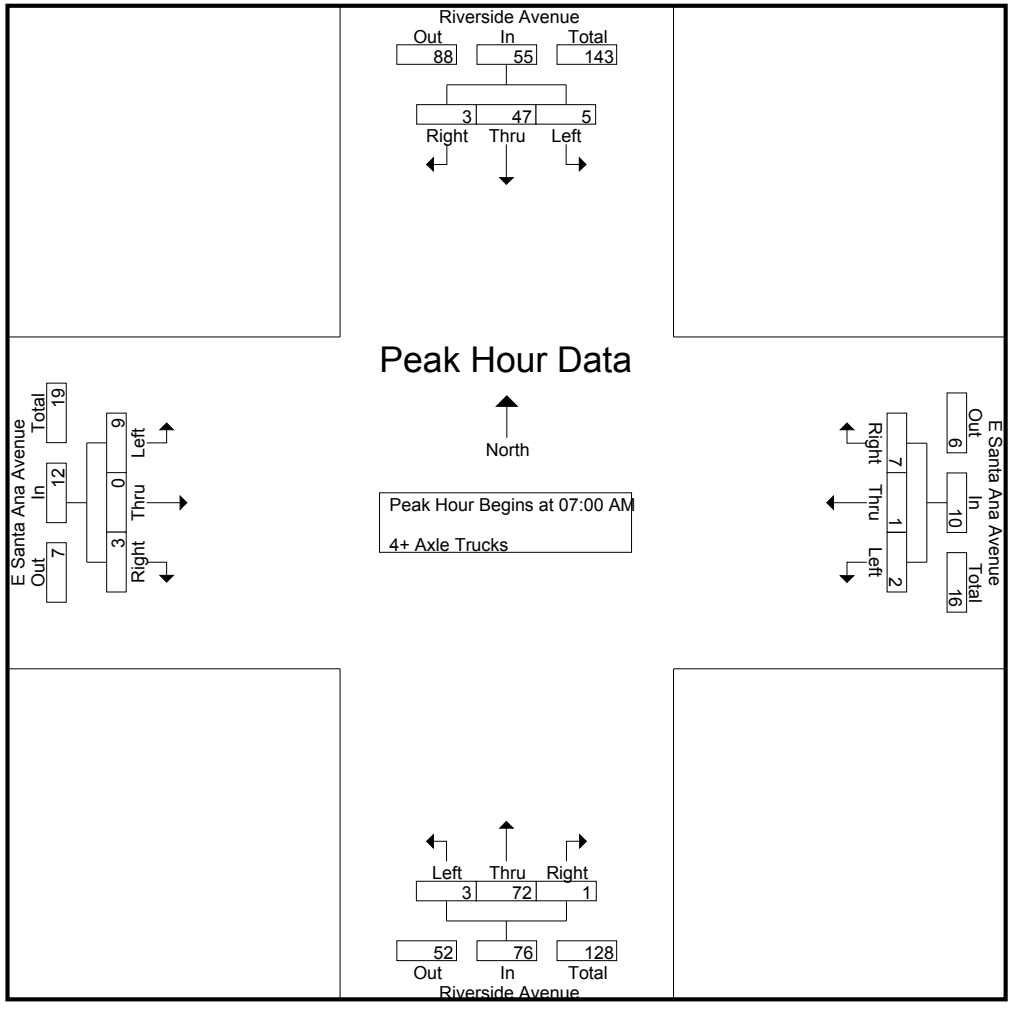
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**3**	15	0	18	0	**1**	**2**	**3**	0	12	0	12	**5**	0	0	**5**	
+15 mins.	1	**17**	1	**19**	**1**	0	1	2	**1**	**25**	**1**	**27**	2	0	**1**	3	
+30 mins.	1	5	**2**	8	1	0	2	3	1	18	0	19	2	0	1	3	
+45 mins.	0	10	0	10	0	0	2	2	1	17	0	18	0	0	1	1	
Total Volume	5	47	3	55	2	1	7	10	3	72	1	76	9	0	3	12	
% App. Total	9.1	85.5	5.5		20	10	70		3.9	94.7	1.3		75	0	25		
PHF	.417	.691	.375	.724	.500	.250	.875	.833	.750	.720	.250	.704	.450	.000	.750	.600	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	14	174	9	3	197	7	2	20	8	29	13	243	5	0	261	18	2	20	7	40	18	527	545
04:15 PM	3	212	16	1	231	5	2	19	5	26	14	215	5	0	234	17	4	13	5	34	11	525	536
04:30 PM	4	195	15	3	214	4	3	11	5	18	10	226	7	1	243	15	1	24	14	40	23	515	538
04:45 PM	4	238	25	4	267	8	2	16	4	26	18	256	7	0	281	15	1	7	2	23	10	597	607
Total	25	819	65	11	909	24	9	66	22	99	55	940	24	1	1019	65	8	64	28	137	62	2164	2226
05:00 PM	3	207	17	5	227	5	2	8	2	15	20	249	4	1	273	28	0	12	5	40	13	555	568
05:15 PM	5	260	23	2	288	5	3	10	2	18	18	251	2	0	271	14	0	16	4	30	8	607	615
05:30 PM	2	184	10	0	196	1	4	13	8	18	16	217	4	1	237	14	2	15	6	31	15	482	497
05:45 PM	3	179	21	0	203	3	0	4	2	7	12	155	2	1	169	11	0	6	1	17	4	396	400
Total	13	830	71	7	914	14	9	35	14	58	66	872	12	3	950	67	2	49	16	118	40	2040	2080
Grand Total	38	1649	136	18	1823	38	18	101	36	157	121	1812	36	4	1969	132	10	113	44	255	102	4204	4306
Apprch %	2.1	90.5	7.5			24.2	11.5	64.3			6.1	92	1.8			51.8	3.9	44.3					
Total %	0.9	39.2	3.2		43.4	0.9	0.4	2.4		3.7	2.9	43.1	0.9		46.8	3.1	0.2	2.7		6.1	2.4	97.6	
Passenger Vehicles	24	1418	117		1577	31	17	84		165	103	1595	23		1724	103	8	106		259	0	0	3725
% Passenger Vehicles	63.2	86	86	100	85.7	81.6	94.4	83.2	91.7	85.5	85.1	88	63.9	75	87.4	78	80	93.8	95.5	86.6	0	0	86.5
Large 2 Axle Vehicles	1	31	5		37	0	0	0		0	2	33	0		35	0	0	3		5	0	0	77
% Large 2 Axle Vehicles	2.6	1.9	3.7	0	2	0	0	0	0	0	1.7	1.8	0	0	1.8	0	0	2.7	4.5	1.7	0	0	1.8
3 Axle Vehicles	3	62	4		69	1	1	7		11	4	21	7		33	6	0	1		7	0	0	120
% 3 Axle Vehicles	7.9	3.8	2.9	0	3.7	2.6	5.6	6.9	5.6	5.7	3.3	1.2	19.4	25	1.7	4.5	0	0.9	0	2.3	0	0	2.8
4+ Axle Trucks	10	138	10		158	6	0	10		17	12	163	6		181	23	2	3		28	0	0	384
% 4+ Axle Trucks	26.3	8.4	7.4	0	8.6	15.8	0	9.9	2.8	8.8	9.9	9	16.7	0	9.2	17.4	20	2.7	0	9.4	0	0	8.9

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	195	15	214	4	**3**	11	18	10	226	**7**	243	15	**1**	**24**	**40**	515
04:45 PM	4	238	**25**	267	**8**	2	**16**	**26**	18	**256**	7	**281**	15	1	7	23	597
05:00 PM	3	207	17	227	5	2	8	15	**20**	249	4	273	**28**	0	12	40	555
05:15 PM	**5**	**260**	23	**288**	5	3	10	18	18	251	2	271	14	0	16	30	**607**
Total Volume	16	900	80	996	22	10	45	77	66	982	20	1068	72	2	59	133	2274
% App. Total	1.6	90.4	8		28.6	13	58.4		6.2	91.9	1.9		54.1	1.5	44.4		
PHF	.800	.865	.800	.865	.688	.833	.703	.740	.825	.959	.714	.950	.643	.500	.615	.831	.937

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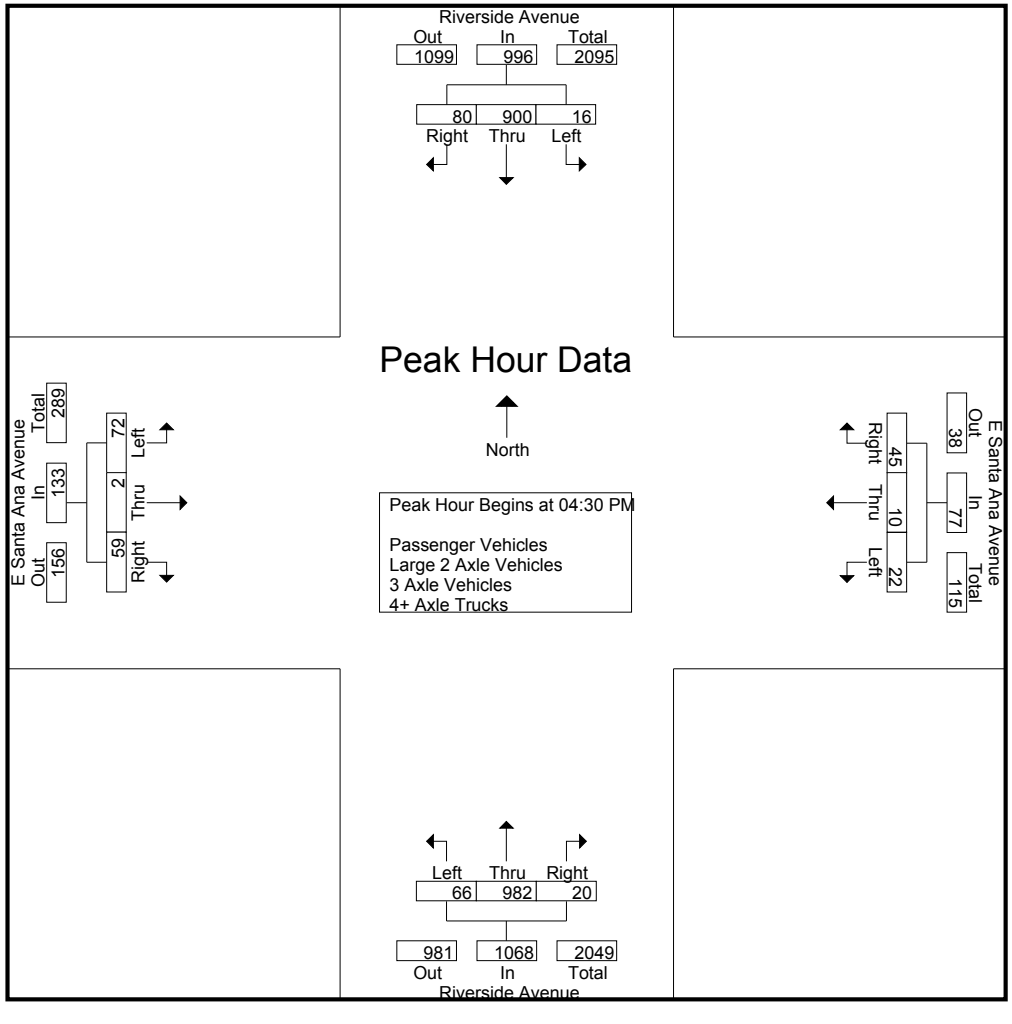
City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:30 PM				04:00 PM				
+0 mins.	4	195	15	214	7	2	**20**	**29**	10	226	**7**	243	**18**	2	20	**40**	
+15 mins.	4	238	**25**	267	5	2	19	26	18	**256**	7	**281**	17	**4**	13	34	
+30 mins.	3	207	17	227	4	**3**	11	18	**20**	249	4	273	15	1	**24**	40	
+45 mins.	**5**	**260**	23	**288**	**8**	2	16	26	18	251	2	271	15	1	7	23	
Total Volume	16	900	80	996	24	9	66	99	66	982	20	1068	65	8	64	137	
% App. Total	1.6	90.4	8		24.2	9.1	66.7		6.2	91.9	1.9		47.4	5.8	46.7		
PHF	.800	.865	.800	.865	.750	.750	.825	.853	.825	.959	.714	.950	.903	.500	.667	.856	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	11	142	9	3	162	6	2	17	8	25	12	213	4	0	229	12	2	19	7	33	18	449	467
04:15 PM	1	180	10	1	191	5	1	17	5	23	12	187	3	0	202	14	3	11	4	28	10	444	454
04:30 PM	2	167	14	3	183	3	3	10	5	16	7	200	5	1	212	10	1	23	13	34	22	445	467
04:45 PM	2	209	23	4	234	6	2	13	4	21	14	227	5	0	246	11	1	6	2	18	10	519	529
Total	16	698	56	11	770	20	8	57	22	85	45	827	17	1	889	47	7	59	26	113	60	1857	1917
05:00 PM	2	178	16	5	196	4	2	6	2	12	16	223	2	1	241	24	0	12	5	36	13	485	498
05:15 PM	5	231	19	2	255	3	3	8	1	14	17	219	2	0	238	12	0	15	4	27	7	534	541
05:30 PM	1	159	9	0	169	1	4	10	6	15	15	190	1	0	206	12	1	15	6	28	12	418	430
05:45 PM	0	152	17	0	169	3	0	3	2	6	10	136	1	1	147	8	0	5	1	13	4	335	339
Total	8	720	61	7	789	11	9	27	11	47	58	768	6	2	832	56	1	47	16	104	36	1772	1808
Grand Total	24	1418	117	18	1559	31	17	84	33	132	103	1595	23	3	1721	103	8	106	42	217	96	3629	3725
Apprch %	1.5	91	7.5			23.5	12.9	63.6			6	92.7	1.3			47.5	3.7	48.8					
Total %	0.7	39.1	3.2		43	0.9	0.5	2.3		3.6	2.8	44	0.6		47.4	2.8	0.2	2.9		6	2.6	97.4	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	167	14	183	3	**3**	10	16	7	200	**5**	212	10	**1**	**23**	34	445
04:45 PM	2	209	**23**	234	**6**	2	**13**	**21**	14	**227**	5	**246**	11	1	6	18	519
05:00 PM	2	178	16	196	4	2	6	12	16	223	2	241	**24**	0	12	**36**	485
05:15 PM	**5**	**231**	19	**255**	3	3	8	14	**17**	219	2	238	12	0	15	27	**534**
Total Volume	11	785	72	868	16	10	37	63	54	869	14	937	57	2	56	115	1983
% App. Total	1.3	90.4	8.3		25.4	15.9	58.7		5.8	92.7	1.5		49.6	1.7	48.7		
PHF	.550	.850	.783	.851	.667	.833	.712	.750	.794	.957	.700	.952	.594	.500	.609	.799	.928

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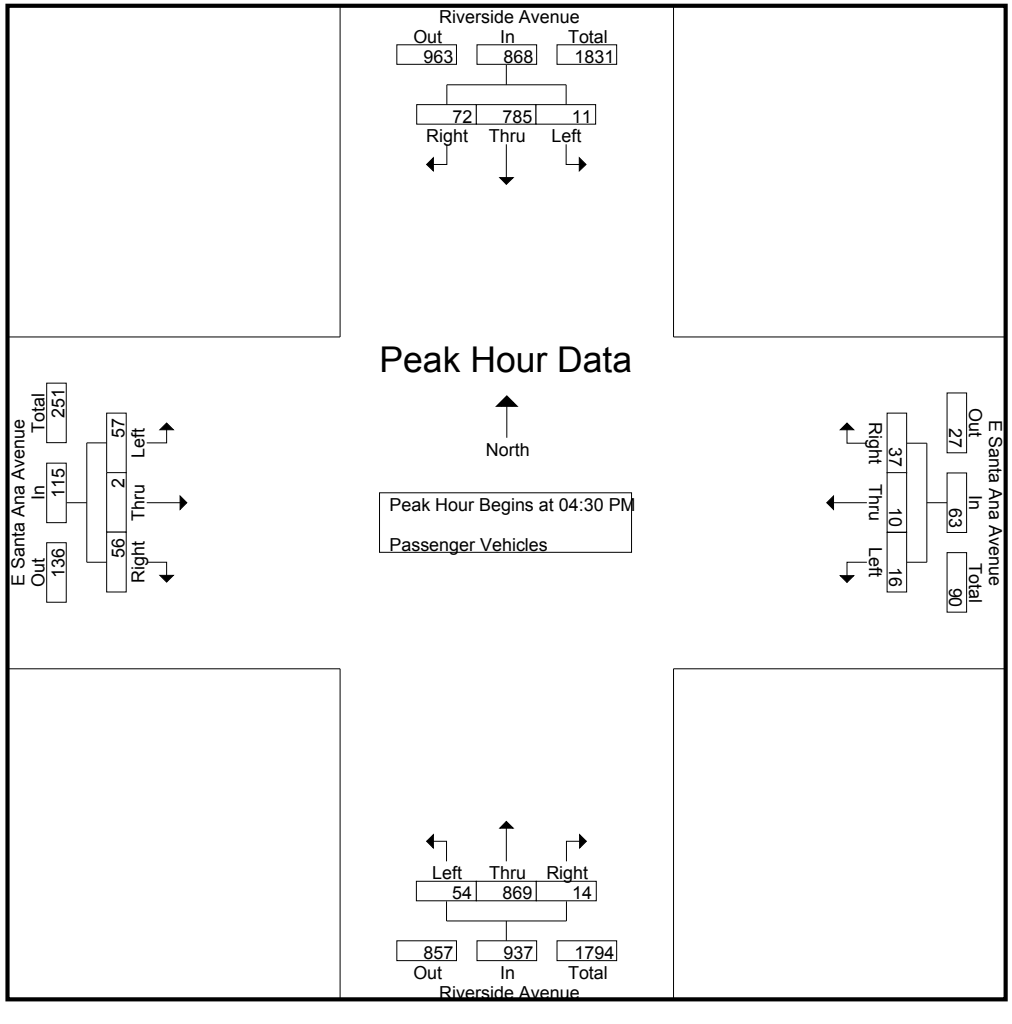
City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	2	167	14	183	3	**3**	10	16	7	200	**5**	212	10	**1**	**23**	34	
+15 mins.	2	209	**23**	234	**6**	2	**13**	**21**	14	**227**	5	**246**	11	1	6	18	
+30 mins.	2	178	16	196	4	2	6	12	16	223	2	241	**24**	0	12	**36**	
+45 mins.	**5**	**231**	19	**255**	3	3	8	14	**17**	219	2	238	12	0	15	27	
Total Volume	11	785	72	868	16	10	37	63	54	869	14	937	57	2	56	115	
% App. Total	1.3	90.4	8.3		25.4	15.9	58.7		5.8	92.7	1.5		49.6	1.7	48.7		
PHF	.550	.850	.783	.851	.667	.833	.712	.750	.794	.957	.700	.952	.594	.500	.609	.799	

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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	9	9
04:15 PM	1	4	1	0	6	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	1	9	10
04:30 PM	0	3	0	0	3	0	0	0	0	0	1	6	0	0	7	0	0	1	1	1	1	11	12
04:45 PM	0	3	0	0	3	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	11	11
Total	1	16	1	0	18	0	0	0	0	0	2	18	0	0	20	0	0	2	2	2	2	40	42
05:00 PM	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	11	11
05:15 PM	0	5	2	0	7	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	13	13
05:30 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6	6
05:45 PM	0	1	2	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	5	5
Total	0	15	4	0	19	0	0	0	0	0	0	15	0	0	15	0	0	1	0	1	0	35	35
Grand Total	1	31	5	0	37	0	0	0	0	0	2	33	0	0	35	0	0	3	2	3	2	75	77
Apprch %	2.7	83.8	13.5			0	0	0			5.7	94.3	0			0	0	100					
Total %	1.3	41.3	6.7		49.3	0	0	0		0	2.7	44	0		46.7	0	0	4		4	2.6	97.4	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	3	0	3	0	0	0	0	**1**	6	0	7	0	0	**1**	**1**	11
04:45 PM	0	3	0	3	0	0	0	0	1	**7**	0	**8**	0	0	0	0	11
05:00 PM	0	**6**	0	6	0	0	0	0	0	5	0	5	0	0	0	0	11
05:15 PM	0	5	**2**	**7**	0	0	0	0	0	6	0	6	0	0	0	0	**13**
Total Volume	0	17	2	19	0	0	0	0	2	24	0	26	0	0	1	1	46
% App. Total	0	89.5	10.5		0	0	0		7.7	92.3	0		0	0	100		
PHF	.000	.708	.250	.679	.000	.000	.000	.000	.500	.857	.000	.813	.000	.000	.250	.250	.885

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City of Rialto
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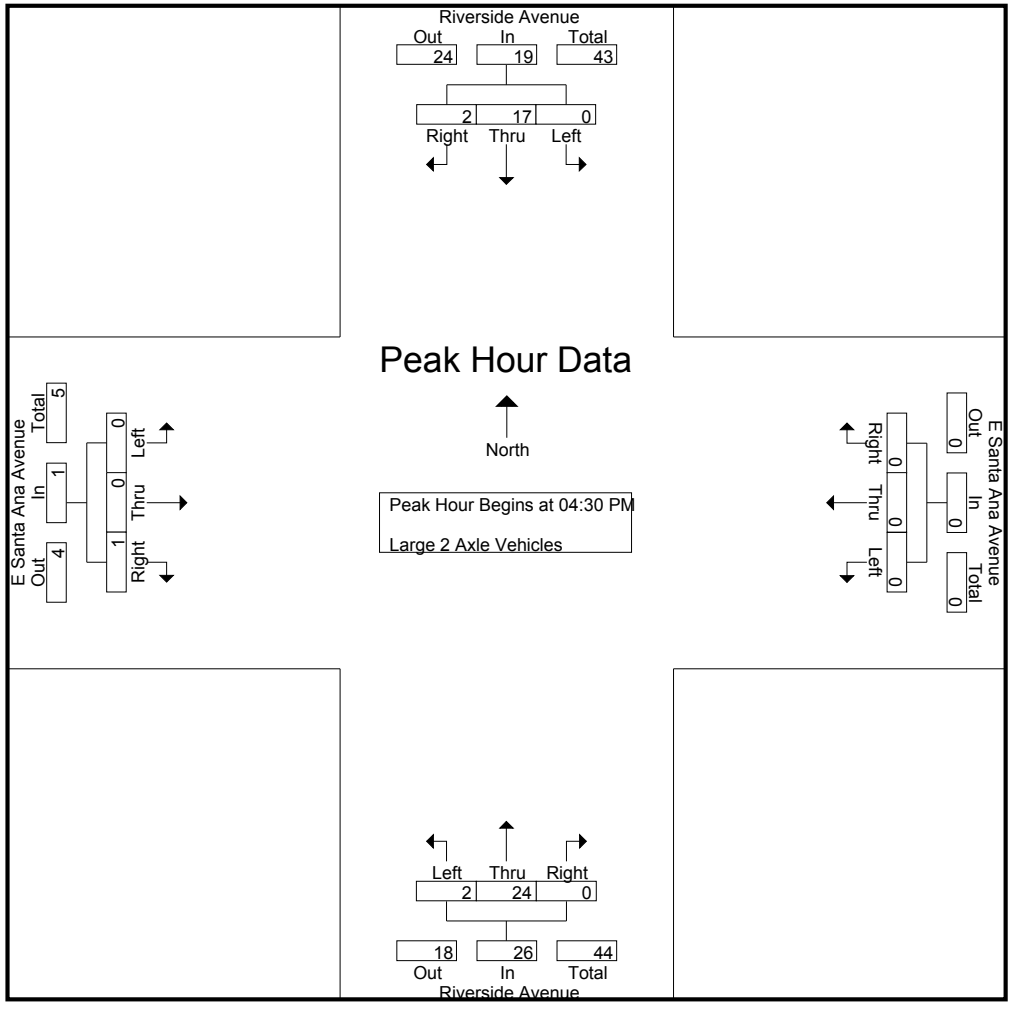
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	3	0	3	0	0	0	0	**1**	6	0	7	0	0	**1**	**1**	
+15 mins.	0	3	0	3	0	0	0	0	1	**7**	0	**8**	0	0	0	0	
+30 mins.	0	**6**	0	6	0	0	0	0	0	5	0	5	0	0	0	0	
+45 mins.	0	5	**2**	**7**	0	0	0	0	0	6	0	6	0	0	0	0	
Total Volume	0	17	2	19	0	0	0	0	2	24	0	26	0	0	1	1	
% App. Total	0	89.5	10.5		0	0	0		7.7	92.3	0		0	0	100		
PHF	.000	.708	.250	.679	.000	.000	.000	.000	.500	.857	.000	.813	.000	.000	.250	.250	

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City of Rialto
N/S: Riverside Avenue
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Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	2	7	0	0	9	0	0	1	0	1	0	4	1	0	5	1	0	1	0	2	0	17	17
04:15 PM	0	9	0	0	9	0	1	1	0	2	1	1	0	0	2	0	0	0	0	0	0	13	13
04:30 PM	1	9	0	0	10	0	0	1	0	1	0	2	1	0	3	0	0	0	0	0	0	14	14
04:45 PM	0	9	0	0	9	1	0	0	0	1	1	5	2	0	8	2	0	0	0	2	0	20	20
Total	3	34	0	0	37	1	1	3	0	5	2	12	4	0	18	3	0	1	0	4	0	64	64
05:00 PM	0	6	1	0	7	0	0	1	0	1	2	3	1	0	6	2	0	0	0	2	0	16	16
05:15 PM	0	6	2	0	8	0	0	2	1	2	0	4	0	0	4	0	0	0	0	0	1	14	15
05:30 PM	0	6	1	0	7	0	0	1	1	1	0	1	2	1	3	0	0	0	0	0	2	11	13
05:45 PM	0	10	0	0	10	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	12	12
Total	0	28	4	0	32	0	0	4	2	4	2	9	3	1	14	3	0	0	0	3	3	53	56
Grand Total	3	62	4	0	69	1	1	7	2	9	4	21	7	1	32	6	0	1	0	7	3	117	120
Apprch %	4.3	89.9	5.8			11.1	11.1	77.8			12.5	65.6	21.9			85.7	0	14.3					
Total %	2.6	53	3.4		59	0.9	0.9	6		7.7	3.4	17.9	6		27.4	5.1	0	0.9		6	2.5	97.5	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	**9**	0	**10**	0	0	1	1	0	2	1	3	0	0	0	0	14
04:45 PM	0	9	0	9	**1**	0	0	1	1	**5**	**2**	**8**	**2**	0	0	**2**	**20**
05:00 PM	0	6	1	7	0	0	1	1	**2**	3	1	6	2	0	0	2	16
05:15 PM	0	6	**2**	8	0	0	**2**	**2**	0	4	0	4	0	0	0	0	14
Total Volume	1	30	3	34	1	0	4	5	3	14	4	21	4	0	0	4	64
% App. Total	2.9	88.2	8.8		20	0	80		14.3	66.7	19		100	0	0		
PHF	.250	.833	.375	.850	.250	.000	.500	.625	.375	.700	.500	.656	.500	.000	.000	.500	.800

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City of Rialto
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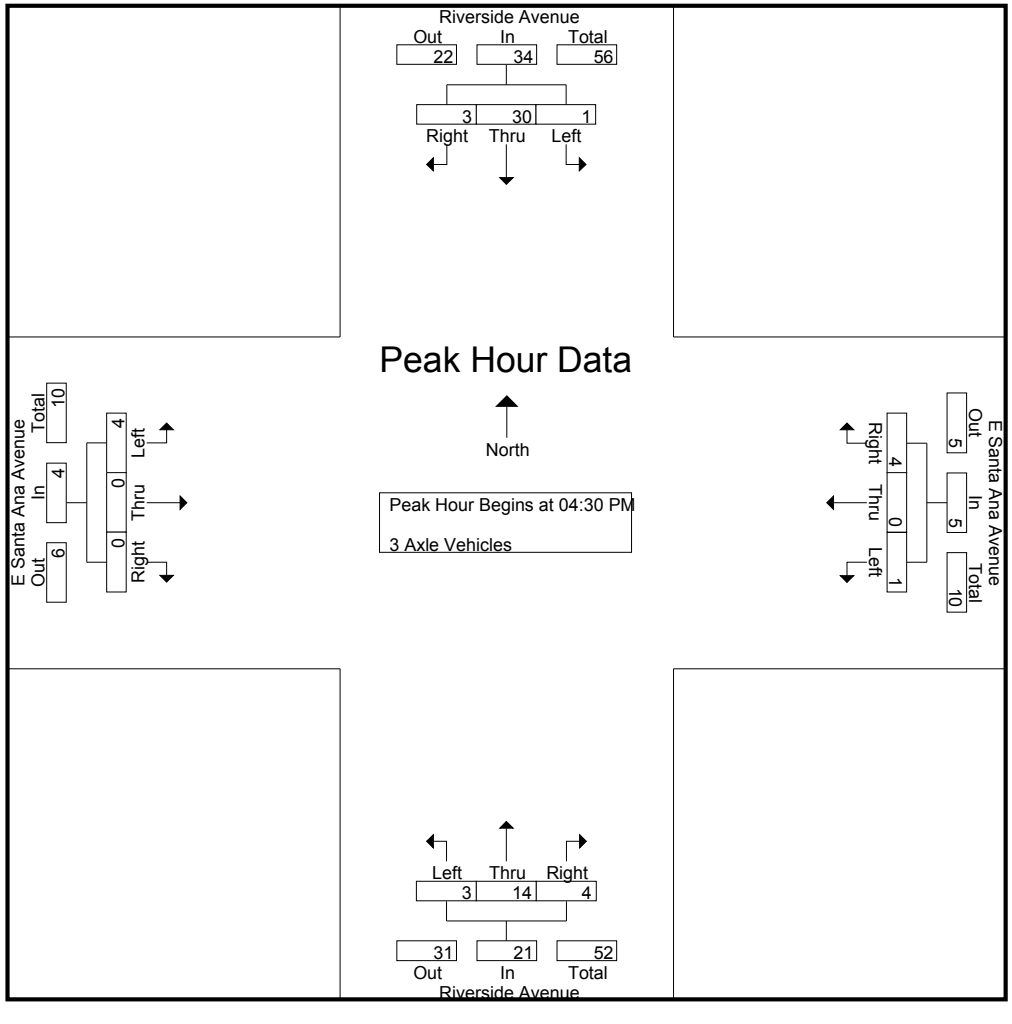
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
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Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	**1**	**9**	0	**10**	0	0	1	1	0	2	1	3	0	0	0	0	
+15 mins.	0	9	0	9	**1**	0	0	1	1	**5**	**2**	**8**	**2**	0	0	**2**	
+30 mins.	0	6	1	7	0	0	1	1	**2**	3	1	6	2	0	0	2	
+45 mins.	0	6	**2**	8	0	0	**2**	**2**	0	4	0	4	0	0	0	0	
Total Volume	1	30	3	34	1	0	4	5	3	14	4	21	4	0	0	4	
% App. Total	2.9	88.2	8.8		20	0	80		14.3	66.7	19		100	0	0		
PHF	.250	.833	.375	.850	.250	.000	.500	.625	.375	.700	.500	.656	.500	.000	.000	.500	

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Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					E Santa Ana Avenue Westbound					Riverside Avenue Northbound					E Santa Ana Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	19	0	0	20	1	0	2	0	3	1	23	0	0	24	5	0	0	0	5	0	52	52
04:15 PM	1	19	5	0	25	0	0	1	0	1	1	25	2	0	28	3	1	1	0	5	0	59	59
04:30 PM	1	16	1	0	18	1	0	0	0	1	2	18	1	0	21	5	0	0	0	5	0	45	45
04:45 PM	2	17	2	0	21	1	0	3	0	4	2	17	0	0	19	2	0	1	0	3	0	47	47
Total	5	71	8	0	84	3	0	6	0	9	6	83	3	0	92	15	1	2	0	18	0	203	203
05:00 PM	1	17	0	0	18	1	0	1	0	2	2	18	1	0	21	2	0	0	0	2	0	43	43
05:15 PM	0	18	0	0	18	2	0	0	0	2	1	22	0	0	23	2	0	1	0	3	0	46	46
05:30 PM	1	16	0	0	17	0	0	2	1	2	1	23	1	0	25	2	1	0	0	3	1	47	48
05:45 PM	3	16	2	0	21	0	0	1	0	1	2	17	1	0	20	2	0	0	0	2	0	44	44
Total	5	67	2	0	74	3	0	4	1	7	6	80	3	0	89	8	1	1	0	10	1	180	181
Grand Total	10	138	10	0	158	6	0	10	1	16	12	163	6	0	181	23	2	3	0	28	1	383	384
Apprch %	6.3	87.3	6.3			37.5	0	62.5			6.6	90.1	3.3			82.1	7.1	10.7					
Total %	2.6	36	2.6		41.3	1.6	0	2.6		4.2	3.1	42.6	1.6		47.3	6	0.5	0.8		7.3	0.3	99.7	

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	16	1	18	1	0	0	1	**2**	18	**1**	21	**5**	0	0	**5**	45
04:45 PM	**2**	17	**2**	**21**	1	0	**3**	**4**	2	17	0	19	2	0	**1**	3	**47**
05:00 PM	1	17	0	18	1	0	1	2	2	18	1	21	2	0	0	2	43
05:15 PM	0	**18**	0	18	**2**	0	0	2	1	**22**	0	**23**	2	0	1	3	46
Total Volume	4	68	3	75	5	0	4	9	7	75	2	84	11	0	2	13	181
% App. Total	5.3	90.7	4		55.6	0	44.4		8.3	89.3	2.4		84.6	0	15.4		
PHF	.500	.944	.375	.893	.625	.000	.333	.563	.875	.852	.500	.913	.550	.000	.500	.650	.963

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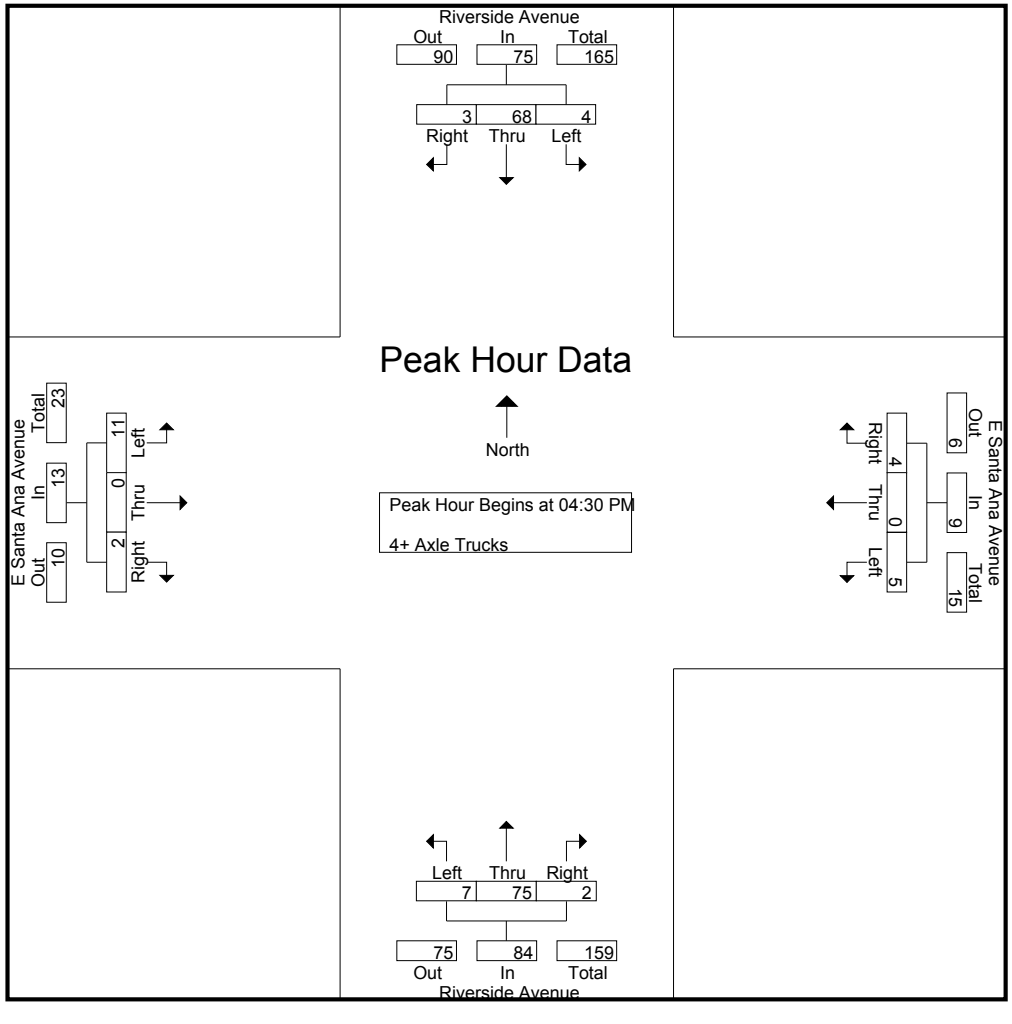
City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue
Weather: Clear

File Name : RLTRISAPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				E Santa Ana Avenue Westbound				Riverside Avenue Northbound				E Santa Ana Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	16	1	18	1	0	0	1	**2**	18	**1**	21	**5**	0	0	**5**	
+15 mins.	**2**	17	**2**	**21**	1	0	**3**	**4**	2	17	0	19	2	0	**1**	3	
+30 mins.	1	17	0	18	1	0	1	2	2	18	1	21	2	0	0	2	
+45 mins.	0	**18**	0	18	**2**	0	0	2	1	**22**	0	**23**	2	0	1	3	
Total Volume	4	68	3	75	5	0	4	9	7	75	2	84	11	0	2	13	
% App. Total	5.3	90.7	4		55.6	0	44.4		8.3	89.3	2.4		84.6	0	15.4		
PHF	.500	.944	.375	.893	.625	.000	.333	.563	.875	.852	.500	.913	.550	.000	.500	.650	

Location: Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue

Date: 1/19/2017
Day: Thursday

PEDESTRIANS

	North Leg Riverside Avenue	East Leg E Santa Ana Avenue	South Leg Riverside Avenue	West Leg E Santa Ana Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

	North Leg Riverside Avenue	East Leg E Santa Ana Avenue	South Leg Riverside Avenue	West Leg E Santa Ana Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	1	2

Location: Rialto
N/S: Riverside Avenue
E/W: E Santa Ana Avenue

Date: 1/19/2017
Day: Thursday

BICYCLES

	North Leg Riverside Avenue	East Leg E Santa Ana Avenue	South Leg Riverside Avenue	West Leg E Santa Ana Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	2	0	0	0	2
TOTAL VOLUMES:	2	0	1	0	3

	North Leg Riverside Avenue	East Leg E Santa Ana Avenue	South Leg Riverside Avenue	West Leg E Santa Ana Avenue	TOTAL
4:00 PM	1	0	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

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City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	227	16	0	243	12	131	0	143	3	8	7	11	7	397	404
07:15 AM	220	18	1	238	12	172	0	184	5	23	17	28	18	450	468
07:30 AM	256	14	1	270	25	161	0	186	9	23	23	32	24	488	512
07:45 AM	277	8	1	285	16	158	0	174	11	24	17	35	18	494	512
Total	980	56	3	1036	65	622	0	687	28	78	64	106	67	1829	1896
08:00 AM	178	11	2	189	11	137	0	148	5	24	22	29	24	366	390
08:15 AM	201	20	1	221	17	145	0	162	8	20	13	28	14	411	425
08:30 AM	157	10	2	167	15	158	0	173	8	21	14	29	16	369	385
08:45 AM	161	5	0	166	21	190	0	211	4	11	8	15	8	392	400
Total	697	46	5	743	64	630	0	694	25	76	57	101	62	1538	1600
Grand Total	1677	102	8	1779	129	1252	0	1381	53	154	121	207	129	3367	3496
Apprch %	94.3	5.7			9.3	90.7			25.6	74.4					
Total %	49.8	3		52.8	3.8	37.2		41	1.6	4.6		6.1	3.7	96.3	
Passenger Vehicles	1497	84		1587	116	1011		1127	47	113		250	0	0	2964
% Passenger Vehicles	89.3	82.4	75	88.8	89.9	80.8	0	81.6	88.7	73.4	74.4	76.2	0	0	84.8
Large 2 Axle Vehicles	46	10		57	7	32		39	3	14		27	0	0	123
% Large 2 Axle Vehicles	2.7	9.8	12.5	3.2	5.4	2.6	0	2.8	5.7	9.1	8.3	8.2	0	0	3.5
3 Axle Vehicles	32	3		35	3	53		56	0	2		4	0	0	95
% 3 Axle Vehicles	1.9	2.9	0	2	2.3	4.2	0	4.1	0	1.3	1.7	1.2	0	0	2.7
4+ Axle Trucks	102	5		108	3	156		159	3	25		47	0	0	314
% 4+ Axle Trucks	6.1	4.9	12.5	6	2.3	12.5	0	11.5	5.7	16.2	15.7	14.3	0	0	9

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	227	16	243	12	131	143	3	8	11	397
07:15 AM	220	**18**	238	12	**172**	184	5	23	28	450
07:30 AM	256	14	270	**25**	161	**186**	9	23	32	488
07:45 AM	**277**	8	**285**	16	158	174	**11**	**24**	**35**	**494**
Total Volume	980	56	1036	65	622	687	28	78	106	1829
% App. Total	94.6	5.4		9.5	90.5		26.4	73.6		
PHF	.884	.778	.909	.650	.904	.923	.636	.813	.757	.926

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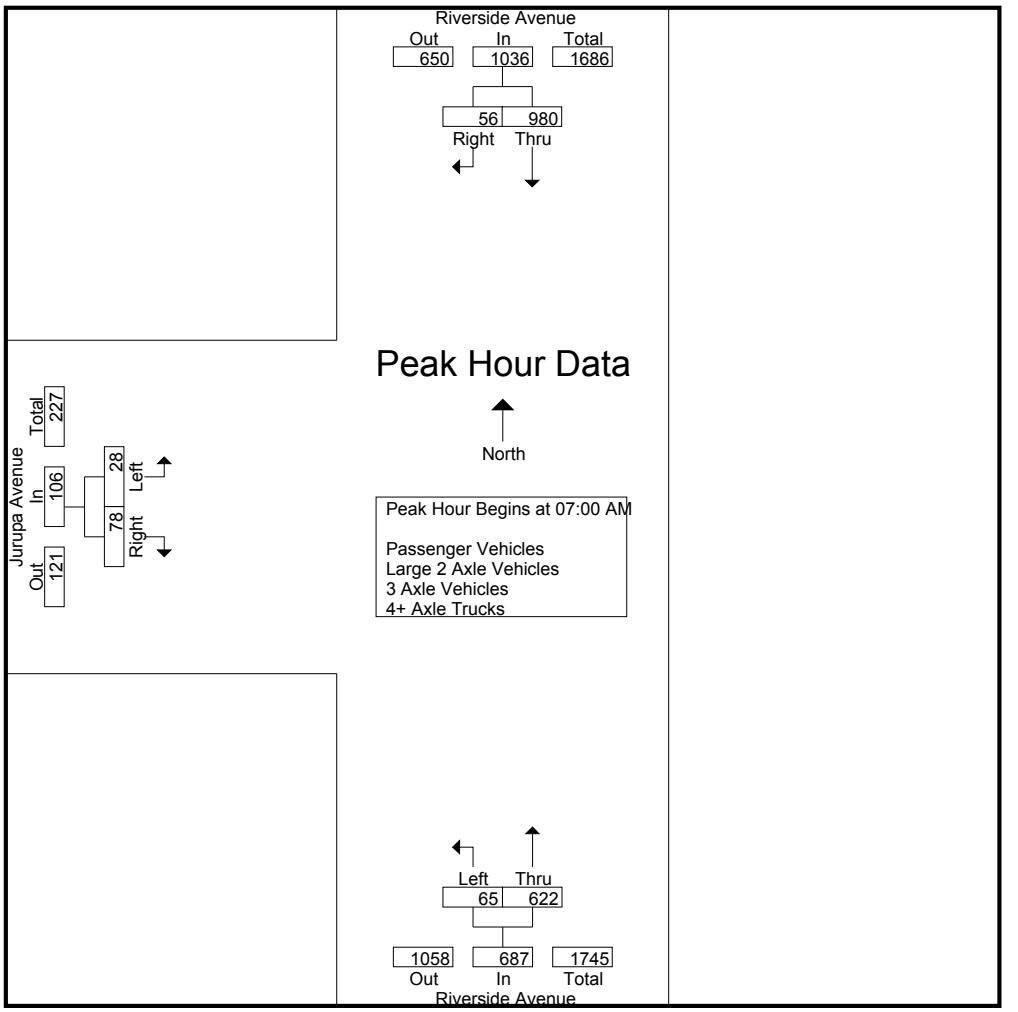
City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			08:00 AM			07:15 AM		
+0 mins.	227	16	243	11	137	148	5	23	28
+15 mins.	220	**18**	238	17	145	162	9	23	32
+30 mins.	256	14	270	15	158	173	**11**	**24**	**35**
+45 mins.	**277**	8	**285**	**21**	**190**	**211**	5	24	29
Total Volume	980	56	1036	64	630	694	30	94	124
% App. Total	94.6	5.4		9.2	90.8		24.2	75.8	
PHF	.884	.778	.909	.762	.829	.822	.682	.979	.886

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City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	202	13	0	215	12	105	0	117	3	8	7	11	7	343	350
07:15 AM	200	17	1	217	10	136	0	146	5	19	14	24	15	387	402
07:30 AM	237	12	1	249	23	133	0	156	8	17	17	25	18	430	448
07:45 AM	257	7	1	264	14	135	0	149	10	17	10	27	11	440	451
Total	896	49	3	945	59	509	0	568	26	61	48	87	51	1600	1651
08:00 AM	154	10	2	164	10	100	0	110	5	19	17	24	19	298	317
08:15 AM	171	15	0	186	15	121	0	136	8	12	8	20	8	342	350
08:30 AM	136	7	1	143	13	131	0	144	6	15	11	21	12	308	320
08:45 AM	140	3	0	143	19	150	0	169	2	6	6	8	6	320	326
Total	601	35	3	636	57	502	0	559	21	52	42	73	45	1268	1313
Grand Total	1497	84	6	1581	116	1011	0	1127	47	113	90	160	96	2868	2964
Apprch %	94.7	5.3			10.3	89.7			29.4	70.6					
Total %	52.2	2.9		55.1	4	35.3		39.3	1.6	3.9		5.6	3.2	96.8	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	202	13	215	12	105	117	3	8	11	343
07:15 AM	200	**17**	217	10	**136**	146	5	**19**	24	387
07:30 AM	237	12	249	**23**	133	**156**	8	17	25	430
07:45 AM	**257**	7	**264**	14	135	149	**10**	17	**27**	**440**
Total Volume	896	49	945	59	509	568	26	61	87	1600
% App. Total	94.8	5.2		10.4	89.6		29.9	70.1		
PHF	.872	.721	.895	.641	.936	.910	.650	.803	.806	.909

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City of Rialto
N/S: Riverside Avenue
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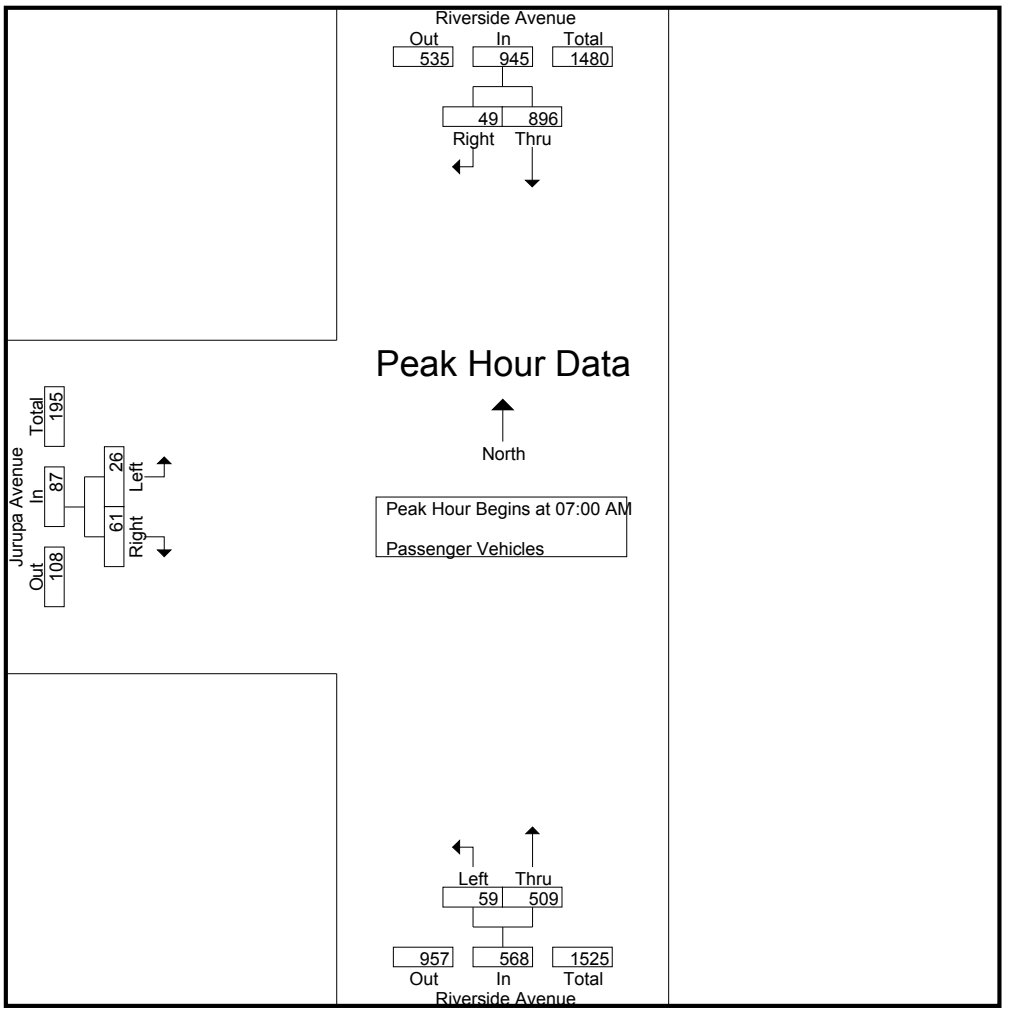
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	202	13	215	12	105	117	3	8	11
+15 mins.	200	**17**	217	10	**136**	146	5	**19**	24
+30 mins.	237	12	249	**23**	133	**156**	8	17	25
+45 mins.	**257**	7	**264**	14	135	149	**10**	17	**27**
Total Volume	896	49	945	59	509	568	26	61	87
% App. Total	94.8	5.2		10.4	89.6		29.9	70.1	
PHF	.872	.721	.895	.641	.936	.910	.650	.803	.806

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City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	6	3	0	9	0	5	0	5	0	0	0	0	0	14	14
07:15 AM	2	0	0	2	1	7	0	8	0	1	1	1	1	11	12
07:30 AM	6	2	0	8	1	3	0	4	1	2	2	3	2	15	17
07:45 AM	7	1	0	8	2	1	0	3	1	3	3	4	3	15	18
Total	21	6	0	27	4	16	0	20	2	6	6	8	6	55	61
08:00 AM	7	1	0	8	0	6	0	6	0	0	0	0	0	14	14
08:15 AM	9	2	1	11	1	4	0	5	0	6	3	6	4	22	26
08:30 AM	2	1	0	3	1	3	0	4	1	0	0	1	0	8	8
08:45 AM	7	0	0	7	1	3	0	4	0	2	1	2	1	13	14
Total	25	4	1	29	3	16	0	19	1	8	4	9	5	57	62
Grand Total	46	10	1	56	7	32	0	39	3	14	10	17	11	112	123
Apprch %	82.1	17.9			17.9	82.1			17.6	82.4					
Total %	41.1	8.9		50	6.2	28.6		34.8	2.7	12.5		15.2	8.9	91.1	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	6	**3**	**9**	0	5	5	0	0	0	14
07:15 AM	2	0	2	1	**7**	**8**	0	1	1	11
07:30 AM	6	2	8	1	3	4	**1**	2	3	**15**
07:45 AM	**7**	1	8	**2**	1	3	1	**3**	**4**	15
Total Volume	21	6	27	4	16	20	2	6	8	55
% App. Total	77.8	22.2		20	80		25	75		
PHF	.750	.500	.750	.500	.571	.625	.500	.500	.500	.917

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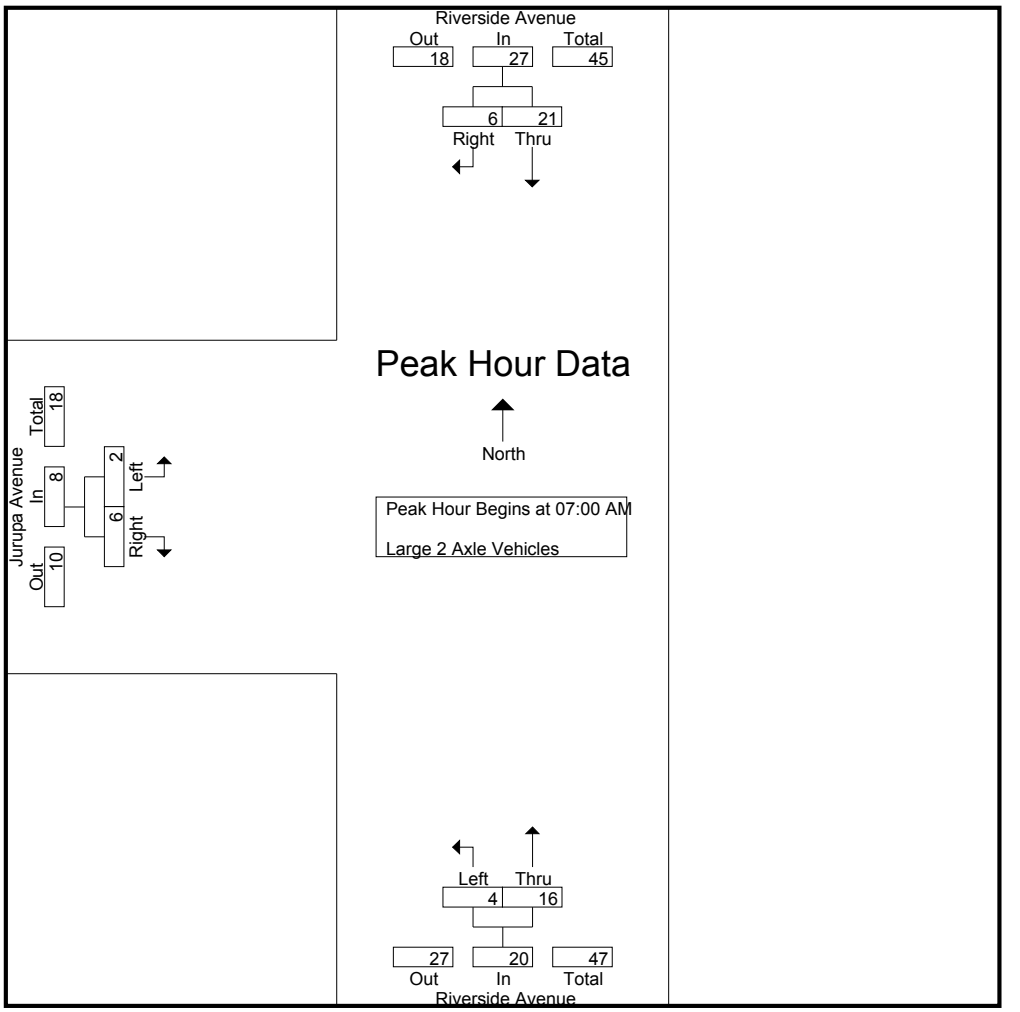
City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	6	**3**	**9**	0	5	5	0	0	0
+15 mins.	2	0	2	1	**7**	**8**	0	1	1
+30 mins.	6	2	8	1	3	4	**1**	2	3
+45 mins.	**7**	1	8	**2**	1	3	1	**3**	**4**
Total Volume	21	6	27	4	16	20	2	6	8
% App. Total	77.8	22.2		20	80		25	75	
PHF	.750	.500	.750	.500	.571	.625	.500	.500	.500

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City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	0	3	0	10	0	10	0	0	0	0	0	13	13
07:15 AM	2	0	0	2	0	7	0	7	0	1	1	1	1	10	11
07:30 AM	4	0	0	4	0	4	0	4	0	0	0	0	0	8	8
07:45 AM	1	0	0	1	0	5	0	5	0	0	0	0	0	6	6
Total	10	0	0	10	0	26	0	26	0	1	1	1	1	37	38
08:00 AM	7	0	0	7	1	7	0	8	0	1	1	1	1	16	17
08:15 AM	6	2	0	8	1	7	0	8	0	0	0	0	0	16	16
08:30 AM	2	0	0	2	1	4	0	5	0	0	0	0	0	7	7
08:45 AM	7	1	0	8	0	9	0	9	0	0	0	0	0	17	17
Total	22	3	0	25	3	27	0	30	0	1	1	1	1	56	57
Grand Total	32	3	0	35	3	53	0	56	0	2	2	2	2	93	95
Apprch %	91.4	8.6			5.4	94.6			0	100					
Total %	34.4	3.2		37.6	3.2	57		60.2	0	2.2		2.2	2.1	97.9	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	3	0	3	0	**10**	**10**	0	0	0	**13**
07:15 AM	2	0	2	0	7	7	0	**1**	**1**	10
07:30 AM	**4**	0	**4**	0	4	4	0	0	0	8
07:45 AM	1	0	1	0	5	5	0	0	0	6
Total Volume	10	0	10	0	26	26	0	1	1	37
% App. Total	100	0		0	100		0	100		
PHF	.625	.000	.625	.000	.650	.650	.000	.250	.250	.712

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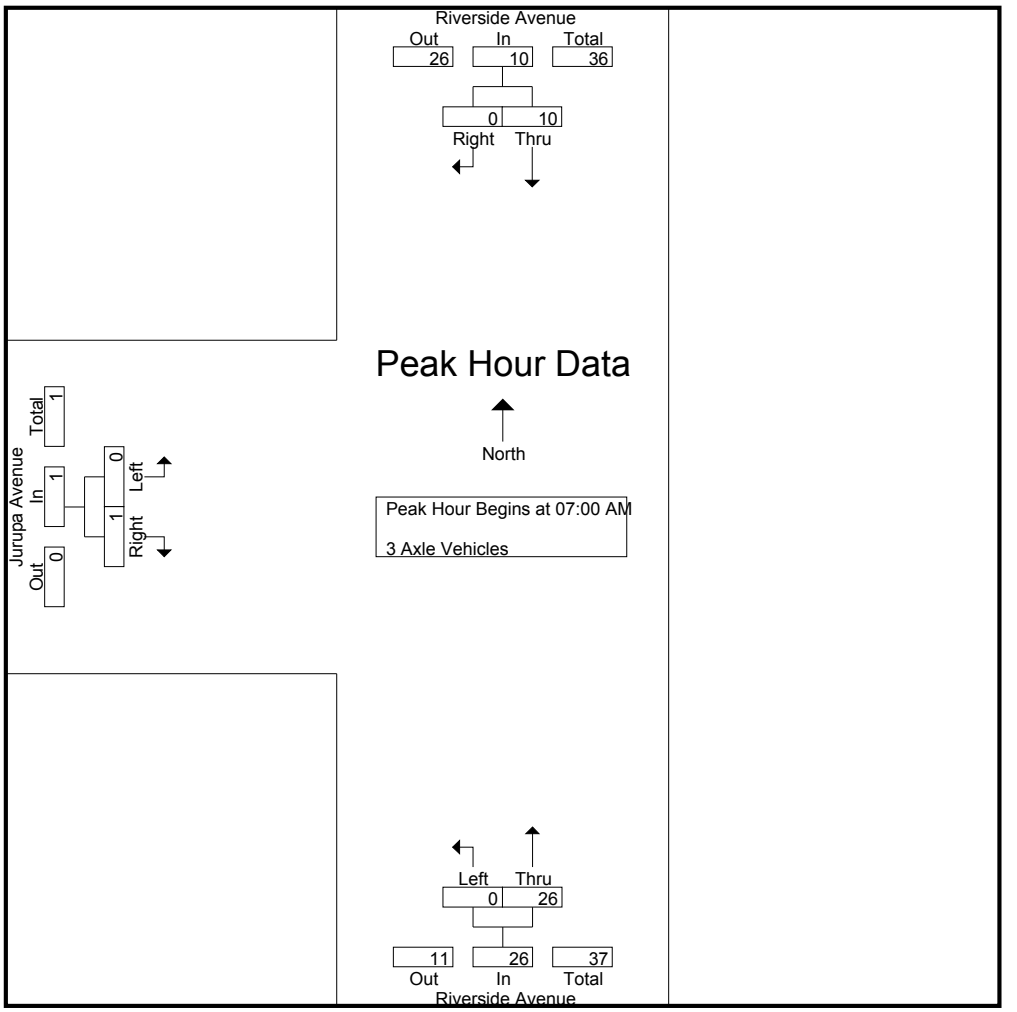
Weather: Clear

File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	3	0	3	0	**10**	**10**	0	0	0
+15 mins.	2	0	2	0	7	7	0	**1**	**1**
+30 mins.	**4**	0	**4**	0	4	4	0	0	0
+45 mins.	1	0	1	0	5	5	0	0	0
Total Volume	10	0	10	0	26	26	0	1	1
% App. Total	100	0		0	100		0	100	
PHF	.625	.000	.625	.000	.650	.650	.000	.250	.250

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File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	16	0	0	16	0	11	0	11	0	0	0	0	0	27	27
07:15 AM	16	1	0	17	1	22	0	23	0	2	1	2	1	42	43
07:30 AM	9	0	0	9	1	21	0	22	0	4	4	4	4	35	39
07:45 AM	12	0	0	12	0	17	0	17	0	4	4	4	4	33	37
Total	53	1	0	54	2	71	0	73	0	10	9	10	9	137	146
08:00 AM	10	0	0	10	0	24	0	24	0	4	4	4	4	38	42
08:15 AM	15	1	0	16	0	13	0	13	0	2	2	2	2	31	33
08:30 AM	17	2	1	19	0	20	0	20	1	6	3	7	4	46	50
08:45 AM	7	1	0	8	1	28	0	29	2	3	1	5	1	42	43
Total	49	4	1	53	1	85	0	86	3	15	10	18	11	157	168
Grand Total	102	5	1	107	3	156	0	159	3	25	19	28	20	294	314
Apprch %	95.3	4.7			1.9	98.1			10.7	89.3					
Total %	34.7	1.7		36.4	1	53.1		54.1	1	8.5		9.5	6.4	93.6	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**16**	0	16	0	11	11	0	0	0	27
07:15 AM	16	**1**	**17**	**1**	**22**	**23**	0	2	2	**42**
07:30 AM	9	0	9	1	21	22	0	**4**	**4**	35
07:45 AM	12	0	12	0	17	17	0	4	4	33
Total Volume	53	1	54	2	71	73	0	10	10	137
% App. Total	98.1	1.9		2.7	97.3		0	100		
PHF	.828	.250	.794	.500	.807	.793	.000	.625	.625	.815

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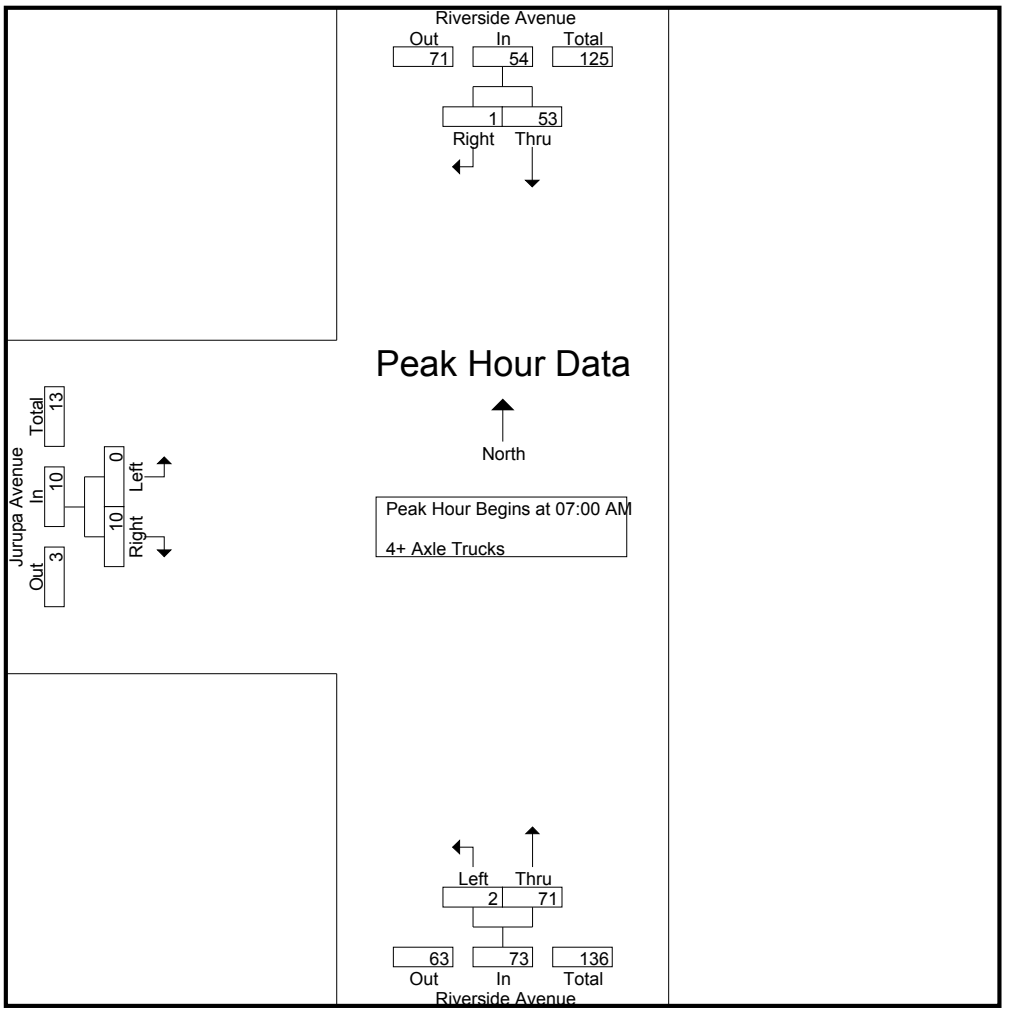
File Name : RLTRIJUAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	**16**	0	16	0	11	11	0	0	0
+15 mins.	16	**1**	**17**	**1**	**22**	**23**	0	2	2
+30 mins.	9	0	9	1	21	22	0	**4**	**4**
+45 mins.	12	0	12	0	17	17	0	4	4
Total Volume	53	1	54	2	71	73	0	10	10
% App. Total	98.1	1.9		2.7	97.3		0	100	
PHF	.828	.250	.794	.500	.807	.793	.000	.625	.625

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Weather: Clear

File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	176	15	0	191	12	200	0	212	23	34	17	57	17	460	477
04:15 PM	207	14	1	221	14	221	0	235	9	37	22	46	23	502	525
04:30 PM	200	12	1	212	10	228	0	238	13	26	19	39	20	489	509
04:45 PM	233	14	2	247	22	252	0	274	12	21	15	33	17	554	571
Total	816	55	4	871	58	901	0	959	57	118	73	175	77	2005	2082
05:00 PM	218	15	0	233	17	243	0	260	6	30	20	36	20	529	549
05:15 PM	214	23	1	237	18	243	0	261	10	36	25	46	26	544	570
05:30 PM	216	21	2	237	9	235	0	244	7	28	18	35	20	516	536
05:45 PM	188	9	0	197	19	171	0	190	7	26	16	33	16	420	436
Total	836	68	3	904	63	892	0	955	30	120	79	150	82	2009	2091
Grand Total	1652	123	7	1775	121	1793	0	1914	87	238	152	325	159	4014	4173
Apprch %	93.1	6.9			6.3	93.7			26.8	73.2					
Total %	41.2	3.1		44.2	3	44.7		47.7	2.2	5.9		8.1	3.8	96.2	
Passenger Vehicles	1409	109		1524	94	1562		1656	82	216		439	0	0	3619
% Passenger Vehicles	85.3	88.6	85.7	85.5	77.7	87.1	0	86.5	94.3	90.8	92.8	92	0	0	86.7
Large 2 Axle Vehicles	50	7		57	15	42		57	3	7		15	0	0	129
% Large 2 Axle Vehicles	3	5.7	0	3.2	12.4	2.3	0	3	3.4	2.9	3.3	3.1	0	0	3.1
3 Axle Vehicles	49	2		52	2	27		29	2	6		11	0	0	92
% 3 Axle Vehicles	3	1.6	14.3	2.9	1.7	1.5	0	1.5	2.3	2.5	2	2.3	0	0	2.2
4+ Axle Trucks	144	5		149	10	162		172	0	9		12	0	0	333
% 4+ Axle Trucks	8.7	4.1	0	8.4	8.3	9	0	9	0	3.8	2	2.5	0	0	8

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**233**	14	**247**	**22**	**252**	**274**	**12**	21	33	**554**
05:00 PM	218	15	233	17	243	260	6	30	36	529
05:15 PM	214	**23**	237	18	243	261	10	**36**	**46**	544
05:30 PM	216	21	237	9	235	244	7	28	35	516
Total Volume	881	73	954	66	973	1039	35	115	150	2143
% App. Total	92.3	7.7		6.4	93.6		23.3	76.7		
PHF	.945	.793	.966	.750	.965	.948	.729	.799	.815	.967

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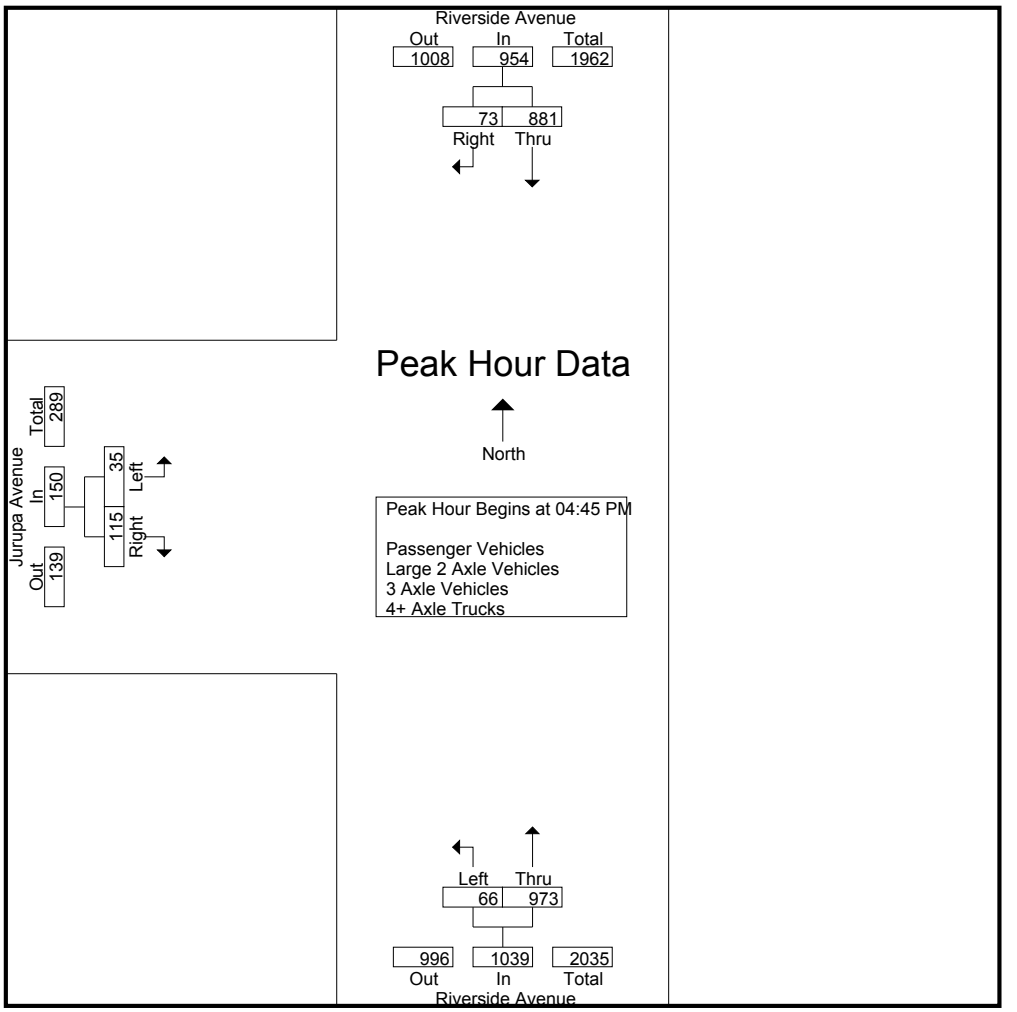
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:00 PM		
+0 mins.	**233**	14	**247**	**22**	**252**	**274**	**23**	34	**57**
+15 mins.	218	15	233	17	243	260	9	**37**	46
+30 mins.	214	**23**	237	18	243	261	13	26	39
+45 mins.	216	21	237	9	235	244	12	21	33
Total Volume	881	73	954	66	973	1039	57	118	175
% App. Total	92.3	7.7		6.4	93.6		32.6	67.4	
PHF	.945	.793	.966	.750	.965	.948	.620	.797	.768

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File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	141	12	0	153	9	174	0	183	22	32	17	54	17	390	407
04:15 PM	175	14	1	189	11	187	0	198	9	32	19	41	20	428	448
04:30 PM	174	10	1	184	8	203	0	211	12	21	16	33	17	428	445
04:45 PM	202	12	2	214	15	218	0	233	11	20	14	31	16	478	494
Total	692	48	4	740	43	782	0	825	54	105	66	159	70	1724	1794
05:00 PM	188	14	0	202	13	216	0	229	5	28	20	33	20	464	484
05:15 PM	185	21	1	206	16	217	0	233	10	33	23	43	24	482	506
05:30 PM	189	17	1	206	6	202	0	208	7	26	17	33	18	447	465
05:45 PM	155	9	0	164	16	145	0	161	6	24	15	30	15	355	370
Total	717	61	2	778	51	780	0	831	28	111	75	139	77	1748	1825
Grand Total	1409	109	6	1518	94	1562	0	1656	82	216	141	298	147	3472	3619
Apprch %	92.8	7.2			5.7	94.3			27.5	72.5					
Total %	40.6	3.1		43.7	2.7	45		47.7	2.4	6.2		8.6	4.1	95.9	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**202**	12	**214**	15	**218**	**233**	**11**	20	31	478
05:00 PM	188	14	202	13	216	229	5	28	33	464
05:15 PM	185	**21**	206	**16**	217	233	10	**33**	**43**	**482**
05:30 PM	189	17	206	6	202	208	7	26	33	447
Total Volume	764	64	828	50	853	903	33	107	140	1871
% App. Total	92.3	7.7		5.5	94.5		23.6	76.4		
PHF	.946	.762	.967	.781	.978	.969	.750	.811	.814	.970

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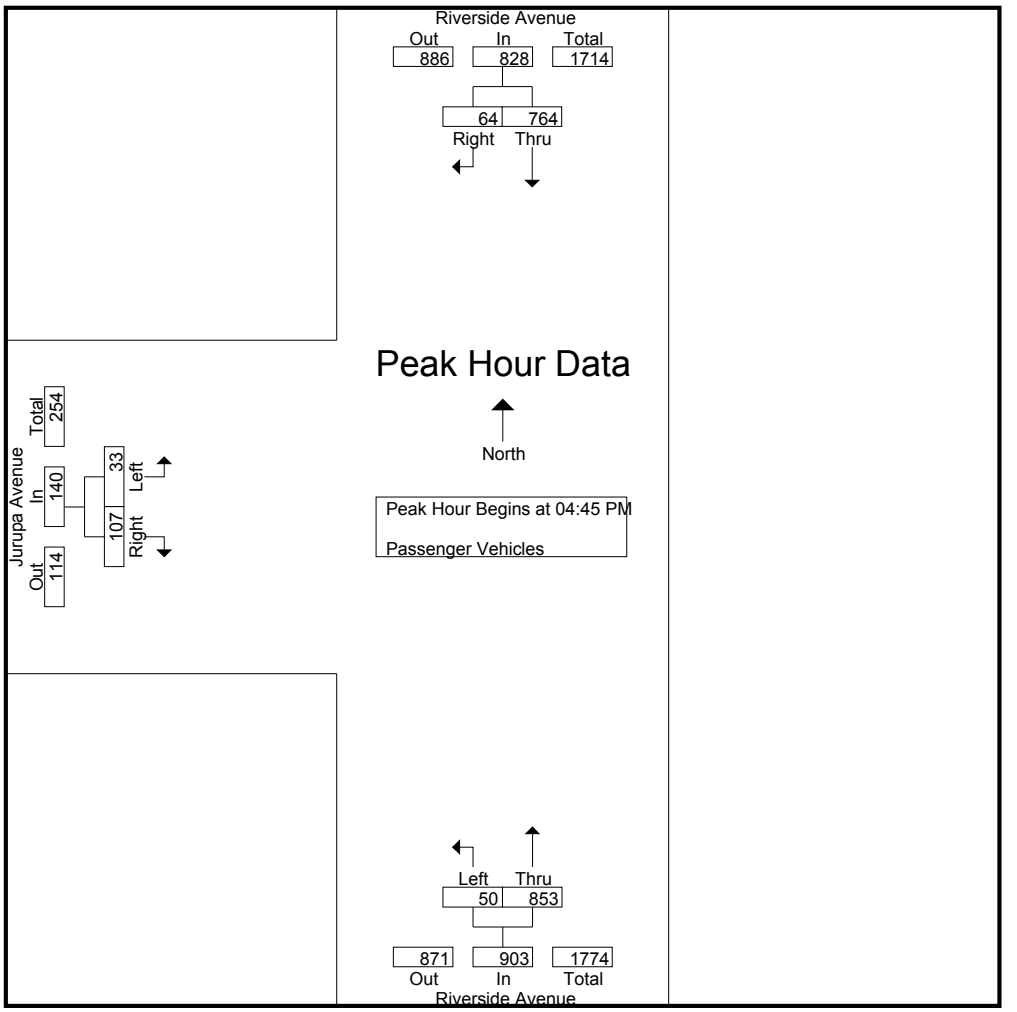
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	**202**	12	**214**	15	**218**	**233**	**11**	20	31
+15 mins.	188	14	202	13	216	229	5	28	33
+30 mins.	185	**21**	206	**16**	217	233	10	**33**	**43**
+45 mins.	189	17	206	6	202	208	7	26	33
Total Volume	764	64	828	50	853	903	33	107	140
% App. Total	92.3	7.7		5.5	94.5		23.6	76.4	
PHF	.946	.762	.967	.781	.978	.969	.750	.811	.814

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File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	7	2	0	9	3	3	0	6	0	0	0	0	0	15	15
04:15 PM	6	0	0	6	2	3	0	5	0	3	2	3	2	14	16
04:30 PM	4	2	0	6	2	10	0	12	1	1	1	2	1	20	21
04:45 PM	6	1	0	7	3	9	0	12	0	1	1	1	1	20	21
Total	23	5	0	28	10	25	0	35	1	5	4	6	4	69	73
05:00 PM	7	0	0	7	3	5	0	8	1	1	0	2	0	17	17
05:15 PM	6	1	0	7	1	5	0	6	0	0	0	0	0	13	13
05:30 PM	8	1	0	9	0	6	0	6	0	0	0	0	0	15	15
05:45 PM	6	0	0	6	1	1	0	2	1	1	1	2	1	10	11
Total	27	2	0	29	5	17	0	22	2	2	1	4	1	55	56
Grand Total	50	7	0	57	15	42	0	57	3	7	5	10	5	124	129
Apprch %	87.7	12.3			26.3	73.7			30	70					
Total %	40.3	5.6		46	12.1	33.9		46	2.4	5.6		8.1	3.9	96.1	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	6	**1**	7	**3**	**9**	**12**	0	**1**	1	**20**
05:00 PM	7	0	7	3	5	8	**1**	1	**2**	17
05:15 PM	6	1	7	1	5	6	0	0	0	13
05:30 PM	**8**	1	**9**	0	6	6	0	0	0	15
Total Volume	27	3	30	7	25	32	1	2	3	65
% App. Total	90	10		21.9	78.1		33.3	66.7		
PHF	.844	.750	.833	.583	.694	.667	.250	.500	.375	.813

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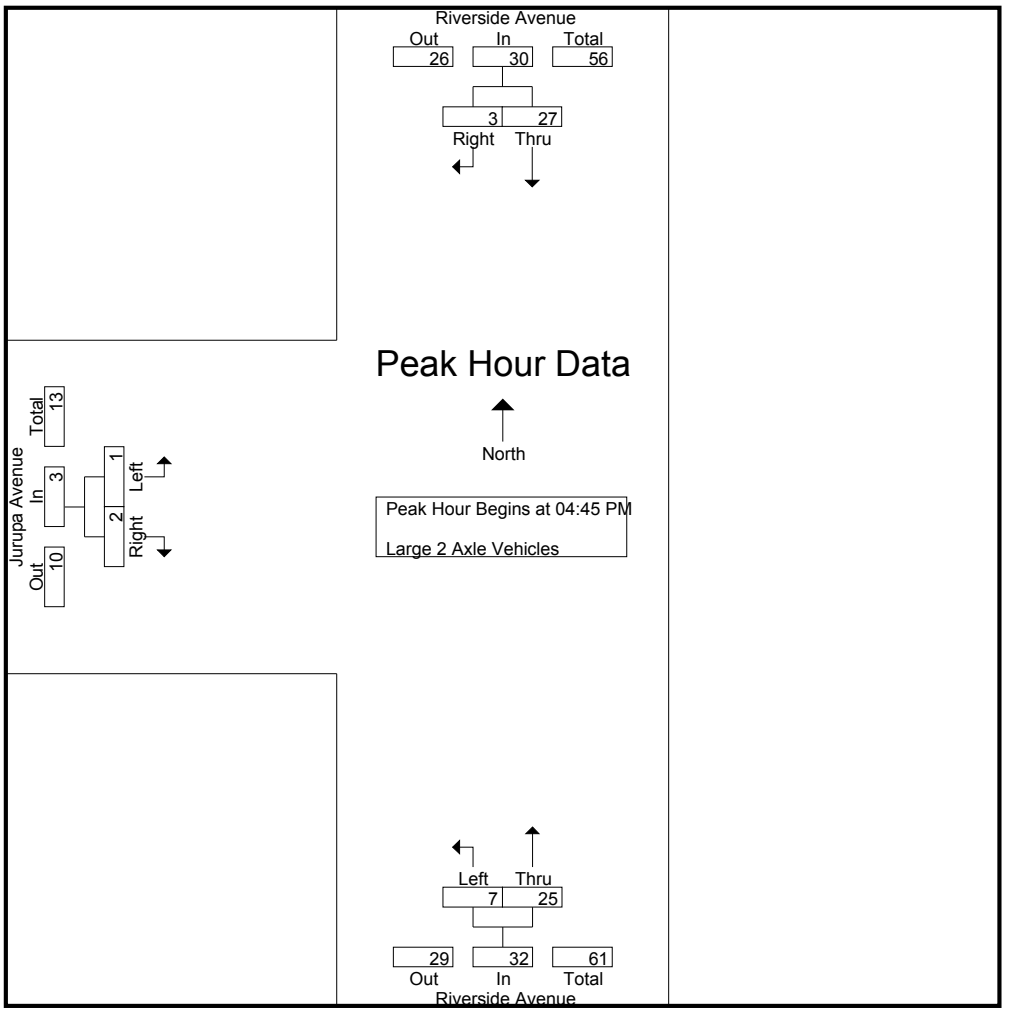
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	6	**1**	7	**3**	**9**	**12**	0	**1**	1
+15 mins.	7	0	7	3	5	8	**1**	1	**2**
+30 mins.	6	1	7	1	5	6	0	0	0
+45 mins.	**8**	1	**9**	0	6	6	0	0	0
Total Volume	27	3	30	7	25	32	1	2	3
% App. Total	90	10		21.9	78.1		33.3	66.7	
PHF	.844	.750	.833	.583	.694	.667	.250	.500	.375

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File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	8	0	0	8	0	4	0	4	1	0	0	1	0	13	13
04:15 PM	9	0	0	9	1	3	0	4	0	0	0	0	0	13	13
04:30 PM	3	0	0	3	0	0	0	0	0	2	0	2	0	5	5
04:45 PM	4	0	0	4	1	6	0	7	1	0	0	1	0	12	12
Total	24	0	0	24	2	13	0	15	2	2	0	4	0	43	43
05:00 PM	6	0	0	6	0	5	0	5	0	0	0	0	0	11	11
05:15 PM	4	1	0	5	0	2	0	2	0	3	2	3	2	10	12
05:30 PM	7	1	1	8	0	5	0	5	0	1	1	1	2	14	16
05:45 PM	8	0	0	8	0	2	0	2	0	0	0	0	0	10	10
Total	25	2	1	27	0	14	0	14	0	4	3	4	4	45	49
Grand Total	49	2	1	51	2	27	0	29	2	6	3	8	4	88	92
Apprch %	96.1	3.9			6.9	93.1			25	75					
Total %	55.7	2.3		58	2.3	30.7		33	2.3	6.8		9.1	4.3	95.7	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	4	0	4	**1**	**6**	**7**	**1**	0	1	12
05:00 PM	6	0	6	0	5	5	0	0	0	11
05:15 PM	4	**1**	5	0	2	2	0	**3**	**3**	10
05:30 PM	**7**	1	**8**	0	5	5	0	1	1	**14**
Total Volume	21	2	23	1	18	19	1	4	5	47
% App. Total	91.3	8.7		5.3	94.7		20	80		
PHF	.750	.500	.719	.250	.750	.679	.250	.333	.417	.839

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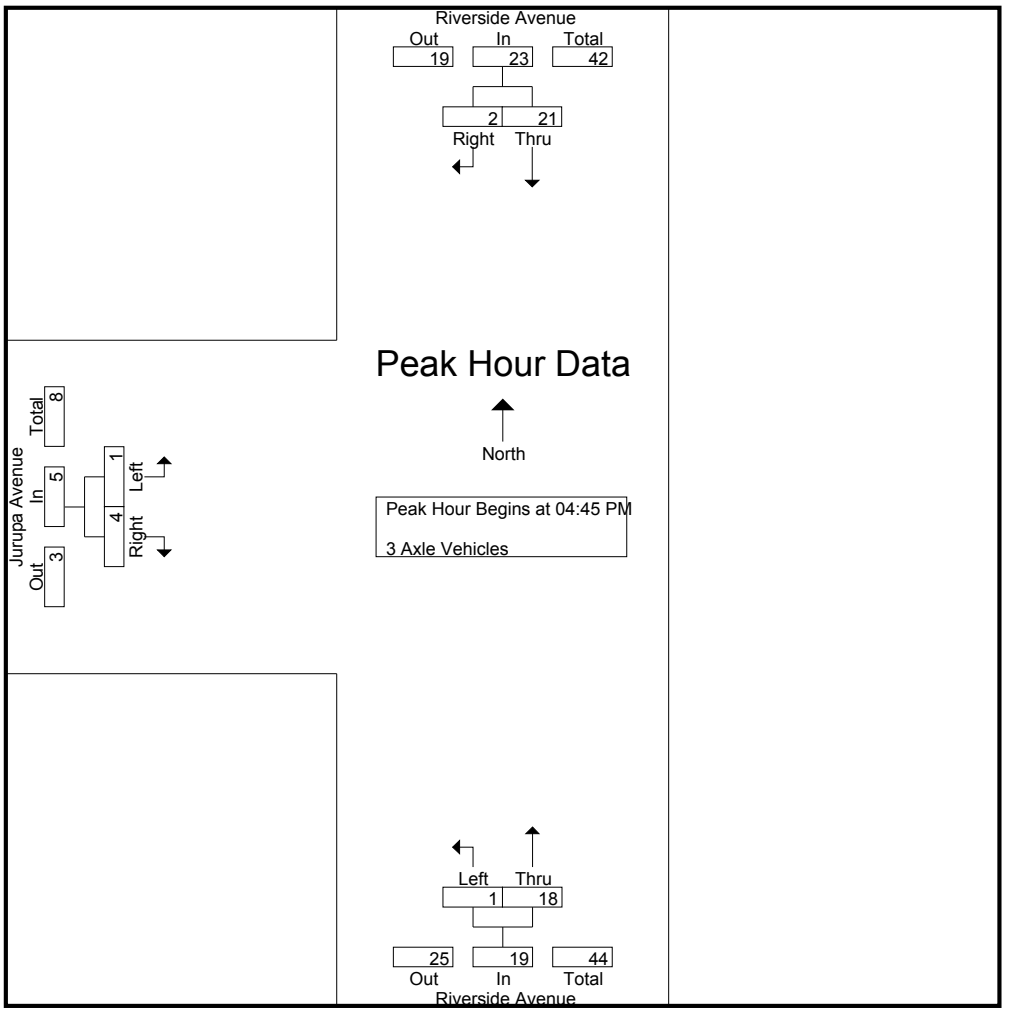
City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	4	0	4	**1**	**6**	**7**	**1**	0	1
+15 mins.	6	0	6	0	5	5	0	0	0
+30 mins.	4	**1**	5	0	2	2	0	**3**	**3**
+45 mins.	**7**	1	**8**	0	5	5	0	1	1
Total Volume	21	2	23	1	18	19	1	4	5
% App. Total	91.3	8.7		5.3	94.7		20	80	
PHF	.750	.500	.719	.250	.750	.679	.250	.333	.417

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City of Rialto
N/S: Riverside Avenue
E/W: Jurupa Avenue
Weather: Clear

File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound				Riverside Avenue Northbound				Jurupa Avenue Eastbound						
Start Time	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	20	1	0	21	0	19	0	19	0	2	0	2	0	42	42
04:15 PM	17	0	0	17	0	28	0	28	0	2	1	2	1	47	48
04:30 PM	19	0	0	19	0	15	0	15	0	2	2	2	2	36	38
04:45 PM	21	1	0	22	3	19	0	22	0	0	0	0	0	44	44
Total	77	2	0	79	3	81	0	84	0	6	3	6	3	169	172
05:00 PM	17	1	0	18	1	17	0	18	0	1	0	1	0	37	37
05:15 PM	19	0	0	19	1	19	0	20	0	0	0	0	0	39	39
05:30 PM	12	2	0	14	3	22	0	25	0	1	0	1	0	40	40
05:45 PM	19	0	0	19	2	23	0	25	0	1	0	1	0	45	45
Total	67	3	0	70	7	81	0	88	0	3	0	3	0	161	161
Grand Total	144	5	0	149	10	162	0	172	0	9	3	9	3	330	333
Apprch %	96.6	3.4			5.8	94.2			0	100					
Total %	43.6	1.5		45.2	3	49.1		52.1	0	2.7		2.7	0.9	99.1	

	Riverside Avenue Southbound			Riverside Avenue Northbound			Jurupa Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**21**	1	**22**	**3**	19	22	0	0	0	**44**
05:00 PM	17	1	18	1	17	18	0	**1**	**1**	37
05:15 PM	19	0	19	1	19	20	0	0	0	39
05:30 PM	12	**2**	14	3	**22**	**25**	0	1	1	40
Total Volume	69	4	73	8	77	85	0	2	2	160
% App. Total	94.5	5.5		9.4	90.6		0	100		
PHF	.821	.500	.830	.667	.875	.850	.000	.500	.500	.909

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City of Rialto
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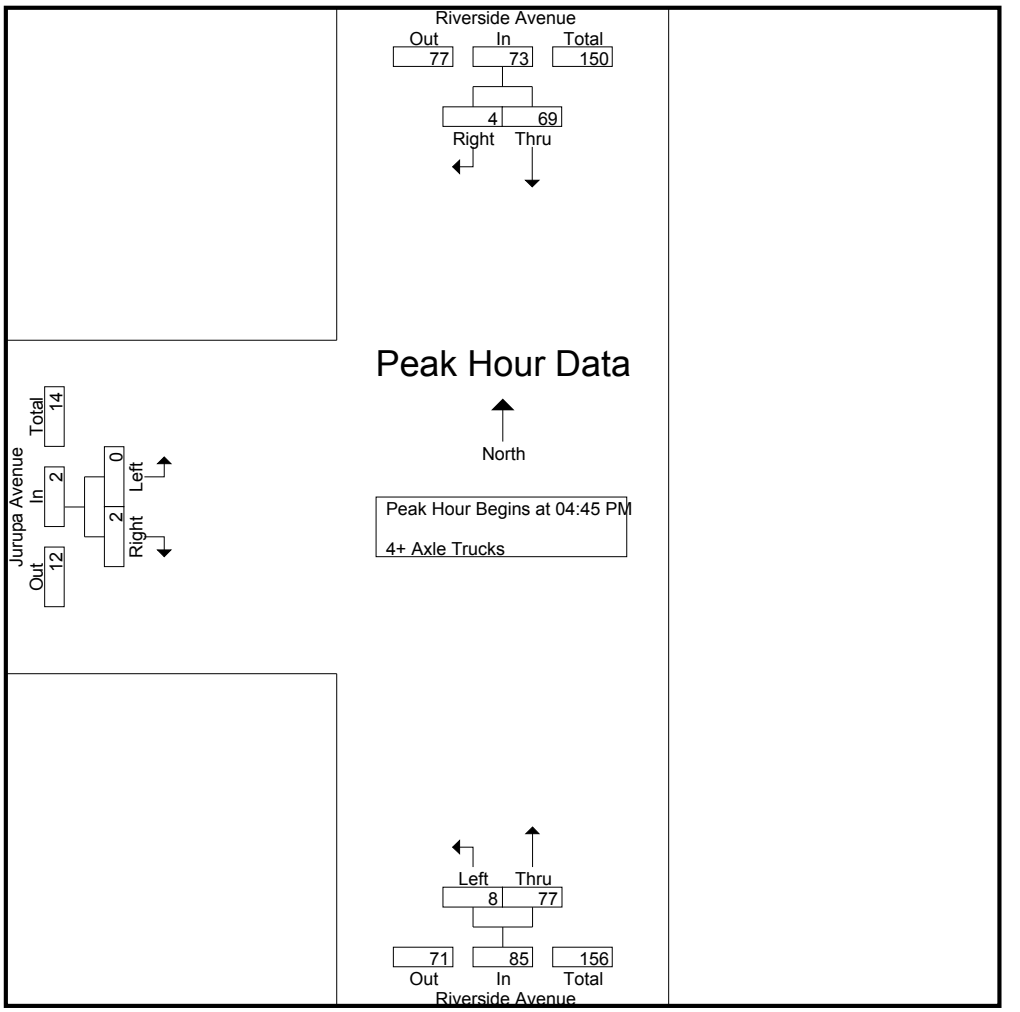
File Name : RLTRIJUPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	**21**	1	**22**	**3**	19	22	0	0	0
+15 mins.	17	1	18	1	17	18	0	**1**	**1**
+30 mins.	19	0	19	1	19	20	0	0	0
+45 mins.	12	**2**	14	3	**22**	**25**	0	1	1
Total Volume	69	4	73	8	77	85	0	2	2
% App. Total	94.5	5.5		9.4	90.6		0	100	
PHF	.821	.500	.830	.667	.875	.850	.000	.500	.500

Location: Rialto
N/S: Riverside Avenue
E/W: Jurupa Road

Date: 1/19/2017
Day: Thursday

PEDESTRIANS

	North Leg Riverside Avenue	East Leg Jurupa Road	South Leg Riverside Avenue	West Leg Jurupa Road	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	1	2

	North Leg Riverside Avenue	East Leg Jurupa Road	South Leg Riverside Avenue	West Leg Jurupa Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

Location: Rialto
N/S: Riverside Avenue
E/W: Jurupa Road

Date: 1/19/2017
Day: Thursday

BICYCLES

	North Leg Riverside Avenue	East Leg Jurupa Road	South Leg Riverside Avenue	West Leg Jurupa Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	0	1	1	2	4

	North Leg Riverside Avenue	East Leg Jurupa Road	South Leg Riverside Avenue	West Leg Jurupa Road	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	8	160	25	11	193	14	50	7	5	71	16	119	0	0	135	22	20	16	10	58	26	457	483
07:15 AM	8	182	19	10	209	18	58	17	7	93	25	154	6	0	185	21	34	12	7	67	24	554	578
07:30 AM	5	199	33	20	237	17	68	16	8	101	20	135	6	1	161	29	40	15	8	84	37	583	620
07:45 AM	15	246	28	18	289	16	56	13	7	85	26	133	7	0	166	24	31	21	11	76	36	616	652
Total	36	787	105	59	928	65	232	53	27	350	87	541	19	1	647	96	125	64	36	285	123	2210	2333
08:00 AM	6	147	23	17	176	21	52	5	3	78	26	118	10	0	154	23	22	16	11	61	31	469	500
08:15 AM	15	163	24	12	202	7	30	4	2	41	26	109	10	4	145	20	29	17	14	66	32	454	486
08:30 AM	11	125	26	10	162	15	25	8	4	48	25	109	5	1	139	17	18	19	9	54	24	403	427
08:45 AM	7	118	18	5	143	9	17	6	2	32	24	120	5	2	149	26	15	14	9	55	18	379	397
Total	39	553	91	44	683	52	124	23	11	199	101	456	30	7	587	86	84	66	43	236	105	1705	1810
Grand Total	75	1340	196	103	1611	117	356	76	38	549	188	997	49	8	1234	182	209	130	79	521	228	3915	4143
Apprch %	4.7	83.2	12.2			21.3	64.8	13.8			15.2	80.8	4			34.9	40.1	25					
Total %	1.9	34.2	5		41.1	3	9.1	1.9		14	4.8	25.5	1.3		31.5	4.6	5.3	3.3		13.3	5.5	94.5	
Passenger Vehicles	49	1206	138		1475	99	313	45		485	143	846	41		1037	134	170	104		475	0	0	3472
% Passenger Vehicles	65.3	90	70.4	79.6	86.1	84.6	87.9	59.2	73.7	82.6	76.1	84.9	83.7	87.5	83.5	73.6	81.3	80	84.8	79.2	0	0	83.8
Large 2 Axle Vehicles	10	48	16		80	5	17	6		31	23	48	1		72	12	16	7		39	0	0	222
% Large 2 Axle Vehicles	13.3	3.6	8.2	5.8	4.7	4.3	4.8	7.9	7.9	5.3	12.2	4.8	2	0	5.8	6.6	7.7	5.4	5.1	6.5	0	0	5.4
3 Axle Vehicles	3	37	11		55	6	5	9		26	4	42	1		47	4	7	3		17	0	0	145
% 3 Axle Vehicles	4	2.8	5.6	3.9	3.2	5.1	1.4	11.8	15.8	4.4	2.1	4.2	2	0	3.8	2.2	3.3	2.3	3.8	2.8	0	0	3.5
4+ Axle Trucks	13	49	31		104	7	21	16		45	18	61	6		86	32	16	16		69	0	0	304
% 4+ Axle Trucks	17.3	3.7	15.8	10.7	6.1	6	5.9	21.1	2.6	7.7	9.6	6.1	12.2	12.5	6.9	17.6	7.7	12.3	6.3	11.5	0	0	7.3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	182	19	209	18	58	**17**	93	25	**154**	6	**185**	21	34	12	67	554
07:30 AM	5	199	**33**	237	17	**68**	16	**101**	20	135	6	161	**29**	**40**	15	**84**	583
07:45 AM	**15**	**246**	28	**289**	16	56	13	85	**26**	133	7	166	24	31	**21**	76	**616**
08:00 AM	6	147	23	176	**21**	52	5	78	26	118	**10**	154	23	22	16	61	469
Total Volume	34	774	103	911	72	234	51	357	97	540	29	666	97	127	64	288	2222
% App. Total	3.7	85	11.3		20.2	65.5	14.3		14.6	81.1	4.4		33.7	44.1	22.2		
PHF	.567	.787	.780	.788	.857	.860	.750	.884	.933	.877	.725	.900	.836	.794	.762	.857	.902

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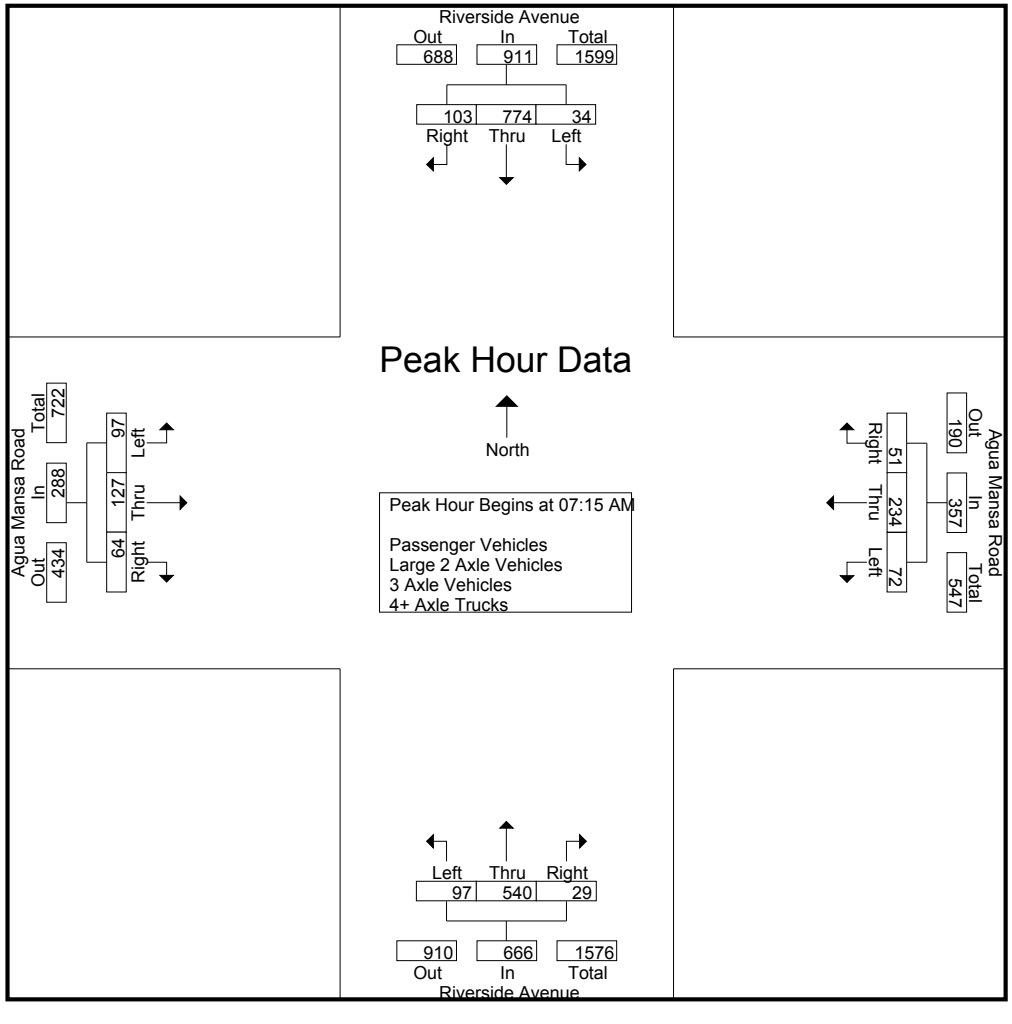
City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRIAGAM
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Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	8	160	25	193	18	58	**17**	93	25	**154**	6	**185**	21	34	12	67	
+15 mins.	8	182	19	209	17	**68**	16	**101**	20	135	6	161	**29**	**40**	15	**84**	
+30 mins.	5	199	**33**	237	16	56	13	85	**26**	133	7	166	24	31	**21**	76	
+45 mins.	**15**	**246**	28	**289**	**21**	52	5	78	26	118	**10**	154	23	22	16	61	
Total Volume	36	787	105	928	72	234	51	357	97	540	29	666	97	127	64	288	
% App. Total	3.9	84.8	11.3		20.2	65.5	14.3		14.6	81.1	4.4		33.7	44.1	22.2		
PHF	.600	.800	.795	.803	.857	.860	.750	.884	.933	.877	.725	.900	.836	.794	.762	.857	

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Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	145	19	10	167	12	46	2	2	60	12	104	0	0	116	19	16	14	9	49	21	392	413
07:15 AM	5	169	15	10	189	16	45	10	4	71	18	132	6	0	156	12	28	8	6	48	20	464	484
07:30 AM	5	179	24	15	208	12	62	10	6	84	18	122	5	1	145	21	28	10	7	59	29	496	525
07:45 AM	13	226	21	16	260	14	51	10	6	75	20	115	6	0	141	17	26	19	9	62	31	538	569
Total	26	719	79	51	824	54	204	32	18	290	68	473	17	1	558	69	98	51	31	218	101	1890	1991
08:00 AM	5	132	16	15	153	19	48	3	3	70	22	96	7	0	125	20	21	13	10	54	28	402	430
08:15 AM	8	140	18	8	166	6	24	1	1	31	21	94	9	4	124	15	23	14	11	52	24	373	397
08:30 AM	5	112	14	6	131	11	22	6	4	39	18	88	4	1	110	13	16	14	6	43	17	323	340
08:45 AM	5	103	11	2	119	9	15	3	2	27	14	95	4	1	113	17	12	12	9	41	14	300	314
Total	23	487	59	31	569	45	109	13	10	167	75	373	24	6	472	65	72	53	36	190	83	1398	1481
Grand Total	49	1206	138	82	1393	99	313	45	28	457	143	846	41	7	1030	134	170	104	67	408	184	3288	3472
Apprch %	3.5	86.6	9.9			21.7	68.5	9.8			13.9	82.1	4			32.8	41.7	25.5					
Total %	1.5	36.7	4.2		42.4	3	9.5	1.4		13.9	4.3	25.7	1.2		31.3	4.1	5.2	3.2		12.4	5.3	94.7	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	169	15	189	16	45	**10**	71	18	**132**	6	**156**	12	**28**	8	48	464
07:30 AM	5	179	**24**	208	12	**62**	10	**84**	18	122	5	145	**21**	28	10	59	496
07:45 AM	**13**	**226**	21	**260**	14	51	10	75	20	115	6	141	17	26	**19**	**62**	**538**
08:00 AM	5	132	16	153	**19**	48	3	70	**22**	96	**7**	125	20	21	13	54	402
Total Volume	28	706	76	810	61	206	33	300	78	465	24	567	70	103	50	223	1900
% App. Total	3.5	87.2	9.4		20.3	68.7	11		13.8	82	4.2		31.4	46.2	22.4		
PHF	.538	.781	.792	.779	.803	.831	.825	.893	.886	.881	.857	.909	.833	.920	.658	.899	.883

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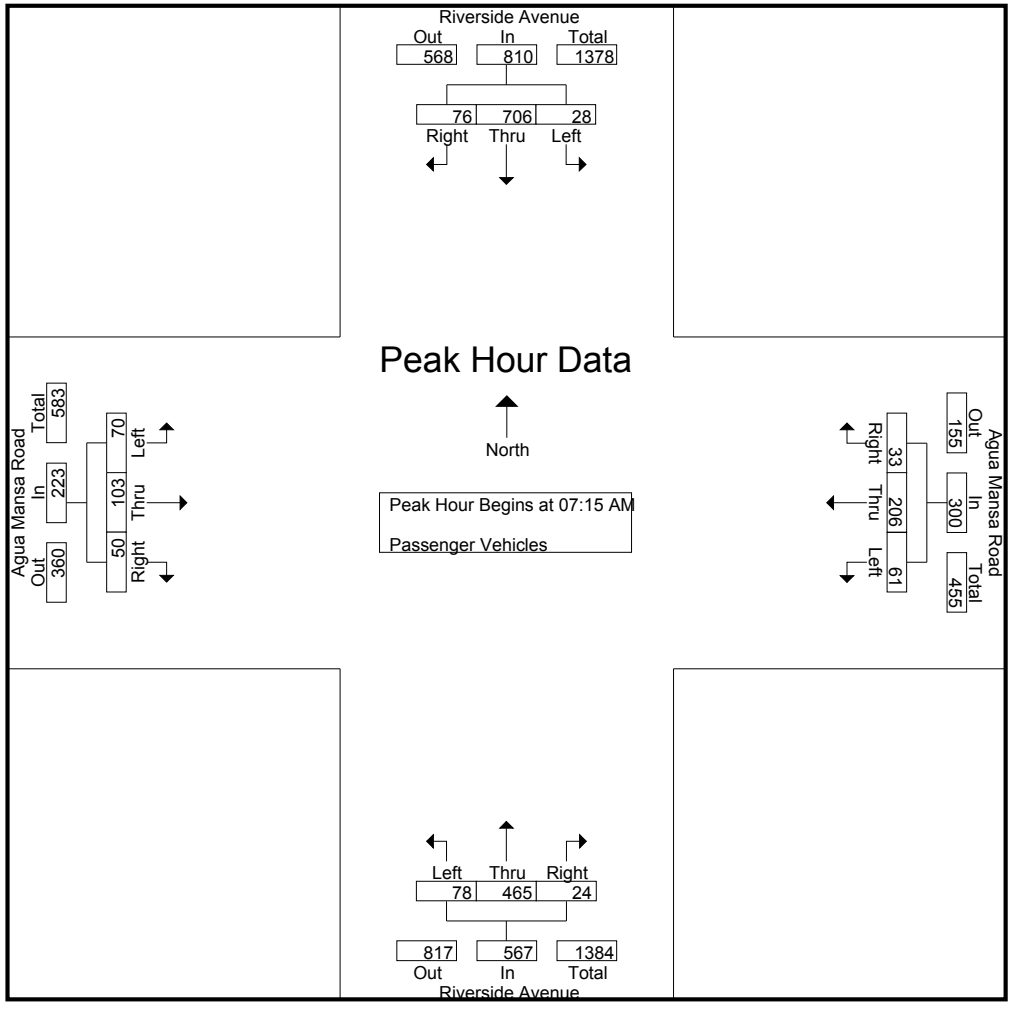

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Page No : 3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	5	169	15	189	16	45	**10**	71	18	**132**	6	**156**	12	**28**	8	48	
+15 mins.	5	179	**24**	208	12	**62**	10	**84**	18	122	5	145	**21**	28	10	59	
+30 mins.	**13**	**226**	21	**260**	14	51	10	75	20	115	6	141	17	26	**19**	**62**	
+45 mins.	5	132	16	153	**19**	48	3	70	**22**	96	**7**	125	20	21	13	54	
Total Volume	28	706	76	810	61	206	33	300	78	465	24	567	70	103	50	223	
% App. Total	3.5	87.2	9.4		20.3	68.7	11		13.8	82	4.2		31.4	46.2	22.4		
PHF	.538	.781	.792	.779	.803	.831	.825	.893	.886	.881	.857	.909	.833	.920	.658	.899	

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File Name : RLTRIAGAM
Site Code : 05117022
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	3	1	0	5	1	2	1	1	4	2	4	0	0	6	1	1	1	1	3	2	18	20
07:15 AM	1	5	0	0	6	0	5	1	0	6	3	9	0	0	12	2	2	1	0	5	0	29	29
07:30 AM	0	9	3	2	12	2	1	0	0	3	1	5	0	0	6	2	5	0	0	7	2	28	30
07:45 AM	1	5	5	1	11	0	4	1	1	5	4	3	0	0	7	2	4	2	2	8	4	31	35
Total	3	22	9	3	34	3	12	3	2	18	10	21	0	0	31	7	12	4	3	23	8	106	114
08:00 AM	0	5	1	1	6	1	1	0	0	2	3	8	1	0	12	1	0	0	0	1	1	21	22
08:15 AM	4	12	2	2	18	0	1	2	1	3	2	4	0	0	6	2	3	0	0	5	3	32	35
08:30 AM	2	3	1	0	6	1	1	1	0	3	3	7	0	0	10	2	0	2	1	4	1	23	24
08:45 AM	1	6	3	0	10	0	2	0	0	2	5	8	0	0	13	0	1	1	0	2	0	27	27
Total	7	26	7	3	40	2	5	3	1	10	13	27	1	0	41	5	4	3	1	12	5	103	108
Grand Total	10	48	16	6	74	5	17	6	3	28	23	48	1	0	72	12	16	7	4	35	13	209	222
Apprch %	13.5	64.9	21.6			17.9	60.7	21.4			31.9	66.7	1.4			34.3	45.7	20					
Total %	4.8	23	7.7		35.4	2.4	8.1	2.9		13.4	11	23	0.5		34.4	5.7	7.7	3.3		16.7	5.9	94.1	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	5	0	6	0	**5**	**1**	**6**	3	**9**	0	**12**	**2**	2	1	5	29
07:30 AM	0	**9**	3	**12**	**2**	1	0	3	1	5	0	6	2	**5**	0	7	28
07:45 AM	1	5	**5**	11	0	4	1	5	**4**	3	0	7	2	4	**2**	**8**	**31**
08:00 AM	0	5	1	6	1	1	0	2	3	8	**1**	12	1	0	0	1	21
Total Volume	2	24	9	35	3	11	2	16	11	25	1	37	7	11	3	21	109
% App. Total	5.7	68.6	25.7		18.8	68.8	12.5		29.7	67.6	2.7		33.3	52.4	14.3		
PHF	.500	.667	.450	.729	.375	.550	.500	.667	.688	.694	.250	.771	.875	.550	.375	.656	.879

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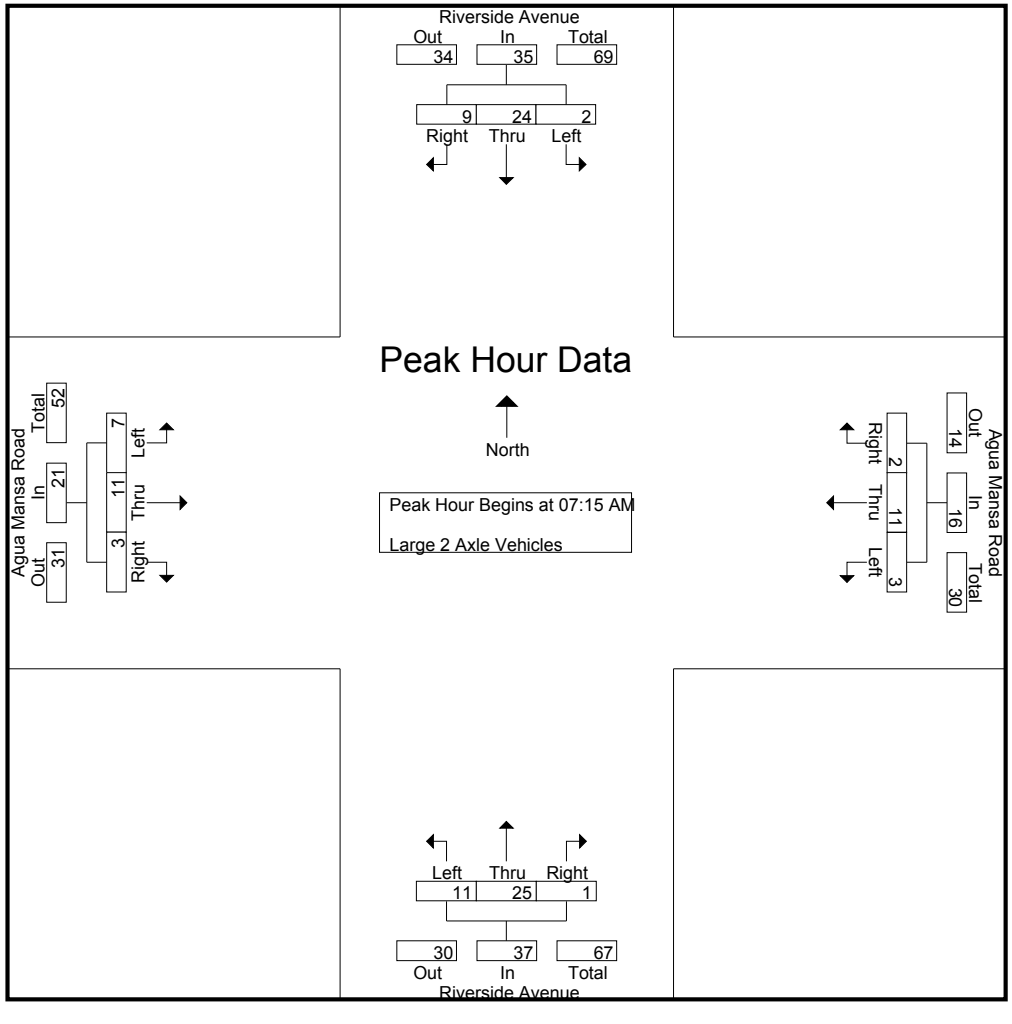
City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	**1**	5	0	6	0	**5**	**1**	**6**	3	**9**	0	**12**	**2**	2	1	5	
+15 mins.	0	**9**	3	**12**	**2**	1	0	3	1	5	0	6	2	**5**	0	7	
+30 mins.	1	5	**5**	11	0	4	1	5	**4**	3	0	7	2	4	**2**	**8**	
+45 mins.	0	5	1	6	1	1	0	2	3	8	**1**	12	1	0	0	1	
Total Volume	2	24	9	35	3	11	2	16	11	25	1	37	7	11	3	21	
% App. Total	5.7	68.6	25.7		18.8	68.8	12.5		29.7	67.6	2.7		33.3	52.4	14.3		
PHF	.500	.667	.450	.729	.375	.550	.500	.667	.688	.694	.250	.771	.875	.550	.375	.656	

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City of Rialto
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E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	7	1	0	9	1	1	2	2	4	0	7	0	0	7	1	0	0	0	1	2	21	23
07:15 AM	0	3	1	0	4	2	2	3	3	7	1	4	0	0	5	0	2	0	0	2	3	18	21
07:30 AM	0	5	1	1	6	3	0	3	1	6	0	4	0	0	4	1	3	0	0	4	2	20	22
07:45 AM	0	7	1	1	8	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	1	16	17
Total	1	22	4	2	27	6	3	8	6	17	1	22	0	0	23	3	5	0	0	8	8	75	83
08:00 AM	1	6	1	0	8	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	15	15
08:15 AM	0	4	2	1	6	0	2	0	0	2	0	4	0	0	4	0	2	2	2	4	3	16	19
08:30 AM	0	0	3	1	3	0	0	1	0	1	2	3	0	0	5	0	0	1	1	1	2	10	12
08:45 AM	1	5	1	0	7	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	0	16	16
Total	2	15	7	2	24	0	2	1	0	3	3	20	1	0	24	1	2	3	3	6	5	57	62
Grand Total	3	37	11	4	51	6	5	9	6	20	4	42	1	0	47	4	7	3	3	14	13	132	145
Apprch %	5.9	72.5	21.6			30	25	45			8.5	89.4	2.1			28.6	50	21.4					
Total %	2.3	28	8.3		38.6	4.5	3.8	6.8		15.2	3	31.8	0.8		35.6	3	5.3	2.3		10.6	9	91	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	**1**	4	2	**2**	**3**	**7**	**1**	4	0	5	0	2	0	2	18
07:30 AM	0	5	1	6	**3**	0	3	6	0	4	0	4	**1**	**3**	0	**4**	**20**
07:45 AM	0	**7**	1	**8**	0	0	0	0	0	**7**	0	**7**	1	0	0	1	16
08:00 AM	**1**	6	1	8	0	0	0	0	0	6	**1**	7	0	0	0	0	15
Total Volume	1	21	4	26	5	2	6	13	1	21	1	23	2	5	0	7	69
% App. Total	3.8	80.8	15.4		38.5	15.4	46.2		4.3	91.3	4.3		28.6	71.4	0		
PHF	.250	.750	1.00	.813	.417	.250	.500	.464	.250	.750	.250	.821	.500	.417	.000	.438	.863

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City of Rialto
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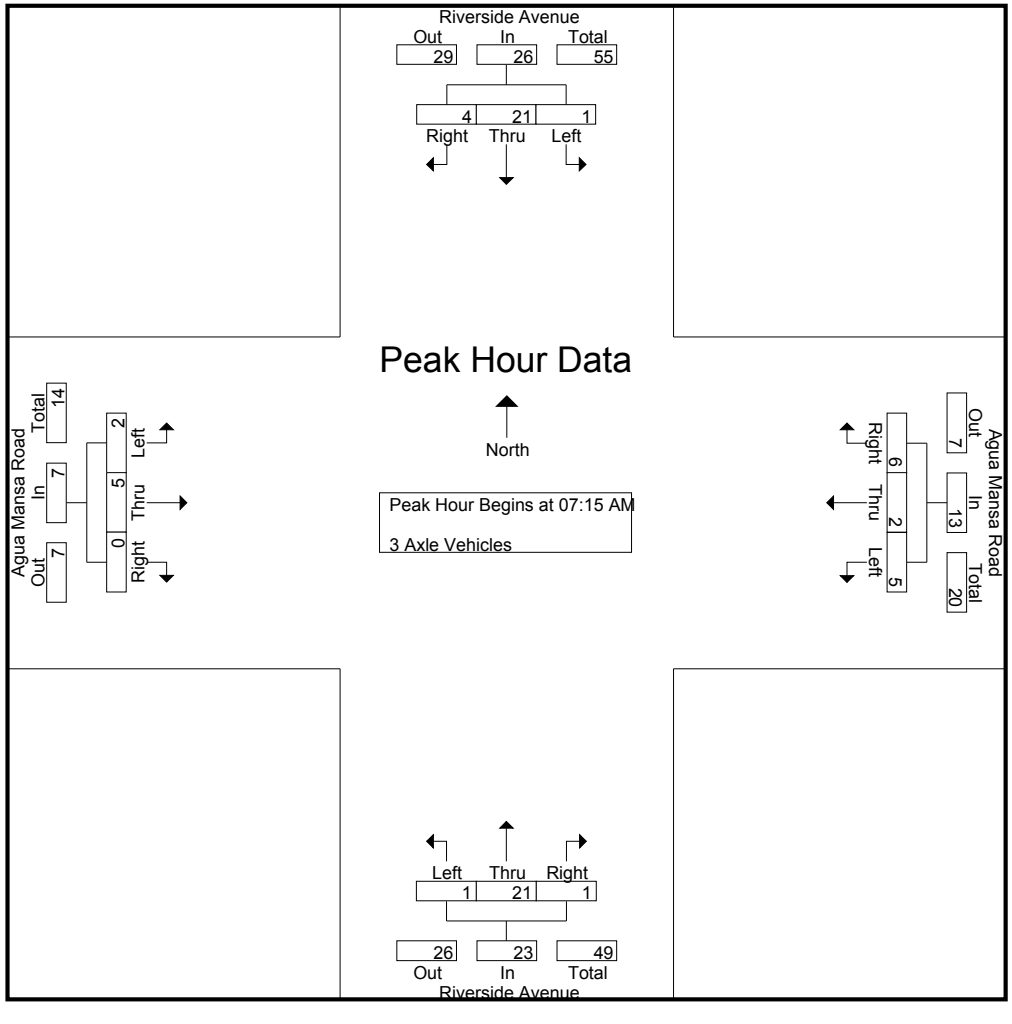
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
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File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	3	**1**	4	2	**2**	**3**	**7**	**1**	4	0	5	0	2	0	2	
+15 mins.	0	5	1	6	**3**	0	3	6	0	4	0	4	**1**	**3**	0	**4**	
+30 mins.	0	**7**	1	**8**	0	0	0	0	0	**7**	0	**7**	1	0	0	1	
+45 mins.	**1**	6	1	8	0	0	0	0	0	6	**1**	7	0	0	0	0	
Total Volume	1	21	4	26	5	2	6	13	1	21	1	23	2	5	0	7	
% App. Total	3.8	80.8	15.4		38.5	15.4	46.2		4.3	91.3	4.3		28.6	71.4	0		
PHF	.250	.750	1.000	.813	.417	.250	.500	.464	.250	.750	.250	.821	.500	.417	.000	.438	

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City of Rialto
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File Name : RLTRIAGAM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	5	4	1	12	0	1	2	0	3	2	4	0	0	6	1	3	1	0	5	1	26	27
07:15 AM	2	5	3	0	10	0	6	3	0	9	3	9	0	0	12	7	2	3	1	12	1	43	44
07:30 AM	0	6	5	2	11	0	5	3	1	8	1	4	1	0	6	5	4	5	1	14	4	39	43
07:45 AM	1	8	1	0	10	2	1	2	0	5	2	8	1	0	11	4	1	0	0	5	0	31	31
Total	6	24	13	3	43	2	13	10	1	25	8	25	2	0	35	17	10	9	2	36	6	139	145
08:00 AM	0	4	5	1	9	1	3	2	0	6	1	8	1	0	10	2	1	3	1	6	2	31	33
08:15 AM	3	7	2	1	12	1	3	1	0	5	3	7	1	0	11	3	1	1	1	5	2	33	35
08:30 AM	4	10	8	3	22	3	2	0	0	5	2	11	1	0	14	2	2	2	1	6	4	47	51
08:45 AM	0	4	3	3	7	0	0	3	0	3	4	10	1	1	15	8	2	1	0	11	4	36	40
Total	7	25	18	8	50	5	8	6	0	19	10	36	4	1	50	15	6	7	3	28	12	147	159
Grand Total	13	49	31	11	93	7	21	16	1	44	18	61	6	1	85	32	16	16	5	64	18	286	304
Apprch %	14	52.7	33.3			15.9	47.7	36.4			21.2	71.8	7.1			50	25	25					
Total %	4.5	17.1	10.8		32.5	2.4	7.3	5.6		15.4	6.3	21.3	2.1		29.7	11.2	5.6	5.6		22.4	5.9	94.1	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	5	3	10	0	**6**	**3**	**9**	**3**	**9**	0	**12**	**7**	2	3	12	**43**
07:30 AM	0	6	**5**	**11**	0	5	3	8	1	4	**1**	6	5	**4**	**5**	**14**	39
07:45 AM	1	**8**	1	10	**2**	1	2	5	2	8	1	11	4	1	0	5	31
08:00 AM	0	4	5	9	1	3	2	6	1	8	1	10	2	1	3	6	31
Total Volume	3	23	14	40	3	15	10	28	7	29	3	39	18	8	11	37	144
% App. Total	7.5	57.5	35		10.7	53.6	35.7		17.9	74.4	7.7		48.6	21.6	29.7		
PHF	.375	.719	.700	.909	.375	.625	.833	.778	.583	.806	.750	.813	.643	.500	.550	.661	.837

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Site Code : 05117022
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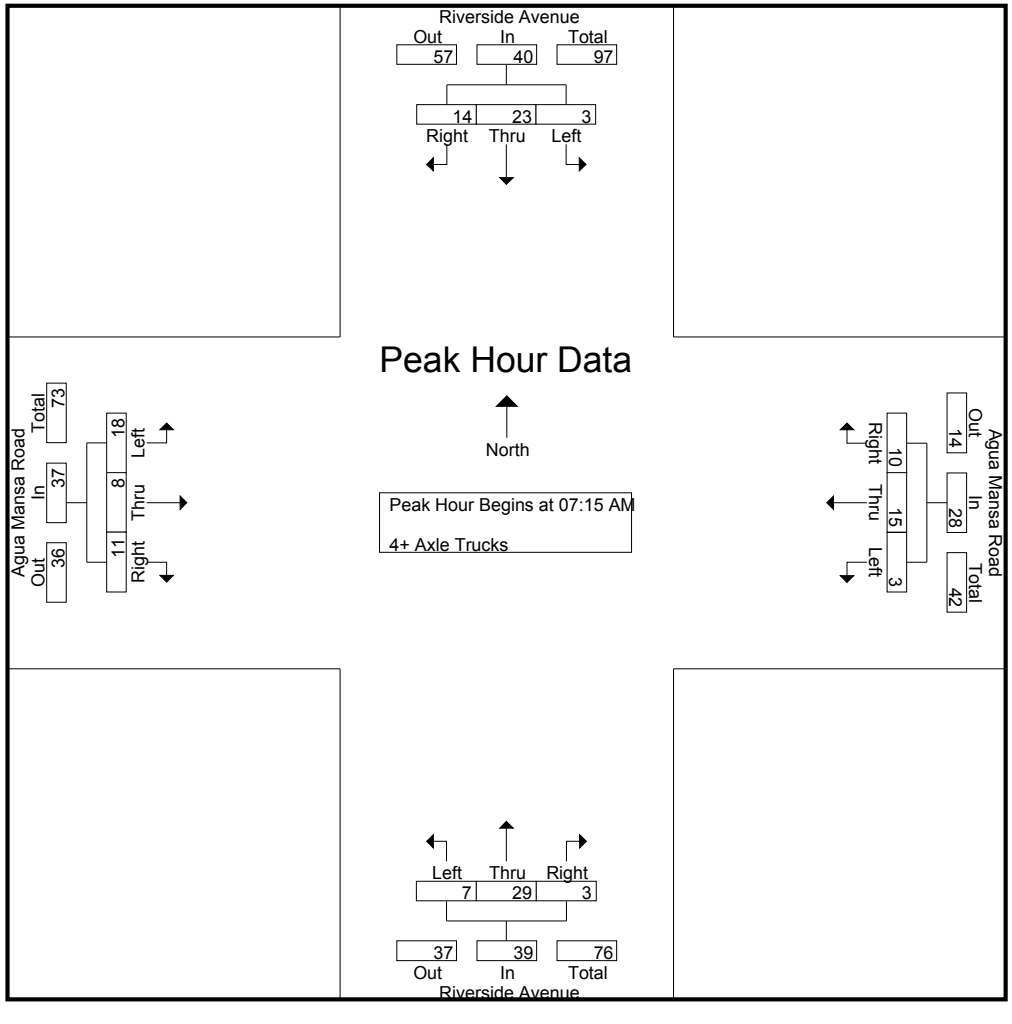
Page No : 2



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Page No : 3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	**2**	5	3	10	0	**6**	**3**	**9**	**3**	**9**	0	**12**	**7**	2	3	12	
+15 mins.	0	6	**5**	**11**	0	5	3	8	1	4	**1**	6	5	**4**	**5**	**14**	
+30 mins.	1	**8**	1	10	**2**	1	2	5	2	8	1	11	4	1	0	5	
+45 mins.	0	4	5	9	1	3	2	6	1	8	1	10	2	1	3	6	
Total Volume	3	23	14	40	3	15	10	28	7	29	3	39	18	8	11	37	
% App. Total	7.5	57.5	35		10.7	53.6	35.7		17.9	74.4	7.7		48.6	21.6	29.7		
PHF	.375	.719	.700	.909	.375	.625	.833	.778	.583	.806	.750	.813	.643	.500	.550	.661	

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File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	14	189	19	12	222	9	35	8	5	52	20	154	16	4	190	37	102	40	19	179	40	643	683
04:15 PM	16	172	30	20	218	7	35	4	2	46	36	154	23	0	213	38	96	23	14	157	36	634	670
04:30 PM	14	191	24	15	229	10	33	14	7	57	26	146	25	3	197	27	102	30	19	159	44	642	686
04:45 PM	15	203	33	20	251	4	37	11	6	52	22	186	17	1	225	40	105	31	13	176	40	704	744
Total	59	755	106	67	920	30	140	37	20	207	104	640	81	8	825	142	405	124	65	671	160	2623	2783
05:00 PM	13	204	20	12	237	7	42	6	1	55	30	180	26	3	236	30	110	25	10	165	26	693	719
05:15 PM	11	197	28	20	236	6	44	12	1	62	22	183	28	2	233	30	118	31	12	179	35	710	745
05:30 PM	6	207	30	14	243	8	39	11	4	58	20	169	11	0	200	34	99	25	11	158	29	659	688
05:45 PM	9	144	24	11	177	5	37	7	3	49	17	108	6	1	131	18	81	16	10	115	25	472	497
Total	39	752	102	57	893	26	162	36	9	224	89	640	71	6	800	112	408	97	43	617	115	2534	2649
Grand Total	98	1507	208	124	1813	56	302	73	29	431	193	1280	152	14	1625	254	813	221	108	1288	275	5157	5432
Apprch %	5.4	83.1	11.5			13	70.1	16.9			11.9	78.8	9.4			19.7	63.1	17.2					
Total %	1.9	29.2	4		35.2	1.1	5.9	1.4		8.4	3.7	24.8	2.9		31.5	4.9	15.8	4.3		25	5.1	94.9	
Passenger Vehicles	67	1392	159		1718	48	263	40		370	140	1168	135		1457	203	769	193		1260	0	0	4805
% Passenger Vehicles	68.4	92.4	76.4	80.6	88.7	85.7	87.1	54.8	65.5	80.4	72.5	91.2	88.8	100	88.9	79.9	94.6	87.3	88	90.3	0	0	88.5
Large 2 Axle Vehicles	1	38	13		58	3	13	2		18	30	41	3		74	4	30	6		43	0	0	193
% Large 2 Axle Vehicles	1	2.5	6.2	4.8	3	5.4	4.3	2.7	0	3.9	15.5	3.2	2	0	4.5	1.6	3.7	2.7	2.8	3.1	0	0	3.6
3 Axle Vehicles	5	42	17		72	2	6	7		19	10	24	4		38	17	3	12		38	0	0	167
% 3 Axle Vehicles	5.1	2.8	8.2	6.5	3.7	3.6	2	9.6	13.8	4.1	5.2	1.9	2.6	0	2.3	6.7	0.4	5.4	5.6	2.7	0	0	3.1
4+ Axle Trucks	25	35	19		89	3	20	24		53	13	47	10		70	30	11	10		55	0	0	267
% 4+ Axle Trucks	25.5	2.3	9.1	8.1	4.6	5.4	6.6	32.9	20.7	11.5	6.7	3.7	6.6	0	4.3	11.8	1.4	4.5	3.7	3.9	0	0	4.9

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**15**	203	**33**	**251**	4	37	11	52	22	**186**	17	225	**40**	105	**31**	176	704
05:00 PM	13	204	20	237	7	42	6	55	**30**	180	26	**236**	30	110	25	165	693
05:15 PM	11	197	28	236	6	**44**	**12**	**62**	22	183	**28**	233	30	**118**	31	**179**	**710**
05:30 PM	6	**207**	30	243	**8**	39	11	58	20	169	11	200	34	99	25	158	659
Total Volume	45	811	111	967	25	162	40	227	94	718	82	894	134	432	112	678	2766
% App. Total	4.7	83.9	11.5		11	71.4	17.6		10.5	80.3	9.2		19.8	63.7	16.5		
PHF	.750	.979	.841	.963	.781	.920	.833	.915	.783	.965	.732	.947	.838	.915	.903	.947	.974

Counts Unlimited
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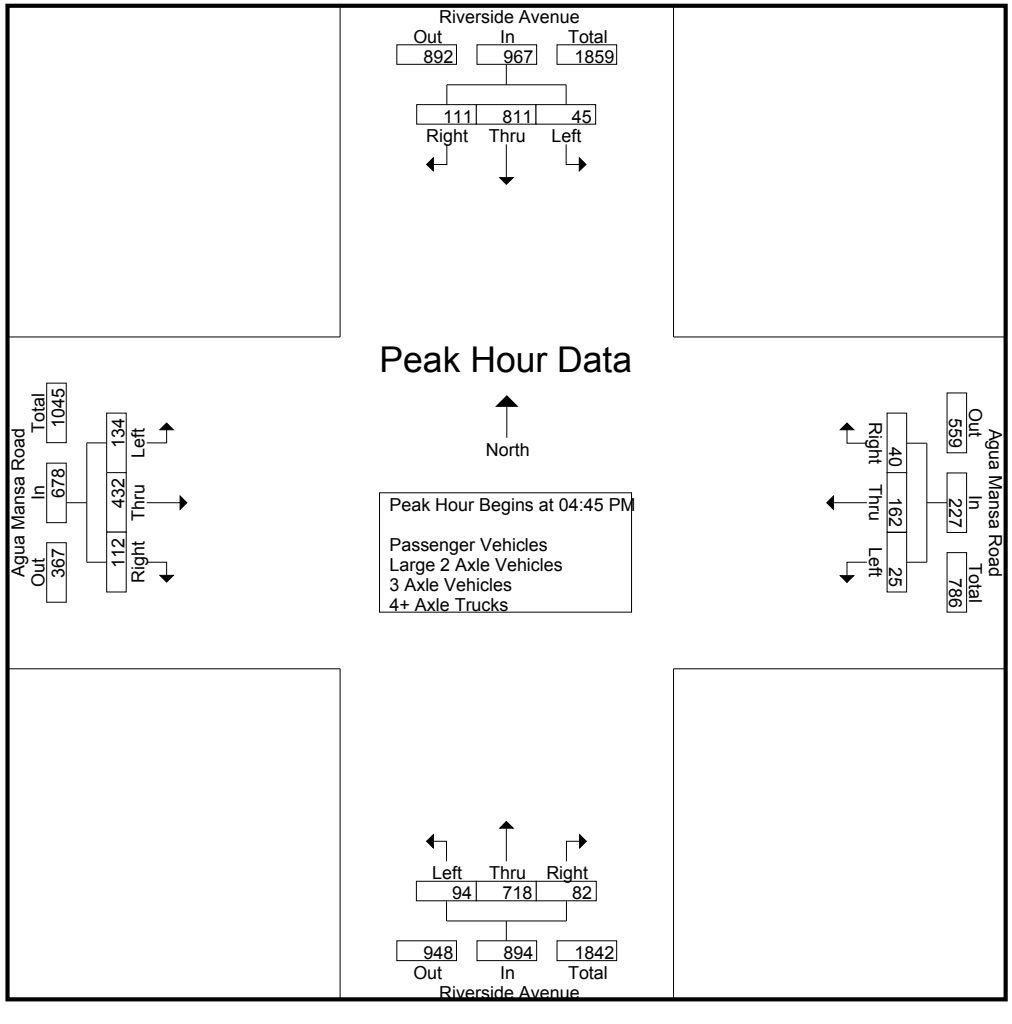
City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:30 PM				
+0 mins.	**15**	203	**33**	**251**	4	37	11	52	22	**186**	17	225	27	102	30	159	
+15 mins.	13	204	20	237	7	42	6	55	**30**	180	26	**236**	**40**	105	**31**	176	
+30 mins.	11	197	28	236	6	**44**	**12**	**62**	22	183	**28**	233	30	110	25	165	
+45 mins.	6	**207**	30	243	**8**	39	11	58	20	169	11	200	30	**118**	31	**179**	
Total Volume	45	811	111	967	25	162	40	227	94	718	82	894	127	435	117	679	
% App. Total	4.7	83.9	11.5		11	71.4	17.6		10.5	80.3	9.2		18.7	64.1	17.2		
PHF	.750	.979	.841	.963	.781	.920	.833	.915	.783	.965	.732	.947	.794	.922	.944	.948	

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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	7	169	13	11	189	9	32	6	4	47	12	143	15	4	170	29	93	37	17	159	36	565	601
04:15 PM	10	157	25	17	192	6	29	1	0	36	28	137	17	0	182	30	89	19	11	138	28	548	576
04:30 PM	10	178	17	10	205	8	29	8	3	45	18	135	22	3	175	22	99	27	18	148	34	573	607
04:45 PM	9	190	28	17	227	3	33	7	5	43	16	172	17	1	205	30	102	26	11	158	34	633	667
Total	36	694	83	55	813	26	123	22	12	171	74	587	71	8	732	111	383	109	57	603	132	2319	2451
05:00 PM	10	194	15	9	219	6	36	3	1	45	20	160	22	3	202	24	107	23	10	154	23	620	643
05:15 PM	8	181	22	16	211	4	35	6	1	45	18	173	26	2	217	27	109	26	11	162	30	635	665
05:30 PM	5	192	23	11	220	8	34	5	2	47	15	152	10	0	177	29	95	19	7	143	20	587	607
05:45 PM	8	131	16	9	155	4	35	4	3	43	13	96	6	1	115	12	75	16	10	103	23	416	439
Total	31	698	76	45	805	22	140	18	7	180	66	581	64	6	711	92	386	84	38	562	96	2258	2354
Grand Total	67	1392	159	100	1618	48	263	40	19	351	140	1168	135	14	1443	203	769	193	95	1165	228	4577	4805
Apprch %	4.1	86	9.8			13.7	74.9	11.4			9.7	80.9	9.4			17.4	66	16.6					
Total %	1.5	30.4	3.5		35.4	1	5.7	0.9		7.7	3.1	25.5	2.9		31.5	4.4	16.8	4.2		25.5	4.7	95.3	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	9	190	**28**	**227**	3	33	**7**	43	16	172	17	205	**30**	102	**26**	158	633
05:00 PM	**10**	**194**	15	219	6	**36**	3	45	**20**	160	22	202	24	107	23	154	620
05:15 PM	8	181	22	211	4	35	6	45	18	**173**	**26**	**217**	27	**109**	26	**162**	**635**
05:30 PM	5	192	23	220	**8**	34	5	**47**	15	152	10	177	29	95	19	143	587
Total Volume	32	757	88	877	21	138	21	180	69	657	75	801	110	413	94	617	2475
% App. Total	3.6	86.3	10		11.7	76.7	11.7		8.6	82	9.4		17.8	66.9	15.2		
PHF	.800	.976	.786	.966	.656	.958	.750	.957	.863	.949	.721	.923	.917	.947	.904	.952	.974

Counts Unlimited
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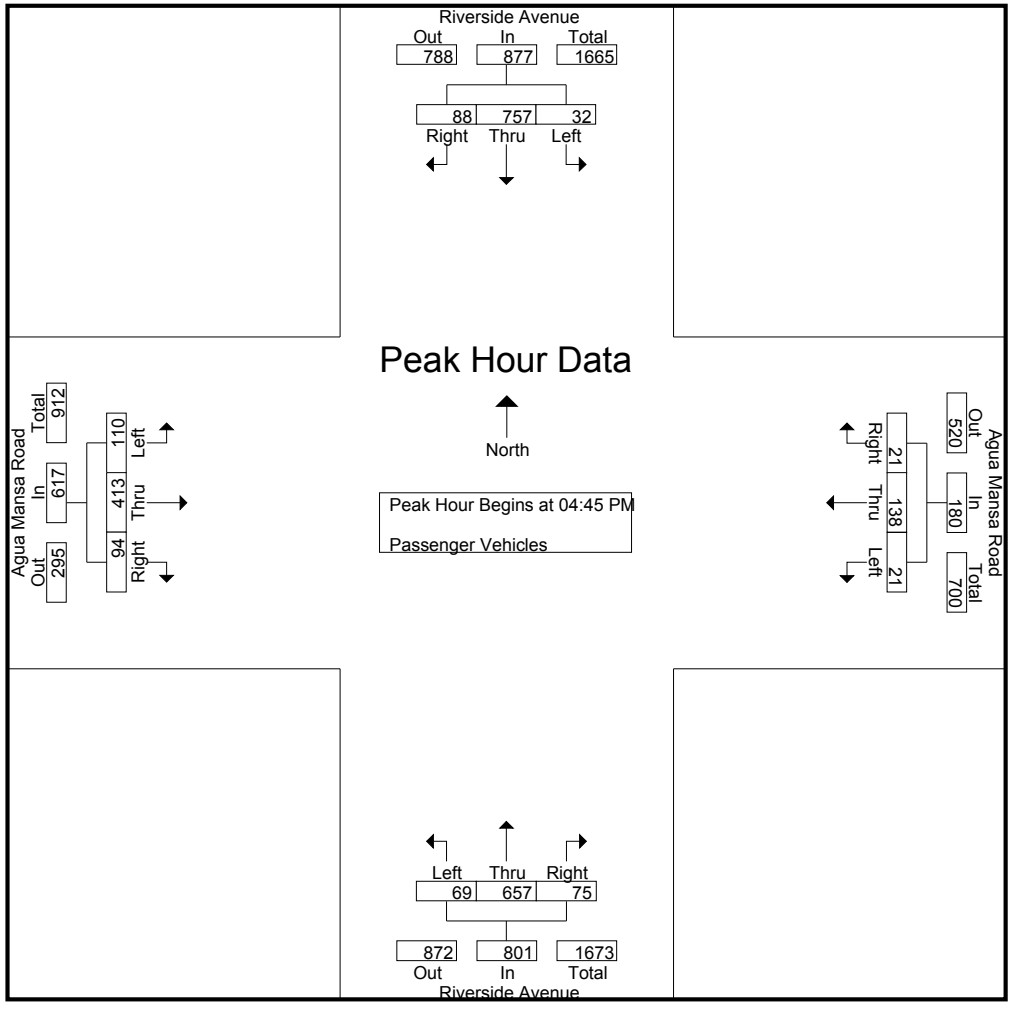
City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	9	190	**28**	**227**	3	33	**7**	43	16	172	17	205	**30**	102	**26**	158	
+15 mins.	**10**	**194**	15	219	6	**36**	3	45	**20**	160	22	202	24	107	23	154	
+30 mins.	8	181	22	211	4	35	6	45	18	**173**	**26**	**217**	27	**109**	26	**162**	
+45 mins.	5	192	23	220	**8**	34	5	**47**	15	152	10	177	29	95	19	143	
Total Volume	32	757	88	877	21	138	21	180	69	657	75	801	110	413	94	617	
% App. Total	3.6	86.3	10		11.7	76.7	11.7		8.6	82	9.4		17.8	66.9	15.2		
PHF	.800	.976	.786	.966	.656	.958	.750	.957	.863	.949	.721	.923	.917	.947	.904	.952	

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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	9	2	0	12	0	1	0	0	1	4	4	0	0	8	0	6	2	1	8	1	29	30
04:15 PM	0	4	1	1	5	1	3	0	0	4	5	6	3	0	14	0	4	1	1	5	2	28	30
04:30 PM	0	3	0	0	3	1	2	0	0	3	5	7	0	0	12	1	3	0	0	4	0	22	22
04:45 PM	0	5	2	1	7	0	2	1	0	3	4	5	0	0	9	2	2	1	0	5	1	24	25
Total	1	21	5	2	27	2	8	1	0	11	18	22	3	0	43	3	15	4	2	22	4	103	107
05:00 PM	0	3	1	1	4	0	2	0	0	2	4	10	0	0	14	1	0	0	0	1	1	21	22
05:15 PM	0	5	1	1	6	1	1	0	0	2	2	5	0	0	7	0	9	1	0	10	1	25	26
05:30 PM	0	7	1	1	8	0	1	1	0	2	3	4	0	0	7	0	2	1	1	3	2	20	22
05:45 PM	0	2	5	1	7	0	1	0	0	1	3	0	0	0	3	0	4	0	0	4	1	15	16
Total	0	17	8	4	25	1	5	1	0	7	12	19	0	0	31	1	15	2	1	18	5	81	86
Grand Total	1	38	13	6	52	3	13	2	0	18	30	41	3	0	74	4	30	6	3	40	9	184	193
Apprch %	1.9	73.1	25			16.7	72.2	11.1			40.5	55.4	4.1			10	75	15					
Total %	0.5	20.7	7.1		28.3	1.6	7.1	1.1		9.8	16.3	22.3	1.6		40.2	2.2	16.3	3.3		21.7	4.7	95.3	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	5	**2**	7	0	**2**	**1**	**3**	**4**	5	0	9	**2**	2	**1**	5	24
05:00 PM	0	3	1	4	0	2	0	2	4	**10**	0	**14**	1	0	0	1	21
05:15 PM	0	5	1	6	**1**	1	0	2	2	5	0	7	0	**9**	1	**10**	**25**
05:30 PM	0	**7**	1	**8**	0	1	1	2	3	4	0	7	0	2	1	3	20
Total Volume	0	20	5	25	1	6	2	9	13	24	0	37	3	13	3	19	90
% App. Total	0	80	20		11.1	66.7	22.2		35.1	64.9	0		15.8	68.4	15.8		
PHF	.000	.714	.625	.781	.250	.750	.500	.750	.813	.600	.000	.661	.375	.361	.750	.475	.900

Counts Unlimited
PO Box 1178
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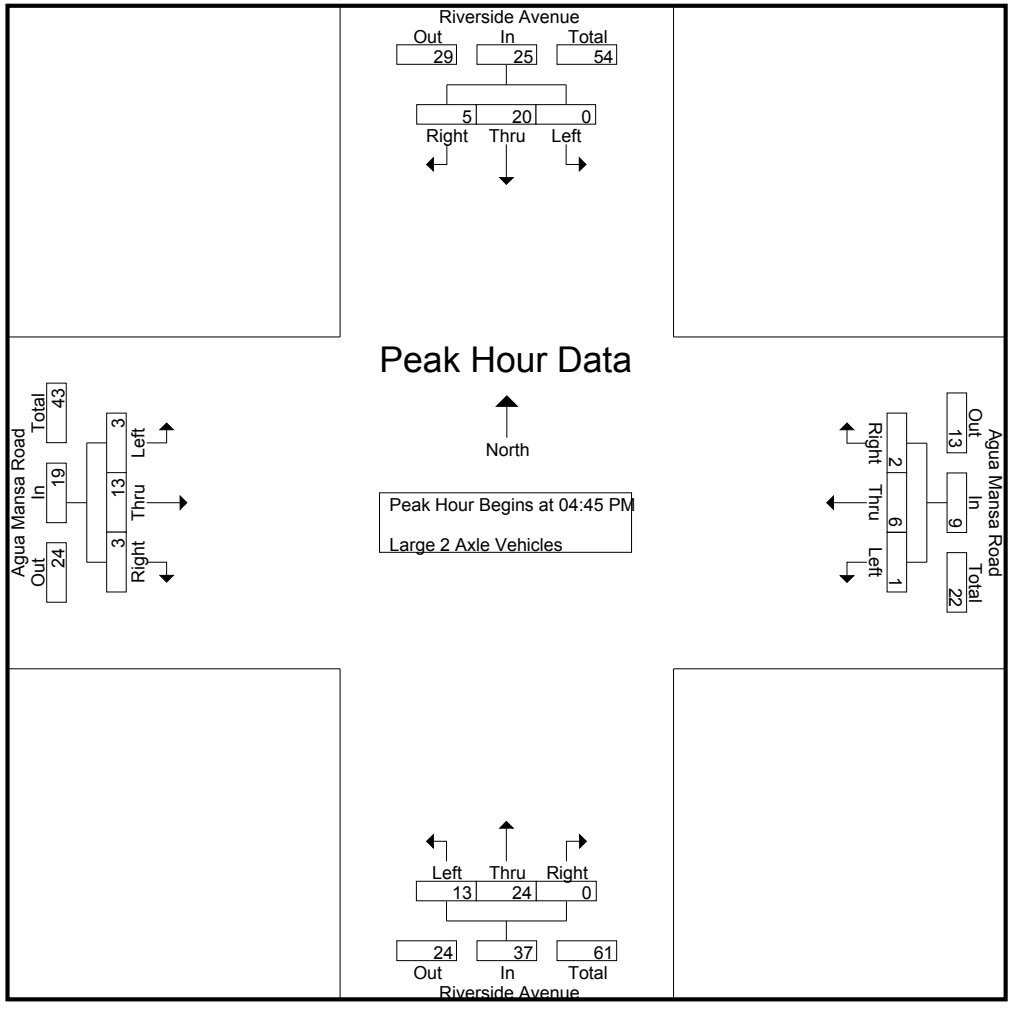
City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	5	**2**	7	0	**2**	**1**	**3**	**4**	5	0	9	**2**	2	**1**	5	
+15 mins.	0	3	1	4	0	2	0	2	4	**10**	0	**14**	1	0	0	1	
+30 mins.	0	5	1	6	**1**	1	0	2	2	5	0	7	0	**9**	1	**10**	
+45 mins.	0	**7**	1	**8**	0	1	1	2	3	4	0	7	0	2	1	3	
Total Volume	0	20	5	25	1	6	2	9	13	24	0	37	3	13	3	19	
% App. Total	0	80	20		11.1	66.7	22.2		35.1	64.9	0		15.8	68.4	15.8		
PHF	.000	.714	.625	.781	.250	.750	.500	.750	.813	.600	.000	.661	.375	.361	.750	.475	

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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	5	2	0	7	0	0	0	0	0	2	2	0	0	4	3	1	1	1	5	1	16	17
04:15 PM	1	7	2	1	10	0	1	0	0	1	2	4	0	0	6	3	0	1	1	4	2	21	23
04:30 PM	0	5	2	2	7	1	1	4	3	6	3	1	2	0	6	3	0	1	1	4	6	23	29
04:45 PM	3	5	2	1	10	0	1	2	1	3	1	4	0	0	5	3	0	4	2	7	4	25	29
Total	4	22	8	4	34	1	3	6	4	10	8	11	2	0	21	12	1	7	5	20	13	85	98
05:00 PM	1	5	4	2	10	0	0	0	0	0	2	4	1	0	7	1	0	1	0	2	2	19	21
05:15 PM	0	6	2	1	8	0	3	1	0	4	0	1	0	0	1	1	0	1	0	2	1	15	16
05:30 PM	0	3	2	1	5	0	0	0	0	0	0	3	1	0	4	1	1	3	1	5	2	14	16
05:45 PM	0	6	1	0	7	1	0	0	0	1	0	5	0	0	5	2	1	0	0	3	0	16	16
Total	1	20	9	4	30	1	3	1	0	5	2	13	2	0	17	5	2	5	1	12	5	64	69
Grand Total	5	42	17	8	64	2	6	7	4	15	10	24	4	0	38	17	3	12	6	32	18	149	167
Apprch %	7.8	65.6	26.6			13.3	40	46.7			26.3	63.2	10.5			53.1	9.4	37.5					
Total %	3.4	28.2	11.4		43	1.3	4	4.7		10.1	6.7	16.1	2.7		25.5	11.4	2	8.1		21.5	10.8	89.2	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**3**	5	2	**10**	0	1	**2**	3	1	**4**	0	5	**3**	0	**4**	**7**	**25**
05:00 PM	1	5	**4**	10	0	0	0	0	**2**	4	**1**	**7**	1	0	1	2	19
05:15 PM	0	**6**	2	8	0	**3**	1	**4**	0	1	0	1	1	0	1	2	15
05:30 PM	0	3	2	5	0	0	0	0	0	3	1	4	1	**1**	3	5	14
Total Volume	4	19	10	33	0	4	3	7	3	12	2	17	6	1	9	16	73
% App. Total	12.1	57.6	30.3		0	57.1	42.9		17.6	70.6	11.8		37.5	6.2	56.2		
PHF	.333	.792	.625	.825	.000	.333	.375	.438	.375	.750	.500	.607	.500	.250	.563	.571	.730

Counts Unlimited
PO Box 1178
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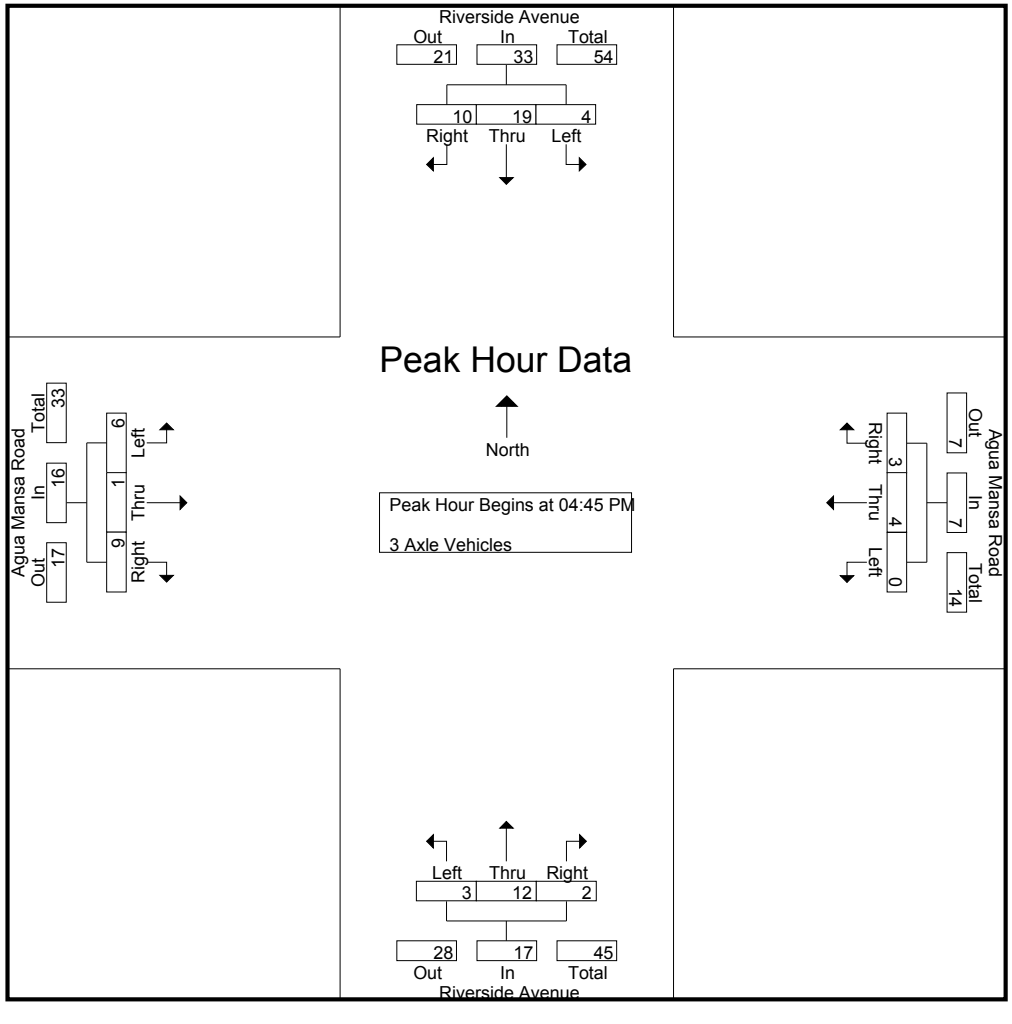
City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 3

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	**3**	5	2	**10**	0	1	**2**	3	1	**4**	0	5	**3**	0	**4**	**7**	
+15 mins.	1	5	**4**	10	0	0	0	0	**2**	4	**1**	**7**	1	0	1	2	
+30 mins.	0	**6**	2	8	0	**3**	1	**4**	0	1	0	1	1	0	1	2	
+45 mins.	0	3	2	5	0	0	0	0	0	3	1	4	1	**1**	3	5	
Total Volume	4	19	10	33	0	4	3	7	3	12	2	17	6	1	9	16	
% App. Total	12.1	57.6	30.3		0	57.1	42.9		17.6	70.6	11.8		37.5	6.2	56.2		
PHF	.333	.792	.625	.825	.000	.333	.375	.438	.375	.750	.500	.607	.500	.250	.563	.571	

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City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

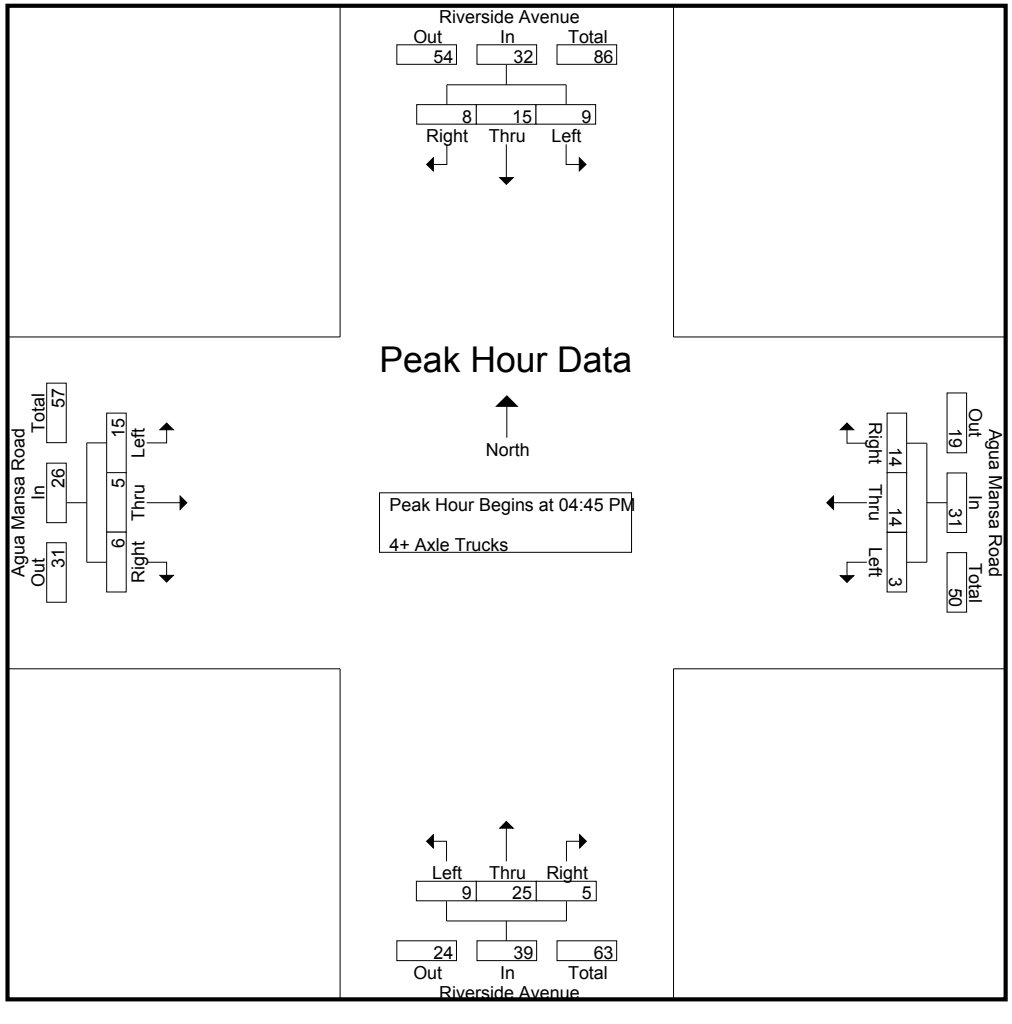
	Riverside Avenue Southbound					Agua Mansa Road Westbound					Riverside Avenue Northbound					Agua Mansa Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	6	6	2	1	14	0	2	2	1	4	2	5	1	0	8	5	2	0	0	7	2	33	35
04:15 PM	5	4	2	1	11	0	2	3	2	5	1	7	3	0	11	5	3	2	1	10	4	37	41
04:30 PM	4	5	5	3	14	0	1	2	1	3	0	3	1	0	4	1	0	2	0	3	4	24	28
04:45 PM	3	3	1	1	7	1	1	1	0	3	1	5	0	0	6	5	1	0	0	6	1	22	23
Total	18	18	10	6	46	1	6	8	4	15	4	20	5	0	29	16	6	4	1	26	11	116	127
05:00 PM	2	2	0	0	4	1	4	3	0	8	4	6	3	0	13	4	3	1	0	8	0	33	33
05:15 PM	3	5	3	2	11	1	5	5	0	11	2	4	2	0	8	2	0	3	1	5	3	35	38
05:30 PM	1	5	4	1	10	0	4	5	2	9	2	10	0	0	12	4	1	2	2	7	5	38	43
05:45 PM	1	5	2	1	8	0	1	3	0	4	1	7	0	0	8	4	1	0	0	5	1	25	26
Total	7	17	9	4	33	2	14	16	2	32	9	27	5	0	41	14	5	6	3	25	9	131	140
Grand Total	25	35	19	10	79	3	20	24	6	47	13	47	10	0	70	30	11	10	4	51	20	247	267
Apprch %	31.6	44.3	24.1			6.4	42.6	51.1			18.6	67.1	14.3			58.8	21.6	19.6					
Total %	10.1	14.2	7.7		32	1.2	8.1	9.7		19	5.3	19	4		28.3	12.1	4.5	4		20.6	7.5	92.5	

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**3**	3	1	7	**1**	1	1	3	1	5	0	6	**5**	1	0	6	22
05:00 PM	2	2	0	4	1	4	3	8	**4**	6	**3**	**13**	4	**3**	1	**8**	33
05:15 PM	3	**5**	3	**11**	1	**5**	**5**	**11**	2	4	2	8	2	0	**3**	5	35
05:30 PM	1	5	**4**	10	0	4	5	9	2	**10**	0	12	4	1	2	7	**38**
Total Volume	9	15	8	32	3	14	14	31	9	25	5	39	15	5	6	26	128
% App. Total	28.1	46.9	25		9.7	45.2	45.2		23.1	64.1	12.8		57.7	19.2	23.1		
PHF	.750	.750	.500	.727	.750	.700	.700	.705	.563	.625	.417	.750	.750	.417	.500	.813	.842

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017
Page No : 2



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road
Weather: Clear

File Name : RLTRIAGPM
Site Code : 05117022
Start Date : 1/19/2017

	Riverside Avenue Southbound				Agua Mansa Road Westbound				Riverside Avenue Northbound				Agua Mansa Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	**3**	3	1	7	**1**	1	1	3	1	5	0	6	**5**	1	0	6	
+15 mins.	2	2	0	4	1	4	3	8	**4**	6	**3**	**13**	4	**3**	1	**8**	
+30 mins.	3	**5**	3	**11**	1	**5**	**5**	**11**	2	4	2	8	2	0	**3**	5	
+45 mins.	1	5	**4**	10	0	4	5	9	2	**10**	0	12	4	1	2	7	
Total Volume	9	15	8	32	3	14	14	31	9	25	5	39	15	5	6	26	
% App. Total	28.1	46.9	25		9.7	45.2	45.2		23.1	64.1	12.8		57.7	19.2	23.1		
PHF	.750	.750	.500	.727	.750	.700	.700	.705	.563	.625	.417	.750	.750	.417	.500	.813	

Location: Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road

Date: 1/19/2017
Day: Thursday

PEDESTRIANS

	North Leg Riverside Avenue	East Leg Agua Mansa Road	South Leg Riverside Avenue	West Leg Agua Mansa Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	2	2
8:00 AM	1	0	0	1	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	3	5

	North Leg Riverside Avenue	East Leg Agua Mansa Road	South Leg Riverside Avenue	West Leg Agua Mansa Road	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	2	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	2	2
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	7	7

Location: Rialto
N/S: Riverside Avenue
E/W: Agua Mansa Road

Date: 1/19/2017
Day: Thursday

BICYCLES

	North Leg Riverside Avenue	East Leg Agua Mansa Road	South Leg Riverside Avenue	West Leg Agua Mansa Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Riverside Avenue	East Leg Agua Mansa Road	South Leg Riverside Avenue	West Leg Agua Mansa Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

T816

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Tue, May 9, 17	LOCATION:	Jurupa Valley	PROJECT #:	SC1321	
	NORTH & SOUTH:	Rancho	LOCATION #:	27	
	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL	

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Rancho)			SOUTHBOUND (Rancho)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	7	66	1	0	131	52	22	3	5	0	5	0	292
7:15 AM	13	84	3	1	190	70	34	5	5	0	6	3	414
7:30 AM	12	69	1	7	182	93	23	5	9	0	8	0	409
7:45 AM	14	63	4	29	185	74	24	10	6	0	7	1	417
8:00 AM	9	55	3	9	127	49	28	9	6	3	12	22	332
8:15 AM	10	42	2	14	109	27	28	2	8	1	4	2	249
8:30 AM	7	49	0	16	97	28	21	3	2	9	2	24	258
8:45 AM	8	43	0	8	73	27	26	4	11	3	4	10	217
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	80	471	14	84	1,094	420	206	41	52	16	48	62	2,588
APPROACH %	14%	83%	2%	5%	68%	26%	69%	14%	17%	13%	38%	49%	
APP/DEPART	565	/ 739		1,598	/ 1,163		299	/ 139		126	/ 547		0
BEGIN PEAK HR		7:15 AM											
VOLUMES	48	271	11	46	684	286	109	29	26	3	33	26	1,572
APPROACH %	15%	82%	3%	5%	67%	28%	66%	18%	16%	5%	53%	42%	
PEAK HR FACTOR		0.825			0.882			0.932			0.419		0.942
APP/DEPART	330	/ 406		1,016	/ 713		164	/ 86		62	/ 367		0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	7	68	0	4	121	40	101	18	13	3	3	18	396
4:15 PM	4	81	8	4	124	33	121	19	10	0	4	6	414
4:30 PM	9	79	0	3	136	29	105	14	20	0	10	5	410
4:45 PM	10	83	0	0	145	26	104	17	22	0	3	0	410
5:00 PM	9	75	0	1	145	28	125	16	19	0	4	2	424
5:15 PM	9	88	0	0	150	32	108	17	35	0	6	1	446
5:30 PM	5	94	1	1	152	35	85	16	16	1	6	3	415
5:45 PM	12	80	2	0	122	28	93	9	26	0	2	2	376
VOLUMES	65	648	11	13	1,095	251	842	126	161	4	38	37	3,291
APPROACH %	9%	90%	2%	1%	81%	18%	75%	11%	14%	5%	48%	47%	
APP/DEPART	724	/ 1,527		1,359	/ 1,260		1,129	/ 150		79	/ 354		0
BEGIN PEAK HR		4:45 PM											
VOLUMES	33	340	1	2	592	121	422	66	92	1	19	6	1,695
APPROACH %	9%	91%	0%	0%	83%	17%	73%	11%	16%	4%	73%	23%	
PEAK HR FACTOR		0.935			0.951			0.906			0.650		0.950
APP/DEPART	374	/ 768		715	/ 685		580	/ 69		26	/ 173		0

U-TURNS

	NB	SB	EB	WB	TTL
	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	1	0	0	0	1
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
	1	0	0	0	1
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
	0	0	0	0	0

Rancho

NORTH SIDE

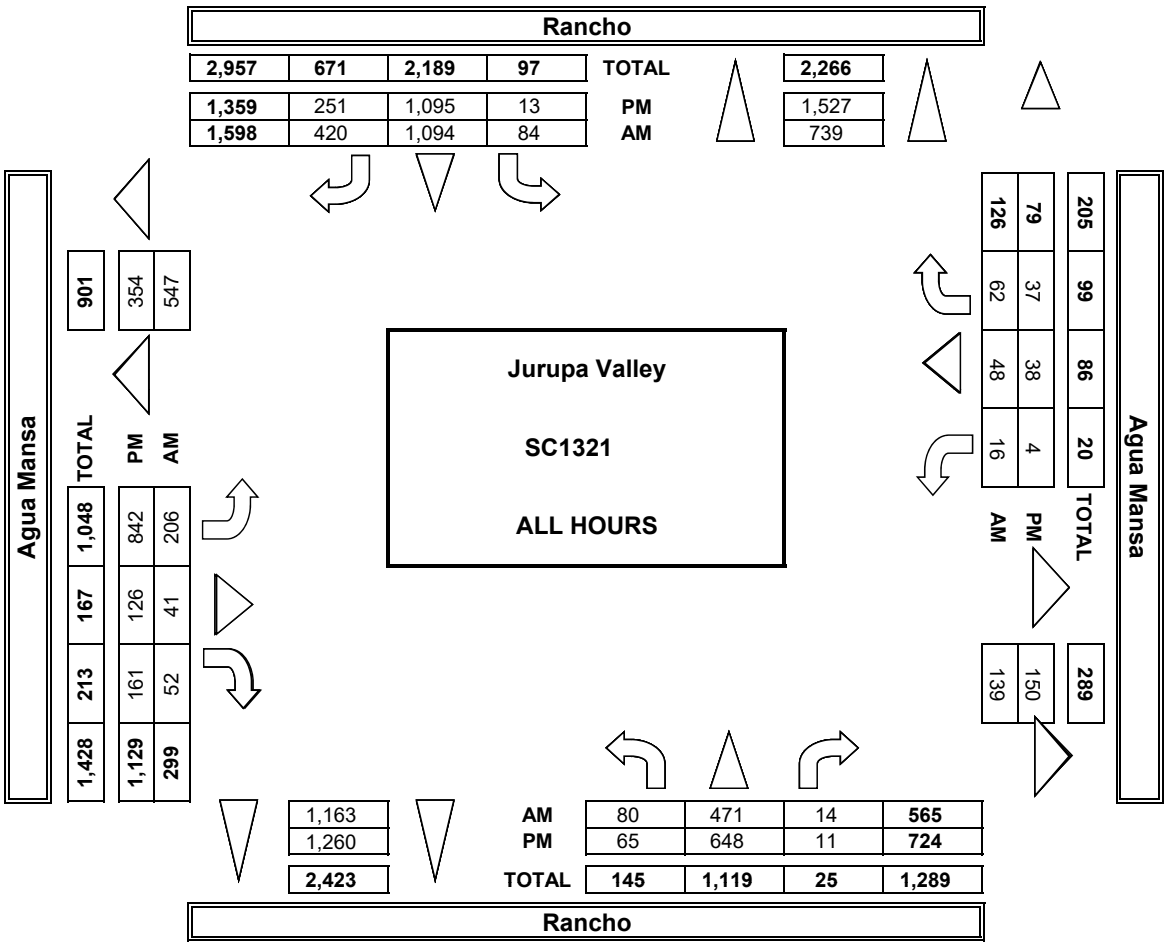
Agua Mansa — WEST SIDE — EAST SIDE — Agua Mansa

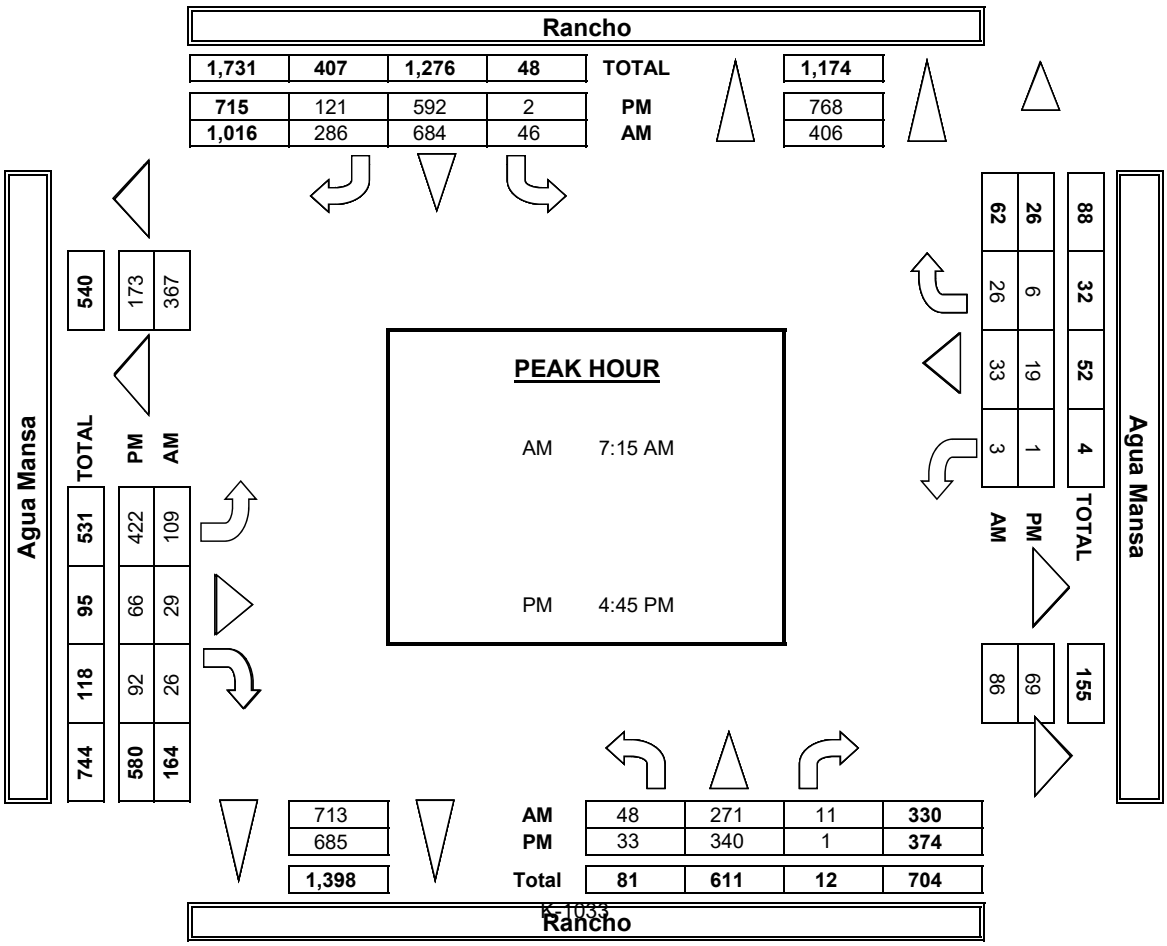
SOUTH SIDE

Rancho

	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER		▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2						

		NORTHBOUND Rancho			SOUTHBOUND Rancho			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	9	71	1	0	134	63	31	4	7	0	5	0	325
	7:15 AM	15	91	3	1	196	72	46	6	6	0	8	4	446
	7:30 AM	14	75	1	7	193	103	33	8	11	0	9	0	452
	7:45 AM	15	68	4	29	196	84	34	11	6	0	8	1	453
	8:00 AM	10	59	3	10	139	55	40	9	11	3	13	24	374
	8:15 AM	15	49	2	14	118	36	40	3	12	1	4	2	294
	8:30 AM	8	61	0	16	109	38	29	3	4	9	2	24	302
	8:45 AM	9	47	0	9	86	32	37	4	14	3	8	11	259
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	94	519	14	86	1,170	481	288	47	70	16	55	65	2,903
	APPROACH %	15%	83%	2%	5%	67%	28%	71%	12%	17%	12%	40%	48%	
	APP/DEPART	627	/	872	1,736	/	1,255	404	/	147	136	/	630	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	53	292	11	47	723	313	152	33	33	3	37	29	1,725
	APPROACH %	15%	82%	3%	4%	67%	29%	70%	15%	15%	4%	54%	42%	
	PEAK HR FACTOR		0.820			0.879			0.916			0.425		0.952
	APP/DEPART	356	/	473	1,083	/	759	218	/	91	68	/	402	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	9	74	0	4	126	49	107	19	15	3	3	18	426
	4:15 PM	5	84	8	4	131	38	125	21	10	0	4	6	434
	4:30 PM	12	81	0	3	141	34	111	17	26	0	11	5	439
	4:45 PM	11	84	0	0	148	31	110	17	24	0	3	0	428
	5:00 PM	10	81	0	1	153	31	129	17	20	0	4	2	448
	5:15 PM	9	89	0	0	154	37	111	18	41	0	7	1	465
	5:30 PM	8	95	1	1	161	43	87	17	17	1	6	3	438
	5:45 PM	13	83	2	0	125	32	96	9	28	0	2	2	390
	VOLUMES	76	669	11	13	1,137	293	874	133	181	4	39	37	3,466
	APPROACH %	10%	89%	1%	1%	79%	20%	74%	11%	15%	5%	49%	46%	
	APP/DEPART	756	/	1,580	1,443	/	1,322	1,188	/	157	80	/	408	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	42	334	0	4	595	132	461	68	111	0	24	8	1,779
	APPROACH %	11%	89%	0%	1%	81%	18%	72%	11%	17%	0%	75%	25%	
	PEAK HR FACTOR		0.964			0.959			0.943			0.516		0.956
	APP/DEPART	376	/	803	731	/	706	640	/	72	32	/	198	0

Rancho

NORTH SIDE

Agua Mansa WEST SIDE EAST SIDE **Agua Mansa**

SOUTH SIDE

Rancho

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

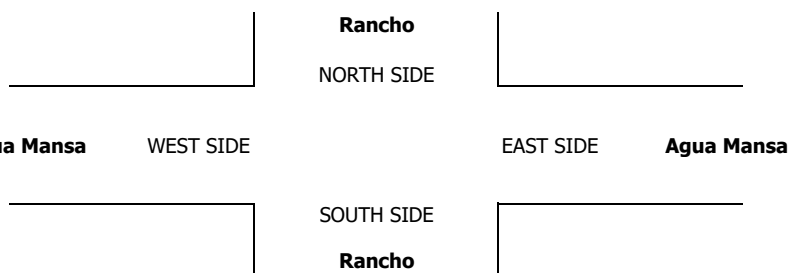
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Rancho)			SOUTHBOUND (Rancho)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	4	61	1	0	126	43	14	1	4	0	5	0	259	0	0	0	0	0
7:15 AM	10	78	3	1	184	69	24	4	4	0	3	2	382	0	0	0	0	0
7:30 AM	11	66	1	7	174	83	16	3	7	0	7	0	375	0	0	0	0	0
7:45 AM	13	59	4	29	176	64	16	9	6	0	6	1	383	0	0	0	0	0
8:00 AM	8	52	3	8	119	44	18	9	2	3	11	20	297	0	0	0	0	0
8:15 AM	7	35	2	14	99	20	18	1	4	1	4	2	207	0	0	0	0	0
8:30 AM	6	40	0	16	86	19	15	3	1	9	2	24	221	0	0	0	0	0
8:45 AM	6	39	0	7	62	23	18	4	9	3	1	9	181	1	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	65	430	14	82	1,026	365	139	34	37	16	39	58	2,305	1	0	0	0	1
APPROACH %	13%	84%	3%	6%	70%	25%	66%	16%	18%	14%	35%	51%						
APP/DEPART	509	/	627	1,473	/	1,080	210	/	130	113	/	468	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	42	255	11	45	653	260	74	25	19	3	27	23	1,437					
APPROACH %	14%	83%	4%	5%	68%	27%	63%	21%	16%	6%	51%	43%						
PEAK HR FACTOR		0.846			0.890			0.922			0.390		0.938					
APP/DEPART	308	/	352	958	/	675	118	/	81	53	/	329	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	5	63	0	4	115	29	94	17	11	3	3	18	362	0	0	0	0	0
4:15 PM	2	77	8	4	115	29	115	17	10	0	4	6	387	0	0	0	0	0
4:30 PM	5	76	0	3	131	25	99	12	17	0	9	5	382	0	0	0	0	0
4:45 PM	9	81	0	0	142	22	98	17	20	0	3	0	392	0	0	0	0	0
5:00 PM	8	69	0	1	137	25	117	14	18	0	4	2	395	0	0	0	0	0
5:15 PM	9	87	0	0	147	29	104	16	29	0	5	1	427	0	0	0	0	0
5:30 PM	3	92	1	1	146	30	82	15	15	1	6	3	395	0	0	0	0	0
5:45 PM	11	76	2	0	118	26	91	9	23	0	2	2	360	0	0	0	0	0
VOLUMES	52	621	11	13	1,051	215	800	117	143	4	36	37	3,100	0	0	0	0	0
APPROACH %	8%	91%	2%	1%	82%	17%	75%	11%	13%	5%	47%	48%						
APP/DEPART	684	/	1,458	1,279	/	1,198	1,060	/	141	77	/	303	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	29	329	1	2	572	106	401	62	82	1	18	6	1,609					
APPROACH %	8%	92%	0%	0%	84%	16%	74%	11%	15%	4%	72%	24%						
PEAK HR FACTOR		0.935			0.960			0.914			0.625		0.942					
APP/DEPART	359	/	736	680	/	655	545	/	65	25	/	153	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

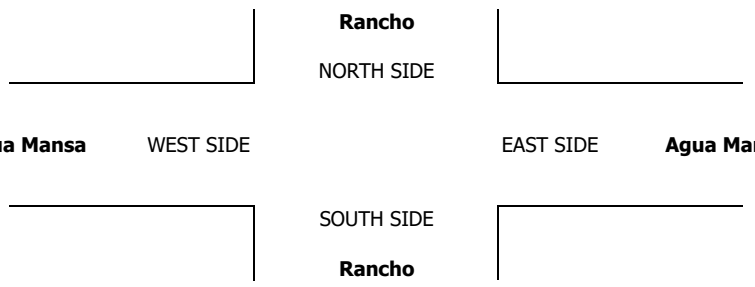
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND (Rancho)			SOUTHBOUND (Rancho)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	2	2	0	0	4	3	2	2	0	0	0	0	15	0	0	0	0	0
7:15 AM	2	3	0	0	4	0	4	1	1	0	3	1	19	0	0	0	0	0
7:30 AM	0	0	0	0	3	5	1	0	0	0	1	0	10	0	0	0	0	0
7:45 AM	1	2	0	0	3	3	3	1	0	0	1	0	14	0	0	0	0	0
8:00 AM	1	1	0	0	2	1	2	0	1	0	0	0	8	0	0	0	0	0
8:15 AM	0	4	0	0	6	3	3	1	3	0	0	0	20	0	0	0	0	0
8:30 AM	0	3	0	0	5	4	1	0	0	0	0	0	13	0	0	0	0	0
8:45 AM	2	3	0	0	4	0	2	0	0	0	1	1	13	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	8	18	0	0	31	19	18	5	5	0	6	2	112	0	0	0	0	0
APPROACH %	31%	69%	0%	0%	62%	38%	64%	18%	18%	0%	75%	25%						
APP/DEPART	26	/	38	50	/	36	28	/	5	8	/	33	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	5	7	0	0	14	11	10	4	1	0	5	1	58					
APPROACH %	42%	58%	0%	0%	56%	44%	67%	27%	7%	0%	83%	17%						
PEAK HR FACTOR		0.600			0.781			0.625			0.375		0.763					
APP/DEPART	12	/	18	25	/	15	15	/	4	6	/	21	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	2	0	0	4	6	5	1	0	0	0	0	19	0	0	0	0	0
4:15 PM	2	3	0	0	7	1	4	1	0	0	0	0	18	0	0	0	0	0
4:30 PM	2	2	0	0	1	1	1	1	0	0	1	0	9	0	0	0	0	0
4:45 PM	0	2	0	0	1	2	2	0	0	0	0	0	7	0	0	0	0	0
5:00 PM	0	3	0	0	4	2	8	2	0	0	0	0	19	0	0	0	0	0
5:15 PM	0	1	0	0	0	1	2	1	2	0	1	0	8	0	0	0	0	0
5:30 PM	1	2	0	0	1	1	3	1	0	0	0	0	9	0	0	0	0	0
5:45 PM	1	3	0	0	3	0	1	0	2	0	0	0	10	0	0	0	0	0
VOLUMES	7	18	0	0	21	14	26	7	4	0	2	0	99	0	0	0	0	0
APPROACH %	28%	72%	0%	0%	60%	40%	70%	19%	11%	0%	100%	0%						
APP/DEPART	25	/	44	35	/	25	37	/	7	2	/	23	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	4	10	0	0	13	6	15	4	0	0	1	0	53					
APPROACH %	29%	71%	0%	0%	68%	32%	79%	21%	0%	0%	100%	0%						
PEAK HR FACTOR		0.700			0.475			0.475			0.250		0.697					
APP/DEPART	14	/	25	19	/	13	19	/	4	1	/	11	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

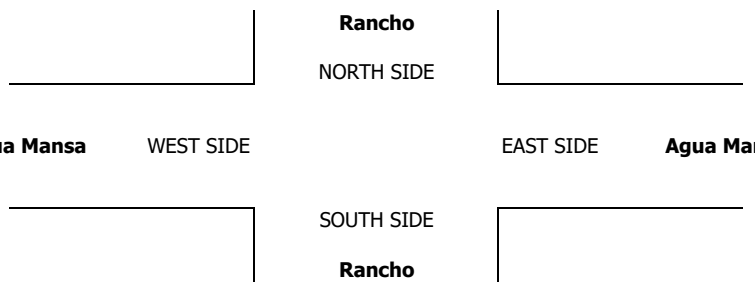
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Rancho)			SOUTHBOUND (Rancho)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	1	0	0	0	3	4	0	0	0	0	0	8	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0
7:30 AM	0	0	0	0	1	3	3	1	2	0	0	0	10	0	0	0	0	0
7:45 AM	0	0	0	0	3	6	2	0	0	0	0	0	11	0	0	0	0	0
8:00 AM	0	0	0	0	0	3	5	0	2	0	0	0	10	0	0	0	0	0
8:15 AM	1	0	0	0	2	1	4	0	0	0	0	0	8	0	0	0	0	0
8:30 AM	1	2	0	0	2	2	3	0	0	0	0	0	10	0	0	0	0	0
8:45 AM	0	0	0	1	3	3	2	0	1	0	1	0	11	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	2	4	0	1	11	21	25	1	5	0	1	0	71	0	0	0	0	0
APPROACH %	33%	67%	0%	3%	33%	64%	81%	3%	16%	0%	100%	0%						
APP/DEPART	6	/	29	33	/	16	31	/	2	1	/	24	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	2	2	0	1	7	9	14	0	3	0	1	0	39					
APPROACH %	50%	50%	0%	6%	41%	53%	82%	0%	18%	0%	100%	0%						
PEAK HR FACTOR		0.333			0.472			0.607			0.250		0.886					
APP/DEPART	4	/	16	17	/	10	17	/	1	1	/	12	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	1	0	0	1	4	1	0	2	0	0	0	10	0	0	0	0	0
4:15 PM	0	1	0	0	1	2	2	1	0	0	0	0	7	0	0	0	0	0
4:30 PM	2	1	0	0	2	2	4	0	0	0	0	0	11	0	0	0	0	0
4:45 PM	1	0	0	0	1	0	3	0	2	0	0	0	7	0	0	0	0	0
5:00 PM	1	1	0	0	2	0	0	0	1	0	0	0	5	0	0	0	0	0
5:15 PM	0	0	0	0	2	0	2	0	3	0	0	0	7	0	0	0	0	0
5:30 PM	0	0	0	0	2	1	0	0	1	0	0	0	4	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
VOLUMES	5	4	0	0	12	9	12	1	9	0	0	0	52	0	0	0	0	0
APPROACH %	56%	44%	0%	0%	57%	43%	55%	5%	41%	0%	0%	0%						
APP/DEPART	9	/	16	21	/	21	22	/	1	0	/	14	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	4	3	0	0	5	8	10	1	4	0	0	0	35					
APPROACH %	57%	43%	0%	0%	38%	62%	67%	7%	27%	0%	0%	0%						
PEAK HR FACTOR		0.583			0.650			0.750			0.000		0.795					
APP/DEPART	7	/	13	13	/	9	15	/	1	0	/	12	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

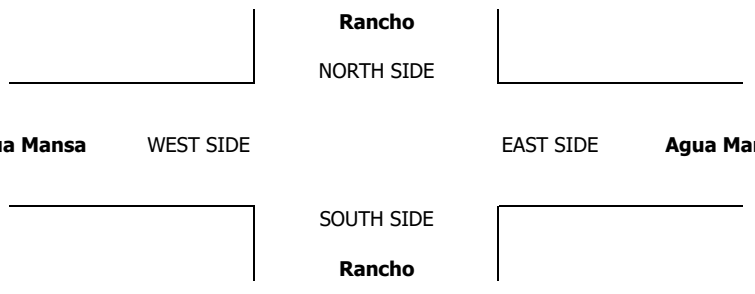
DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND (Rancho)			SOUTHBOUND (Rancho)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	1	0	0	0	3	2	0	1	0	0	0	7	0	0	0	0	0
7:15 AM	0	2	0	0	2	1	4	0	0	0	0	0	9	0	0	0	0	0
7:30 AM	1	3	0	0	4	2	3	1	0	0	0	0	14	0	0	0	0	0
7:45 AM	0	2	0	0	3	1	3	0	0	0	0	0	9	0	0	0	0	0
8:00 AM	0	1	0	0	5	1	3	0	1	0	0	0	11	0	0	0	0	0
8:15 AM	2	2	0	0	2	3	3	0	1	0	0	0	13	0	0	0	0	0
8:30 AM	0	4	0	0	3	3	2	0	1	0	0	0	13	0	0	0	0	0
8:45 AM	0	1	0	0	4	1	4	0	1	0	1	0	12	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	3	16	0	0	23	15	24	1	5	0	1	0	88	0	0	0	0	0
APPROACH %	16%	84%	0%	0%	61%	39%	80%	3%	17%	0%	100%	0%						
APP/DEPART	19	/	40	38	/	28	30	/	1	1	/	19	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	2	8	0	0	14	8	12	0	4	0	1	0	49					
APPROACH %	20%	80%	0%	0%	64%	36%	75%	0%	25%	0%	100%	0%						
PEAK HR FACTOR		0.625			0.917			0.800			0.250		0.942					
APP/DEPART	10	/	20	22	/	18	16	/	0	1	/	11	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	2	0	0	1	1	1	0	0	0	0	0	5	0	0	0	0	0
4:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	1	3	0	0	0	5	0	0	0	0	0
4:45 PM	0	0	0	0	0	2	1	0	0	0	0	0	3	0	0	0	0	0
5:00 PM	0	1	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0
5:15 PM	0	0	0	0	1	2	0	0	1	0	0	0	4	0	0	0	0	0
5:30 PM	1	0	0	0	3	3	0	0	0	0	0	0	7	0	0	0	0	0
5:45 PM	0	0	0	0	0	2	1	0	0	0	0	0	3	0	0	0	0	0
VOLUMES	1	3	0	0	8	13	3	1	4	0	0	0	33	0	0	0	0	0
APPROACH %	25%	75%	0%	0%	38%	62%	38%	13%	50%	0%	0%	0%						
APP/DEPART	4	/	6	21	/	12	8	/	1	0	/	14	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	1	1	0	0	6	8	1	0	1	0	0	0	18					
APPROACH %	50%	50%	0%	0%	43%	57%	50%	0%	50%	0%	0%	0%						
PEAK HR FACTOR		0.500			0.583			0.500			0.000		0.643					
APP/DEPART	2	/	2	14	/	7	2	/	0	0	/	9	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Rancho)			SOUTHBOUND (Rancho)			EASTBOUND (Agua Mansa)			WESTBOUND (Agua Mansa)				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
APP/DEPART	0	/	0	1	/	2	1	/	0	0	/	0	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	0	0	0	0	0	0	0	0	1	0	0	0	1					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250					
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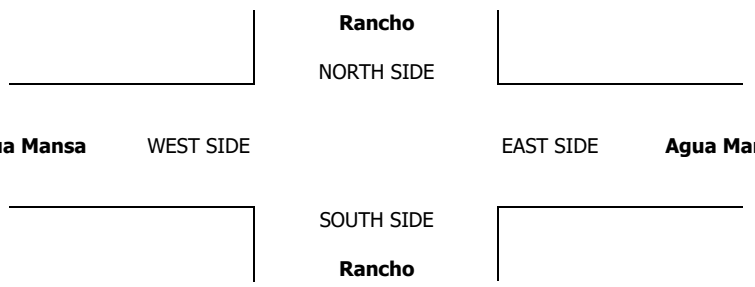

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC1321
5/9/17	NORTH & SOUTH:	Rancho	LOCATION #:	27
TUESDAY	EAST & WEST:	Agua Mansa	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
BUSES			

		NORTHBOUND Rancho			SOUTHBOUND Rancho			EASTBOUND Agua Mansa			WESTBOUND Agua Mansa				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	1	1	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	7:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	2	3	0	1	3	0	0	0	0	0	1	2	12	0	0	0	0	0
	APPROACH %	40%	60%	0%	25%	75%	0%	0%	0%	0%	0%	33%	67%						
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	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	2	0	1	2	0	0	0	0	0	1	2	8					
	APPROACH %	0%	100%	0%	33%	67%	0%	0%	0%	0%	0%	33%	67%						
	PEAK HR FACTOR		0.500			0.375			0.000			0.250		0.333					
	APP/DEPART	2	/	4	3	/	2	0	/	1	3	/	1	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	0	0	2	0	1	0	0	0	0	0	5	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	3	2	/	2	1	/	0	0	/	0	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	1	0	0	2	0	1	0	0	0	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.250			0.250			0.000		0.333					
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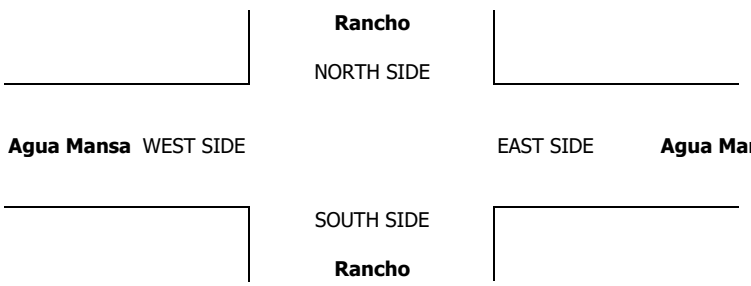
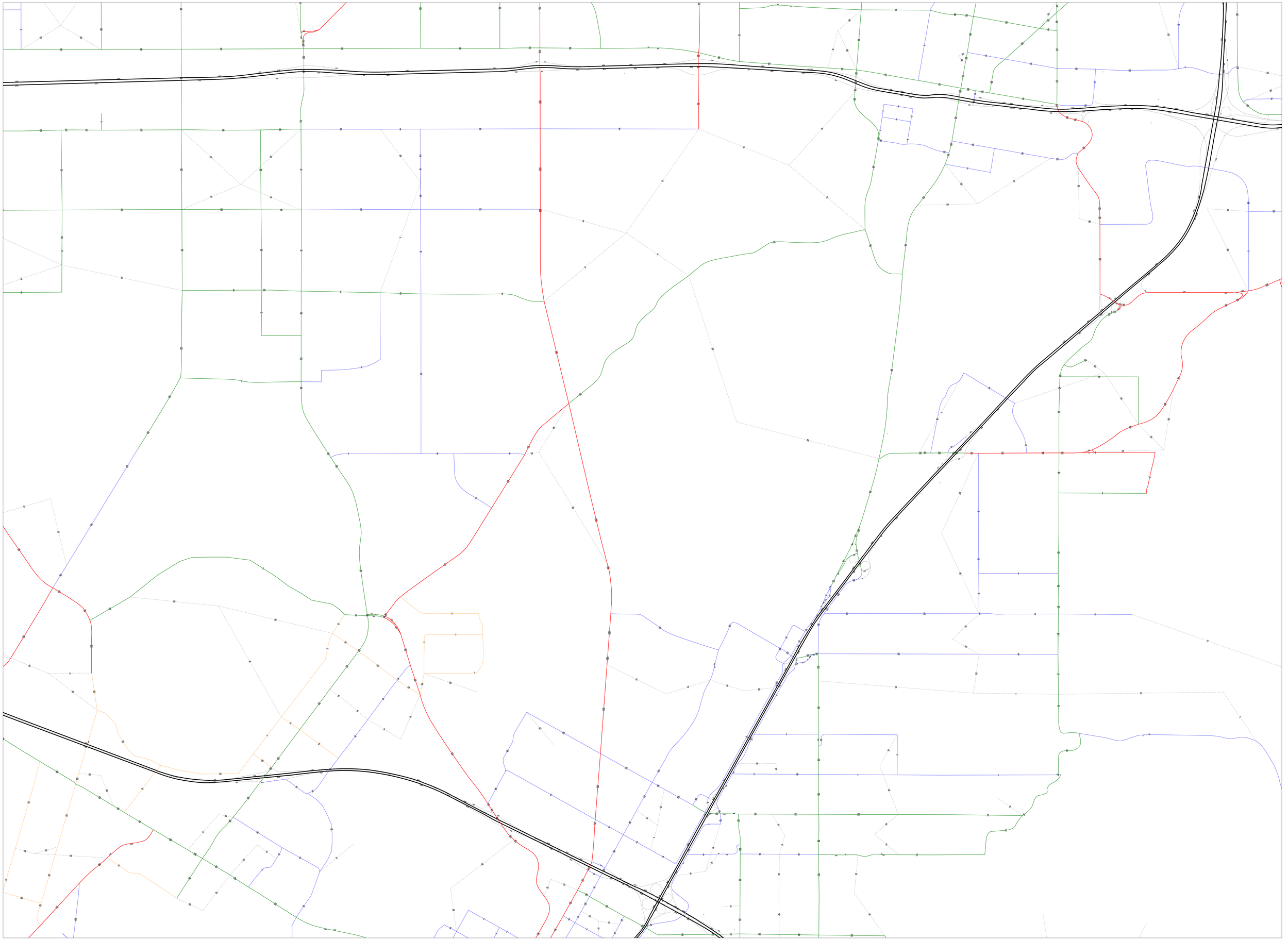


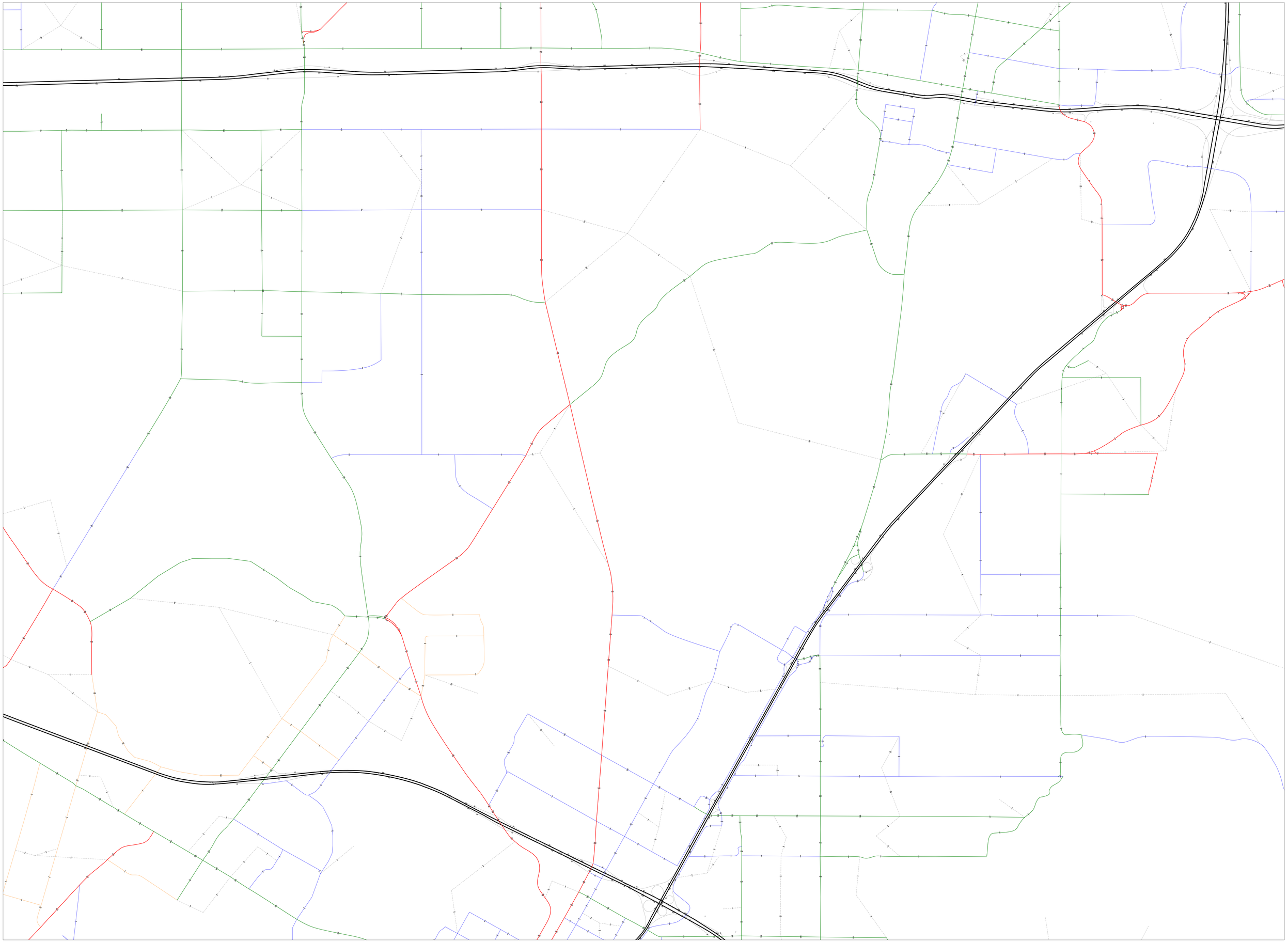
APPENDIX D

RIVTAM PLOTS

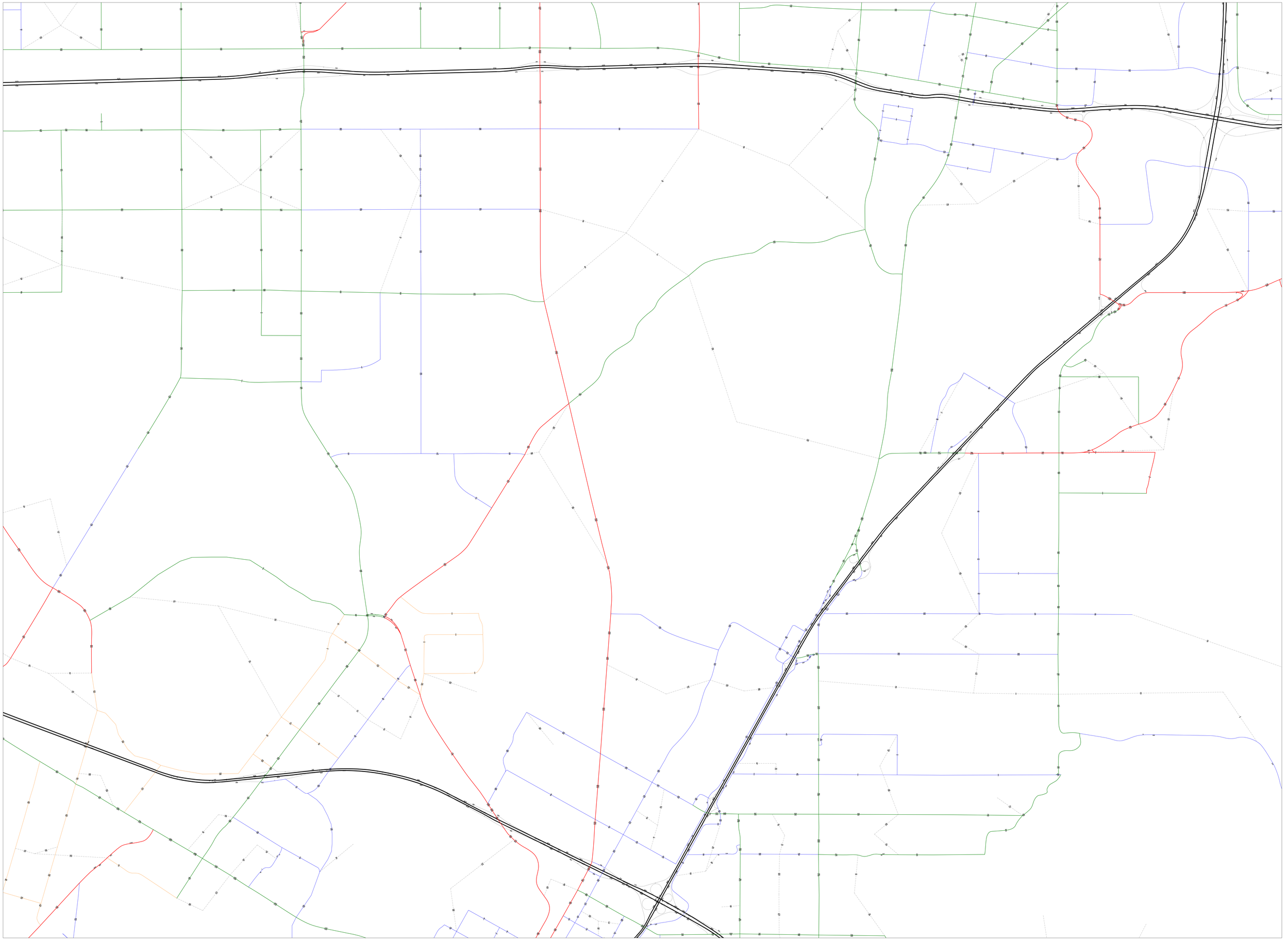
Year 2007 AM Peak Hour - Cars



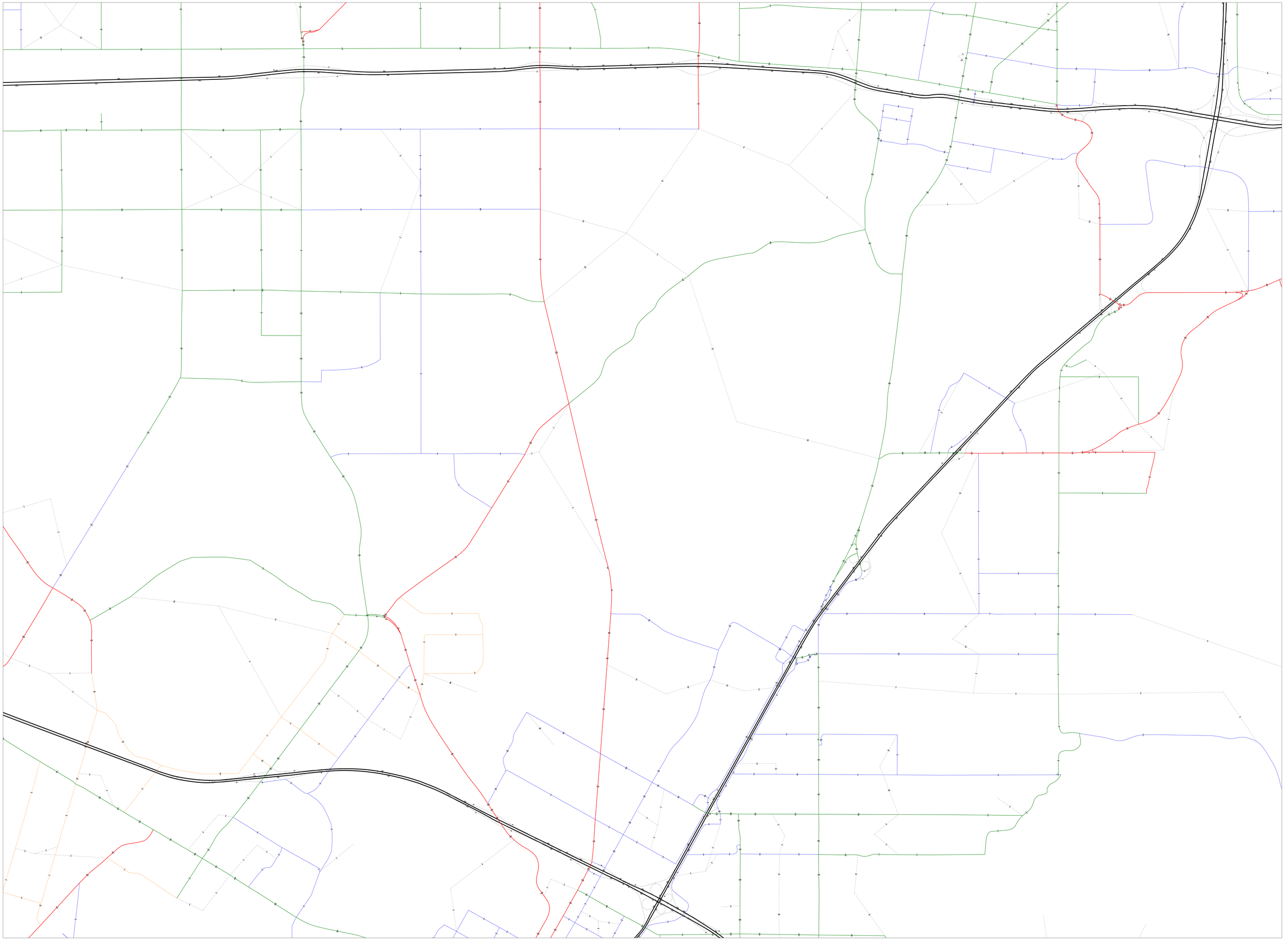
Year 2007 AM Peak Hour - Trucks PCE



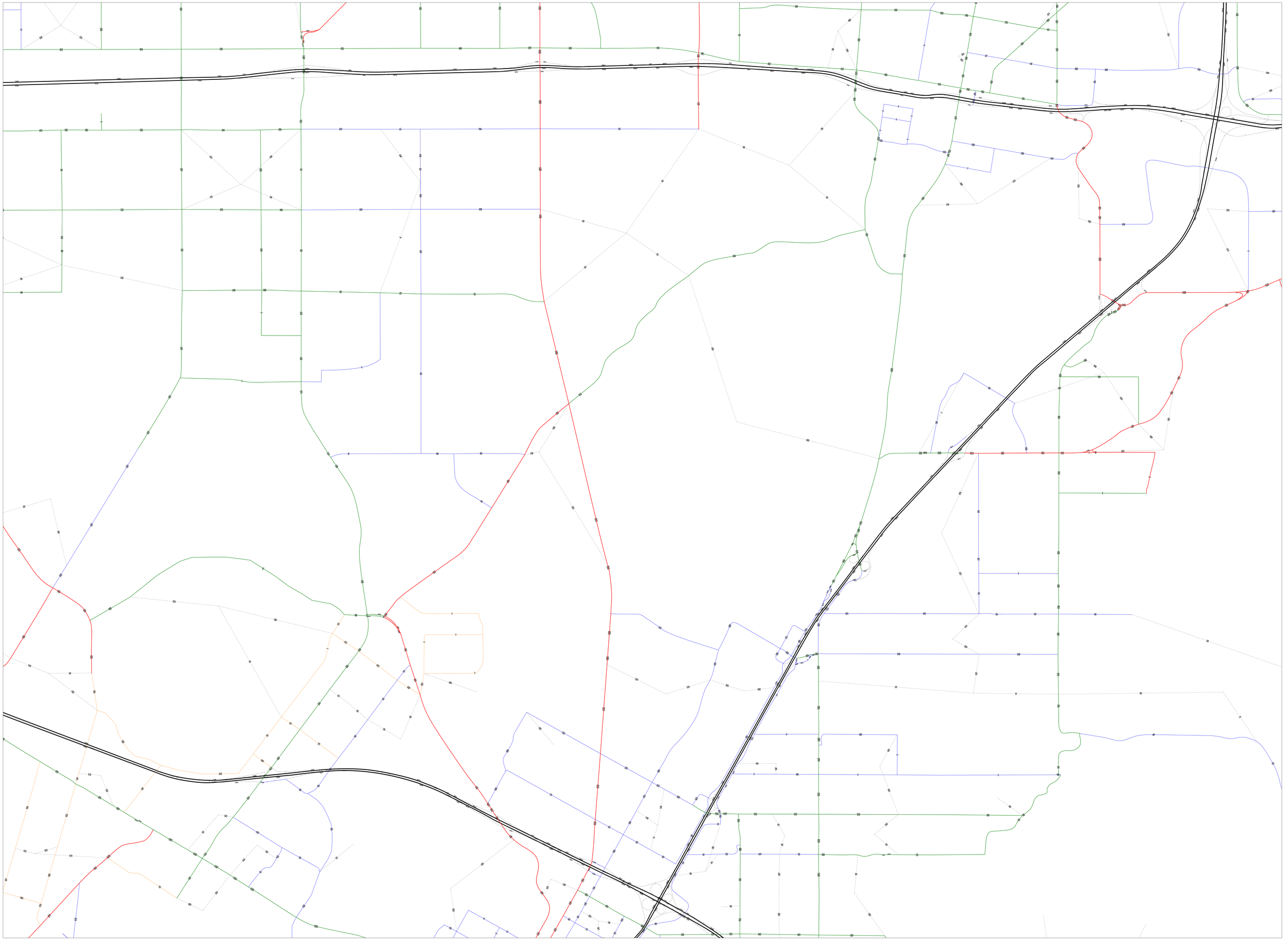
Year 2007 PM Peak Hour - Cars



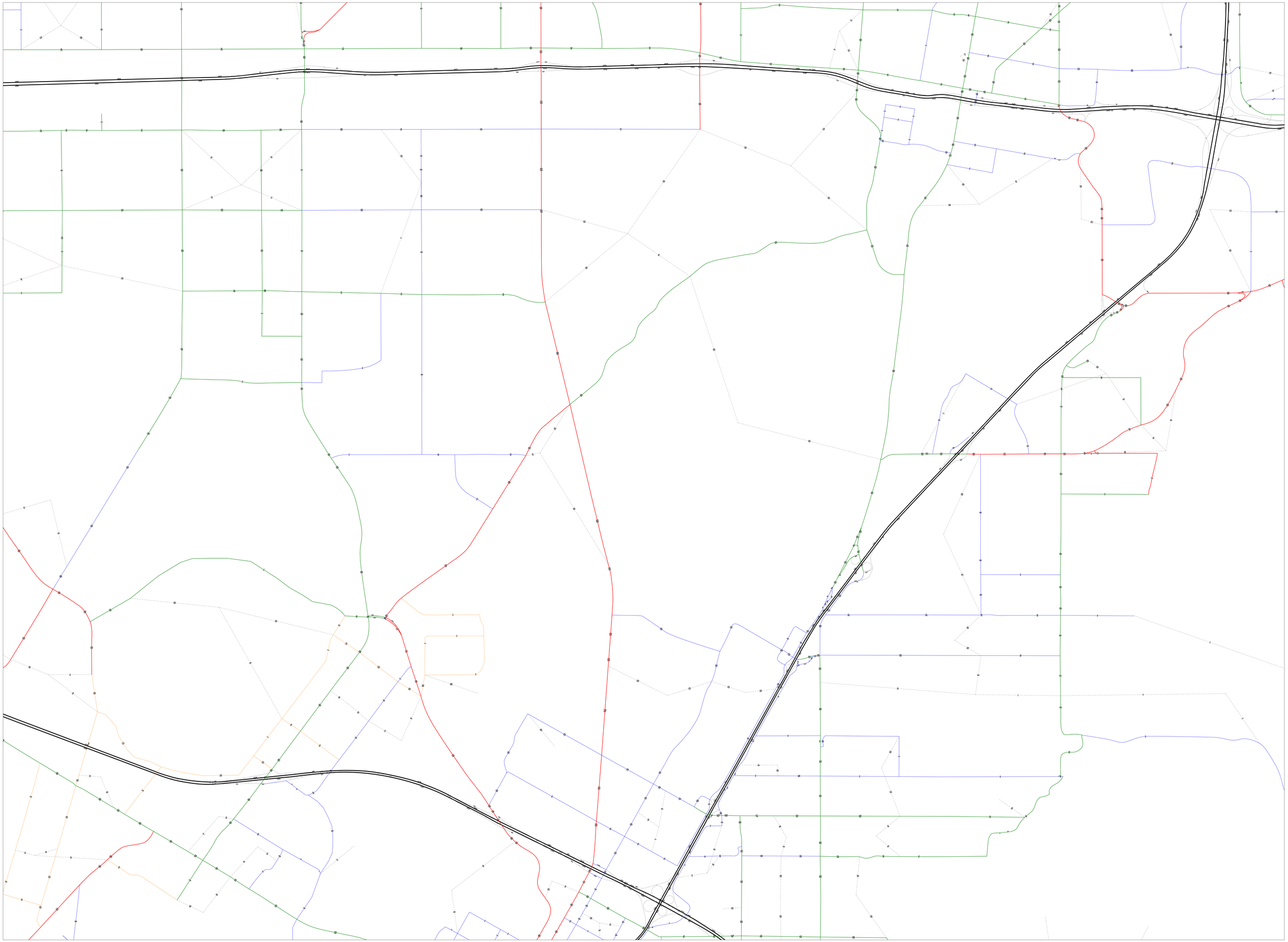
Year 2007 PM Peak Hour - Trucks PCE



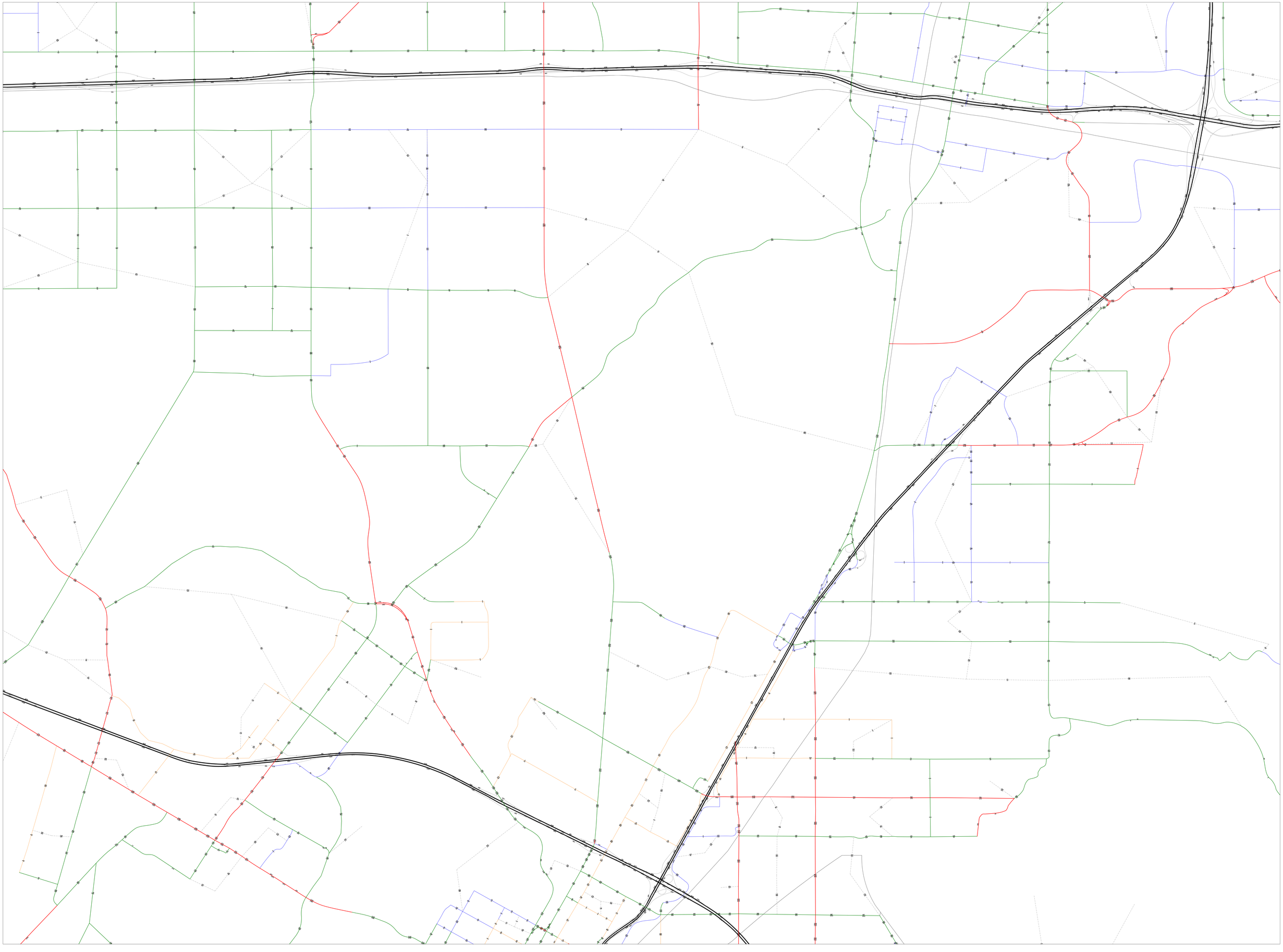
Year 2007 Daily - Cars



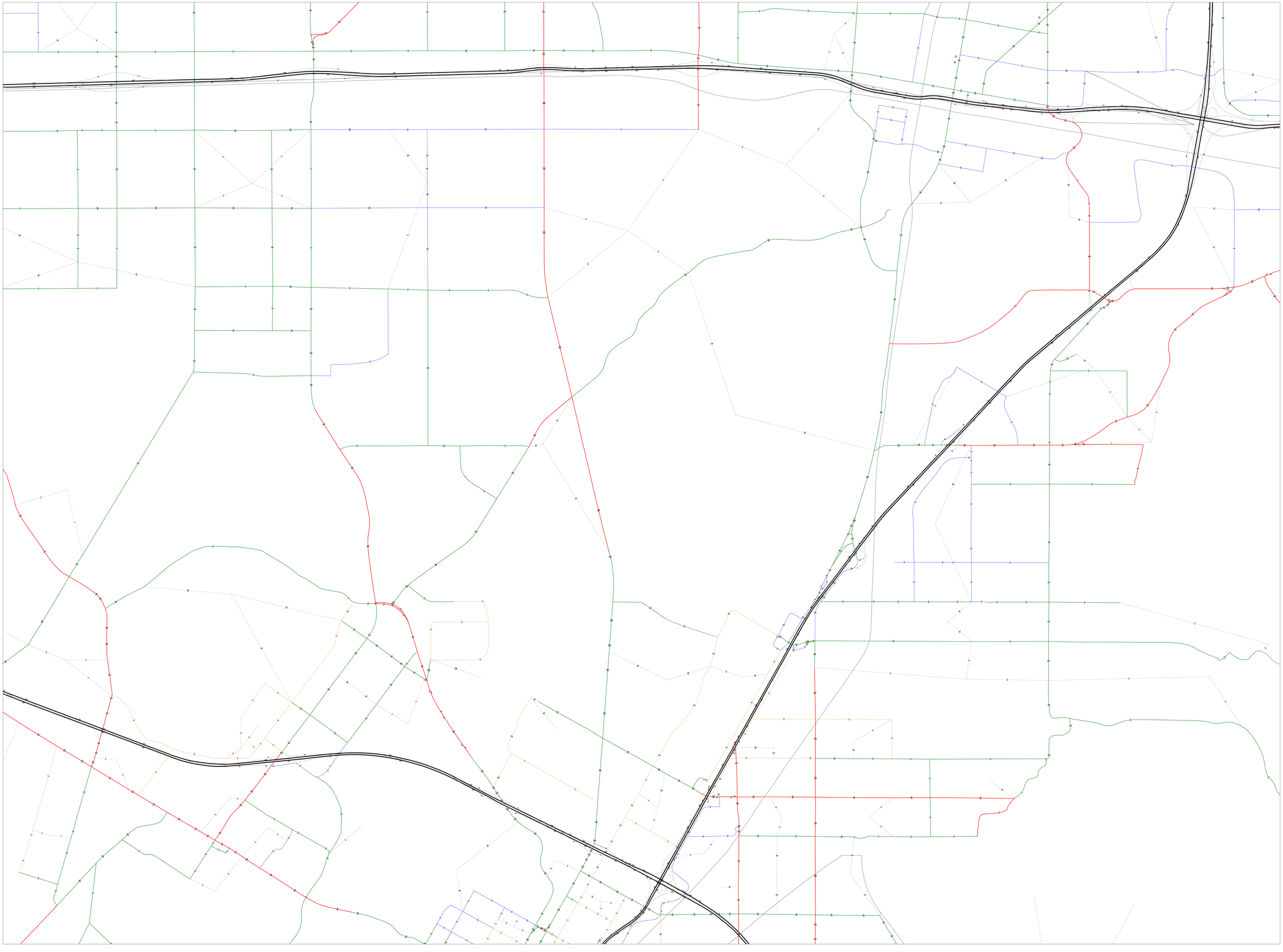
Year 2007 Daily - TrucksPCE



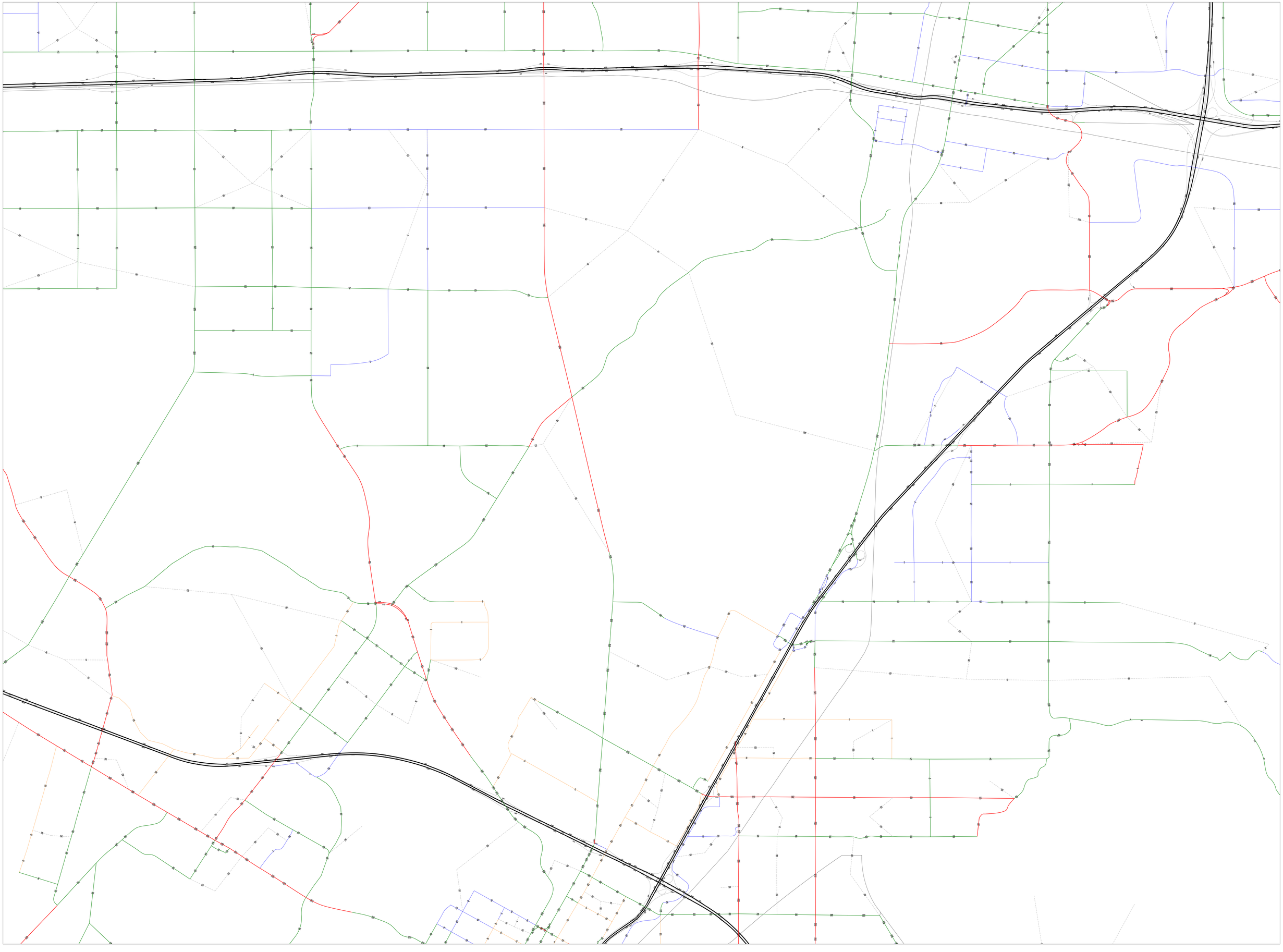
Year 2035 AM Peak Hour - Cars



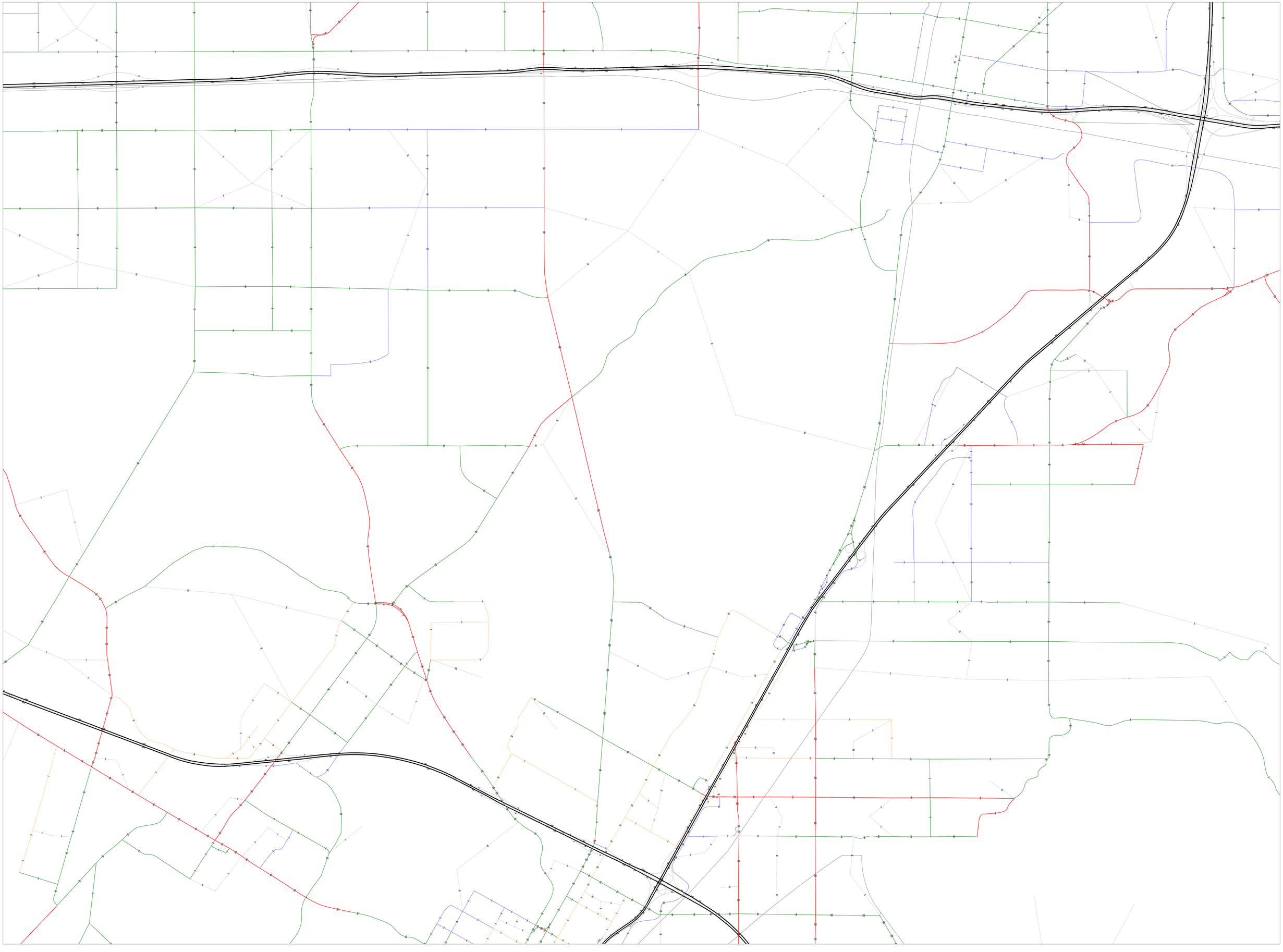
Year 2035 AM Peak Hour - TrucksPCE



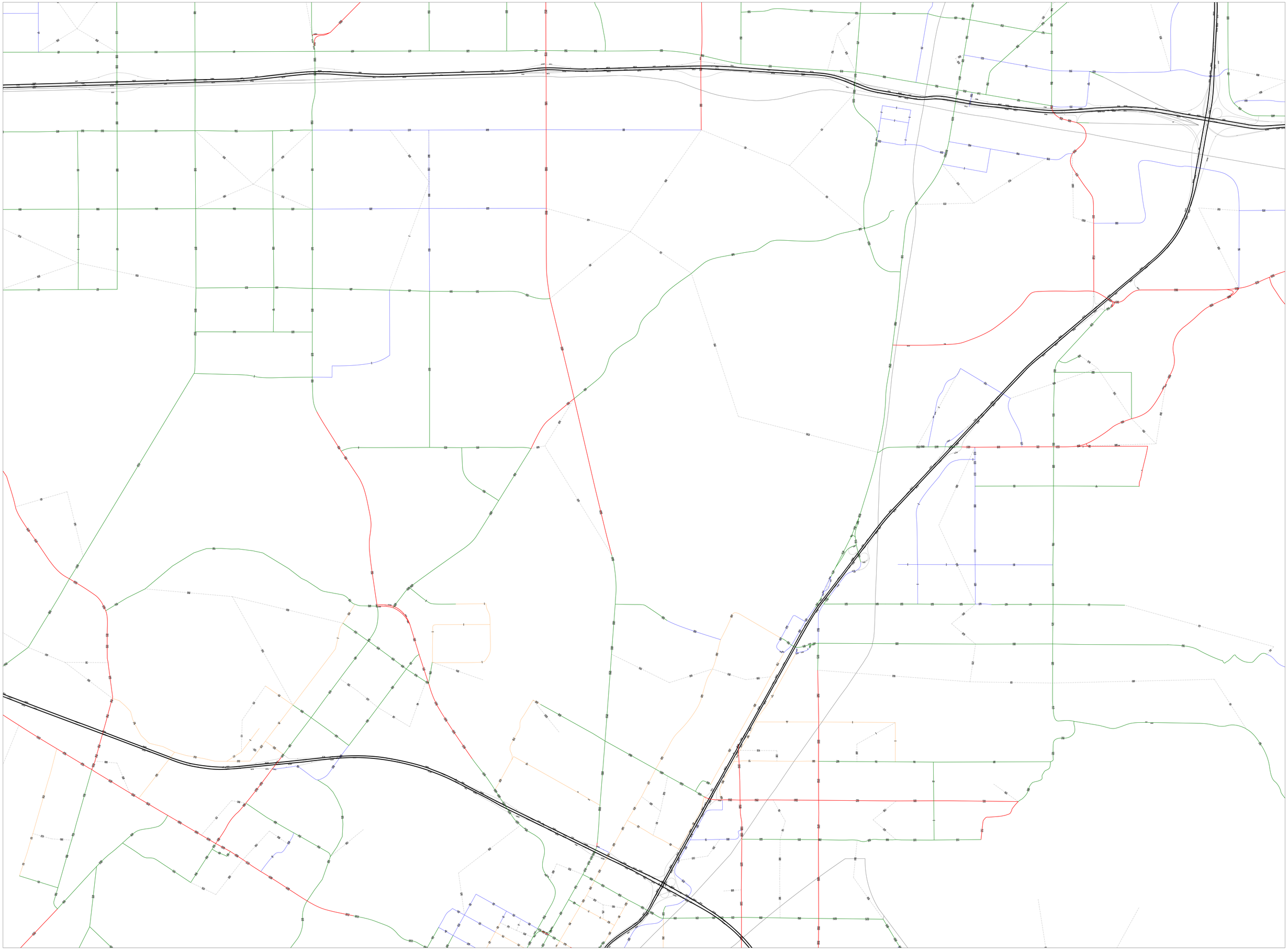
Year 2035 PM Peak Hour - Cars



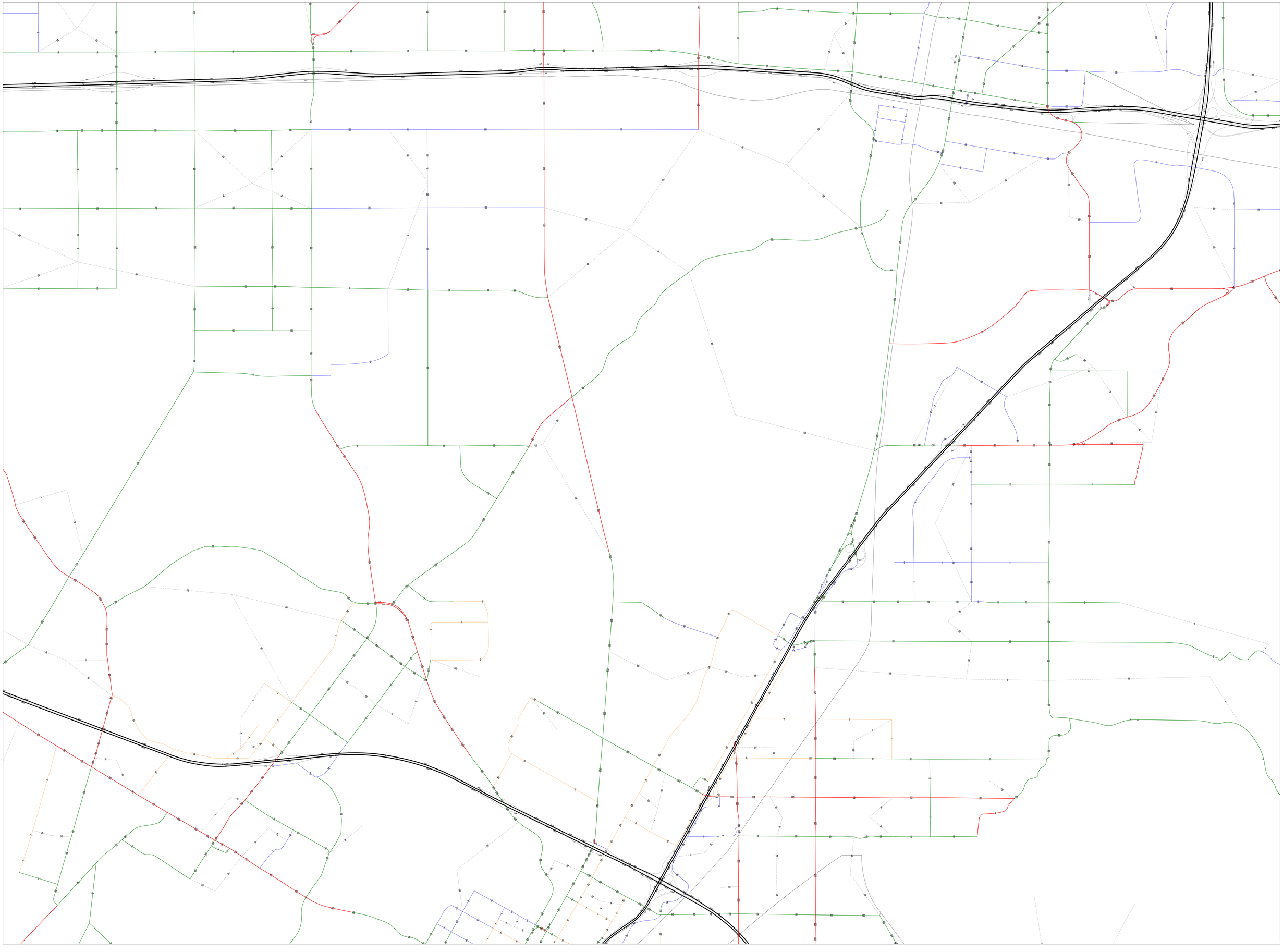
Year 2035 PM Peak Hour - TrucksPCE



Year 2035 PM Daily - Cars



Year 2035 PM Daily - TrucksPCE



APPENDIX E

FUTURE GROWTH INCREMENT WORKSHEETS

INTERSECTION	LEG	CTP 2007 ADT	EXISTING 2018 ADT	CTP 2035 ADT	NEW 2035 ADT[1]	OPENING 2020 ADT
Cedar Avenue (NS) / I-10 Freeway WB Ramps (EW) - #1	North	34,996	**42,700**	45,332	49,000	43,400
	South	25,517	**35,900**	35,656	42,100	36,600
	East	6,073	**9,800**	7,335	10,800	9,900
	West	7,932	**11,100**	10,720	12,800	11,300
Cedar Avenue (NS) / I-10 Freeway EB Ramps (EW) - #2	North	25,517	**36,300**	35,656	42,500	37,000
	South	17,041	**29,500**	26,190	35,100	30,200
	East	4,813	**9,200**	5,029	10,100	9,300
	West	7,820	**10,000**	11,330	12,100	10,300
Cedar Avenue (NS) / Slover Avenue (EW) - #3	North	17,041	**29,500**	26,190	35,100	30,200
	South	4,303	**24,900**	1,246	27,400	25,200
	East	6,025	**8,700**	9,097	10,600	8,900
	West	10,871	**11,600**	21,038	17,800	12,300
Cedar Avenue (NS) / Santa Ana Avenue (EW) - #4	North	4,303	**24,900**	1,246	27,400	25,200
	South	1,343	**25,100**	2,502	27,600	25,400
	East	5,086	**5,100**	9,479	7,800	5,400
	West	5,574	**6,700**	9,915	9,300	7,000
Cedar Avenue (NS) / Jurupa Avenue (EW) - #5	North	1,343	**25,100**	2,502	27,600	25,400
	South	6,895	**22,100**	10,608	24,400	22,400
	East	755	**6,400**	2,151	7,200	6,500
	West	6,308	**5,400**	10,256	7,800	5,700
Cedar Avenue (NS) / El Rivino Road (EW) - #6	North	6,751	**22,100**	12,952	25,900	22,500
	South	6,865	**22,300**	12,952	26,000	22,700
	East	121	**4,300**	11,803	11,400	5,100
	West	-	**1,000**	-	1,100	1,000
Rubidoux Boulevard (NS) / Production Circle (EW) - #9	North	6,865	**22,300**	12,952	26,000	22,700
	South	6,865	**22,000**	12,952	25,700	22,400
	East	-	**-**	-	-	-
	West	-	**1,100**	-	1,200	1,100
Rubidoux Boulevard (NS) / 20th Street (EW) - #10	North	6,865	**22,000**	12,952	25,700	22,400
	South	7,353	**18,800**	16,320	24,200	19,400
	East	13,462	**22,200**	25,986	29,800	23,100
	West	1,451	**2,000**	6,080	4,800	2,300
Rubidoux Boulevard (NS) / 24th Street (EW) - #11	North	7,353	**18,800**	16,320	24,200	19,400
	South	8,827	**19,600**	17,827	25,100	20,200
	East	5,251	**3,000**	12,331	7,300	3,500
	West	3,054	**700**	5,969	2,500	900
Rubidoux Boulevard (NS) / 26th Street (EW) - #12	North	8,827	**19,600**	17,363	24,800	20,200
	South	9,037	**20,200**	18,358	25,900	20,900
	East	1,522	**800**	4,980	2,900	1,000
	West	-	**200**	-	200	200
Rubidoux Boulevard (NS) / 28th Street (EW) - #13	North	9,037	**20,200**	18,358	25,900	20,900
	South	9,909	**21,800**	21,803	29,000	22,600
	East	1,149	**1,800**	5,144	4,200	2,100
	West	1,500	**1,700**	6,813	4,900	2,100
Rubidoux Boulevard (NS) / 30th Street (EW) - #14	North	9,909	**21,800**	21,803	29,000	22,600
	South	18,159	**28,000**	28,797	34,500	28,800
	East	9,183	**7,300**	10,248	8,000	7,400
	West	6,490	**4,200**	6,226	4,600	4,200

[1] Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2035.

INTERSECTION	LEG	CTP 2007 ADT	EXISTING 2018 ADT	CTP 2035 ADT	NEW 2035 ADT[1]	OPENING 2020 ADT
Rubidoux Boulevard (NS) / SR-60 Freeway WB Off-Ramp	North	18,159	**28,000**	28,797	34,500	28,800
	South	18,129	**25,400**	24,590	29,300	25,900
	East	-	**-**	-	-	-
	West	2,386	**8,100**	5,601	10,100	8,300
Rubidoux Boulevard (NS) / SR-60 Freeway EB Ramps (E	North	18,129	**25,400**	24,590	29,300	25,900
	South	18,120	**25,200**	25,103	29,400	25,700
	East	10,283	**5,100**	12,148	6,200	5,200
	West	3,003	**12,200**	7,461	14,900	12,500
Rubidoux Boulevard (NS) / 34th Street (EW) - #17	North	18,120	**23,800**	25,103	28,000	24,300
	South	14,740	**19,200**	18,688	21,600	19,500
	East	2,841	**4,900**	6,468	7,100	5,200
	West	2,777	**4,600**	2,646	5,100	4,700
Cactus Avenue (NS) / El Rivino Road (EW) - #20	North	1,877	**3,100**	6,084	5,700	3,400
	South	-	**-**	-	-	-
	East	1,775	**4,000**	6,084	6,600	4,300
	West	121	**4,300**	-	4,700	4,400
Hall Avenue (NS) / El Rivino Road (EW) - #22	North	-	**400**	-	400	400
	South	386	**1,100**	3,214	2,800	1,300
	East	1,389	**3,100**	2,868	4,000	3,200
	West	1,775	**4,000**	6,084	6,600	4,300
Agua Mansa Road (NS) / El Rivino Road (EW) - #24	North	10,598	**15,200**	24,896	23,900	16,200
	South	9,209	**12,800**	18,926	18,700	13,500
	East	-	**-**	-	-	-
	West	1,389	**3,100**	2,868	4,000	3,200
Agua Mansa Road (NS) / Holly Place (EW) - #25	North	9,209	**12,800**	20,477	19,600	13,600
	South	9,209	**12,800**	20,477	19,600	13,600
	East	-	**3,500**	-	3,900	3,500
	West	-	**-**	-	-	-
Agua Mansa Road (NS) / Hall Avenue (EW) - #26	North	9,209	**12,800**	20,477	19,600	13,600
	South	9,594	**12,300**	23,692	20,900	13,300
	East	-	**-**	-	-	-
	West	386	**1,100**	3,214	2,800	1,300
Agua Mansa Road (NS) / Brown Avenue (EW) - #27	North	9,594	**12,300**	23,692	20,900	13,300
	South	9,594	**11,300**	23,692	19,900	12,300
	East	-	**6,600**	-	7,300	6,700
	West	-	**700**	-	800	700
Agua Mansa Road (NS) / Regional Park Access (EW) - #2	North	9,594	**11,300**	23,692	19,900	12,300
	South	9,594	**11,300**	23,692	19,900	12,300
	East	-	**3,100**	-	3,400	3,100
	West	-	**-**	-	-	-
Agua Mansa Road (NS) / Market Street (EW) - #29	North	9,594	**11,300**	23,692	19,900	12,300
	South	-	**100**	-	100	100
	East	7,862	**17,000**	17,569	22,900	17,700
	West	13,462	**22,200**	25,986	29,800	23,100

[1] Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2035.

INTERSECTION	LEG	CTP 2007 ADT	EXISTING 2018 ADT	CTP 2035 ADT	NEW 2035 ADT[1]	OPENING 2020 ADT
Market Street (NS) / Hall Avenue (EW) - #30	North	7,898	**17,000**	17,569	22,900	17,700
	South	7,475	**23,600**	16,514	29,100	24,200
	East	-	**-**	-	-	-
	West	385	**1,400**	1,289	1,900	1,500
Market Street (NS) / Rivera Street (EW) - #31	North	15,089	**23,600**	32,029	33,900	24,800
	South	9,397	**28,300**	34,644	43,600	30,100
	East	20,786	**9,200**	15,213	10,100	9,300
	West	-	**2,600**	-	2,900	2,600
Market Street (NS) / SR-60 Freeway WB Ramps (EW) - #3	North	21,916	**28,300**	38,459	38,300	29,500
	South	19,042	**24,400**	34,762	33,900	25,500
	East	7,218	**8,100**	12,441	11,300	8,500
	West	5,546	**7,900**	9,728	10,400	8,200
Market Street (NS) / SR-60 Freeway EB Ramps (EW) - #33	North	19,042	**24,600**	34,762	34,100	25,700
	South	15,889	**27,500**	30,024	36,100	28,500
	East	6,905	**7,000**	12,578	10,400	7,400
	West	5,071	**11,400**	8,722	13,600	11,700
Riverside Avenue (NS) / I-10 Freeway WB Ramps (EW) - #	North	43,148	**39,800**	64,051	52,500	41,300
	South	38,815	**36,800**	65,934	53,300	38,700
	East	5,187	**11,200**	6,864	12,300	11,300
	West	8,218	**8,400**	11,543	10,400	8,600
Riverside Avenue (NS) / I-10 Freeway EB Ramps (EW) - #	North	38,815	**37,400**	65,934	53,900	39,300
	South	41,278	**41,000**	69,538	58,200	43,000
	East	4,885	**10,900**	7,464	12,500	11,100
	West	6,787	**11,400**	8,634	12,500	11,500
Riverside Avenue (NS) / Slover Avenue (EW) - #36	North	41,278	**41,000**	69,538	58,200	43,000
	South	37,509	**38,200**	63,463	54,000	40,100
	East	832	**2,600**	1,370	2,900	2,600
	West	5,137	**10,600**	7,911	12,300	10,800
Riverside Avenue (NS) / Santa Ana Avenue (EW) - #37	North	37,509	**38,200**	63,463	54,000	40,100
	South	40,487	**29,600**	66,869	45,600	31,500
	East	1,361	**1,900**	2,352	2,500	2,000
	West	4,381	**4,200**	5,778	5,000	4,300
Riverside Avenue (NS) / Jurupa Avenue (EW) - #38	North	41,686	**29,600**	69,074	46,200	31,600
	South	43,184	**34,600**	71,294	51,700	36,600
	East	-	**-**	-	-	-
	West	1,545	**4,000**	2,507	4,600	4,100
Riverside Avenue (NS) / Agua Mansa Road (EW) - #39	North	43,184	**34,600**	71,294	51,700	36,600
	South	35,390	**24,700**	52,069	34,800	25,900
	East	9,387	**7,700**	14,791	11,000	8,100
	West	12,824	**15,200**	24,987	22,600	16,100
Rancho Avenue (NS) / Agua Mansa Road (EW) - #40	North	20,702	**18,800**	30,012	24,500	19,500
	South	16,073	**13,400**	26,763	19,900	14,200
	East	-	**1,200**	-	1,300	1,200
	West	7,932	**7,700**	10,569	9,300	7,900

[1] Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2035.

CEDAR AVENUE (NS) / I-10 FREEWAY WB RAMPS (EW) - #1

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			654	894	0			
			<	v	>			
0	^					^	447	
0	>					<	0	
0	v					v	375	
			<	^	>			
			184	1042	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1548	1489			
				v	^			
		838	<	IN =	3596	<	822	
		0	>	OUT =	3596	>	0	
				v	^			
				1269	1226			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			97	174	0			
			<	v	>			
0	^					^	75	
0	>					<	0	
0	v					v	81	
			<	^	>			
			122	192	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			751	1068	0			
			<	v	>			
0	^					^	522	
0	>					<	0	
0	v					v	456	
			<	^	>			
			306	1234	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1594	1039			
				v	^			
		654	<	IN =	2785	<	415	
		0	>	OUT =	2785	>	0	
				v	^			
				1092	776			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				48	55			
				v	^			
		31	<	IN =	108	<	13	
		0	>	OUT =	109	>	0	
				v	^			
				23	47			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1642	1094			
				v	^			
		685	<	IN =	2893	<	428	
		0	>	OUT =	2894	>	0	
				v	^			
				1115	823			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1857	1381			
				v	^			
		905	<	IN =	3555	<	461	
		0	>	OUT =	3555	>	0	
				v	^			
				1269	1237			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				79	81			
				v	^			
		60	<	IN =	183	<	21	
		0	>	OUT =	183	>	0	
				v	^			
				42	83			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1936	1462			
				v	^			
		965	<	IN =	3738	<	482	
		0	>	OUT =	3738	>	0	
				v	^			
				1311	1320			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				294	368			
				v	^			
		280	<			<	54	
		0	>			>	0	
				v	^			
				196	497			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				290	370			
				v	^			
		280	<	IN =	890	<	100	
		0	>	OUT =	850	>	0	
				v	^			
				200	500			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				180	220			
				v	^			
		170	<			<	60	
		0	>			>	0	
				v	^			
				120	300			

NEW PROJECTED VOLUMES (PCEs): 2035

				2000	1980			
				v	^			
		1230	<			<	1040	
		0	>			>	0	
				v	^			
				1640	1840			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	30			
				v	^			
		20	<			<	10	
		0	>			>	0	
				v	^			
				10	40			

INITIAL YEAR 2020 VOLUMES:

2020

				1840	1790			
				v	^			
		1080	<	IN =	4410	<	990	
		0	>	OUT =	4400	>	0	
				v	^			
				1530	1580			

BALANCED YEAR 2020 VOLUMES:

2020

				1840	1790			
				v	^			
		1080	<	IN =	4410	<	990	
		0	>	OUT =	4400	>	0	
				v	^			
				1530	1580			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			564	895	0			
			<	v	>			
0	^					^	491	
0	>					<	2	
0	v					v	237	
			<	^	>			
			233	1246	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1459	1737			
				v	^			
		799	<	IN =	3668	<	730	
		0	>	OUT =	3668	>	0	
				v	^			
				1132	1479			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			61	119	0			
			<	v	>			
0	^					^	36	
0	>					<	2	
0	v					v	46	
			<	^	>			
			67	150	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			625	1014	0			
			<	v	>			
0	^					^	527	
0	>					<	4	
0	v					v	283	
			<	^	>			
			300	1396	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1232	1813			
				v	^			
		538	<	IN =	3224	<	524	
		0	>	OUT =	3224	>	0	
				v	^			
				873	1468			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				61	56			
				v	^			
		40	<	IN =	124	<	12	
		0	>	OUT =	126	>	0	
				v	^			
				30	51			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1293	1869			
				v	^			
		578	<	IN =	3348	<	536	
		0	>	OUT =	3350	>	0	
				v	^			
				903	1519			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1590	2423			
				v	^			
		740	<	IN =	4465	<	802	
		0	>	OUT =	4465	>	0	
				v	^			
				1302	2073			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				94	106			
				v	^			
		59	<	IN =	222	<	23	
		0	>	OUT =	222	>	0	
				v	^			
				57	105			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1684	2529			
				v	^			
		799	<	IN =	4687	<	825	
		0	>	OUT =	4687	>	0	
				v	^			
				1359	2178			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				391	660			
				v	^			
		221	<			<	289	
		0	>			>	0	
				v	^			
				456	659			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				390	660			
				v	^			
		220	<	IN =	1340	<	290	
		0	>	OUT =	1340	>	0	
				v	^			
				460	660			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				240	400			
				v	^			
		130	<			<	180	
		0	>			>	0	
				v	^			
				280	400			

NEW PROJECTED VOLUMES (PCEs): 2035

				1880	2320			
				v	^			
		1060	<			<	990	
		0	>			>	0	
				v	^			
				1580	2100			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	50			
				v	^			
		20	<			<	20	
		0	>			>	0	
				v	^			
				30	50			

INITIAL YEAR 2020 VOLUMES:

2020

				1670	1970			
				v	^			
		950	<	IN =	4250	<	830	
		0	>	OUT =	4250	>	0	
				v	^			
				1330	1750			

BALANCED YEAR 2020 VOLUMES:

2020

				1670	1970			
				v	^			
		950	<	IN =	4250	<	830	
		0	>	OUT =	4250	>	0	
				v	^			
				1330	1750			

CEDAR AVENUE (NS) / I-10 FREEWAY WB RAMPS (EW) - #1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**306**	SOUTH LEG		NORTH	LEFT	**300**	SOUTH LEG	
BOUND	THRU	**1,234**	IN ...	**1,580**	BOUND	THRU	**1,396**	IN ...	**1,750**
	RIGHT	**0**	OUT ...	**1,530**		RIGHT	**0**	OUT ...	**1,330**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,068**	IN ...	**1,840**	BOUND	THRU	**1,014**	IN ...	**1,670**
	RIGHT	**751**	OUT ...	**1,790**		RIGHT	**625**	OUT ...	**1,970**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**1,080**		RIGHT	**0**	OUT ...	**950**
WEST	LEFT	**456**	EAST LEG		WEST	LEFT	**283**	EAST LEG	
BOUND	THRU	**0**	IN ...	**990**	BOUND	THRU	**4**	IN ...	**830**
	RIGHT	**522**	OUT ...	**0**		RIGHT	**527**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**306**	**315**	NORTH LEG		NORTH	LEFT	**300**	**313**	NORTH LEG	
BOUND	THRU	**1,234**	**1,261**	RATIO	**7.4%**	BOUND	THRU	**1,396**	**1,437**	RATIO	**7.4%**
	RIGHT	**0**	**0**	ADT	49,000		RIGHT	**0**	**0**	ADT	49,000
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,068**	**1,081**	RATIO	**7.4%**	BOUND	THRU	**1,014**	**1,037**	RATIO	**7.3%**
	RIGHT	**751**	**765**	ADT	42,100		RIGHT	**625**	**633**	ADT	42,100
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**9.2%**	BOUND	THRU	**0**	**0**	RATIO	**7.7%**
	RIGHT	**0**	**0**	ADT	10,800		RIGHT	**0**	**0**	ADT	10,800
WEST	LEFT	**456**	**461**	WEST LEG		WEST	LEFT	**283**	**293**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**8.4%**	BOUND	THRU	**4**	**4**	RATIO	**7.4%**
	RIGHT	**522**	**529**	ADT	12,800		RIGHT	**527**	**533**	ADT	12,800

CEDAR AVENUE (NS) / I-10 FREEWAY WB RAMPS (EW) - #1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**306**	SOUTH LEG		NORTH	LEFT	**300**	SOUTH LEG	
BOUND	THRU	**1,234**	IN ...	**1,840**	BOUND	THRU	**1,396**	IN ...	**2,100**
	RIGHT	**0**	OUT ...	**1,640**		RIGHT	**0**	OUT ...	**1,580**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,068**	IN ...	**2,000**	BOUND	THRU	**1,014**	IN ...	**1,880**
	RIGHT	**751**	OUT ...	**1,980**		RIGHT	**625**	OUT ...	**2,320**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**1,230**		RIGHT	**0**	OUT ...	**1,060**
WEST	LEFT	**456**	EAST LEG		WEST	LEFT	**283**	EAST LEG	
BOUND	THRU	**0**	IN ...	**1,040**	BOUND	THRU	**4**	IN ...	**990**
	RIGHT	**522**	OUT ...	**0**		RIGHT	**527**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**306**	**389**	NORTH LEG		NORTH	LEFT	**300**	**382**	NORTH LEG	
BOUND	THRU	**1,234**	**1,439**	RATIO	**8.2%**	BOUND	THRU	**1,396**	**1,712**	RATIO	**8.6%**
	RIGHT	**0**	**0**	ADT	49,000		RIGHT	**0**	**0**	ADT	49,000
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,068**	**1,175**	RATIO	**8.3%**	BOUND	THRU	**1,014**	**1,205**	RATIO	**8.7%**
	RIGHT	**751**	**841**	ADT	42,100		RIGHT	**625**	**688**	ADT	42,100
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**10.0%**	BOUND	THRU	**0**	**0**	RATIO	**9.1%**
	RIGHT	**0**	**0**	ADT	10,800		RIGHT	**0**	**0**	ADT	10,800
WEST	LEFT	**456**	**502**	WEST LEG		WEST	LEFT	**283**	**375**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**9.6%**	BOUND	THRU	**4**	**5**	RATIO	**8.4%**
	RIGHT	**522**	**574**	ADT	12,800		RIGHT	**527**	**608**	ADT	12,800

CEDAR AVENUE (NS) / I-10 FREEWAY EB RAMPS (EW) - #2

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	863	372			
			<	v	>			
		437	^			^	0	
		0	>			<	0	
		250	v			v	0	
			<	^	>			
			0	772	322			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1235	1209			
				v	^			
		0	<	IN =	3016	<	0	
		687	>	OUT =	3016	>	694	
				v	^			
				1113	1094			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	170	106			
			<	v	>			
		118	^			^	0	
		0	>			<	0	
		112	v			v	0	

PCE FACTORS BY AXLE:

			<	^	>			
2:	1.5	3:	2.0	4+:	3.0	0	206	92

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	1033	478			
			<	v	>			
		555	^			^	0	
		0	>			<	0	
		362	v			v	0	
			<	^	>			
			0	978	414			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1092	776			
				v	^			
		0	<	IN =	2034	<	0	
		425	>	OUT =	2034	>	487	
				v	^			
				771	517			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				23	47			
				v	^			
		0	<	IN =	78	<	0	
		38	>	OUT =	78	>	10	
				v	^			
				21	17			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				1115	823			
				v	^			
		0	<	IN =	2112	<	0	
		463	>	OUT =	2112	>	497	
				v	^			
				792	534			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1269	1237			
				v	^			
		0	<	IN =	2845	<	0	
		724	>	OUT =	2845	>	494	
				v	^			
				1114	852			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				42	83			
				v	^			
		0	<	IN =	146	<	0	
		64	>	OUT =	146	>	11	
				v	^			
				52	40			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				1311	1320			
				v	^			
		0	<	IN =	2991	<	0	
		788	>	OUT =	2991	>	505	
				v	^			
				1166	892			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				196	497			
				v	^			
		0	<			<	0	
		325	>			>	8	
				v	^			
				374	358			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				200	500			
				v	^			
		0	<	IN =	890	<	0	
		330	>	OUT =	960	>	90	
				v	^			
				370	360			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				120	300			
				v	^			
		0	<			<	0	
		200	>			>	50	
				v	^			
				220	220			

NEW PROJECTED VOLUMES (PCEs): 2035

				1630	1830			
				v	^			
		0	<			<	0	
		1120	>			>	940	
				v	^			
				1620	1610			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				10	40			
				v	^			
		0	<			<	0	
		20	>			>	10	
				v	^			
				30	30			

INITIAL YEAR 2020 VOLUMES:

2020

				1520	1570			
				v	^			
		0	<	IN =	3880	<	0	
		940	>	OUT =	3900	>	900	
				v	^			
				1430	1420			

BALANCED YEAR 2020 VOLUMES:

2020

				1530	1570			
				v	^			
		0	<	IN =	3900	<	0	
		940	>	OUT =	3900	>	900	
				v	^			
				1430	1430			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	791	343			
			<	v	>			
		565	^			^	0	
		2	>			<	0	
		72	v			v	0	
			<	^	>			
			0	952	331			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1134	1517			
				v	^			
		0	<	IN =	3056	<	0	
		639	>	OUT =	3056	>	676	
				v	^			
				863	1283			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	120	47			
			<	v	>			
		99	^			^	0	
		0	>			<	0	
		99	v			v	0	

PCE FACTORS BY AXLE:

			<	^	>			
2:	1.5	3:	2	4+:	3.0	0	107	46

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	911	390			
			<	v	>			
		664	^			^	0	
		2	>			<	0	
		171	v			v	0	
			<	^	>			
			0	1059	377			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				873	1468			
				v	^			
		0	<	IN =	2471	<	0	
		539	>	OUT =	2471	>	286	
				v	^			
				717	1059			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				30	51			
				v	^			
		0	<	IN =	86	<	0	
		27	>	OUT =	86	>	10	
				v	^			
				25	29			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				903	1519			
				v	^			
		0	<	IN =	2557	<	0	
		566	>	OUT =	2557	>	296	
				v	^			
				742	1088			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1302	2073			
				v	^			
		0	<	IN =	3669	<	0	
		836	>	OUT =	3669	>	436	
				v	^			
				1160	1531			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				57	105			
				v	^			
		0	<	IN =	176	<	0	
		57	>	OUT =	175	>	16	
				v	^			
				54	62			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				1359	2178			
				v	^			
		0	<	IN =	3845	<	0	
		893	>	OUT =	3844	>	452	
				v	^			
				1214	1593			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				456	659			
				v	^			
		0	<			<	0	
		327	>			>	156	
				v	^			
				472	505			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				460	660			
				v	^			
		0	<	IN =	1300	<	0	
		330	>	OUT =	1290	>	160	
				v	^			
				470	510			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				280	400			
				v	^			
		0	<			<	0	
		200	>			>	100	
				v	^			
				290	310			

NEW PROJECTED VOLUMES (PCEs): 2035

				1580	2120			
				v	^			
		0	<			<	0	
		1040	>			>	870	
				v	^			
				1370	1750			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				30	50			
				v	^			
		0	<			<	0	
		20	>			>	10	
				v	^			
				30	40			

INITIAL YEAR 2020 VOLUMES:

2020

				1330	1770			
				v	^			
		0	<	IN =	3670	<	0	
		860	>	OUT =	3660	>	780	
				v	^			
				1110	1480			

BALANCED YEAR 2020 VOLUMES:

2020

				1330	1770			
				v	^			
		0	<	IN =	3670	<	0	
		860	>	OUT =	3660	>	780	
				v	^			
				1110	1480			

CEDAR AVENUE (NS) / I-10 FREEWAY EB RAMPS (EW) - #2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**978**	IN ...	**1,430**	BOUND	THRU	**1,059**	IN ...	**1,480**
	RIGHT	**414**	OUT ...	**1,430**		RIGHT	**377**	OUT ...	**1,110**
SOUTH	LEFT	**478**	NORTH LEG		SOUTH	LEFT	**390**	NORTH LEG	
BOUND	THRU	**1,033**	IN ...	**1,530**	BOUND	THRU	**911**	IN ...	**1,330**
	RIGHT	**0**	OUT ...	**1,570**		RIGHT	**0**	OUT ...	**1,770**
EAST	LEFT	**555**	WEST LEG		EAST	LEFT	**664**	WEST LEG	
BOUND	THRU	**0**	IN ...	**940**	BOUND	THRU	**2**	IN ...	**860**
	RIGHT	**362**	OUT ...	**0**		RIGHT	**171**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**900**		RIGHT	**0**	OUT ...	**780**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**978**	**1,006**	RATIO **7.3%**	BOUND	THRU	**1,059**	**1,091**	RATIO **7.3%**	
	RIGHT	**414**	**424**	ADT 42,500		RIGHT	**377**	**385**	ADT 42,500	
SOUTH	LEFT	**478**	**484**	SOUTH LEG	SOUTH	LEFT	**390**	**395**	SOUTH LEG	
BOUND	THRU	**1,033**	**1,054**	RATIO **8.1%**	BOUND	THRU	**911**	**934**	RATIO **7.4%**	
	RIGHT	**0**	**0**	ADT 35,100		RIGHT	**0**	**0**	ADT 35,100	
EAST	LEFT	**555**	**564**	EAST LEG	EAST	LEFT	**664**	**679**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **9.0%**	BOUND	THRU	**2**	**2**	RATIO **7.7%**	
	RIGHT	**362**	**376**	ADT 10,100		RIGHT	**171**	**176**	ADT 10,100	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **7.8%**	BOUND	THRU	**0**	**0**	RATIO **7.1%**	
	RIGHT	**0**	**0**	ADT 12,100		RIGHT	**0**	**0**	ADT 12,100	

CEDAR AVENUE (NS) / I-10 FREEWAY EB RAMPS (EW) - #2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**978**	IN ...	**1,610**	BOUND	THRU	**1,059**	IN ...	**1,750**
	RIGHT	**414**	OUT ...	**1,620**		RIGHT	**377**	OUT ...	**1,370**
SOUTH	LEFT	**478**	NORTH LEG		SOUTH	LEFT	**390**	NORTH LEG	
BOUND	THRU	**1,033**	IN ...	**1,630**	BOUND	THRU	**911**	IN ...	**1,580**
	RIGHT	**0**	OUT ...	**1,830**		RIGHT	**0**	OUT ...	**2,120**
EAST	LEFT	**555**	WEST LEG		EAST	LEFT	**664**	WEST LEG	
BOUND	THRU	**0**	IN ...	**1,120**	BOUND	THRU	**2**	IN ...	**1,040**
	RIGHT	**362**	OUT ...	**0**		RIGHT	**171**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**940**		RIGHT	**0**	OUT ...	**870**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**978**	**1,161**	RATIO	**8.3%**	BOUND	THRU	**1,059**	**1,308**	RATIO	**8.7%**
	RIGHT	**414**	**460**	ADT	42,500		RIGHT	**377**	**437**	ADT	42,500
SOUTH	LEFT	**478**	**526**	SOUTH LEG		SOUTH	LEFT	**390**	**431**	SOUTH LEG	
BOUND	THRU	**1,033**	**1,162**	RATIO	**9.2%**	BOUND	THRU	**911**	**1,146**	RATIO	**8.9%**
	RIGHT	**0**	**0**	ADT	35,100		RIGHT	**0**	**0**	ADT	35,100
EAST	LEFT	**555**	**669**	EAST LEG		EAST	LEFT	**664**	**812**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**9.8%**	BOUND	THRU	**2**	**2**	RATIO	**8.6%**
	RIGHT	**362**	**458**	ADT	10,100		RIGHT	**171**	**224**	ADT	10,100
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**9.3%**	BOUND	THRU	**0**	**0**	RATIO	**8.6%**
	RIGHT	**0**	**0**	ADT	12,100		RIGHT	**0**	**0**	ADT	12,100

CEDAR AVENUE (NS) / SLOVER AVENUE (EW) - #3

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			65	703	30			
			<	v	>			
	150	^				^	36	
	107	>				<	158	
	52	v				v	14	
			<	^	>			
			97	641	10			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				798	827			
				v	^			
	320	<	IN =	2063		<	208	
	309	>	OUT =	2063		>	147	
				v	^			
				769	748			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			28	161	53			
			<	v	>			
	18	^				^	81	
	9	>				<	38	
	15	v				v	2	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2.0 4+: 3.0			33	172	6			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			93	864	83			
			<	v	>			
	168	^				^	117	
	116	>				<	196	
	67	v				v	16	
			<	^	>			
			130	813	16			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				771	517			
				v	^			
	511	<	IN =	1462		<	148	
	408	>	OUT =	1461		>	257	
				v	^			
				176	135			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				21	17			
				v	^			
	18	<	IN =	47		<	9	
	15	>	OUT =	47		>	10	
				v	^			
				2	2			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				792	534			
				v	^			
	529	<	IN =	1509		<	157	
	423	>	OUT =	1508		>	267	
				v	^			
				178	137			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1114	852			
				v	^			
	545	<	IN =	2136		<	197	
	644	>	OUT =	2136		>	532	
				v	^			
				207	181			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				52	40			
				v	^			
	25	<	IN =	97		<	18	
	21	>	OUT =	98		>	28	
				v	^			
				5	6			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				1166	892			
				v	^			
	570	<	IN =	2233		<	215	
	665	>	OUT =	2234		>	560	
				v	^			
				212	187			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				374	358			
				v	^			
	41	<				<	58	
	242	>				>	293	
				v	^			
				34	50			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				370	360			
				v	^			
	40	<	IN =	720		<	60	
	240	>	OUT =	720		>	290	
				v	^			
				30	50			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				220	220			
				v	^			
	20	<				<	40	
	150	>				>	180	
				v	^			
				20	30			

NEW PROJECTED VOLUMES (PCEs): 2035

				1260	1320			
				v	^			
	440	<				<	370	
	500	>				>	400	
				v	^			
				970	990			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				30	30			
				v	^			
	0	<				<	0	
	20	>				>	20	
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				1070	1130			
				v	^			
	420	<	IN =	2730		<	330	
	370	>	OUT =	2740		>	240	
				v	^			
				950	960			

BALANCED YEAR 2020 VOLUMES:

2020

				1070	1130			
				v	^			
	420	<	IN =	2730		<	330	
	370	>	OUT =	2740		>	240	
				v	^			
				950	960			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			58	579	50			
			<	v	>			
	198	^				^	55	
	281	>				<	98	
	107	v				v	19	
			<	^	>			
			48	772	28			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				687	1025			
				v	^			
	204	<	IN =	2293		<	172	
	586	>	OUT =	2293		>	359	
				v	^			
				705	848			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			26	149	45			
			<	v	>			
	28	^				^	37	
	80	>				<	18	
	7	v				v	2	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2 4+: 3.0			15	113	11			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			84	728	95			
			<	v	>			
	226	^				^	92	
	361	>				<	116	
	114	v				v	21	
			<	^	>			
			63	885	39			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				717	1059			
				v	^			
	496	<	IN =	2001		<	386	
	620	>	OUT =	2001		>	253	
				v	^			
				193	278			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				25	29			
				v	^			
	18	<	IN =	65		<	13	
	23	>	OUT =	65		>	15	
				v	^			
				3	4			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				742	1088			
				v	^			
	514	<	IN =	2066		<	399	
	643	>	OUT =	2066		>	268	
				v	^			
				196	282			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1160	1531			
				v	^			
	936	<	IN =	3053		<	542	
	1023	>	OUT =	3054		>	313	
				v	^			
				274	328			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				54	62			
				v	^			
	39	<	IN =	139		<	27	
	48	>	OUT =	139		>	28	
				v	^			
				10	10			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				1214	1593			
				v	^			
	975	<	IN =	3192		<	569	
	1071	>	OUT =	3193		>	341	
				v	^			
				284	338			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				472	505			
				v	^			
	461	<				<	170	
	428	>				>	73	
				v	^			
				88	56			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				470	510			
				v	^			
	460	<	IN =	1130		<	170	
	430	>	OUT =	1130		>	70	
				v	^			
				90	60			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				290	310			
				v	^			
	280	<				<	100	
	260	>				>	40	
				v	^			
				50	40			

NEW PROJECTED VOLUMES (PCEs): 2035

				1200	1510			
				v	^			
	540	<				<	330	
	960	>				>	540	
				v	^			
				910	1030			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				30	40			
				v	^			
	30	<				<	10	
	30	>				>	10	
				v	^			
				10	0			

INITIAL YEAR 2020 VOLUMES:

2020

				940	1240			
				v	^			
	290	<	IN =	2900		<	240	
	730	>	OUT =	2910		>	510	
				v	^			
				870	990			

BALANCED YEAR 2020 VOLUMES:

2020

				940	1240			
				v	^			
	290	<	IN =	2900		<	240	
	730	>	OUT =	2910		>	510	
				v	^			
				870	990			

CEDAR AVENUE (NS) / SLOVER AVENUE (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**130**	SOUTH LEG		NORTH	LEFT	**63**	SOUTH LEG	
BOUND	THRU	**813**	IN ...	**960**	BOUND	THRU	**885**	IN ...	**990**
	RIGHT	**16**	OUT ...	**950**		RIGHT	**39**	OUT ...	**870**
SOUTH	LEFT	**83**	NORTH LEG		SOUTH	LEFT	**95**	NORTH LEG	
BOUND	THRU	**864**	IN ...	**1,070**	BOUND	THRU	**728**	IN ...	**940**
	RIGHT	**93**	OUT ...	**1,130**		RIGHT	**84**	OUT ...	**1,240**
EAST	LEFT	**168**	WEST LEG		EAST	LEFT	**226**	WEST LEG	
BOUND	THRU	**116**	IN ...	**370**	BOUND	THRU	**361**	IN ...	**730**
	RIGHT	**67**	OUT ...	**420**		RIGHT	**114**	OUT ...	**290**
WEST	LEFT	**16**	EAST LEG		WEST	LEFT	**21**	EAST LEG	
BOUND	THRU	**196**	IN ...	**330**	BOUND	THRU	**116**	IN ...	**240**
	RIGHT	**117**	OUT ...	**240**		RIGHT	**92**	OUT ...	**510**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**130**	**132**	NORTH LEG	NORTH	LEFT	**63**	**65**	NORTH LEG	
BOUND	THRU	**813**	**825**	RATIO **6.3%**	BOUND	THRU	**885**	**896**	RATIO **6.2%**	
	RIGHT	**16**	**16**	ADT 35,100		RIGHT	**39**	**39**	ADT 35,100	
SOUTH	LEFT	**83**	**97**	SOUTH LEG	SOUTH	LEFT	**95**	**102**	SOUTH LEG	
BOUND	THRU	**864**	**874**	RATIO **7.0%**	BOUND	THRU	**728**	**740**	RATIO **6.8%**	
	RIGHT	**93**	**102**	ADT 27,400		RIGHT	**84**	**100**	ADT 27,400	
EAST	LEFT	**168**	**182**	EAST LEG	EAST	LEFT	**226**	**250**	EAST LEG	
BOUND	THRU	**116**	**127**	RATIO **5.4%**	BOUND	THRU	**361**	**371**	RATIO **7.1%**	
	RIGHT	**67**	**68**	ADT 10,600		RIGHT	**114**	**115**	ADT 10,600	
WEST	LEFT	**16**	**16**	WEST LEG	WEST	LEFT	**21**	**21**	WEST LEG	
BOUND	THRU	**196**	**198**	RATIO **4.5%**	BOUND	THRU	**116**	**125**	RATIO **5.8%**	
	RIGHT	**117**	**123**	ADT 17,800		RIGHT	**92**	**97**	ADT 17,800	

CEDAR AVENUE (NS) / SLOVER AVENUE (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**130**	SOUTH LEG		NORTH	LEFT	**63**	SOUTH LEG	
BOUND	THRU	**813**	IN ...	**990**	BOUND	THRU	**885**	IN ...	**1,030**
	RIGHT	**16**	OUT ...	**970**		RIGHT	**39**	OUT ...	**910**
SOUTH	LEFT	**83**	NORTH LEG		SOUTH	LEFT	**95**	NORTH LEG	
BOUND	THRU	**864**	IN ...	**1,260**	BOUND	THRU	**728**	IN ...	**1,200**
	RIGHT	**93**	OUT ...	**1,320**		RIGHT	**84**	OUT ...	**1,510**
EAST	LEFT	**168**	WEST LEG		EAST	LEFT	**226**	WEST LEG	
BOUND	THRU	**116**	IN ...	**500**	BOUND	THRU	**361**	IN ...	**960**
	RIGHT	**67**	OUT ...	**440**		RIGHT	**114**	OUT ...	**540**
WEST	LEFT	**16**	EAST LEG		WEST	LEFT	**21**	EAST LEG	
BOUND	THRU	**196**	IN ...	**370**	BOUND	THRU	**116**	IN ...	**330**
	RIGHT	**117**	OUT ...	**400**		RIGHT	**92**	OUT ...	**540**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**130**	**143**	NORTH LEG	NORTH	LEFT	**63**	**83**	NORTH LEG	
BOUND	THRU	**813**	**894**	RATIO **7.5%**	BOUND	THRU	**885**	**974**	RATIO **7.8%**	
	RIGHT	**16**	**18**	ADT 35,100		RIGHT	**39**	**43**	ADT 35,100	
SOUTH	LEFT	**83**	**193**	SOUTH LEG	SOUTH	LEFT	**95**	**126**	SOUTH LEG	
BOUND	THRU	**864**	**950**	RATIO **7.7%**	BOUND	THRU	**728**	**801**	RATIO **7.5%**	
	RIGHT	**93**	**146**	ADT 27,400		RIGHT	**84**	**263**	ADT 27,400	
EAST	LEFT	**168**	**265**	EAST LEG	EAST	LEFT	**226**	**462**	EAST LEG	
BOUND	THRU	**116**	**189**	RATIO **7.6%**	BOUND	THRU	**361**	**397**	RATIO **8.5%**	
	RIGHT	**67**	**74**	ADT 10,600		RIGHT	**114**	**125**	ADT 10,600	
WEST	LEFT	**16**	**18**	WEST LEG	WEST	LEFT	**21**	**23**	WEST LEG	
BOUND	THRU	**196**	**216**	RATIO **5.8%**	BOUND	THRU	**116**	**194**	RATIO **8.6%**	
	RIGHT	**117**	**167**	ADT 17,800		RIGHT	**92**	**122**	ADT 17,800	

CEDAR AVENUE (NS) / SANTA ANA AVENUE (EW) - #4

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			50	661	43			
			<	v	>			
	49	^				^	24	
	76	>				<	88	
	70	v				v	30	
			<	^	>			
			83	668	28			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				754	741			
				v	^			
	221	<	IN =	1870		<	142	
	195	>	OUT =	1870		>	147	
				v	^			
				761	779			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			10	140	19			
			<	v	>			
	13	^				^	21	
	18	>				<	21	
	5	v				v	42	
			<	^	>			
			3	174	8			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			60	801	62			
			<	v	>			
	62	^				^	45	
	94	>				<	109	
	75	v				v	72	
			<	^	>			
			86	842	36			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				83	72			
				v	^			
	146	<	IN =	444		<	202	
	139	>	OUT =	445		>	175	
				v	^			
				52	20			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				2	2			
				v	^			
	9	<	IN =	21		<	10	
	8	>	OUT =	21		>	9	
				v	^			
				1	1			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				85	74			
				v	^			
	155	<	IN =	465		<	212	
	147	>	OUT =	466		>	184	
				v	^			
				53	21			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				30	14			
				v	^			
	242	<	IN =	777		<	225	
	459	>	OUT =	776		>	435	
				v	^			
				85	63			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				1	1			
				v	^			
	18	<	IN =	44		<	16	
	24	>	OUT =	43		>	21	
				v	^			
				3	3			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				31	15			
				v	^			
	260	<	IN =	821		<	241	
	483	>	OUT =	819		>	456	
				v	^			
				88	66			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				-54	-59			
				v	^			
	105	<				<	29	
	336	>				>	272	
				v	^			
				35	45			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				90	90			
				v	^			
	110	<	IN =	510		<	30	
	340	>	OUT =	510		>	270	
				v	^			
				40	50			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				50	50			
				v	^			
	70	<				<	20	
	210	>				>	160	
				v	^			
				20	30			

NEW PROJECTED VOLUMES (PCEs): 2035

				970	1000			
				v	^			
	330	<				<	250	
	440	>				>	350	
				v	^			
				970	990			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	10			
				v	^			
	10	<				<	0	
	20	>				>	20	
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				930	960			
				v	^			
	270	<	IN =	2370		<	230	
	250	>	OUT =	2390		>	210	
				v	^			
				950	960			

BALANCED YEAR 2020 VOLUMES:

2020

				940	960			
				v	^			
	270	<	IN =	2390		<	230	
	250	>	OUT =	2390		>	210	
				v	^			
				950	970			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			50	613	29			
			<	v	>			
	57	^				^	18	
	130	>				<	81	
	94	v				v	22	
			<	^	>			
			83	768	37			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				692	843			
				v	^			
	214	<	IN =	1982		<	121	
	281	>	OUT =	1982		>	196	
				v	^			
				729	888			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			2	95	29			
			<	v	>			
	4	^				^	15	
	16	>				<	20	
	8	v				v	13	
			<	^	>			
			14	107	18			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			52	708	58			
			<	v	>			
	61	^				^	33	
	146	>				<	101	
	102	v				v	35	
			<	^	>			
			97	875	55			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				124	178			
				v	^			
	217	<	IN =	781		<	259	
	258	>	OUT =	780		>	297	
				v	^			
				88	140			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				3	4			
				v	^			
	13	<	IN =	38		<	13	
	18	>	OUT =	36		>	17	
				v	^			
				2	4			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				127	182			
				v	^			
	230	<	IN =	819		<	272	
	276	>	OUT =	816		>	314	
				v	^			
				90	144			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				67	99			
				v	^			
	619	<	IN =	1362		<	571	
	546	>	OUT =	1362		>	517	
				v	^			
				127	178			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				5	5			
				v	^			
	29	<	IN =	75		<	26	
	37	>	OUT =	77		>	35	
				v	^			
				8	7			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				72	104			
				v	^			
	648	<	IN =	1437		<	597	
	583	>	OUT =	1439		>	552	
				v	^			
				135	185			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				-55	-78			
				v	^			
	418	<				<	325	
	307	>				>	238	
				v	^			
				45	41			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				80	100			
				v	^			
	420	<	IN =	760		<	330	
	310	>	OUT =	810		>	240	
				v	^			
				50	40			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				50	60			
				v	^			
	260	<				<	200	
	190	>				>	150	
				v	^			
				30	20			

NEW PROJECTED VOLUMES (PCEs): 2035

				870	1030			
				v	^			
	510	<				<	370	
	500	>				>	410	
				v	^			
				880	1050			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	10			
				v	^			
	30	<				<	20	
	20	>				>	20	
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				830	980			
				v	^			
	280	<	IN =	2380		<	190	
	330	>	OUT =	2390		>	280	
				v	^			
				850	1030			

BALANCED YEAR 2020 VOLUMES:

2020

				830	980			
				v	^			
	280	<	IN =	2380		<	190	
	330	>	OUT =	2390		>	280	
				v	^			
				850	1030			

CEDAR AVENUE (NS) / SANTA ANA AVENUE (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**86**	SOUTH LEG		NORTH	LEFT	**97**	SOUTH LEG	
BOUND	THRU	**842**	IN ...	**970**	BOUND	THRU	**875**	IN ...	**1,030**
	RIGHT	**36**	OUT ...	**950**		RIGHT	**55**	OUT ...	**850**
SOUTH	LEFT	**62**	NORTH LEG		SOUTH	LEFT	**58**	NORTH LEG	
BOUND	THRU	**801**	IN ...	**940**	BOUND	THRU	**708**	IN ...	**830**
	RIGHT	**60**	OUT ...	**960**		RIGHT	**52**	OUT ...	**980**
EAST	LEFT	**62**	WEST LEG		EAST	LEFT	**61**	WEST LEG	
BOUND	THRU	**94**	IN ...	**250**	BOUND	THRU	**146**	IN ...	**330**
	RIGHT	**75**	OUT ...	**270**		RIGHT	**102**	OUT ...	**280**
WEST	LEFT	**72**	EAST LEG		WEST	LEFT	**35**	EAST LEG	
BOUND	THRU	**109**	IN ...	**230**	BOUND	THRU	**101**	IN ...	**190**
	RIGHT	**45**	OUT ...	**210**		RIGHT	**33**	OUT ...	**280**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**86**	**89**	NORTH LEG		NORTH	LEFT	**97**	**103**	NORTH LEG	
BOUND	THRU	**842**	**852**	RATIO	**7.0%**	BOUND	THRU	**875**	**886**	RATIO	**6.7%**
	RIGHT	**36**	**37**	ADT	27,400		RIGHT	**55**	**56**	ADT	27,400
SOUTH	LEFT	**62**	**68**	SOUTH LEG		SOUTH	LEFT	**58**	**63**	SOUTH LEG	
BOUND	THRU	**801**	**811**	RATIO	**7.0%**	BOUND	THRU	**708**	**716**	RATIO	**6.9%**
	RIGHT	**60**	**66**	ADT	27,600		RIGHT	**52**	**59**	ADT	27,600
EAST	LEFT	**62**	**68**	EAST LEG		EAST	LEFT	**61**	**66**	EAST LEG	
BOUND	THRU	**94**	**105**	RATIO	**5.7%**	BOUND	THRU	**146**	**161**	RATIO	**6.0%**
	RIGHT	**75**	**77**	ADT	7,800		RIGHT	**102**	**104**	ADT	7,800
WEST	LEFT	**72**	**73**	WEST LEG		WEST	LEFT	**35**	**36**	WEST LEG	
BOUND	THRU	**109**	**115**	RATIO	**5.6%**	BOUND	THRU	**101**	**118**	RATIO	**6.6%**
	RIGHT	**45**	**46**	ADT	9,300		RIGHT	**33**	**37**	ADT	9,300

CEDAR AVENUE (NS) / SANTA ANA AVENUE (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**86**	SOUTH LEG		NORTH	LEFT	**97**	SOUTH LEG	
BOUND	THRU	**842**	IN ...	**990**	BOUND	THRU	**875**	IN ...	**1,050**
	RIGHT	**36**	OUT ...	**970**		RIGHT	**55**	OUT ...	**880**
SOUTH	LEFT	**62**	NORTH LEG		SOUTH	LEFT	**58**	NORTH LEG	
BOUND	THRU	**801**	IN ...	**970**	BOUND	THRU	**708**	IN ...	**870**
	RIGHT	**60**	OUT ...	**1,000**		RIGHT	**52**	OUT ...	**1,030**
EAST	LEFT	**62**	WEST LEG		EAST	LEFT	**61**	WEST LEG	
BOUND	THRU	**94**	IN ...	**440**	BOUND	THRU	**146**	IN ...	**500**
	RIGHT	**75**	OUT ...	**330**		RIGHT	**102**	OUT ...	**510**
WEST	LEFT	**72**	EAST LEG		WEST	LEFT	**35**	EAST LEG	
BOUND	THRU	**109**	IN ...	**250**	BOUND	THRU	**101**	IN ...	**370**
	RIGHT	**45**	OUT ...	**350**		RIGHT	**33**	OUT ...	**410**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**86**	**105**	NORTH LEG	NORTH	LEFT	**97**	**142**	NORTH LEG	
BOUND	THRU	**842**	**926**	RATIO **7.8%**	BOUND	THRU	**875**	**963**	RATIO **7.6%**	
	RIGHT	**36**	**45**	ADT 27,400		RIGHT	**55**	**61**	ADT 27,400	
SOUTH	LEFT	**62**	**91**	SOUTH LEG	SOUTH	LEFT	**58**	**81**	SOUTH LEG	
BOUND	THRU	**801**	**881**	RATIO **7.8%**	BOUND	THRU	**708**	**779**	RATIO **7.7%**	
	RIGHT	**60**	**85**	ADT 27,600		RIGHT	**52**	**99**	ADT 27,600	
EAST	LEFT	**62**	**112**	EAST LEG	EAST	LEFT	**61**	**104**	EAST LEG	
BOUND	THRU	**94**	**214**	RATIO **7.9%**	BOUND	THRU	**146**	**270**	RATIO **10.1%**	
	RIGHT	**75**	**115**	ADT 7,800		RIGHT	**102**	**133**	ADT 7,800	
WEST	LEFT	**72**	**79**	WEST LEG	WEST	LEFT	**35**	**48**	WEST LEG	
BOUND	THRU	**109**	**139**	RATIO **8.3%**	BOUND	THRU	**101**	**268**	RATIO **10.9%**	
	RIGHT	**45**	**50**	ADT 9,300		RIGHT	**33**	**59**	ADT 9,300	

CEDAR AVENUE (NS) / JURUPA AVENUE (EW) - #5

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			30	690	67			
			<	v	>			
39	^					^	137	
71	>					<	64	
27	v					v	47	
			<	^	>			
			23	591	36			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				787	767			
				v	^			
117	<	IN =		1822		<	248	
137	>	OUT =		1822		>	174	
				v	^			
				764	650			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			5	177	5			
			<	v	>			
7	^					^	14	
4	>					<	11	
2	v					v	8	
			<	^	>			
			12	168	2			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			35	867	72			
			<	v	>			
46	^					^	151	
75	>					<	75	
29	v					v	55	
			<	^	>			
			35	759	38			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				52	20			
				v	^			
203	<	IN =		541		<	37	
266	>	OUT =		540		>	20	
				v	^			
				297	186			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				1	1			
				v	^			
13	<	IN =		29		<	2	
14	>	OUT =		28		>	1	
				v	^			
				13	12			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				53	21			
				v	^			
216	<	IN =		570		<	39	
280	>	OUT =		568		>	21	
				v	^			
				310	198			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				85	63			
				v	^			
236	<	IN =		931		<	81	
548	>	OUT =		932		>	80	
				v	^			
				553	217			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				3	3			
				v	^			
18	<	IN =		49		<	4	
26	>	OUT =		51		>	4	
				v	^			
				26	16			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				88	66			
				v	^			
254	<	IN =		980		<	85	
574	>	OUT =		983		>	84	
				v	^			
				579	233			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				35	45			
				v	^			
38	<					<	46	
294	>					>	63	
				v	^			
				269	35			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				100	100			
				v	^			
40	<	IN =		480		<	50	
290	>	OUT =		470		>	60	
				v	^			
				270	40			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				60	60			
				v	^			
20	<					<	30	
180	>					>	40	
				v	^			
				160	20			

NEW PROJECTED VOLUMES (PCEs): 2035

				1030	1020			
				v	^			
170	<					<	310	
330	>					>	230	
				v	^			
				1110	850			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	10			
				v	^			
0	<					<	0	
20	>					>	0	
				v	^			
				20	0			

INITIAL YEAR 2020 VOLUMES:

2020

				980	970			
				v	^			
150	<	IN =		2260		<	280	
170	>	OUT =		2280		>	190	
				v	^			
				970	830			

BALANCED YEAR 2020 VOLUMES:

2020

				990	970			
				v	^			
150	<	IN =		2280		<	280	
170	>	OUT =		2280		>	190	
				v	^			
				970	840			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			36	655	102			
			<	v	>			
44	^					^	43	
158	>					<	58	
43	v					v	52	
			<	^	>			
			57	815	57			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				793	902			
				v	^			
151	<	IN =		2120		<	153	
245	>	OUT =		2120		>	317	
				v	^			
				750	929			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			4	90	7			
			<	v	>			
12	^					^	8	
27	>					<	3	
5	v					v	15	
			<	^	>			
			3	118	7			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			40	745	109			
			<	v	>			
56	^					^	51	
185	>					<	61	
48	v					v	67	
			<	^	>			
			60	933	64			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				88	140			
				v	^			
428	<	IN =		1040		<	25	
384	>	OUT =		1040		>	58	
				v	^			
				414	543			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				2	4			
				v	^			
22	<	IN =		49		<	2	
22	>	OUT =		51		>	4	
				v	^			
				21	23			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				90	144			
				v	^			
450	<	IN =		1089		<	27	
406	>	OUT =		1091		>	62	
				v	^			
				435	566			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				127	178			
				v	^			
719	<	IN =		1576		<	138	
552	>	OUT =		1576		>	96	
				v	^			
				583	759			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				8	7			
				v	^			
37	<	IN =		90		<	7	
37	>	OUT =		89		>	5	
				v	^			
				40	38			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				135	185			
				v	^			
756	<	IN =		1666		<	145	
589	>	OUT =		1665		>	101	
				v	^			
				623	797			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				45	41			
				v	^			
306	<					<	118	
183	>					>	39	
				v	^			
				188	231			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				90	100			
				v	^			
310	<	IN =		620		<	120	
180	>	OUT =		640		>	40	
				v	^			
				190	230			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				50	60			
				v	^			
190	<					<	70	
110	>					>	20	
				v	^			
				120	140			

NEW PROJECTED VOLUMES (PCEs): 2035

				940	1100			
				v	^			
350	<					<	250	
400	>					>	380	
				v	^			
				980	1200			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	10			
				v	^			
20	<					<	10	
10	>					>	0	
				v	^			
				10	20			

INITIAL YEAR 2020 VOLUMES:

2020

				900	1050			
				v	^			
180	<	IN =		2470		<	190	
300	>	OUT =		2460		>	360	
				v	^			
				870	1080			

BALANCED YEAR 2020 VOLUMES:

2020

				900	1050			
				v	^			
180	<	IN =		2470		<	190	
300	>	OUT =		2460		>	360	
				v	^			
				870	1080			

CEDAR AVENUE (NS) / JURUPA AVENUE (EW) - #5

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**35**	SOUTH LEG		NORTH	LEFT	**60**	SOUTH LEG	
BOUND	THRU	**759**	IN ...	**840**	BOUND	THRU	**933**	IN ...	**1,080**
	RIGHT	**38**	OUT ...	**970**		RIGHT	**64**	OUT ...	**870**
SOUTH	LEFT	**72**	NORTH LEG		SOUTH	LEFT	**109**	NORTH LEG	
BOUND	THRU	**867**	IN ...	**990**	BOUND	THRU	**745**	IN ...	**900**
	RIGHT	**35**	OUT ...	**970**		RIGHT	**40**	OUT ...	**1,050**
EAST	LEFT	**46**	WEST LEG		EAST	LEFT	**56**	WEST LEG	
BOUND	THRU	**75**	IN ...	**170**	BOUND	THRU	**185**	IN ...	**300**
	RIGHT	**29**	OUT ...	**150**		RIGHT	**48**	OUT ...	**180**
WEST	LEFT	**55**	EAST LEG		WEST	LEFT	**67**	EAST LEG	
BOUND	THRU	**75**	IN ...	**280**	BOUND	THRU	**61**	IN ...	**190**
	RIGHT	**151**	OUT ...	**190**		RIGHT	**51**	OUT ...	**360**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**35**	**36**	NORTH LEG	NORTH	LEFT	**60**	**68**	NORTH LEG	
BOUND	THRU	**759**	**768**	RATIO **7.1%**	BOUND	THRU	**933**	**944**	RATIO **7.1%**	
	RIGHT	**38**	**38**	ADT 27,600		RIGHT	**64**	**65**	ADT 27,600	
SOUTH	LEFT	**72**	**73**	SOUTH LEG	SOUTH	LEFT	**109**	**110**	SOUTH LEG	
BOUND	THRU	**867**	**882**	RATIO **7.4%**	BOUND	THRU	**745**	**754**	RATIO **8.0%**	
	RIGHT	**35**	**37**	ADT 24,400		RIGHT	**40**	**43**	ADT 24,400	
EAST	LEFT	**46**	**53**	EAST LEG	EAST	LEFT	**56**	**57**	EAST LEG	
BOUND	THRU	**75**	**83**	RATIO **6.7%**	BOUND	THRU	**185**	**190**	RATIO **7.7%**	
	RIGHT	**29**	**33**	ADT 7,200		RIGHT	**48**	**51**	ADT 7,200	
WEST	LEFT	**55**	**56**	WEST LEG	WEST	LEFT	**67**	**70**	WEST LEG	
BOUND	THRU	**75**	**77**	RATIO **4.1%**	BOUND	THRU	**61**	**69**	RATIO **6.1%**	
	RIGHT	**151**	**153**	ADT 7,800		RIGHT	**51**	**52**	ADT 7,800	

CEDAR AVENUE (NS) / JURUPA AVENUE (EW) - #5

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**35**	SOUTH LEG		NORTH	LEFT	**60**	SOUTH LEG	
BOUND	THRU	**759**	IN ...	**850**	BOUND	THRU	**933**	IN ...	**1,200**
	RIGHT	**38**	OUT ...	**1,110**		RIGHT	**64**	OUT ...	**980**
SOUTH	LEFT	**72**	NORTH LEG		SOUTH	LEFT	**109**	NORTH LEG	
BOUND	THRU	**867**	IN ...	**1,030**	BOUND	THRU	**745**	IN ...	**940**
	RIGHT	**35**	OUT ...	**1,020**		RIGHT	**40**	OUT ...	**1,100**
EAST	LEFT	**46**	WEST LEG		EAST	LEFT	**56**	WEST LEG	
BOUND	THRU	**75**	IN ...	**330**	BOUND	THRU	**185**	IN ...	**400**
	RIGHT	**29**	OUT ...	**170**		RIGHT	**48**	OUT ...	**350**
WEST	LEFT	**55**	EAST LEG		WEST	LEFT	**67**	EAST LEG	
BOUND	THRU	**75**	IN ...	**310**	BOUND	THRU	**61**	IN ...	**250**
	RIGHT	**151**	OUT ...	**230**		RIGHT	**51**	OUT ...	**380**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**35**	**44**	NORTH LEG	NORTH	LEFT	**60**	**153**	NORTH LEG
BOUND	THRU	**759**	**835**	RATIO **7.9%**	BOUND	THRU	**933**	**1,026**	RATIO **7.9%**
	RIGHT	**38**	**42**	ADT 27,600		RIGHT	**64**	**70**	ADT 27,600
SOUTH	LEFT	**72**	**79**	SOUTH LEG	SOUTH	LEFT	**109**	**120**	SOUTH LEG
BOUND	THRU	**867**	**954**	RATIO **8.3%**	BOUND	THRU	**745**	**820**	RATIO **9.2%**
	RIGHT	**35**	**39**	ADT 24,400		RIGHT	**40**	**71**	ADT 24,400
EAST	LEFT	**46**	**102**	EAST LEG	EAST	LEFT	**56**	**74**	EAST LEG
BOUND	THRU	**75**	**144**	RATIO **8.3%**	BOUND	THRU	**185**	**237**	RATIO **9.6%**
	RIGHT	**29**	**85**	ADT 7,200		RIGHT	**48**	**93**	ADT 7,200
WEST	LEFT	**55**	**72**	WEST LEG	WEST	LEFT	**67**	**83**	WEST LEG
BOUND	THRU	**75**	**91**	RATIO **6.5%**	BOUND	THRU	**61**	**125**	RATIO **9.7%**
	RIGHT	**151**	**166**	ADT 7,800		RIGHT	**51**	**56**	ADT 7,800

CEDAR AVENUE / RUBIDOUX BOULEVARD (NS) / TARRAGONA DRIVE / EL RIVINO ROAD (EW) - #6

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			7	760	62			
			<	v	>			
		17	^			^	40	
		8	>			<	2	
		14	v			v	39	
			<	^	>			
			8	428	36			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				829	485			
				v	^			
		17	<	IN =	1421	<	81	
		39	>	OUT =	1421	>	106	
				v	^			
				813	472			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	151	9			
			<	v	>			
		3	^			^	22	
		0	>			<	2	
		5	v			v	25	
			<	^	>			
			0	138	14			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			7	911	71			
			<	v	>			
		20	^			^	62	
		8	>			<	4	
		19	v			v	64	
			<	^	>			
			8	566	50			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				293	182			
				v	^			
		0	<	IN =	476	<	0	
		0	>	OUT =	476	>	1	
				v	^			
				293	183			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				13	12			
				v	^			
		0	<	IN =	25	<	0	
		0	>	OUT =	25	>	0	
				v	^			
				13	12			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				306	194			
				v	^			
		0	<	IN =	501	<	0	
		0	>	OUT =	501	>	1	
				v	^			
				306	195			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				654	250			
				v	^			
		0	<	IN =	904	<	0	
		0	>	OUT =	904	>	0	
				v	^			
				654	250			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				39	26			
				v	^			
		0	<	IN =	65	<	0	
		0	>	OUT =	65	>	0	
				v	^			
				39	26			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				693	276			
				v	^			
		0	<	IN =	969	<	0	
		0	>	OUT =	969	>	0	
				v	^			
				693	276			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				387	82			
				v	^			
		0	<			<	0	
		0	>			>	-1	
				v	^			
				387	81			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				390	80			
				v	^			
		0	<	IN =	480	<	10	
		0	>	OUT =	480	>	10	
				v	^			
				390	80			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				240	50			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				240	50			

NEW PROJECTED VOLUMES (PCEs): 2035

				1230	700			
				v	^			
		20	<			<	140	
		50	>			>	140	
				v	^			
				1230	670			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	10			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				30	10			

INITIAL YEAR 2020 VOLUMES:

2020

				1020	660			
				v	^			
		20	<	IN =	1830	<	130	
		50	>	OUT =	1830	>	130	
				v	^			
				1020	630			

BALANCED YEAR 2020 VOLUMES:

2020

				1020	660			
				v	^			
		20	<	IN =	1830	<	130	
		50	>	OUT =	1830	>	130	
				v	^			
				1020	630			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			13	800	171			
			<	v	>			
		19	^			^	109	
		5	>			<	6	
		11	v			v	35	
			<	^	>			
			12	856	72			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				984	984			
				v	^			
		31	<	IN =	2109	<	150	
		35	>	OUT =	2109	>	248	
				v	^			
				846	940			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			2	147	137			
			<	v	>			
		0	^			^	45	
		3	>			<	8	
		8	v			v	27	
			<	^	>			
			0	286	5			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			15	947	308			
			<	v	>			
		19	^			^	154	
		8	>			<	14	
		19	v			v	62	
			<	^	>			
			12	1142	77			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				411	539			
				v	^			
		0	<	IN =	981	<	22	
		0	>	OUT =	981	>	10	
				v	^			
				432	548			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				21	23			
				v	^			
		0	<	IN =	46	<	1	
		0	>	OUT =	45	>	0	
				v	^			
				22	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				432	562			
				v	^			
		0	<	IN =	1027	<	23	
		0	>	OUT =	1026	>	10	
				v	^			
				454	572			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				705	882			
				v	^			
		0	<	IN =	1587	<	0	
		0	>	OUT =	1587	>	0	
				v	^			
				705	882			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				56	52			
				v	^			
		0	<	IN =	108	<	0	
		0	>	OUT =	108	>	0	
				v	^			
				56	52			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				761	934			
				v	^			
		0	<	IN =	1695	<	0	
		0	>	OUT =	1695	>	0	
				v	^			
				761	934			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				329	372			
				v	^			
		0	<			<	-23	
		0	>			>	-10	
				v	^			
				307	362			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				330	370			
				v	^			
		0	<	IN =	710	<	20	
		0	>	OUT =	720	>	40	
				v	^			
				310	360			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				200	220			
				v	^			
		0	<			<	10	
		0	>			>	20	
				v	^			
				190	220			

NEW PROJECTED VOLUMES (PCEs): 2035

				1470	1540			
				v	^			
		40	<			<	240	
		50	>			>	410	
				v	^			
				1220	1450			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	30			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				20	30			

INITIAL YEAR 2020 VOLUMES:

2020

				1290	1350			
				v	^			
		40	<	IN =	2830	<	230	
		50	>	OUT =	2830	>	390	
				v	^			
				1050	1260			

BALANCED YEAR 2020 VOLUMES:

2020

				1290	1350			
				v	^			
		40	<	IN =	2830	<	230	
		50	>	OUT =	2830	>	390	
				v	^			
				1050	1260			

CEDAR AVENUE / RUBIDOUX BOULEVARD (NS) / TARRAGONA DRIVE / EL RIVINO ROAD (EW) - #6

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**8**	SOUTH LEG		NORTH	LEFT	**12**	SOUTH LEG	
BOUND	THRU	**566**	IN ...	**630**	BOUND	THRU	**1,142**	IN ...	**1,260**
	RIGHT	**50**	OUT ...	**1,020**		RIGHT	**77**	OUT ...	**1,050**
SOUTH	LEFT	**71**	NORTH LEG		SOUTH	LEFT	**308**	NORTH LEG	
BOUND	THRU	**911**	IN ...	**1,020**	BOUND	THRU	**947**	IN ...	**1,290**
	RIGHT	**7**	OUT ...	**660**		RIGHT	**15**	OUT ...	**1,350**
EAST	LEFT	**20**	WEST LEG		EAST	LEFT	**19**	WEST LEG	
BOUND	THRU	**8**	IN ...	**50**	BOUND	THRU	**8**	IN ...	**50**
	RIGHT	**19**	OUT ...	**20**		RIGHT	**19**	OUT ...	**40**
WEST	LEFT	**64**	EAST LEG		WEST	LEFT	**62**	EAST LEG	
BOUND	THRU	**4**	IN ...	**130**	BOUND	THRU	**14**	IN ...	**230**
	RIGHT	**62**	OUT ...	**130**		RIGHT	**154**	OUT ...	**390**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**8**	**8**	NORTH LEG	NORTH	LEFT	**12**	**12**	NORTH LEG
BOUND	THRU	**566**	**575**	RATIO **6.5%**	BOUND	THRU	**1,142**	**1,174**	RATIO **10.2%**
	RIGHT	**50**	**51**	ADT 25,900		RIGHT	**77**	**78**	ADT 25,900
SOUTH	LEFT	**71**	**73**	SOUTH LEG	SOUTH	LEFT	**308**	**312**	SOUTH LEG
BOUND	THRU	**911**	**938**	RATIO **6.4%**	BOUND	THRU	**947**	**968**	RATIO **8.9%**
	RIGHT	**7**	**8**	ADT 26,000		RIGHT	**15**	**15**	ADT 26,000
EAST	LEFT	**20**	**22**	EAST LEG	EAST	LEFT	**19**	**21**	EAST LEG
BOUND	THRU	**8**	**8**	RATIO **2.3%**	BOUND	THRU	**8**	**8**	RATIO **5.5%**
	RIGHT	**19**	**20**	ADT 11,400		RIGHT	**19**	**21**	ADT 11,400
WEST	LEFT	**64**	**65**	WEST LEG	WEST	LEFT	**62**	**63**	WEST LEG
BOUND	THRU	**4**	**4**	RATIO **6.4%**	BOUND	THRU	**14**	**14**	RATIO **8.3%**
	RIGHT	**62**	**64**	ADT 1,100		RIGHT	**154**	**156**	ADT 1,100

CEDAR AVENUE / RUBIDOUX BOULEVARD (NS) / TARRAGONA DRIVE / EL RIVINO ROAD (EW) - #6

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**8**	SOUTH LEG		NORTH	LEFT	**12**	SOUTH LEG	
BOUND	THRU	**566**	IN ...	**670**	BOUND	THRU	**1,142**	IN ...	**1,450**
	RIGHT	**50**	OUT ...	**1,230**		RIGHT	**77**	OUT ...	**1,220**
SOUTH	LEFT	**71**	NORTH LEG		SOUTH	LEFT	**308**	NORTH LEG	
BOUND	THRU	**911**	IN ...	**1,230**	BOUND	THRU	**947**	IN ...	**1,470**
	RIGHT	**7**	OUT ...	**700**		RIGHT	**15**	OUT ...	**1,540**
EAST	LEFT	**20**	WEST LEG		EAST	LEFT	**19**	WEST LEG	
BOUND	THRU	**8**	IN ...	**50**	BOUND	THRU	**8**	IN ...	**50**
	RIGHT	**19**	OUT ...	**20**		RIGHT	**19**	OUT ...	**40**
WEST	LEFT	**64**	EAST LEG		WEST	LEFT	**62**	EAST LEG	
BOUND	THRU	**4**	IN ...	**140**	BOUND	THRU	**14**	IN ...	**240**
	RIGHT	**62**	OUT ...	**140**		RIGHT	**154**	OUT ...	**410**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**8**	**9**	NORTH LEG	NORTH	LEFT	**12**	**13**	NORTH LEG
BOUND	THRU	**566**	**623**	RATIO **7.5%**	BOUND	THRU	**1,142**	**1,358**	RATIO **11.7%**
	RIGHT	**50**	**55**	ADT 25,900		RIGHT	**77**	**85**	ADT 25,900
SOUTH	LEFT	**71**	**82**	SOUTH LEG	SOUTH	LEFT	**308**	**339**	SOUTH LEG
BOUND	THRU	**911**	**1,140**	RATIO **7.4%**	BOUND	THRU	**947**	**1,133**	RATIO **10.3%**
	RIGHT	**7**	**8**	ADT 26,000		RIGHT	**15**	**17**	ADT 26,000
EAST	LEFT	**20**	**22**	EAST LEG	EAST	LEFT	**19**	**21**	EAST LEG
BOUND	THRU	**8**	**9**	RATIO **2.5%**	BOUND	THRU	**8**	**9**	RATIO **6.0%**
	RIGHT	**19**	**21**	ADT 11,400		RIGHT	**19**	**21**	ADT 11,400
WEST	LEFT	**64**	**70**	WEST LEG	WEST	LEFT	**62**	**68**	WEST LEG
BOUND	THRU	**4**	**4**	RATIO **6.6%**	BOUND	THRU	**14**	**15**	RATIO **8.7%**
	RIGHT	**62**	**68**	ADT 1,100		RIGHT	**154**	**169**	ADT 1,100

RUBIDOUX BOULEVARD (NS) / PRODUCTION CIRCLE / PROJECT ACCESS (EW) - #9

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			8	820	0			
			<	v	>			
		3	^			^	0	
		0	>			<	0	
		7	v			v	0	
			<	^	>			
			16	513	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				828	516			
				v	^			
		24	<	IN =	1367	<	0	
		10	>	OUT =	1367	>	0	
				v	^			
				827	529			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			2	190	0			
			<	v	>			
		2	^			^	0	
		0	>			<	0	
		9	v			v	0	
			<	^	>			
			2	164	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			10	1010	0			
			<	v	>			
		5	^			^	0	
		0	>			<	0	
		16	v			v	0	
			<	^	>			
			18	677	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				293	183			
				v	^			
		0	<	IN =	476	<	0	
		0	>	OUT =	476	>	0	
				v	^			
				293	183			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				13	12			
				v	^			
		0	<	IN =	25	<	0	
		0	>	OUT =	25	>	0	
				v	^			
				13	12			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				306	195			
				v	^			
		0	<	IN =	501	<	0	
		0	>	OUT =	501	>	0	
				v	^			
				306	195			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				654	250			
				v	^			
		0	<	IN =	904	<	0	
		0	>	OUT =	904	>	0	
				v	^			
				654	250			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				39	26			
				v	^			
		0	<	IN =	65	<	0	
		0	>	OUT =	65	>	0	
				v	^			
				39	26			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				693	276			
				v	^			
		0	<	IN =	969	<	0	
		0	>	OUT =	969	>	0	
				v	^			
				693	276			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				387	81			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				387	81			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				390	80			
				v	^			
		0	<	IN =	470	<	0	
		0	>	OUT =	470	>	0	
				v	^			
				390	80			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				240	50			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				240	50			

NEW PROJECTED VOLUMES (PCEs): 2035

				1260	730			
				v	^			
		30	<			<	0	
		20	>			>	0	
				v	^			
				1270	750			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	10			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				30	10			

INITIAL YEAR 2020 VOLUMES:

2020

				1050	690			
				v	^			
		30	<	IN =	1780	<	0	
		20	>	OUT =	1780	>	0	
				v	^			
				1060	710			

BALANCED YEAR 2020 VOLUMES:

2020

				1050	690			
				v	^			
		30	<	IN =	1780	<	0	
		20	>	OUT =	1780	>	0	
				v	^			
				1060	710			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			15	835	0			
			<	v	>			
		19	^			^	1	
		0	>			<	0	
		32	v			v	0	
			<	^	>			
			14	870	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				850	890			
				v	^			
		29	<	IN =	1786	<	1	
		51	>	OUT =	1786	>	0	
				v	^			
				867	884			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	194	0			
			<	v	>			
		3	^			^	0	
		0	>			<	0	
		2	v			v	0	
			<	^	>			
			4	331	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			15	1029	0			
			<	v	>			
		22	^			^	1	
		0	>			<	0	
		34	v			v	0	
			<	^	>			
			18	1201	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				432	548			
				v	^			
		0	<	IN =	980	<	0	
		0	>	OUT =	980	>	0	
				v	^			
				432	548			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				22	24			
				v	^			
		0	<	IN =	46	<	0	
		0	>	OUT =	46	>	0	
				v	^			
				22	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				454	572			
				v	^			
		0	<	IN =	1026	<	0	
		0	>	OUT =	1026	>	0	
				v	^			
				454	572			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				705	882			
				v	^			
		0	<	IN =	1587	<	0	
		0	>	OUT =	1587	>	0	
				v	^			
				705	882			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				56	52			
				v	^			
		0	<	IN =	108	<	0	
		0	>	OUT =	108	>	0	
				v	^			
				56	52			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				761	934			
				v	^			
		0	<	IN =	1695	<	0	
		0	>	OUT =	1695	>	0	
				v	^			
				761	934			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				307	362			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				307	362			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				310	360			
				v	^			
		0	<	IN =	680	<	0	
		10	>	OUT =	670	>	0	
				v	^			
				310	360			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				190	220			
				v	^			
		0	<			<	0	
		10	>			>	0	
				v	^			
				190	220			

NEW PROJECTED VOLUMES (PCEs): 2035

				1230	1440			
				v	^			
		30	<			<	0	
		70	>			>	0	
				v	^			
				1250	1440			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	30			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				20	30			

INITIAL YEAR 2020 VOLUMES:

2020

				1060	1250			
				v	^			
		30	<	IN =	2370	<	0	
		60	>	OUT =	2360	>	0	
				v	^			
				1080	1250			

BALANCED YEAR 2020 VOLUMES:

2020

				1060	1260			
				v	^			
		30	<	IN =	2370	<	0	
		60	>	OUT =	2370	>	0	
				v	^			
				1080	1250			

RUBIDOUX BOULEVARD (NS) / PRODUCTION CIRCLE / PROJECT ACCESS (EW) - #9

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**18**	SOUTH LEG		NORTH	LEFT	**18**	SOUTH LEG	
BOUND	THRU	**677**	IN ...	**710**	BOUND	THRU	**1,201**	IN ...	**1,250**
	RIGHT	**0**	OUT ...	**1,060**		RIGHT	**0**	OUT ...	**1,080**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,010**	IN ...	**1,050**	BOUND	THRU	**1,029**	IN ...	**1,060**
	RIGHT	**10**	OUT ...	**690**		RIGHT	**15**	OUT ...	**1,260**
EAST	LEFT	**5**	WEST LEG		EAST	LEFT	**22**	WEST LEG	
BOUND	THRU	**0**	IN ...	**20**	BOUND	THRU	**0**	IN ...	**60**
	RIGHT	**16**	OUT ...	**30**		RIGHT	**34**	OUT ...	**30**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**1**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**18**	**20**	NORTH LEG	NORTH	LEFT	**18**	**18**	NORTH LEG	
BOUND	THRU	**677**	**686**	RATIO **6.7%**	BOUND	THRU	**1,201**	**1,236**	RATIO **8.9%**	
	RIGHT	**0**	**0**	ADT 26,000		RIGHT	**0**	**0**	ADT 26,000	
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,010**	**1,044**	RATIO **6.9%**	BOUND	THRU	**1,029**	**1,044**	RATIO **9.1%**	
	RIGHT	**10**	**10**	ADT 25,700		RIGHT	**15**	**15**	ADT 25,700	
EAST	LEFT	**5**	**5**	EAST LEG	EAST	LEFT	**22**	**24**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**	
	RIGHT	**16**	**16**	ADT 0		RIGHT	**34**	**36**	ADT 0	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **4.3%**	BOUND	THRU	**0**	**0**	RATIO **7.8%**	
	RIGHT	**0**	**0**	ADT 1,200		RIGHT	**1**	**1**	ADT 1,200	

RUBIDOUX BOULEVARD (NS) / PRODUCTION CIRCLE / PROJECT ACCESS (EW) - #9

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**18**	SOUTH LEG		NORTH	LEFT	**18**	SOUTH LEG	
BOUND	THRU	**677**	IN ...	**750**	BOUND	THRU	**1,201**	IN ...	**1,440**
	RIGHT	**0**	OUT ...	**1,270**		RIGHT	**0**	OUT ...	**1,250**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,010**	IN ...	**1,260**	BOUND	THRU	**1,029**	IN ...	**1,230**
	RIGHT	**10**	OUT ...	**730**		RIGHT	**15**	OUT ...	**1,440**
EAST	LEFT	**5**	WEST LEG		EAST	LEFT	**22**	WEST LEG	
BOUND	THRU	**0**	IN ...	**20**	BOUND	THRU	**0**	IN ...	**70**
	RIGHT	**16**	OUT ...	**30**		RIGHT	**34**	OUT ...	**30**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**1**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**18**	**20**	NORTH LEG	NORTH	LEFT	**18**	**20**	NORTH LEG	
BOUND	THRU	**677**	**745**	RATIO **7.8%**	BOUND	THRU	**1,201**	**1,413**	RATIO	**10.3%**
	RIGHT	**0**	**0**	ADT 26,000		RIGHT	**0**	**0**	ADT	26,000
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,010**	**1,254**	RATIO **7.9%**	BOUND	THRU	**1,029**	**1,208**	RATIO	**10.4%**
	RIGHT	**10**	**11**	ADT 25,700		RIGHT	**15**	**17**	ADT	25,700
EAST	LEFT	**5**	**6**	EAST LEG	EAST	LEFT	**22**	**27**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**16**	**18**	ADT 0		RIGHT	**34**	**42**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **4.6%**	BOUND	THRU	**0**	**0**	RATIO	**8.8%**
	RIGHT	**0**	**0**	ADT 1,200		RIGHT	**1**	**1**	ADT	1,200

RUBIDOUX BOULEVARD (NS) / 20TH STREET / MARKET STREET (EW) - #10

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			7	479	482			
			<	v	>			
		1	^			^	291	
		7	>			<	18	
		0	v			v	140	
			<	^	>			
			2	186	154			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				968	478			
				v	^			
		27	<	IN =	1767	<	449	
		8	>	OUT =	1767	>	643	
				v	^			
				619	342			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			10	55	34			
			<	v	>			
		13	^			^	32	
		22	>			<	18	
		11	v			v	122	
			<	^	>			
			11	35	108			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			17	534	516			
			<	v	>			
		14	^			^	323	
		29	>			<	36	
		11	v			v	262	
			<	^	>			
			13	221	262			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				293	183			
				v	^			
		51	<	IN =	1036	<	447	
		48	>	OUT =	1036	>	562	
				v	^			
				240	248			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				13	12			
				v	^			
		2	<	IN =	61	<	29	
		2	>	OUT =	61	>	32	
				v	^			
				15	17			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				306	195			
				v	^			
		53	<	IN =	1097	<	476	
		50	>	OUT =	1097	>	594	
				v	^			
				255	265			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				654	250			
				v	^			
		168	<	IN =	2195	<	773	
		269	>	OUT =	2195	>	1067	
				v	^			
				710	499			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				39	26			
				v	^			
		12	<	IN =	150	<	63	
		17	>	OUT =	149	>	64	
				v	^			
				47	31			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				693	276			
				v	^			
		180	<	IN =	2345	<	836	
		286	>	OUT =	2344	>	1131	
				v	^			
				757	530			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				387	81			
				v	^			
		127	<			<	360	
		236	>			>	537	
				v	^			
				502	265			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				390	80			
				v	^			
		130	<	IN =	1260	<	360	
		240	>	OUT =	1250	>	540	
				v	^			
				500	270			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				240	50			
				v	^			
		80	<			<	220	
		150	>			>	330	
				v	^			
				300	160			

NEW PROJECTED VOLUMES (PCEs): 2035

				1310	610			
				v	^			
		150	<			<	840	
		200	>			>	1140	
				v	^			
				1110	660			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	10			
				v	^			
		10	<			<	30	
		20	>			>	40	
				v	^			
				40	20			

INITIAL YEAR 2020 VOLUMES:

2020

				1100	570			
				v	^			
		80	<	IN =	2340	<	650	
		70	>	OUT =	2350	>	850	
				v	^			
				850	520			

BALANCED YEAR 2020 VOLUMES:

2020

				1100	570			
				v	^			
		80	<	IN =	2340	<	650	
		70	>	OUT =	2350	>	850	
				v	^			
				850	520			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			15	404	423			
			<	v	>			
		21	^			^	434	
		40	>			<	19	
		1	v			v	214	
			<	^	>			
			4	300	319			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				842	755			
				v	^			
		38	<	IN =	2194	<	667	
		62	>	OUT =	2194	>	782	
				v	^			
				619	623			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			7	54	35			
			<	v	>			
		8	^			^	27	
		18	>			<	20	
		2	v			v	73	
			<	^	>			
			11	75	133			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			22	458	458			
			<	v	>			
		29	^			^	461	
		58	>			<	39	
		3	v			v	287	
			<	^	>			
			15	375	452			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				432	548			
				v	^			
		68	<	IN =	1800	<	794	
		78	>	OUT =	1799	>	752	
				v	^			
				431	496			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				22	24			
				v	^			
		3	<	IN =	91	<	38	
		3	>	OUT =	91	>	43	
				v	^			
				21	28			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				454	572			
				v	^			
		71	<	IN =	1891	<	832	
		81	>	OUT =	1890	>	795	
				v	^			
				452	524			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				705	882			
				v	^			
		349	<	IN =	3310	<	1286	
		248	>	OUT =	3309	>	1141	
				v	^			
				937	1071			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				56	52			
				v	^			
		22	<	IN =	215	<	74	
		20	>	OUT =	214	>	84	
				v	^			
				56	65			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				761	934			
				v	^			
		371	<	IN =	3525	<	1360	
		268	>	OUT =	3523	>	1225	
				v	^			
				993	1136			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				307	362			
				v	^			
		300	<			<	528	
		187	>			>	430	
				v	^			
				541	612			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				310	360			
				v	^			
		300	<	IN =	1640	<	530	
		190	>	OUT =	1630	>	430	
				v	^			
				540	610			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				190	220			
				v	^			
		180	<			<	320	
		120	>			>	260	
				v	^			
				330	370			

NEW PROJECTED VOLUMES (PCEs): 2035

				1130	1090			
				v	^			
		260	<			<	1110	
		210	>			>	1230	
				v	^			
				1080	1210			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	30			
				v	^			
		20	<			<	40	
		10	>			>	30	
				v	^			
				40	40			

INITIAL YEAR 2020 VOLUMES:

2020

				960	900			
				v	^			
		100	<	IN =	2770	<	830	
		100	>	OUT =	2790	>	1000	
				v	^			
				790	880			

BALANCED YEAR 2020 VOLUMES:

2020

				970	900			
				v	^			
		100	<	IN =	2800	<	840	
		100	>	OUT =	2790	>	1000	
				v	^			
				790	890			

RUBIDOUX BOULEVARD (NS) / 20TH STREET / MARKET STREET (EW) - #10

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**13**	SOUTH LEG		NORTH	LEFT	**15**	SOUTH LEG	
BOUND	THRU	**221**	IN ...	**520**	BOUND	THRU	**375**	IN ...	**890**
	RIGHT	**262**	OUT ...	**850**		RIGHT	**452**	OUT ...	**790**
SOUTH	LEFT	**516**	NORTH LEG		SOUTH	LEFT	**458**	NORTH LEG	
BOUND	THRU	**534**	IN ...	**1,100**	BOUND	THRU	**458**	IN ...	**970**
	RIGHT	**17**	OUT ...	**570**		RIGHT	**22**	OUT ...	**900**
EAST	LEFT	**14**	WEST LEG		EAST	LEFT	**29**	WEST LEG	
BOUND	THRU	**29**	IN ...	**70**	BOUND	THRU	**58**	IN ...	**100**
	RIGHT	**11**	OUT ...	**80**		RIGHT	**3**	OUT ...	**100**
WEST	LEFT	**262**	EAST LEG		WEST	LEFT	**287**	EAST LEG	
BOUND	THRU	**36**	IN ...	**650**	BOUND	THRU	**39**	IN ...	**840**
	RIGHT	**323**	OUT ...	**850**		RIGHT	**461**	OUT ...	**1,000**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**13**	**16**	NORTH LEG		NORTH	LEFT	**15**	**20**	NORTH LEG	
BOUND	THRU	**221**	**225**	RATIO	**6.5%**	BOUND	THRU	**375**	**392**	RATIO	**7.3%**
	RIGHT	**262**	**281**	ADT	25,700		RIGHT	**452**	**475**	ADT	25,700
SOUTH	LEFT	**516**	**531**	SOUTH LEG		SOUTH	LEFT	**458**	**463**	SOUTH LEG	
BOUND	THRU	**534**	**554**	RATIO	**5.7%**	BOUND	THRU	**458**	**478**	RATIO	**6.9%**
	RIGHT	**17**	**20**	ADT	24,200		RIGHT	**22**	**28**	ADT	24,200
EAST	LEFT	**14**	**18**	EAST LEG		EAST	LEFT	**29**	**32**	EAST LEG	
BOUND	THRU	**29**	**38**	RATIO	**5.0%**	BOUND	THRU	**58**	**64**	RATIO	**6.2%**
	RIGHT	**11**	**15**	ADT	29,800		RIGHT	**3**	**3**	ADT	29,800
WEST	LEFT	**262**	**282**	WEST LEG		WEST	LEFT	**287**	**309**	WEST LEG	
BOUND	THRU	**36**	**44**	RATIO	**3.1%**	BOUND	THRU	**39**	**52**	RATIO	**4.1%**
	RIGHT	**323**	**327**	ADT	4,800		RIGHT	**461**	**476**	ADT	4,800

RUBIDOUX BOULEVARD (NS) / 20TH STREET / MARKET STREET (EW) - #10

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**13**	SOUTH LEG		NORTH	LEFT	**15**	SOUTH LEG	
BOUND	THRU	**221**	IN ...	**660**	BOUND	THRU	**375**	IN ...	**1,210**
	RIGHT	**262**	OUT ...	**1,110**		RIGHT	**452**	OUT ...	**1,080**
SOUTH	LEFT	**516**	NORTH LEG		SOUTH	LEFT	**458**	NORTH LEG	
BOUND	THRU	**534**	IN ...	**1,310**	BOUND	THRU	**458**	IN ...	**1,130**
	RIGHT	**17**	OUT ...	**610**		RIGHT	**22**	OUT ...	**1,090**
EAST	LEFT	**14**	WEST LEG		EAST	LEFT	**29**	WEST LEG	
BOUND	THRU	**29**	IN ...	**200**	BOUND	THRU	**58**	IN ...	**210**
	RIGHT	**11**	OUT ...	**150**		RIGHT	**3**	OUT ...	**260**
WEST	LEFT	**262**	EAST LEG		WEST	LEFT	**287**	EAST LEG	
BOUND	THRU	**36**	IN ...	**840**	BOUND	THRU	**39**	IN ...	**1,110**
	RIGHT	**323**	OUT ...	**1,140**		RIGHT	**461**	OUT ...	**1,230**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**13**	**31**	NORTH LEG		NORTH	LEFT	**15**	**62**	NORTH LEG	
BOUND	THRU	**221**	**243**	RATIO	**7.6%**	BOUND	THRU	**375**	**507**	RATIO	**8.8%**
	RIGHT	**262**	**399**	ADT	25,700		RIGHT	**452**	**641**	ADT	25,700
SOUTH	LEFT	**516**	**624**	SOUTH LEG		SOUTH	LEFT	**458**	**504**	SOUTH LEG	
BOUND	THRU	**534**	**654**	RATIO	**7.4%**	BOUND	THRU	**458**	**613**	RATIO	**9.5%**
	RIGHT	**17**	**32**	ADT	24,200		RIGHT	**22**	**64**	ADT	24,200
EAST	LEFT	**14**	**38**	EAST LEG		EAST	LEFT	**29**	**65**	EAST LEG	
BOUND	THRU	**29**	**117**	RATIO	**6.7%**	BOUND	THRU	**58**	**136**	RATIO	**8.0%**
	RIGHT	**11**	**45**	ADT	29,800		RIGHT	**3**	**9**	ADT	29,800
WEST	LEFT	**262**	**411**	WEST LEG		WEST	LEFT	**287**	**457**	WEST LEG	
BOUND	THRU	**36**	**87**	RATIO	**7.3%**	BOUND	THRU	**39**	**134**	RATIO	**9.8%**
	RIGHT	**323**	**355**	ADT	4,800		RIGHT	**461**	**518**	ADT	4,800

RUBIDOUX BOULEVARD (NS) / 24TH STREET (EW) - #11

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018				1	520	82		
				<	v	>		
	1	^					^	10
	2	>					<	1
	1	v					v	5
				<	^	>		
				9	333	17		

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018					603	344		
					v	^		
	11	<	IN =		982		<	16
	4	>	OUT =		982		>	101
					^	v		
					526	359		

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

				0	240	2		
				<	v	>		
	0	^					^	5
	0	>					<	2
	15	v					v	2
				<	^	>		
				13	156	8		

PCE FACTORS BY AXLE:
2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018				1	760	84		
				<	v	>		
	1	^					^	15
	2	>					<	3
	16	v					v	7
				<	^	>		
				22	489	25		

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007					240	248		
					v	^		
	117	<	IN =		866		<	142
	137	>	OUT =		867		>	233
					v	^		
					269	347		

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007					15	17		
					v	^		
	5	<	IN =		62		<	15
	6	>	OUT =		62		>	15
					v	^		
					25	26		

EXISTING PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

					255	265		
					v	^		
	122	<	IN =		928		<	157
	143	>	OUT =		929		>	248
					v	^		
					294	373		

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035					710	499		
					v	^		
	60	<	IN =		1756		<	110
	248	>	OUT =		1756		>	689
					v	^		
					508	688		

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035					47	31		
					v	^		
	11	<	IN =		154		<	39
	16	>	OUT =		153		>	47
					v	^		
					64	52		

FUTURE PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

					757	530		
					v	^		
	71	<	IN =		1910		<	149
	264	>	OUT =		1909		>	736
					v	^		
					572	740		

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

					502	265		
					v	^		
	-51	<					<	-8
	121	>					>	488
					v	^		
					278	367		

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

					500	270		
					v	^		
	0	<	IN =		990		<	0
	120	>	OUT =		1040		>	490
					v	^		
					280	370		

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

					300	160		
					v	^		
	0	<					<	0
	70	>					>	300
					v	^		
					170	220		

NEW PROJECTED VOLUMES (PCEs): 2035

					1150	670		
					v	^		
	30	<					<	30
	90	>					>	410
					v	^		
					950	760		

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

					40	20		
					v	^		
	0	<					<	0
	10	>					>	40
					v	^		
					20	30		

INITIAL YEAR 2020 VOLUMES:

2020					890	530		
					v	^		
	30	<	IN =		1520		<	30
	30	>	OUT =		1510		>	150
					v	^		
					800	570		

BALANCED YEAR 2020 VOLUMES:

2020					890	530		
					v	^		
	30	<	IN =		1520		<	30
	30	>	OUT =		1520		>	150
					v	^		
					810	570		

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018				4	508	100		
				<	v	>		
	4	^					^	23
	12	>					<	10
	13	v					v	16
				<	^	>		
				4	560	43		

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018					612	587		
					v	^		
	18	<	IN =		1297		<	49
	29	>	OUT =		1297		>	155
					v	^		
					537	607		

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

				0	184	8		
				<	v	>		
	0	^					^	3
	3	>					<	0
	2	v					v	2
				<	^	>		
				10	307	30		

PCE FACTORS BY AXLE:
2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018				4	692	108		
				<	v	>		
	4	^					^	26
	15	>					<	10
	15	v					v	18
				<	^	>		
				14	867	73		

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007					431	496		
					v	^		
	137	<	IN =		1289		<	327
	83	>	OUT =		1289		>	148
					v	^		
					508	448		

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007					21	28		
					v	^		
	7	<	IN =		82		<	21
	5	>	OUT =		83		>	17
					v	^		
					31	35		

EXISTING PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

					452	524		
					v	^		
	144	<	IN =		1371		<	348
	88	>	OUT =		1372		>	165
					v	^		
					539	483		

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035					937	1071		
					v	^		
	216	<	IN =		2559		<	677
	86	>	OUT =		2560		>	371
					v	^		
					902	859		

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035					56	65		
					v	^		
	17	<	IN =		208		<	53
	14	>	OUT =		206		>	64
					v	^		
					60	85		

FUTURE PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

					993	1136		
					v	^		
	233	<	IN =		2767		<	730
	100	>	OUT =		2766		>	435
					v	^		
					962	944		

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

					541	612		
					v	^		
	89	<					<	382
	12	>					>	270
					v	^		
					423	461		

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

					540	610		
					v	^		
	90	<	IN =		1390		<	380
	10	>	OUT =		1390		>	270
					v	^		
					420	460		

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

					330	370		
					v	^		
	50	<					<	230
	10	>					>	160
					v	^		
					260	280		

NEW PROJECTED VOLUMES (PCEs): 2035

					1130	1270		
					v	^		
	80	<					<	280
	40	>					>	360
					v	^		
					990	1230		

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

					40	40		
					v	^		
	10	<					<	30
	0	>					>	20
					v	^		
					30	30		

INITIAL YEAR 2020 VOLUMES:

2020					840	940		
					v	^		
	40	<	IN =		1930		<	80
	30	>	OUT =		1960		>	220
					v	^		
					760	980		

BALANCED YEAR 2020 VOLUMES:

2020					850	940		
					v	^		
	40	<	IN =		1960		<	80
	30	>	OUT =		1960		>	220
					v	^		
					760	1000		

RUBIDOUX BOULEVARD (NS) / 24TH STREET (EW) - #11

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**22**	SOUTH LEG		NORTH	LEFT	**14**	SOUTH LEG	
BOUND	THRU	**489**	IN ...	**570**	BOUND	THRU	**867**	IN ...	**1,000**
	RIGHT	**25**	OUT ...	**810**		RIGHT	**73**	OUT ...	**760**
SOUTH	LEFT	**84**	NORTH LEG		SOUTH	LEFT	**108**	NORTH LEG	
BOUND	THRU	**760**	IN ...	**890**	BOUND	THRU	**692**	IN ...	**850**
	RIGHT	**1**	OUT ...	**530**		RIGHT	**4**	OUT ...	**940**
EAST	LEFT	**1**	WEST LEG		EAST	LEFT	**4**	WEST LEG	
BOUND	THRU	**2**	IN ...	**30**	BOUND	THRU	**15**	IN ...	**30**
	RIGHT	**16**	OUT ...	**30**		RIGHT	**15**	OUT ...	**40**
WEST	LEFT	**7**	EAST LEG		WEST	LEFT	**18**	EAST LEG	
BOUND	THRU	**3**	IN ...	**30**	BOUND	THRU	**10**	IN ...	**80**
	RIGHT	**15**	OUT ...	**150**		RIGHT	**26**	OUT ...	**220**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**22**	**25**	NORTH LEG	NORTH	LEFT	**14**	**18**	NORTH LEG
BOUND	THRU	**489**	**511**	RATIO **5.9%**	BOUND	THRU	**867**	**900**	RATIO **7.4%**
	RIGHT	**25**	**34**	ADT 24,200		RIGHT	**73**	**83**	ADT 24,200
SOUTH	LEFT	**84**	**112**	SOUTH LEG	SOUTH	LEFT	**108**	**123**	SOUTH LEG
BOUND	THRU	**760**	**777**	RATIO **5.5%**	BOUND	THRU	**692**	**722**	RATIO **7.0%**
	RIGHT	**1**	**1**	ADT 25,100		RIGHT	**4**	**5**	ADT 25,100
EAST	LEFT	**1**	**2**	EAST LEG	EAST	LEFT	**4**	**4**	EAST LEG
BOUND	THRU	**2**	**4**	RATIO **2.5%**	BOUND	THRU	**15**	**15**	RATIO **4.1%**
	RIGHT	**16**	**24**	ADT 7,300		RIGHT	**15**	**15**	ADT 7,300
WEST	LEFT	**7**	**8**	WEST LEG	WEST	LEFT	**18**	**26**	WEST LEG
BOUND	THRU	**3**	**3**	RATIO **2.4%**	BOUND	THRU	**10**	**17**	RATIO **3.0%**
	RIGHT	**15**	**18**	ADT 2,500		RIGHT	**26**	**37**	ADT 2,500

RUBIDOUX BOULEVARD (NS) / 24TH STREET (EW) - #11

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**22**	SOUTH LEG		NORTH	LEFT	**14**	SOUTH LEG	
BOUND	THRU	**489**	IN ...	**760**	BOUND	THRU	**867**	IN ...	**1,230**
	RIGHT	**25**	OUT ...	**950**		RIGHT	**73**	OUT ...	**990**
SOUTH	LEFT	**84**	NORTH LEG		SOUTH	LEFT	**108**	NORTH LEG	
BOUND	THRU	**760**	IN ...	**1,150**	BOUND	THRU	**692**	IN ...	**1,130**
	RIGHT	**1**	OUT ...	**670**		RIGHT	**4**	OUT ...	**1,270**
EAST	LEFT	**1**	WEST LEG		EAST	LEFT	**4**	WEST LEG	
BOUND	THRU	**2**	IN ...	**90**	BOUND	THRU	**15**	IN ...	**40**
	RIGHT	**16**	OUT ...	**30**		RIGHT	**15**	OUT ...	**80**
WEST	LEFT	**7**	EAST LEG		WEST	LEFT	**18**	EAST LEG	
BOUND	THRU	**3**	IN ...	**30**	BOUND	THRU	**10**	IN ...	**280**
	RIGHT	**15**	OUT ...	**410**		RIGHT	**26**	OUT ...	**360**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**22**	**26**	NORTH LEG	NORTH	LEFT	**14**	**18**	NORTH LEG	
BOUND	THRU	**489**	**647**	RATIO **7.6%**	BOUND	THRU	**867**	**1,116**	RATIO **9.9%**	
	RIGHT	**25**	**96**	ADT 24,200		RIGHT	**73**	**113**	ADT 24,200	
SOUTH	LEFT	**84**	**290**	SOUTH LEG	SOUTH	LEFT	**108**	**225**	SOUTH LEG	
BOUND	THRU	**760**	**878**	RATIO **6.8%**	BOUND	THRU	**692**	**899**	RATIO **8.9%**	
	RIGHT	**1**	**1**	ADT 25,100		RIGHT	**4**	**7**	ADT 25,100	
EAST	LEFT	**1**	**4**	EAST LEG	EAST	LEFT	**4**	**5**	EAST LEG	
BOUND	THRU	**2**	**24**	RATIO **6.0%**	BOUND	THRU	**15**	**22**	RATIO **8.8%**	
	RIGHT	**16**	**64**	ADT 7,300		RIGHT	**15**	**17**	ADT 7,300	
WEST	LEFT	**7**	**8**	WEST LEG	WEST	LEFT	**18**	**78**	WEST LEG	
BOUND	THRU	**3**	**3**	RATIO **4.9%**	BOUND	THRU	**10**	**56**	RATIO **5.0%**	
	RIGHT	**15**	**19**	ADT 2,500		RIGHT	**26**	**149**	ADT 2,500	

RUBIDOUX BOULEVARD (NS) / 26TH STREET (EW) - #12

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	521	4			
			<	v	>			
		0	^			^	3	
		0	>			<	1	
		3	v			v	1	
			<	^	>			
			8	357	3			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				525	360			
				v	^			
		9	<	IN =	901	<	5	
		3	>	OUT =	901	>	7	
				v	^			
				525	368			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	266	2			
			<	v	>			
		0	^			^	0	
		0	>			<	0	
		0	v			v	10	
			<	^	>			
			0	177	5			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	787	6			
			<	v	>			
		0	^			^	3	
		0	>			<	1	
		3	v			v	11	
			<	^	>			
			8	534	8			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				269	347			
				v	^			
		0	<	IN =	670	<	42	
		0	>	OUT =	670	>	53	
				v	^			
				270	359			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				25	26			
				v	^			
		0	<	IN =	56	<	4	
		0	>	OUT =	56	>	4	
				v	^			
				26	27			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				294	373			
				v	^			
		0	<	IN =	726	<	46	
		0	>	OUT =	726	>	57	
				v	^			
				296	386			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				508	688			
				v	^			
		0	<	IN =	1406	<	85	
		0	>	OUT =	1405	>	268	
				v	^			
				449	813			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				64	52			
				v	^			
		0	<	IN =	153	<	27	
		0	>	OUT =	153	>	35	
				v	^			
				66	62			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				572	740			
				v	^			
		0	<	IN =	1559	<	112	
		0	>	OUT =	1558	>	303	
				v	^			
				515	875			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				278	367			
				v	^			
		0	<			<	66	
		0	>			>	246	
				v	^			
				219	489			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				280	370			
				v	^			
		0	<	IN =	840	<	70	
		0	>	OUT =	840	>	250	
				v	^			
				220	490			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				170	220			
				v	^			
		0	<			<	40	
		0	>			>	150	
				v	^			
				130	300			

NEW PROJECTED VOLUMES (PCEs): 2035

				960	760			
				v	^			
		10	<			<	60	
		0	>			>	160	
				v	^			
				930	850			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	30			
				v	^			
		0	<			<	10	
		0	>			>	20	
				v	^			
				20	40			

INITIAL YEAR 2020 VOLUMES:

2020

				810	570			
				v	^			
		10	<	IN =	1430	<	30	
		0	>	OUT =	1430	>	30	
				v	^			
				820	590			

BALANCED YEAR 2020 VOLUMES:

2020

				810	570			
				v	^			
		10	<	IN =	1430	<	30	
		0	>	OUT =	1430	>	30	
				v	^			
				820	590			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			2	557	7			
			<	v	>			
		0	^			^	12	
		0	>			<	0	
		9	v			v	4	
			<	^	>			
			4	622	16			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				566	634			
				v	^			
		6	<	IN =	1233	<	16	
		9	>	OUT =	1233	>	23	
				v	^			
				570	642			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	164	10			
			<	v	>			
		0	^			^	2	
		0	>			<	0	
		0	v			v	8	
			<	^	>			
			0	326	9			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			2	721	17			
			<	v	>			
		0	^			^	14	
		0	>			<	0	
		9	v			v	12	
			<	^	>			
			4	948	25			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				508	448			
				v	^			
		0	<	IN =	1031	<	79	
		0	>	OUT =	1031	>	63	
				v	^			
				520	444			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				31	35			
				v	^			
		0	<	IN =	71	<	4	
		0	>	OUT =	71	>	4	
				v	^			
				32	36			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				539	483			
				v	^			
		0	<	IN =	1102	<	83	
		0	>	OUT =	1102	>	67	
				v	^			
				552	480			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				902	859			
				v	^			
		0	<	IN =	1961	<	254	
		0	>	OUT =	1960	>	139	
				v	^			
				962	805			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				60	85			
				v	^			
		0	<	IN =	181	<	32	
		0	>	OUT =	182	>	35	
				v	^			
				62	89			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				962	944			
				v	^			
		0	<	IN =	2142	<	286	
		0	>	OUT =	2142	>	174	
				v	^			
				1024	894			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				423	461			
				v	^			
		0	<			<	203	
		0	>			>	107	
				v	^			
				472	414			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				420	460			
				v	^			
		0	<	IN =	1030	<	200	
		0	>	OUT =	1040	>	110	
				v	^			
				470	410			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				260	280			
				v	^			
		0	<			<	120	
		0	>			>	70	
				v	^			
				290	250			

NEW PROJECTED VOLUMES (PCEs): 2035

				1000	1240			
				v	^			
		10	<			<	150	
		10	>			>	110	
				v	^			
				1030	1230			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	30			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				30	30			

INITIAL YEAR 2020 VOLUMES:

2020

				770	990			
				v	^			
		10	<	IN =	1830	<	40	
		10	>	OUT =	1820	>	50	
				v	^			
				770	1010			

BALANCED YEAR 2020 VOLUMES:

2020

				770	1000			
				v	^			
		10	<	IN =	1830	<	40	
		10	>	OUT =	1830	>	50	
				v	^			
				770	1010			

RUBIDOUX BOULEVARD (NS) / 26TH STREET (EW) - #12

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**8**	SOUTH LEG		NORTH	LEFT	**4**	SOUTH LEG	
BOUND	THRU	**534**	IN ...	**590**	BOUND	THRU	**948**	IN ...	**1,010**
	RIGHT	**8**	OUT ...	**820**		RIGHT	**25**	OUT ...	**770**
SOUTH	LEFT	**6**	NORTH LEG		SOUTH	LEFT	**17**	NORTH LEG	
BOUND	THRU	**787**	IN ...	**810**	BOUND	THRU	**721**	IN ...	**770**
	RIGHT	**0**	OUT ...	**570**		RIGHT	**2**	OUT ...	**1,000**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**10**
	RIGHT	**3**	OUT ...	**10**		RIGHT	**9**	OUT ...	**10**
WEST	LEFT	**11**	EAST LEG		WEST	LEFT	**12**	EAST LEG	
BOUND	THRU	**1**	IN ...	**30**	BOUND	THRU	**0**	IN ...	**40**
	RIGHT	**3**	OUT ...	**30**		RIGHT	**14**	OUT ...	**50**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**8**	**8**	NORTH LEG		NORTH	LEFT	**4**	**7**	NORTH LEG	
BOUND	THRU	**534**	**564**	RATIO	**5.6%**	BOUND	THRU	**948**	**978**	RATIO	**7.1%**
	RIGHT	**8**	**18**	ADT	24,800		RIGHT	**25**	**29**	ADT	24,800
SOUTH	LEFT	**6**	**12**	SOUTH LEG		SOUTH	LEFT	**17**	**21**	SOUTH LEG	
BOUND	THRU	**787**	**798**	RATIO	**5.5%**	BOUND	THRU	**721**	**742**	RATIO	**6.9%**
	RIGHT	**0**	**0**	ADT	25,900		RIGHT	**2**	**3**	ADT	25,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**2.1%**	BOUND	THRU	**0**	**0**	RATIO	**3.1%**
	RIGHT	**3**	**3**	ADT	2,900		RIGHT	**9**	**10**	ADT	2,900
WEST	LEFT	**11**	**22**	WEST LEG		WEST	LEFT	**12**	**18**	WEST LEG	
BOUND	THRU	**1**	**2**	RATIO	**6.5%**	BOUND	THRU	**0**	**0**	RATIO	**10.0%**
	RIGHT	**3**	**6**	ADT	200		RIGHT	**14**	**22**	ADT	200

RUBIDOUX BOULEVARD (NS) / 26TH STREET (EW) - #12

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**8**	SOUTH LEG		NORTH	LEFT	**4**	SOUTH LEG	
BOUND	THRU	**534**	IN ...	**850**	BOUND	THRU	**948**	IN ...	**1,230**
	RIGHT	**8**	OUT ...	**930**		RIGHT	**25**	OUT ...	**1,030**
SOUTH	LEFT	**6**	NORTH LEG		SOUTH	LEFT	**17**	NORTH LEG	
BOUND	THRU	**787**	IN ...	**960**	BOUND	THRU	**721**	IN ...	**1,000**
	RIGHT	**0**	OUT ...	**760**		RIGHT	**2**	OUT ...	**1,240**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**10**
	RIGHT	**3**	OUT ...	**10**		RIGHT	**9**	OUT ...	**10**
WEST	LEFT	**11**	EAST LEG		WEST	LEFT	**12**	EAST LEG	
BOUND	THRU	**1**	IN ...	**60**	BOUND	THRU	**0**	IN ...	**150**
	RIGHT	**3**	OUT ...	**160**		RIGHT	**14**	OUT ...	**110**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**8**	**9**	NORTH LEG		NORTH	LEFT	**4**	**7**	NORTH LEG	
BOUND	THRU	**534**	**747**	RATIO	**6.9%**	BOUND	THRU	**948**	**1,160**	RATIO	**9.0%**
	RIGHT	**8**	**97**	ADT	24,800		RIGHT	**25**	**64**	ADT	24,800
SOUTH	LEFT	**6**	**63**	SOUTH LEG		SOUTH	LEFT	**17**	**46**	SOUTH LEG	
BOUND	THRU	**787**	**886**	RATIO	**6.9%**	BOUND	THRU	**721**	**950**	RATIO	**8.7%**
	RIGHT	**0**	**0**	ADT	25,900		RIGHT	**2**	**3**	ADT	25,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.6%**	BOUND	THRU	**0**	**0**	RATIO	**9.0%**
	RIGHT	**3**	**3**	ADT	2,900		RIGHT	**9**	**10**	ADT	2,900
WEST	LEFT	**11**	**44**	WEST LEG		WEST	LEFT	**12**	**70**	WEST LEG	
BOUND	THRU	**1**	**3**	RATIO	**7.5%**	BOUND	THRU	**0**	**0**	RATIO	**10.0%**
	RIGHT	**3**	**13**	ADT	200		RIGHT	**14**	**80**	ADT	200

RUBIDOUX BOULEVARD (NS) / 28TH STREET (EW) - #13

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018			20	528	5			
			<	v	>			
	12	^				^	3	
	11	>				<	22	
	11	v				v	45	
			<	^	>			
			16	354	9			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018				553	369			
				v	^			
	58	<	IN =	1036		<	70	
	34	>	OUT =	1036		>	25	
				v	^			
				584	379			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	274	0			
			<	v	>			
	0	^				^	6	
	2	>				<	0	
	8	v				v	15	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2.0 4+: 3.0			2	173	3			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018			20	802	5			
			<	v	>			
	12	^				^	9	
	13	>				<	22	
	19	v				v	60	
			<	^	>			
			18	527	12			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007				270	359			
				v	^			
	37	<	IN =	723		<	42	
	27	>	OUT =	725		>	34	
				v	^			
				295	384			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007				26	27			
				v	^			
	1	<	IN =	56		<	1	
	1	>	OUT =	56		>	1	
				v	^			
				27	28			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00				296	386			
PHF FOR TRUCKS: 1.000				v	^			
	38	<	IN =	779		<	43	
	28	>	OUT =	781		>	35	
				v	^			
				322	412			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035				449	813			
				v	^			
	312	<	IN =	2067		<	139	
	370	>	OUT =	2067		>	292	
				v	^			
				650	1109			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035				66	62			
				v	^			
	21	<	IN =	176		<	5	
	17	>	OUT =	177		>	15	
				v	^			
				79	88			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00				515	875			
PHF FOR TRUCKS: 1.000				v	^			
	333	<	IN =	2243		<	144	
	387	>	OUT =	2244		>	307	
				v	^			
				729	1197			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				219	489			
				v	^			
	295	<				<	101	
	359	>				>	272	
				v	^			
				407	785			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				220	490			
				v	^			
	300	<	IN =	1470		<	100	
	360	>	OUT =	1470		>	270	
				v	^			
				410	790			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				130	300			
				v	^			
	180	<				<	60	
	220	>				>	160	
				v	^			
				250	480			

NEW PROJECTED VOLUMES (PCEs): 2035

				960	850			
				v	^			
	240	<				<	150	
	260	>				>	190	
				v	^			
				1130	1040			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				20	40			
				v	^			
	20	<				<	10	
	30	>				>	20	
				v	^			
				30	60			

INITIAL YEAR 2020 VOLUMES:

2020				850	590			
				v	^			
	80	<	IN =	1640		<	100	
	70	>	OUT =	1630		>	50	
				v	^			
				910	620			

BALANCED YEAR 2020 VOLUMES:

2020				850	590			
				v	^			
	80	<	IN =	1640		<	100	
	70	>	OUT =	1640		>	50	
				v	^			
				920	620			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018			15	559	13			
			<	v	>			
	28	^				^	9	
	17	>				<	14	
	20	v				v	51	
			<	^	>			
			23	594	42			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018				587	631			
				v	^			
	52	<	IN =	1385		<	74	
	65	>	OUT =	1385		>	72	
				v	^			
				630	659			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	76	2			
			<	v	>			
	2	^				^	0	
	0	>				<	2	
	0	v				v	3	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2 4+: 3.0			22	222	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018			15	635	15			
			<	v	>			
	30	^				^	9	
	17	>				<	16	
	20	v				v	54	
			<	^	>			
			45	816	42			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007				520	444			
				v	^			
	79	<	IN =	1190		<	91	
	131	>	OUT =	1191		>	93	
				v	^			
				575	448			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007				32	36			
				v	^			
	2	<	IN =	75		<	2	
	5	>	OUT =	75		>	3	
				v	^			
				34	36			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00				552	480			
PHF FOR TRUCKS: 1.00				v	^			
	81	<	IN =	1265		<	93	
	136	>	OUT =	1266		>	96	
				v	^			
				609	484			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035				962	805			
				v	^			
	424	<	IN =	2678		<	436	
	369	>	OUT =	2678		>	327	
				v	^			
				1122	911			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035				62	89			
				v	^			
	17	<	IN =	207		<	22	
	23	>	OUT =	206		>	15	
				v	^			
				85	100			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00				1024	894			
PHF FOR TRUCKS: 1.00				v	^			
	441	<	IN =	2885		<	458	
	392	>	OUT =	2884		>	342	
				v	^			
				1207	1011			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				472	414			
				v	^			
	360	<				<	365	
	256	>				>	246	
				v	^			
				598	527			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				470	410			
				v	^			
	360	<	IN =	1630		<	370	
	260	>	OUT =	1620		>	250	
				v	^			
				600	530			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				290	250			
				v	^			
	220	<				<	220	
	160	>				>	150	
				v	^			
				360	320			

NEW PROJECTED VOLUMES (PCEs): 2035

				960	1110			
				v	^			
	300	<				<	300	
	230	>				>	220	
				v	^			
				1070	1220			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				30	30			
				v	^			
	30	<				<	30	
	20	>				>	20	
				v	^			
				40	40			

INITIAL YEAR 2020 VOLUMES:

2020				700	890			
				v	^			
	110	<	IN =	1840		<	110	
	90	>	OUT =	1840		>	90	
				v	^			
				750	940			

BALANCED YEAR 2020 VOLUMES:

2020				700	890			
				v	^			
	110	<	IN =	1840		<	110	
	90	>	OUT =	1840		>	90	
				v	^			
				750	940			

RUBIDOUX BOULEVARD (NS) / 28TH STREET (EW) - #13

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**18**	SOUTH LEG		NORTH	LEFT	**45**	SOUTH LEG	
BOUND	THRU	**527**	IN ...	**620**	BOUND	THRU	**816**	IN ...	**940**
	RIGHT	**12**	OUT ...	**920**		RIGHT	**42**	OUT ...	**750**
SOUTH	LEFT	**5**	NORTH LEG		SOUTH	LEFT	**15**	NORTH LEG	
BOUND	THRU	**802**	IN ...	**850**	BOUND	THRU	**635**	IN ...	**700**
	RIGHT	**20**	OUT ...	**590**		RIGHT	**15**	OUT ...	**890**
EAST	LEFT	**12**	WEST LEG		EAST	LEFT	**30**	WEST LEG	
BOUND	THRU	**13**	IN ...	**70**	BOUND	THRU	**17**	IN ...	**90**
	RIGHT	**19**	OUT ...	**80**		RIGHT	**20**	OUT ...	**110**
WEST	LEFT	**60**	EAST LEG		WEST	LEFT	**54**	EAST LEG	
BOUND	THRU	**22**	IN ...	**100**	BOUND	THRU	**16**	IN ...	**110**
	RIGHT	**9**	OUT ...	**50**		RIGHT	**9**	OUT ...	**90**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**18**	**28**	NORTH LEG		NORTH	LEFT	**45**	**59**	NORTH LEG	
BOUND	THRU	**527**	**567**	RATIO	**5.6%**	BOUND	THRU	**816**	**837**	RATIO	**6.1%**
	RIGHT	**12**	**19**	ADT	25,900		RIGHT	**42**	**47**	ADT	25,900
SOUTH	LEFT	**5**	**6**	SOUTH LEG		SOUTH	LEFT	**15**	**18**	SOUTH LEG	
BOUND	THRU	**802**	**826**	RATIO	**5.3%**	BOUND	THRU	**635**	**657**	RATIO	**5.8%**
	RIGHT	**20**	**24**	ADT	29,000		RIGHT	**15**	**22**	ADT	29,000
EAST	LEFT	**12**	**15**	EAST LEG		EAST	LEFT	**30**	**40**	EAST LEG	
BOUND	THRU	**13**	**25**	RATIO	**3.6%**	BOUND	THRU	**17**	**25**	RATIO	**4.8%**
	RIGHT	**19**	**30**	ADT	4,200		RIGHT	**20**	**25**	ADT	4,200
WEST	LEFT	**60**	**65**	WEST LEG		WEST	LEFT	**54**	**69**	WEST LEG	
BOUND	THRU	**22**	**28**	RATIO	**3.1%**	BOUND	THRU	**16**	**29**	RATIO	**4.1%**
	RIGHT	**9**	**9**	ADT	4,900		RIGHT	**9**	**13**	ADT	4,900

RUBIDOUX BOULEVARD (NS) / 28TH STREET (EW) - #13

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**18**	SOUTH LEG		NORTH	LEFT	**45**	SOUTH LEG	
BOUND	THRU	**527**	IN ...	**1,040**	BOUND	THRU	**816**	IN ...	**1,220**
	RIGHT	**12**	OUT ...	**1,130**		RIGHT	**42**	OUT ...	**1,070**
SOUTH	LEFT	**5**	NORTH LEG		SOUTH	LEFT	**15**	NORTH LEG	
BOUND	THRU	**802**	IN ...	**960**	BOUND	THRU	**635**	IN ...	**960**
	RIGHT	**20**	OUT ...	**850**		RIGHT	**15**	OUT ...	**1,110**
EAST	LEFT	**12**	WEST LEG		EAST	LEFT	**30**	WEST LEG	
BOUND	THRU	**13**	IN ...	**260**	BOUND	THRU	**17**	IN ...	**230**
	RIGHT	**19**	OUT ...	**240**		RIGHT	**20**	OUT ...	**300**
WEST	LEFT	**60**	EAST LEG		WEST	LEFT	**54**	EAST LEG	
BOUND	THRU	**22**	IN ...	**150**	BOUND	THRU	**16**	IN ...	**300**
	RIGHT	**9**	OUT ...	**190**		RIGHT	**9**	OUT ...	**220**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**18**	**132**	NORTH LEG		NORTH	LEFT	**45**	**131**	NORTH LEG	
BOUND	THRU	**527**	**814**	RATIO	**7.1%**	BOUND	THRU	**816**	**995**	RATIO	**8.0%**
	RIGHT	**12**	**65**	ADT	25,900		RIGHT	**42**	**92**	ADT	25,900
SOUTH	LEFT	**5**	**9**	SOUTH LEG		SOUTH	LEFT	**15**	**39**	SOUTH LEG	
BOUND	THRU	**802**	**930**	RATIO	**7.4%**	BOUND	THRU	**635**	**862**	RATIO	**7.9%**
	RIGHT	**20**	**46**	ADT	29,000		RIGHT	**15**	**52**	ADT	29,000
EAST	LEFT	**12**	**30**	EAST LEG		EAST	LEFT	**30**	**87**	EAST LEG	
BOUND	THRU	**13**	**116**	RATIO	**8.3%**	BOUND	THRU	**17**	**89**	RATIO	**12.4%**
	RIGHT	**19**	**115**	ADT	4,200		RIGHT	**20**	**54**	ADT	4,200
WEST	LEFT	**60**	**85**	WEST LEG		WEST	LEFT	**54**	**154**	WEST LEG	
BOUND	THRU	**22**	**62**	RATIO	**10.2%**	BOUND	THRU	**16**	**117**	RATIO	**10.8%**
	RIGHT	**9**	**10**	ADT	4,900		RIGHT	**9**	**28**	ADT	4,900

RUBIDOUX BOULEVARD (NS) / 30TH STREET / SR-60 FREEWAY WB OFF-RAMP (EW) - #14

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			20	559	0			
			<	v	>			
		8	^			^	53	
		0	>			<	83	
		137	v			v	335	
			<	^	>			
			31	362	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				579	423			
				v	^			
		134	<	IN =	1588	<	471	
		145	>	OUT =	1588	>	0	
				v	^			
				1031	393			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			2	231	0			
			<	v	>			
		2	^			^	13	
		0	>			<	5	
		19	v			v	12	
			<	^	>			
			2	169	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			22	790	0			
			<	v	>			
		10	^			^	66	
		0	>			<	88	
		156	v			v	347	
			<	^	>			
			33	531	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				295	384			
				v	^			
		267	<	IN =	1590	<	677	
		260	>	OUT =	1589	>	0	
				v	^			
				938	358			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				27	28			
				v	^			
		11	<	IN =	95	<	25	
		15	>	OUT =	93	>	0	
				v	^			
				54	28			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				322	412			
				v	^			
		278	<	IN =	1685	<	702	
		275	>	OUT =	1682	>	0	
				v	^			
				992	386			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				650	1109			
				v	^			
		62	<	IN =	2448	<	691	
		312	>	OUT =	2448	>	0	
				v	^			
				1277	795			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				79	88			
				v	^			
		1	<	IN =	188	<	39	
		6	>	OUT =	187	>	0	
				v	^			
				98	64			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				729	1197			
				v	^			
		63	<	IN =	2636	<	730	
		318	>	OUT =	2635	>	0	
				v	^			
				1375	859			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				407	785			
				v	^			
		-215	<			<	28	
		43	>			>	0	
				v	^			
				383	473			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				410	790			
				v	^			
		10	<	IN =	970	<	50	
		40	>	OUT =	1180	>	0	
				v	^			
				380	470			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				250	480			
				v	^			
		10	<			<	30	
		20	>			>	0	
				v	^			
				230	290			

NEW PROJECTED VOLUMES (PCEs): 2035

				1060	1090			
				v	^			
		150	<			<	530	
		190	>			>	0	
				v	^			
				1520	850			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	60			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				30	30			

INITIAL YEAR 2020 VOLUMES:

2020

				840	670			
				v	^			
		140	<	IN =	2100	<	500	
		170	>	OUT =	2130	>	0	
				v	^			
				1320	590			

BALANCED YEAR 2020 VOLUMES:

2020

				850	670			
				v	^			
		140	<	IN =	2130	<	510	
		170	>	OUT =	2130	>	0	
				v	^			
				1320	600			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			10	649	0			
			<	v	>			
		23	^			^	42	
		0	>			<	93	
		129	v			v	442	
			<	^	>			
			64	631	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				659	696			
				v	^			
		167	<	IN =	2083	<	577	
		152	>	OUT =	2083	>	0	
				v	^			
				1220	695			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			15	157	0			
			<	v	>			
		6	^			^	11	
		0	>			<	3	
		5	v			v	14	
			<	^	>			
			3	237	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			25	806	0			
			<	v	>			
		29	^			^	53	
		0	>			<	96	
		134	v			v	456	
			<	^	>			
			67	868	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				575	448			
				v	^			
		294	<	IN =	2108	<	740	
		359	>	OUT =	2108	>	0	
				v	^			
				1366	434			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				34	36			
				v	^			
		12	<	IN =	112	<	23	
		20	>	OUT =	113	>	0	
				v	^			
				65	35			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				609	484			
				v	^			
		306	<	IN =	2220	<	763	
		379	>	OUT =	2221	>	0	
				v	^			
				1431	469			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1122	911			
				v	^			
		423	<	IN =	3114	<	840	
		405	>	OUT =	3114	>	0	
				v	^			
				1780	747			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				85	100			
				v	^			
		8	<	IN =	225	<	31	
		24	>	OUT =	225	>	0	
				v	^			
				117	85			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1207	1011			
				v	^			
		431	<	IN =	3339	<	871	
		429	>	OUT =	3339	>	0	
				v	^			
				1897	832			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				598	527			
				v	^			
		125	<			<	108	
		50	>			>	0	
				v	^			
				466	363			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				600	530			
				v	^			
		130	<	IN =	1120	<	110	
		50	>	OUT =	1130	>	0	
				v	^			
				470	360			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				360	320			
				v	^			
		80	<			<	70	
		30	>			>	0	
				v	^			
				290	220			

NEW PROJECTED VOLUMES (PCEs): 2035

				1190	1270			
				v	^			
		270	<			<	680	
		190	>			>	0	
				v	^			
				1690	1160			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	40			
				v	^			
		10	<			<	10	
		0	>			>	0	
				v	^			
				30	30			

INITIAL YEAR 2020 VOLUMES:

2020

				870	990			
				v	^			
		200	<	IN =	2620	<	620	
		160	>	OUT =	2620	>	0	
				v	^			
				1430	970			

BALANCED YEAR 2020 VOLUMES:

2020

				870	990			
				v	^			
		200	<	IN =	2620	<	620	
		160	>	OUT =	2620	>	0	
				v	^			
				1430	970			

RUBIDOUX BOULEVARD (NS) / 30TH STREET / SR-60 FREEWAY WB OFF-RAMP (EW) - #14

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**33**	SOUTH LEG		NORTH	LEFT	**67**	SOUTH LEG	
BOUND	THRU	**531**	IN ...	**600**	BOUND	THRU	**868**	IN ...	**970**
	RIGHT	**0**	OUT ...	**1,320**		RIGHT	**0**	OUT ...	**1,430**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**790**	IN ...	**850**	BOUND	THRU	**806**	IN ...	**870**
	RIGHT	**22**	OUT ...	**670**		RIGHT	**25**	OUT ...	**990**
EAST	LEFT	**10**	WEST LEG		EAST	LEFT	**29**	WEST LEG	
BOUND	THRU	**0**	IN ...	**170**	BOUND	THRU	**0**	IN ...	**160**
	RIGHT	**156**	OUT ...	**140**		RIGHT	**134**	OUT ...	**200**
WEST	LEFT	**347**	EAST LEG		WEST	LEFT	**456**	EAST LEG	
BOUND	THRU	**88**	IN ...	**510**	BOUND	THRU	**96**	IN ...	**620**
	RIGHT	**66**	OUT ...	**0**		RIGHT	**53**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**33**	**33**	NORTH LEG	NORTH	LEFT	**67**	**69**	NORTH LEG
BOUND	THRU	**531**	**576**	RATIO **5.2%**	BOUND	THRU	**868**	**903**	RATIO **6.4%**
	RIGHT	**0**	**0**	ADT 29,000		RIGHT	**0**	**0**	ADT 29,000
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG
BOUND	THRU	**790**	**823**	RATIO **5.6%**	BOUND	THRU	**806**	**841**	RATIO **7.0%**
	RIGHT	**22**	**23**	ADT 34,500		RIGHT	**25**	**28**	ADT 34,500
EAST	LEFT	**10**	**13**	EAST LEG	EAST	LEFT	**29**	**30**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **6.5%**	BOUND	THRU	**0**	**0**	RATIO **7.8%**
	RIGHT	**156**	**158**	ADT 8,000		RIGHT	**134**	**136**	ADT 8,000
WEST	LEFT	**347**	**351**	WEST LEG	WEST	LEFT	**456**	**461**	WEST LEG
BOUND	THRU	**88**	**89**	RATIO **6.9%**	BOUND	THRU	**96**	**103**	RATIO **8.0%**
	RIGHT	**66**	**81**	ADT 4,600		RIGHT	**53**	**57**	ADT 4,600

RUBIDOUX BOULEVARD (NS) / 30TH STREET / SR-60 FREEWAY WB OFF-RAMP (EW) - #14

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**33**	SOUTH LEG		NORTH	LEFT	**67**	SOUTH LEG	
BOUND	THRU	**531**	IN ...	**850**	BOUND	THRU	**868**	IN ...	**1,160**
	RIGHT	**0**	OUT ...	**1,520**		RIGHT	**0**	OUT ...	**1,690**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**790**	IN ...	**1,060**	BOUND	THRU	**806**	IN ...	**1,190**
	RIGHT	**22**	OUT ...	**1,090**		RIGHT	**25**	OUT ...	**1,270**
EAST	LEFT	**10**	WEST LEG		EAST	LEFT	**29**	WEST LEG	
BOUND	THRU	**0**	IN ...	**190**	BOUND	THRU	**0**	IN ...	**190**
	RIGHT	**156**	OUT ...	**150**		RIGHT	**134**	OUT ...	**270**
WEST	LEFT	**347**	EAST LEG		WEST	LEFT	**456**	EAST LEG	
BOUND	THRU	**88**	IN ...	**530**	BOUND	THRU	**96**	IN ...	**680**
	RIGHT	**66**	OUT ...	**0**		RIGHT	**53**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**33**	**36**	NORTH LEG	NORTH	LEFT	**67**	**74**	NORTH LEG	
BOUND	THRU	**531**	**902**	RATIO **7.5%**	BOUND	THRU	**868**	**1,119**	RATIO **8.4%**	
	RIGHT	**0**	**0**	ADT 29,000		RIGHT	**0**	**0**	ADT 29,000	
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**790**	**1,050**	RATIO **7.4%**	BOUND	THRU	**806**	**1,119**	RATIO **8.6%**	
	RIGHT	**22**	**35**	ADT 34,500		RIGHT	**25**	**54**	ADT 34,500	
EAST	LEFT	**10**	**29**	EAST LEG	EAST	LEFT	**29**	**55**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **8.0%**	BOUND	THRU	**0**	**0**	RATIO **9.3%**	
	RIGHT	**156**	**172**	ADT 8,000		RIGHT	**134**	**147**	ADT 8,000	
WEST	LEFT	**347**	**382**	WEST LEG	WEST	LEFT	**456**	**502**	WEST LEG	
BOUND	THRU	**88**	**97**	RATIO **8.0%**	BOUND	THRU	**96**	**144**	RATIO **10.3%**	
	RIGHT	**66**	**159**	ADT 4,600		RIGHT	**53**	**96**	ADT 4,600	

RUBIDOUX BOULEVARD (NS) / SR-60 FREEWAY WB ON-RAMP (EW) - #15

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			337	690	0			
			<	v	>			
0	^					^	0	
0	>					<	0	
0	v					v	0	
			<	^	>			
			305	400	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1027	400			
				v	^			
		642	<	IN =	1732	<	0	
		0	>	OUT =	1732	>	0	
				v	^			
				690	705			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			199	85	0			
			<	v	>			
0	^					^	0	
0	>					<	0	
0	v					v	0	
			<	^	>			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

			32	184	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			536	775	0			
			<	v	>			
0	^					^	0	
0	>					<	0	
0	v					v	0	
			<	^	>			
			337	584	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				938	358			
				v	^			
		176	<	IN =	1326	<	0	
		0	>	OUT =	1326	>	0	
				v	^			
				792	388			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				54	28			
				v	^			
		21	<	IN =	82	<	0	
		0	>	OUT =	82	>	0	
				v	^			
				33	28			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				992	386			
				v	^			
		197	<	IN =	1408	<	0	
		0	>	OUT =	1408	>	0	
				v	^			
				825	416			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1277	795			
				v	^			
		378	<	IN =	1768	<	0	
		0	>	OUT =	1768	>	0	
				v	^			
				595	491			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				98	64			
				v	^			
		57	<	IN =	141	<	0	
		0	>	OUT =	141	>	0	
				v	^			
				20	43			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1375	859			
				v	^			
		435	<	IN =	1909	<	0	
		0	>	OUT =	1909	>	0	
				v	^			
				615	534			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				383	473			
				v	^			
		238	<			<	0	
		0	>			>	0	
				v	^			
				-210	118			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				380	470			
				v	^			
		240	<	IN =	500	<	0	
		0	>	OUT =	720	>	0	
				v	^			
				10	120			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				230	290			
				v	^			
		150	<			<	0	
		0	>			>	0	
				v	^			
				10	70			

NEW PROJECTED VOLUMES (PCEs): 2035

				1540	870			
				v	^			
		1020	<			<	0	
		0	>			>	0	
				v	^			
				790	990			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	30			
				v	^			
		20	<			<	0	
		0	>			>	0	
				v	^			
				0	10			

INITIAL YEAR 2020 VOLUMES:

2020

				1340	610			
				v	^			
		890	<	IN =	2270	<	0	
		0	>	OUT =	2280	>	0	
				v	^			
				780	930			

BALANCED YEAR 2020 VOLUMES:

2020

				1350	610			
				v	^			
		890	<	IN =	2280	<	0	
		0	>	OUT =	2280	>	0	
				v	^			
				780	930			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			299	887	0			
			<	v	>			
0	^					^	0	
0	>					<	0	
0	v					v	0	
			<	^	>			
			224	697	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1186	697			
				v	^			
		523	<	IN =	2107	<	0	
		0	>	OUT =	2107	>	0	
				v	^			
				887	921			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			147	29	0			
			<	v	>			
0	^					^	0	
0	>					<	0	
0	v					v	0	
			<	^	>			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

			6	274	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			446	916	0			
			<	v	>			
0	^					^	0	
0	>					<	0	
0	v					v	0	
			<	^	>			
			230	971	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1366	434			
				v	^			
		216	<	IN =	1832	<	0	
		0	>	OUT =	1832	>	0	
				v	^			
				1182	466			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				65	35			
				v	^			
		24	<	IN =	101	<	0	
		0	>	OUT =	101	>	0	
				v	^			
				42	36			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1431	469			
				v	^			
		240	<	IN =	1933	<	0	
		0	>	OUT =	1933	>	0	
				v	^			
				1224	502			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1780	747			
				v	^			
		415	<	IN =	2262	<	0	
		0	>	OUT =	2262	>	0	
				v	^			
				1100	482			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				117	85			
				v	^			
		56	<	IN =	154	<	0	
		0	>	OUT =	154	>	0	
				v	^			
				13	37			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1897	832			
				v	^			
		471	<	IN =	2416	<	0	
		0	>	OUT =	2416	>	0	
				v	^			
				1113	519			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				466	363			
				v	^			
		231	<			<	0	
		0	>			>	0	
				v	^			
				-111	17			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				470	360			
				v	^			
		230	<	IN =	500	<	0	
		0	>	OUT =	590	>	0	
				v	^			
				0	30			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				290	220			
				v	^			
		140	<			<	0	
		0	>			>	0	
				v	^			
				0	20			

NEW PROJECTED VOLUMES (PCEs): 2035

				1650	1190			
				v	^			
		820	<			<	0	
		0	>			>	0	
				v	^			
				920	1220			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	30			
				v	^			
		20	<			<	0	
		0	>			>	0	
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				1390	1000			
				v	^			
		700	<	IN =	2590	<	0	
		0	>	OUT =	2620	>	0	
				v	^			
				920	1200			

BALANCED YEAR 2020 VOLUMES:

2020

				1410	1000			
				v	^			
		700	<	IN =	2620	<	0	
		0	>	OUT =	2620	>	0	
				v	^			
				920	1210			

RUBIDOUX BOULEVARD (NS) / SR-60 FREEWAY WB ON-RAMP (EW) - #15

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**337**	SOUTH LEG		NORTH	LEFT	**230**	SOUTH LEG	
BOUND	THRU	**584**	IN ...	**930**	BOUND	THRU	**971**	IN ...	**1,210**
	RIGHT	**0**	OUT ...	**780**		RIGHT	**0**	OUT ...	**920**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**775**	IN ...	**1,350**	BOUND	THRU	**916**	IN ...	**1,410**
	RIGHT	**536**	OUT ...	**610**		RIGHT	**446**	OUT ...	**1,000**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**890**		RIGHT	**0**	OUT ...	**700**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**337**	**341**	NORTH LEG	NORTH	LEFT	**230**	**233**	NORTH LEG	
BOUND	THRU	**584**	**610**	RATIO **5.7%**	BOUND	THRU	**971**	**1,000**	RATIO **7.0%**	
	RIGHT	**0**	**0**	ADT 34,500		RIGHT	**0**	**0**	ADT 34,500	
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**775**	**784**	RATIO **5.9%**	BOUND	THRU	**916**	**927**	RATIO **7.4%**	
	RIGHT	**536**	**569**	ADT 29,300		RIGHT	**446**	**485**	ADT 29,300	
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**	
	RIGHT	**0**	**0**	ADT 0		RIGHT	**0**	**0**	ADT 0	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **9.0%**	BOUND	THRU	**0**	**0**	RATIO **7.1%**	
	RIGHT	**0**	**0**	ADT 10,100		RIGHT	**0**	**0**	ADT 10,100	

RUBIDOUX BOULEVARD (NS) / SR-60 FREEWAY WB ON-RAMP (EW) - #15

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**337**	SOUTH LEG		NORTH	LEFT	**230**	SOUTH LEG	
BOUND	THRU	**584**	IN ...	**990**	BOUND	THRU	**971**	IN ...	**1,220**
	RIGHT	**0**	OUT ...	**790**		RIGHT	**0**	OUT ...	**920**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**775**	IN ...	**1,540**	BOUND	THRU	**916**	IN ...	**1,650**
	RIGHT	**536**	OUT ...	**870**		RIGHT	**446**	OUT ...	**1,190**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**1,020**		RIGHT	**0**	OUT ...	**820**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**337**	**371**	NORTH LEG		NORTH	LEFT	**230**	**253**	NORTH LEG	
BOUND	THRU	**584**	**870**	RATIO	**7.4%**	BOUND	THRU	**971**	**1,190**	RATIO	**8.4%**
	RIGHT	**0**	**0**	ADT	34,500		RIGHT	**0**	**0**	ADT	34,500
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**775**	**853**	RATIO	**7.1%**	BOUND	THRU	**916**	**1,008**	RATIO	**8.4%**
	RIGHT	**536**	**817**	ADT	29,300		RIGHT	**446**	**705**	ADT	29,300
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**0**	**0**	ADT	0		RIGHT	**0**	**0**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**11.8%**	BOUND	THRU	**0**	**0**	RATIO	**9.5%**
	RIGHT	**0**	**0**	ADT	10,100		RIGHT	**0**	**0**	ADT	10,100

RUBIDOUX BOULEVARD (NS) / SR-60 FREEWAY EB RAMPS (EW) - #16

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	565	114			
			<	v	>			
		189	^			^	3	
		23	>			<	0	
		221	v			v	11	
			<	^	>			
			0	496	505			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				679	688			
				v	^			
		0	<	IN =	2127	<	14	
		433	>	OUT =	2127	>	642	
				v	^			
				797	1001			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	52	30			
			<	v	>			
		162	^			^	0	
		3	>			<	0	
		21	v			v	0	
			<	^	>			
			0	48	18			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	617	144			
			<	v	>			
		351	^			^	3	
		26	>			<	0	
		242	v			v	11	
			<	^	>			
			0	544	523			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				792	388			
				v	^			
		0	<	IN =	1827	<	0	
		234	>	OUT =	1827	>	853	
				v	^			
				586	801			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				33	28			
				v	^			
		0	<	IN =	78	<	0	
		25	>	OUT =	78	>	29	
				v	^			
				21	20			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				825	416			
				v	^			
		0	<	IN =	1905	<	0	
		259	>	OUT =	1905	>	882	
				v	^			
				607	821			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				595	491			
				v	^			
		0	<	IN =	2383	<	0	
		603	>	OUT =	2384	>	1119	
				v	^			
				774	1185			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				20	43			
				v	^			
		0	<	IN =	108	<	0	
		59	>	OUT =	109	>	36	
				v	^			
				30	29			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				615	534			
				v	^			
		0	<	IN =	2491	<	0	
		662	>	OUT =	2493	>	1155	
				v	^			
				804	1214			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				-210	118			
				v	^			
		0	<			<	0	
		403	>			>	273	
				v	^			
				197	393			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				80	120			
				v	^			
		0	<	IN =	870	<	0	
		400	>	OUT =	590	>	270	
				v	^			
				200	390			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				50	70			
				v	^			
		0	<			<	0	
		240	>			>	160	
				v	^			
				120	240			

NEW PROJECTED VOLUMES (PCEs): 2035

				810	970			
				v	^			
		0	<			<	10	
		860	>			>	850	
				v	^			
				990	1310			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	10			
				v	^			
		0	<			<	0	
		30	>			>	20	
				v	^			
				10	30			

INITIAL YEAR 2020 VOLUMES:

2020

				770	910			
				v	^			
		0	<	IN =	2530	<	10	
		650	>	OUT =	2500	>	710	
				v	^			
				880	1100			

BALANCED YEAR 2020 VOLUMES:

2020

				770	920			
				v	^			
		0	<	IN =	2530	<	10	
		650	>	OUT =	2530	>	720	
				v	^			
				890	1100			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	800	81			
			<	v	>			
		360	^			^	4	
		32	>			<	0	
		364	v			v	13	
			<	^	>			
			0	563	287			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				881	927			
				v	^			
		0	<	IN =	2504	<	17	
		756	>	OUT =	2504	>	400	
				v	^			
				1177	850			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	26	2			
			<	v	>			
		248	^			^	0	
		3	>			<	0	
		10	v			v	0	
			<	^	>			
			0	30	5			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	826	83			
			<	v	>			
		608	^			^	4	
		35	>			<	0	
		374	v			v	13	
			<	^	>			
			0	593	292			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1182	466			
				v	^			
		0	<	IN =	2227	<	0	
		288	>	OUT =	2228	>	915	
				v	^			
				847	757			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				42	36			
				v	^			
		0	<	IN =	96	<	0	
		30	>	OUT =	97	>	39	
				v	^			
				22	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1224	502			
				v	^			
		0	<	IN =	2323	<	0	
		318	>	OUT =	2325	>	954	
				v	^			
				869	781			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1100	482			
				v	^			
		0	<	IN =	2613	<	0	
		599	>	OUT =	2614	>	1011	
				v	^			
				1121	914			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				13	37			
				v	^			
		0	<	IN =	121	<	0	
		78	>	OUT =	122	>	55	
				v	^			
				30	30			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1113	519			
				v	^			
		0	<	IN =	2734	<	0	
		677	>	OUT =	2736	>	1066	
				v	^			
				1151	944			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				-111	17			
				v	^			
		0	<			<	0	
		359	>			>	112	
				v	^			
				282	163			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				90	120			
				v	^			
		0	<	IN =	610	<	0	
		360	>	OUT =	510	>	110	
				v	^			
				280	160			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				50	70			
				v	^			
		0	<			<	0	
		220	>			>	70	
				v	^			
				170	100			

NEW PROJECTED VOLUMES (PCEs): 2035

				960	1280			
				v	^			
		0	<			<	20	
		1240	>			>	480	
				v	^			
				1380	990			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	10			
				v	^			
		0	<			<	0	
		30	>			>	10	
				v	^			
				20	10			

INITIAL YEAR 2020 VOLUMES:

2020

				920	1220			
				v	^			
		0	<	IN =	2890	<	20	
		1050	>	OUT =	2870	>	420	
				v	^			
				1230	900			

BALANCED YEAR 2020 VOLUMES:

2020

				920	1230			
				v	^			
		0	<	IN =	2890	<	20	
		1050	>	OUT =	2890	>	420	
				v	^			
				1240	900			

RUBIDOUX BOULEVARD (NS) / SR-60 FREEWAY EB RAMPS (EW) - #16

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**544**	IN ...	**1,100**	BOUND	THRU	**593**	IN ...	**900**
	RIGHT	**523**	OUT ...	**890**		RIGHT	**292**	OUT ...	**1,240**
SOUTH	LEFT	**144**	NORTH LEG		SOUTH	LEFT	**83**	NORTH LEG	
BOUND	THRU	**617**	IN ...	**770**	BOUND	THRU	**826**	IN ...	**920**
	RIGHT	**0**	OUT ...	**920**		RIGHT	**0**	OUT ...	**1,230**
EAST	LEFT	**351**	WEST LEG		EAST	LEFT	**608**	WEST LEG	
BOUND	THRU	**26**	IN ...	**650**	BOUND	THRU	**35**	IN ...	**1,050**
	RIGHT	**242**	OUT ...	**0**		RIGHT	**374**	OUT ...	**0**
WEST	LEFT	**11**	EAST LEG		WEST	LEFT	**13**	EAST LEG	
BOUND	THRU	**0**	IN ...	**10**	BOUND	THRU	**0**	IN ...	**20**
	RIGHT	**3**	OUT ...	**720**		RIGHT	**4**	OUT ...	**420**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**544**	**553**	RATIO	**5.8%**	BOUND	THRU	**593**	**601**	RATIO	**7.3%**
	RIGHT	**523**	**546**	ADT	29,300		RIGHT	**292**	**299**	ADT	29,300
SOUTH	LEFT	**144**	**146**	SOUTH LEG		SOUTH	LEFT	**83**	**84**	SOUTH LEG	
BOUND	THRU	**617**	**624**	RATIO	**6.8%**	BOUND	THRU	**826**	**836**	RATIO	**7.3%**
	RIGHT	**0**	**0**	ADT	29,400		RIGHT	**0**	**0**	ADT	29,400
EAST	LEFT	**351**	**364**	EAST LEG		EAST	LEFT	**608**	**625**	EAST LEG	
BOUND	THRU	**26**	**28**	RATIO	**11.8%**	BOUND	THRU	**35**	**36**	RATIO	**7.1%**
	RIGHT	**242**	**258**	ADT	6,200		RIGHT	**374**	**389**	ADT	6,200
WEST	LEFT	**11**	**11**	WEST LEG		WEST	LEFT	**13**	**15**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**4.4%**	BOUND	THRU	**0**	**0**	RATIO	**7.0%**
	RIGHT	**3**	**3**	ADT	14,900		RIGHT	**4**	**4**	ADT	14,900

RUBIDOUX BOULEVARD (NS) / SR-60 FREEWAY EB RAMPS (EW) - #16

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**544**	IN ...	**1,310**	BOUND	THRU	**593**	IN ...	**990**
	RIGHT	**523**	OUT ...	**990**		RIGHT	**292**	OUT ...	**1,380**
SOUTH	LEFT	**144**	NORTH LEG		SOUTH	LEFT	**83**	NORTH LEG	
BOUND	THRU	**617**	IN ...	**810**	BOUND	THRU	**826**	IN ...	**960**
	RIGHT	**0**	OUT ...	**970**		RIGHT	**0**	OUT ...	**1,280**
EAST	LEFT	**351**	WEST LEG		EAST	LEFT	**608**	WEST LEG	
BOUND	THRU	**26**	IN ...	**860**	BOUND	THRU	**35**	IN ...	**1,240**
	RIGHT	**242**	OUT ...	**0**		RIGHT	**374**	OUT ...	**0**
WEST	LEFT	**11**	EAST LEG		WEST	LEFT	**13**	EAST LEG	
BOUND	THRU	**0**	IN ...	**10**	BOUND	THRU	**0**	IN ...	**20**
	RIGHT	**3**	OUT ...	**850**		RIGHT	**4**	OUT ...	**480**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**544**	**598**	RATIO	**6.3%**	BOUND	THRU	**593**	**652**	RATIO	**7.9%**
	RIGHT	**523**	**671**	ADT	29,300		RIGHT	**292**	**354**	ADT	29,300
SOUTH	LEFT	**144**	**158**	SOUTH LEG		SOUTH	LEFT	**83**	**91**	SOUTH LEG	
BOUND	THRU	**617**	**679**	RATIO	**7.9%**	BOUND	THRU	**826**	**909**	RATIO	**8.3%**
	RIGHT	**0**	**0**	ADT	29,400		RIGHT	**0**	**0**	ADT	29,400
EAST	LEFT	**351**	**409**	EAST LEG		EAST	LEFT	**608**	**669**	EAST LEG	
BOUND	THRU	**26**	**38**	RATIO	**14.2%**	BOUND	THRU	**35**	**45**	RATIO	**8.2%**
	RIGHT	**242**	**362**	ADT	6,200		RIGHT	**374**	**506**	ADT	6,200
WEST	LEFT	**11**	**12**	WEST LEG		WEST	LEFT	**13**	**16**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**5.4%**	BOUND	THRU	**0**	**0**	RATIO	**8.2%**
	RIGHT	**3**	**3**	ADT	14,900		RIGHT	**4**	**4**	ADT	14,900

RUBIDOUX BOULEVARD (NS) / 34TH STREET (EW) - #17

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			66	571	47			
			<	v	>			
		140	^				^	100
		30	>				<	17
		19	v				v	10
			<	^	>			
			24	677	45			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				684	917			
				v	^			
		107	<	IN =	1746	<	127	
		189	>	OUT =	1746	>	122	
				v	^			
				600	746			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			8	77	2			
			<	v	>			
		15	^				^	0
		3	>				<	3
		0	v				v	0
			<	^	>			
			3	73	2			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			74	648	49			
			<	v	>			
		155	^				^	100
		33	>				<	20
		19	v				v	10
			<	^	>			
			27	750	47			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				586	801			
				v	^			
		86	<	IN =	1470	<	111	
		109	>	OUT =	1469	>	113	
				v	^			
				469	664			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				21	20			
				v	^			
		2	<	IN =	42	<	2	
		2	>	OUT =	42	>	3	
				v	^			
				17	17			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				607	821			
				v	^			
		88	<	IN =	1512	<	113	
		111	>	OUT =	1511	>	116	
				v	^			
				486	681			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				774	1185			
				v	^			
		63	<	IN =	2062	<	260	
		123	>	OUT =	2062	>	311	
				v	^			
				503	905			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				30	29			
				v	^			
		2	<	IN =	60	<	5	
		1	>	OUT =	60	>	7	
				v	^			
				22	24			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				804	1214			
				v	^			
		65	<	IN =	2122	<	265	
		124	>	OUT =	2122	>	318	
				v	^			
				525	929			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				197	393			
				v	^			
		-23	<				<	152
		13	>				>	202
				v	^			
				39	248			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				200	390			
				v	^			
		10	<	IN =	620	<	150	
		20	>	OUT =	640	>	200	
				v	^			
				40	250			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				120	240			
				v	^			
		10	<				<	90
		10	>				>	120
				v	^			
				20	150			

NEW PROJECTED VOLUMES (PCEs): 2035

				890	1250			
				v	^			
		130	<				<	220
		220	>				>	250
				v	^			
				700	970			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				10	30			
				v	^			
		0	<				<	10
		0	>				>	10
				v	^			
				0	20			

INITIAL YEAR 2020 VOLUMES:

2020

				780	1040			
				v	^			
		120	<	IN =	1970	<	140	
		210	>	OUT =	1980	>	140	
				v	^			
				680	840			

BALANCED YEAR 2020 VOLUMES:

2020

				780	1040			
				v	^			
		120	<	IN =	1970	<	140	
		210	>	OUT =	1980	>	140	
				v	^			
				680	840			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			150	866	166			
			<	v	>			
		96	^				^	70
		53	>				<	34
		12	v				v	12
			<	^	>			
			29	515	59			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1182	681			
				v	^			
		213	<	IN =	2062	<	116	
		161	>	OUT =	2062	>	278	
				v	^			
				890	603			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			3	58	8			
			<	v	>			
		6	^				^	0
		2	>				<	0
		0	v				v	0
			<	^	>			
			2	45	2			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			153	924	174			
			<	v	>			
		102	^				^	70
		55	>				<	34
		12	v				v	12
			<	^	>			
			31	560	61			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				847	757			
				v	^			
		141	<	IN =	1718	<	136	
		129	>	OUT =	1719	>	168	
				v	^			
				653	606			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				22	24			
				v	^			
		2	<	IN =	47	<	2	
		2	>	OUT =	47	>	4	
				v	^			
				17	21			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				869	781			
				v	^			
		143	<	IN =	1765	<	138	
		131	>	OUT =	1766	>	172	
				v	^			
				670	627			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1121	914			
				v	^			
		151	<	IN =	2165	<	272	
		102	>	OUT =	2164	>	408	
				v	^			
				691	670			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				30	30			
				v	^			
		2	<	IN =	62	<	5	
		2	>	OUT =	61	>	8	
				v	^			
				21	25			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1151	944			
				v	^			
		153	<	IN =	2227	<	277	
		104	>	OUT =	2225	>	416	
				v	^			
				712	695			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				282	163			
				v	^			
		10	<				<	139
		-27	>				>	244
				v	^			
				42	68			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				280	160			
				v	^			
		20	<	IN =	510	<	140	
		20	>	OUT =	460	>	240	
				v	^			
				40	70			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				170	100			
				v	^			
		10	<				<	90
		10	>				>	150
				v	^			
				20	40			

NEW PROJECTED VOLUMES (PCEs): 2035

				1420	830			
				v	^			
		230	<				<	210
		180	>				>	440
				v	^			
				970	690			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	10			
				v	^			
		0	<				<	10
		0	>				>	20
				v	^			
				0	10			

INITIAL YEAR 2020 VOLUMES:

2020

				1270	740			
				v	^			
		220	<	IN =	2230	<	130	
		170	>	OUT =	2220	>	310	
				v	^			
				950	660			

BALANCED YEAR 2020 VOLUMES:

2020

				1270	740			
				v	^			
		220	<	IN =	2230	<	130	
		170	>	OUT =	2220	>	310	
				v	^			
				950	660			

RUBIDOUX BOULEVARD (NS) / 34TH STREET (EW) - #17

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**27**	SOUTH LEG		NORTH	LEFT	**31**	SOUTH LEG	
BOUND	THRU	**750**	IN ...	**840**	BOUND	THRU	**560**	IN ...	**660**
	RIGHT	**47**	OUT ...	**680**		RIGHT	**61**	OUT ...	**950**
SOUTH	LEFT	**49**	NORTH LEG		SOUTH	LEFT	**174**	NORTH LEG	
BOUND	THRU	**648**	IN ...	**780**	BOUND	THRU	**924**	IN ...	**1,270**
	RIGHT	**74**	OUT ...	**1,040**		RIGHT	**153**	OUT ...	**740**
EAST	LEFT	**155**	WEST LEG		EAST	LEFT	**102**	WEST LEG	
BOUND	THRU	**33**	IN ...	**210**	BOUND	THRU	**55**	IN ...	**170**
	RIGHT	**19**	OUT ...	**120**		RIGHT	**12**	OUT ...	**220**
WEST	LEFT	**10**	EAST LEG		WEST	LEFT	**12**	EAST LEG	
BOUND	THRU	**20**	IN ...	**140**	BOUND	THRU	**34**	IN ...	**130**
	RIGHT	**100**	OUT ...	**140**		RIGHT	**70**	OUT ...	**310**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**27**	**27**	NORTH LEG	NORTH	LEFT	**31**	**31**	NORTH LEG	
BOUND	THRU	**750**	**771**	RATIO **6.5%**	BOUND	THRU	**560**	**567**	RATIO **7.2%**	
	RIGHT	**47**	**50**	ADT 28,000		RIGHT	**61**	**65**	ADT 28,000	
SOUTH	LEFT	**49**	**55**	SOUTH LEG	SOUTH	LEFT	**174**	**187**	SOUTH LEG	
BOUND	THRU	**648**	**656**	RATIO **7.1%**	BOUND	THRU	**924**	**935**	RATIO **7.5%**	
	RIGHT	**74**	**75**	ADT 21,600		RIGHT	**153**	**155**	ADT 21,600	
EAST	LEFT	**155**	**159**	EAST LEG	EAST	LEFT	**102**	**103**	EAST LEG	
BOUND	THRU	**33**	**35**	RATIO **3.9%**	BOUND	THRU	**55**	**58**	RATIO **6.2%**	
	RIGHT	**19**	**19**	ADT 7,100		RIGHT	**12**	**12**	ADT 7,100	
WEST	LEFT	**10**	**10**	WEST LEG	WEST	LEFT	**12**	**13**	WEST LEG	
BOUND	THRU	**20**	**20**	RATIO **6.6%**	BOUND	THRU	**34**	**38**	RATIO **7.8%**	
	RIGHT	**100**	**110**	ADT 5,100		RIGHT	**70**	**79**	ADT 5,100	

RUBIDOUX BOULEVARD (NS) / 34TH STREET (EW) - #17

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**27**	SOUTH LEG		NORTH	LEFT	**31**	SOUTH LEG	
BOUND	THRU	**750**	IN ...	**970**	BOUND	THRU	**560**	IN ...	**690**
	RIGHT	**47**	OUT ...	**700**		RIGHT	**61**	OUT ...	**970**
SOUTH	LEFT	**49**	NORTH LEG		SOUTH	LEFT	**174**	NORTH LEG	
BOUND	THRU	**648**	IN ...	**890**	BOUND	THRU	**924**	IN ...	**1,420**
	RIGHT	**74**	OUT ...	**1,250**		RIGHT	**153**	OUT ...	**830**
EAST	LEFT	**155**	WEST LEG		EAST	LEFT	**102**	WEST LEG	
BOUND	THRU	**33**	IN ...	**220**	BOUND	THRU	**55**	IN ...	**180**
	RIGHT	**19**	OUT ...	**130**		RIGHT	**12**	OUT ...	**230**
WEST	LEFT	**10**	EAST LEG		WEST	LEFT	**12**	EAST LEG	
BOUND	THRU	**20**	IN ...	**220**	BOUND	THRU	**34**	IN ...	**210**
	RIGHT	**100**	OUT ...	**250**		RIGHT	**70**	OUT ...	**440**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**27**	**30**	NORTH LEG	NORTH	LEFT	**31**	**34**	NORTH LEG
BOUND	THRU	**750**	**896**	RATIO **7.8%**	BOUND	THRU	**560**	**616**	RATIO **8.4%**
	RIGHT	**47**	**78**	ADT 28,000		RIGHT	**61**	**77**	ADT 28,000
SOUTH	LEFT	**49**	**123**	SOUTH LEG	SOUTH	LEFT	**174**	**296**	SOUTH LEG
BOUND	THRU	**648**	**713**	RATIO **8.1%**	BOUND	THRU	**924**	**1,016**	RATIO **8.2%**
	RIGHT	**74**	**85**	ADT 21,600		RIGHT	**153**	**168**	ADT 21,600
EAST	LEFT	**155**	**171**	EAST LEG	EAST	LEFT	**102**	**112**	EAST LEG
BOUND	THRU	**33**	**49**	RATIO **6.7%**	BOUND	THRU	**55**	**67**	RATIO **9.1%**
	RIGHT	**19**	**21**	ADT 7,100		RIGHT	**12**	**13**	ADT 7,100
WEST	LEFT	**10**	**11**	WEST LEG	WEST	LEFT	**12**	**17**	WEST LEG
BOUND	THRU	**20**	**24**	RATIO **7.5%**	BOUND	THRU	**34**	**50**	RATIO **8.7%**
	RIGHT	**100**	**190**	ADT 5,100		RIGHT	**70**	**141**	ADT 5,100

CACTUS AVENUE / PROJECT ACCESS (NS) / EL RIVINO ROAD (EW) - #20

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			25	0	43			
			<	v	>			
		39	^			^	43	
		64	>			<	46	
		0	v			v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				68	82			
				v	^			
		71	<	IN =	260	<	89	
		103	>	OUT =	260	>	107	
				v	^			
				0	0			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			14	0	5			
			<	v	>			
		18	^			^	10	
		16	>			<	33	
		0	v			v	0	

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

			<	^	>			
			0	0	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			39	0	48			
			<	v	>			
		57	^			^	53	
		80	>			<	79	
		0	v			v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				72	100			
				v	^			
		0	<	IN =	172	<	99	
		1	>	OUT =	172	>	72	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				2	2			
				v	^			
		0	<	IN =	4	<	2	
		0	>	OUT =	4	>	2	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				74	102			
				v	^			
		0	<	IN =	176	<	101	
		1	>	OUT =	176	>	74	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				334	189			
				v	^			
		0	<	IN =	523	<	189	
		0	>	OUT =	523	>	334	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				23	11			
				v	^			
		0	<	IN =	34	<	11	
		0	>	OUT =	34	>	23	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				357	200			
				v	^			
		0	<	IN =	557	<	200	
		0	>	OUT =	557	>	357	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				283	98			
				v	^			
		0	<			<	99	
		-1	>			>	283	
				v	^			
				0	0			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				280	100			
				v	^			
		10	<	IN =	390	<	100	
		10	>	OUT =	390	>	280	
				v	^			
				0	0			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				170	60			
				v	^			
		10	<			<	60	
		10	>			>	170	
				v	^			
				0	0			

NEW PROJECTED VOLUMES (PCEs): 2035

				260	170			
				v	^			
		130	<			<	190	
		150	>			>	300	
				v	^			
				0	0			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	10			
				v	^			
		0	<			<	10	
		0	>			>	20	
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				110	120			
				v	^			
		120	<	IN =	390	<	140	
		140	>	OUT =	390	>	150	
				v	^			
				0	0			

BALANCED YEAR 2020 VOLUMES:

2020

				110	120			
				v	^			
		120	<	IN =	390	<	140	
		140	>	OUT =	390	>	150	
				v	^			
				0	0			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			41	0	26			
			<	v	>			
		36	^			^	43	
		218	>			<	156	
		0	v			v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				67	79			
				v	^			
		197	<	IN =	520	<	199	
		254	>	OUT =	520	>	244	
				v	^			
				0	0			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			24	0	5			
			<	v	>			
		68	^			^	17	
		162	>			<	55	
		0	v			v	0	

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

			<	^	>			
			0	0	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			65	0	31			
			<	v	>			
		104	^			^	60	
		380	>			<	211	
		0	v			v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				133	104			
				v	^			
		22	<	IN =	240	<	97	
		10	>	OUT =	240	>	114	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				4	4			
				v	^			
		1	<	IN =	8	<	4	
		0	>	OUT =	9	>	4	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				137	108			
				v	^			
		23	<	IN =	248	<	101	
		10	>	OUT =	249	>	118	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				370	448			
				v	^			
		0	<	IN =	818	<	448	
		0	>	OUT =	818	>	370	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				2275	28			
				v	^			
		0	<	IN =	2303	<	28	
		0	>	OUT =	55	>	27	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2645	476			
				v	^			
		0	<	IN =	3121	<	476	
		0	>	OUT =	873	>	397	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				2508	368			
				v	^			
		-23	<			<	375	
		-10	>			>	279	
				v	^			
				0	0			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				2510	370			
				v	^			
		30	<	IN =	2940	<	380	
		50	>	OUT =	680	>	280	
				v	^			
				0	0			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				1520	220			
				v	^			
		20	<			<	230	
		30	>			>	170	
				v	^			
				0	0			

NEW PROJECTED VOLUMES (PCEs): 2035

				1620	380			
				v	^			
		300	<			<	500	
		510	>			>	580	
				v	^			
				0	0			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				180	30			
				v	^			
		0	<			<	30	
		0	>			>	20	
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				280	190			
				v	^			
		280	<	IN =	1060	<	300	
		480	>	OUT =	900	>	430	
				v	^			
				0	0			

BALANCED YEAR 2020 VOLUMES:

2020

				280	220			
				v	^			
		330	<	IN =	1060	<	300	
		480	>	OUT =	1060	>	510	
				v	^			
				0	0			

CACTUS AVENUE / PROJECT ACCESS (NS) / EL RIVINO ROAD (EW) - #20

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
SOUTH	LEFT	**48**	NORTH LEG		SOUTH	LEFT	**31**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**110**	BOUND	THRU	**0**	IN ...	**280**
	RIGHT	**39**	OUT ...	**120**		RIGHT	**65**	OUT ...	**220**
EAST	LEFT	**57**	WEST LEG		EAST	LEFT	**104**	WEST LEG	
BOUND	THRU	**80**	IN ...	**140**	BOUND	THRU	**380**	IN ...	**480**
	RIGHT	**0**	OUT ...	**120**		RIGHT	**0**	OUT ...	**330**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**79**	IN ...	**140**	BOUND	THRU	**211**	IN ...	**300**
	RIGHT	**53**	OUT ...	**150**		RIGHT	**60**	OUT ...	**510**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**4.1%**	BOUND	THRU	**0**	**0**	RATIO	**8.8%**
	RIGHT	**0**	**0**	ADT	5,700		RIGHT	**0**	**0**	ADT	5,700
SOUTH	LEFT	**48**	**67**	SOUTH LEG		SOUTH	LEFT	**31**	**137**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**39**	**43**	ADT	0		RIGHT	**65**	**143**	ADT	0
EAST	LEFT	**57**	**58**	EAST LEG		EAST	LEFT	**104**	**108**	EAST LEG	
BOUND	THRU	**80**	**83**	RATIO	**4.4%**	BOUND	THRU	**380**	**385**	RATIO	**12.8%**
	RIGHT	**0**	**0**	ADT	6,600		RIGHT	**0**	**0**	ADT	6,600
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**79**	**80**	RATIO	**5.6%**	BOUND	THRU	**211**	**214**	RATIO	**18.1%**
	RIGHT	**53**	**63**	ADT	4,700		RIGHT	**60**	**112**	ADT	4,700

CACTUS AVENUE / PROJECT ACCESS (NS) / EL RIVINO ROAD (EW) - #20

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
SOUTH	LEFT	**48**	NORTH LEG		SOUTH	LEFT	**31**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**260**	BOUND	THRU	**0**	IN ...	**1,620**
	RIGHT	**39**	OUT ...	**170**		RIGHT	**65**	OUT ...	**380**
EAST	LEFT	**57**	WEST LEG		EAST	LEFT	**104**	WEST LEG	
BOUND	THRU	**80**	IN ...	**150**	BOUND	THRU	**380**	IN ...	**510**
	RIGHT	**0**	OUT ...	**130**		RIGHT	**0**	OUT ...	**300**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**79**	IN ...	**190**	BOUND	THRU	**211**	IN ...	**500**
	RIGHT	**53**	OUT ...	**300**		RIGHT	**60**	OUT ...	**580**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.7%**	BOUND	THRU	**0**	**0**	RATIO	**20.1%**
	RIGHT	**0**	**0**	ADT	5,700		RIGHT	**0**	**0**	ADT	5,700
SOUTH	LEFT	**48**	**204**	SOUTH LEG		SOUTH	LEFT	**31**	**495**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO	-	BOUND	THRU	**0**	**0**	RATIO	-
	RIGHT	**39**	**56**	ADT	0		RIGHT	**65**	**271**	ADT	0
EAST	LEFT	**57**	**63**	EAST LEG		EAST	LEFT	**104**	**163**	EAST LEG	
BOUND	THRU	**80**	**96**	RATIO	**7.6%**	BOUND	THRU	**380**	**418**	RATIO	**20.6%**
	RIGHT	**0**	**0**	ADT	6,600		RIGHT	**0**	**0**	ADT	6,600
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**79**	**87**	RATIO	**6.4%**	BOUND	THRU	**211**	**232**	RATIO	**23.1%**
	RIGHT	**53**	**116**	ADT	4,700		RIGHT	**60**	**217**	ADT	4,700

HALL AVENUE (NS) / EL RIVINO ROAD (EW) - #22

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			9	6	9			
			<	v	>			
		2	^			^	5	
		75	>			<	72	
		27	v			v	1	
			<	^	>			
			21	2	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				24	9			
				v	^			
		102	<	IN =	229	<	78	
		104	>	OUT =	229	>	84	
				v	^			
				34	23			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			2	0	0			
			<	v	>			
		0	^			^	0	
		13	>			<	29	
		11	v			v	0	
			<	^	>			
			16	0	2			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			11	6	9			
			<	v	>			
		2	^			^	5	
		88	>			<	101	
		38	v			v	1	
			<	^	>			
			37	2	2			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				0	0			
				v	^			
		99	<	IN =	171	<	84	
		72	>	OUT =	170	>	57	
				v	^			
				14	15			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				0	0			
				v	^			
		2	<	IN =	4	<	1	
		2	>	OUT =	4	>	1	
				v	^			
				1	1			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				0	0			
				v	^			
		101	<	IN =	175	<	85	
		74	>	OUT =	174	>	58	
				v	^			
				15	16			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				0	0			
				v	^			
		189	<	IN =	523	<	108	
		334	>	OUT =	523	>	155	
				v	^			
				179	81			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				0	0			
				v	^			
		11	<	IN =	34	<	2	
		23	>	OUT =	34	>	7	
				v	^			
				16	9			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				0	0			
				v	^			
		200	<	IN =	557	<	110	
		357	>	OUT =	557	>	162	
				v	^			
				195	90			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				0	0			
				v	^			
		99	<			<	25	
		283	>			>	104	
				v	^			
				180	74			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				0	0			
				v	^			
		100	<	IN =	380	<	30	
		280	>	OUT =	380	>	100	
				v	^			
				180	70			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				0	0			
				v	^			
		60	<			<	20	
		170	>			>	60	
				v	^			
				110	40			

NEW PROJECTED VOLUMES (PCEs): 2035

				30	10			
				v	^			
		210	<			<	130	
		300	>			>	160	
				v	^			
				160	80			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				0	0			
				v	^			
		10	<			<	0	
		20	>			>	10	
				v	^			
				10	10			

INITIAL YEAR 2020 VOLUMES:

2020

				30	10			
				v	^			
		160	<	IN =	340	<	110	
		150	>	OUT =	340	>	110	
				v	^			
				60	50			

BALANCED YEAR 2020 VOLUMES:

2020

				30	10			
				v	^			
		160	<	IN =	340	<	110	
		150	>	OUT =	340	>	110	
				v	^			
				60	50			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			5	4	3			
			<	v	>			
		7	^			^	7	
		201	>			<	126	
		35	v			v	0	
			<	^	>			
			68	1	1			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				12	15			
				v	^			
		199	<	IN =	458	<	133	
		243	>	OUT =	458	>	205	
				v	^			
				39	70			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
		0	^			^	5	
		113	>			<	34	
		54	v			v	0	
			<	^	>			
			37	0	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			5	4	3			
			<	v	>			
		7	^			^	12	
		314	>			<	160	
		89	v			v	0	
			<	^	>			
			105	1	1			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				0	0			
				v	^			
		97	<	IN =	211	<	83	
		114	>	OUT =	210	>	99	
				v	^			
				14	14			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				0	0			
				v	^			
		4	<	IN =	8	<	3	
		4	>	OUT =	8	>	3	
				v	^			
				1	1			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				0	0			
				v	^			
		101	<	IN =	219	<	86	
		118	>	OUT =	218	>	102	
				v	^			
				15	15			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				0	0			
				v	^			
		448	<	IN =	818	<	147	
		370	>	OUT =	818	>	200	
				v	^			
				170	301			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				0	0			
				v	^			
		28	<	IN =	55	<	4	
		27	>	OUT =	55	>	9	
				v	^			
				18	24			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				0	0			
				v	^			
		476	<	IN =	873	<	151	
		397	>	OUT =	873	>	209	
				v	^			
				188	325			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				0	0			
				v	^			
		375	<			<	65	
		279	>			>	107	
				v	^			
				173	310			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				0	0			
				v	^			
		380	<	IN =	660	<	70	
		280	>	OUT =	660	>	110	
				v	^			
				170	310			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				0	0			
				v	^			
		230	<			<	40	
		170	>			>	70	
				v	^			
				100	190			

NEW PROJECTED VOLUMES (PCEs): 2035

				10	20			
				v	^			
		500	<			<	210	
		580	>			>	390	
				v	^			
				190	300			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				0	0			
				v	^			
		30	<			<	10	
		20	>			>	10	
				v	^			
				10	20			

INITIAL YEAR 2020 VOLUMES:

2020

				10	20			
				v	^			
		300	<	IN =	750	<	180	
		430	>	OUT =	750	>	330	
				v	^			
				100	130			

BALANCED YEAR 2020 VOLUMES:

2020

				10	20			
				v	^			
		300	<	IN =	750	<	180	
		430	>	OUT =	750	>	330	
				v	^			
				100	130			

HALL AVENUE (NS) / EL RIVINO ROAD (EW) - #22

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**37**	SOUTH LEG		NORTH	LEFT	**105**	SOUTH LEG	
BOUND	THRU	**2**	IN ...	**50**	BOUND	THRU	**1**	IN ...	**130**
	RIGHT	**2**	OUT ...	**60**		RIGHT	**1**	OUT ...	**100**
SOUTH	LEFT	**9**	NORTH LEG		SOUTH	LEFT	**3**	NORTH LEG	
BOUND	THRU	**6**	IN ...	**30**	BOUND	THRU	**4**	IN ...	**10**
	RIGHT	**11**	OUT ...	**10**		RIGHT	**5**	OUT ...	**20**
EAST	LEFT	**2**	WEST LEG		EAST	LEFT	**7**	WEST LEG	
BOUND	THRU	**88**	IN ...	**150**	BOUND	THRU	**314**	IN ...	**430**
	RIGHT	**38**	OUT ...	**160**		RIGHT	**89**	OUT ...	**300**
WEST	LEFT	**1**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**101**	IN ...	**110**	BOUND	THRU	**160**	IN ...	**180**
	RIGHT	**5**	OUT ...	**110**		RIGHT	**12**	OUT ...	**330**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**37**	**45**	NORTH LEG		NORTH	LEFT	**105**	**128**	NORTH LEG	
BOUND	THRU	**2**	**2**	RATIO	**9.8%**	BOUND	THRU	**1**	**1**	RATIO	**8.0%**
	RIGHT	**2**	**2**	ADT	400		RIGHT	**1**	**1**	ADT	400
SOUTH	LEFT	**9**	**10**	SOUTH LEG		SOUTH	LEFT	**3**	**3**	SOUTH LEG	
BOUND	THRU	**6**	**8**	RATIO	**3.9%**	BOUND	THRU	**4**	**4**	RATIO	**8.3%**
	RIGHT	**11**	**12**	ADT	2,800		RIGHT	**5**	**5**	ADT	2,800
EAST	LEFT	**2**	**2**	EAST LEG		EAST	LEFT	**7**	**7**	EAST LEG	
BOUND	THRU	**88**	**98**	RATIO	**5.5%**	BOUND	THRU	**314**	**326**	RATIO	**12.8%**
	RIGHT	**38**	**51**	ADT	4,000		RIGHT	**89**	**97**	ADT	4,000
WEST	LEFT	**1**	**1**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**101**	**103**	RATIO	**4.7%**	BOUND	THRU	**160**	**168**	RATIO	**11.1%**
	RIGHT	**5**	**5**	ADT	6,600		RIGHT	**12**	**12**	ADT	6,600

HALL AVENUE (NS) / EL RIVINO ROAD (EW) - #22

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**37**	SOUTH LEG		NORTH	LEFT	**105**	SOUTH LEG	
BOUND	THRU	**2**	IN ...	**80**	BOUND	THRU	**1**	IN ...	**300**
	RIGHT	**2**	OUT ...	**160**		RIGHT	**1**	OUT ...	**190**
SOUTH	LEFT	**9**	NORTH LEG		SOUTH	LEFT	**3**	NORTH LEG	
BOUND	THRU	**6**	IN ...	**30**	BOUND	THRU	**4**	IN ...	**10**
	RIGHT	**11**	OUT ...	**10**		RIGHT	**5**	OUT ...	**20**
EAST	LEFT	**2**	WEST LEG		EAST	LEFT	**7**	WEST LEG	
BOUND	THRU	**88**	IN ...	**300**	BOUND	THRU	**314**	IN ...	**580**
	RIGHT	**38**	OUT ...	**210**		RIGHT	**89**	OUT ...	**500**
WEST	LEFT	**1**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**101**	IN ...	**130**	BOUND	THRU	**160**	IN ...	**210**
	RIGHT	**5**	OUT ...	**160**		RIGHT	**12**	OUT ...	**390**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**37**	**74**	NORTH LEG		NORTH	LEFT	**105**	**296**	NORTH LEG	
BOUND	THRU	**2**	**3**	RATIO	**11.3%**	BOUND	THRU	**1**	**2**	RATIO	**9.0%**
	RIGHT	**2**	**3**	ADT	400		RIGHT	**1**	**2**	ADT	400
SOUTH	LEFT	**9**	**10**	SOUTH LEG		SOUTH	LEFT	**3**	**3**	SOUTH LEG	
BOUND	THRU	**6**	**11**	RATIO	**8.6%**	BOUND	THRU	**4**	**4**	RATIO	**17.5%**
	RIGHT	**11**	**12**	ADT	2,800		RIGHT	**5**	**6**	ADT	2,800
EAST	LEFT	**2**	**3**	EAST LEG		EAST	LEFT	**7**	**8**	EAST LEG	
BOUND	THRU	**88**	**150**	RATIO	**7.4%**	BOUND	THRU	**314**	**386**	RATIO	**15.1%**
	RIGHT	**38**	**147**	ADT	4,000		RIGHT	**89**	**186**	ADT	4,000
WEST	LEFT	**1**	**2**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**101**	**124**	RATIO	**7.7%**	BOUND	THRU	**160**	**200**	RATIO	**16.4%**
	RIGHT	**5**	**6**	ADT	6,600		RIGHT	**12**	**13**	ADT	6,600

AGUA MANSA ROAD (NS) / EL RIVINO ROAD (EW) - #24

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			59	292	0			
			<	v	>			
		41	^			^	0	
		0	>			<	0	
		23	v			v	0	
			<	^	>			
			16	192	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				351	233			
				v	^			
		75	<	IN =	623	<	0	
		64	>	OUT =	623	>	0	
				v	^			
				315	208			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			12	158	0			
			<	v	>			
		20	^			^	0	
		0	>			<	0	
		0	v			v	0	
			<	^	>			
			2	165	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			71	450	0			
			<	v	>			
		61	^			^	0	
		0	>			<	0	
		23	v			v	0	
			<	^	>			
			18	357	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				250	244			
				v	^			
		84	<	IN =	799	<	173	
		57	>	OUT =	799	>	132	
				v	^			
				339	319			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				17	19			
				v	^			
		1	<	IN =	46	<	5	
		1	>	OUT =	46	>	5	
				v	^			
				21	23			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				267	263			
				v	^			
		85	<	IN =	845	<	178	
		58	>	OUT =	845	>	137	
				v	^			
				360	342			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				535	531			
				v	^			
		108	<	IN =	1710	<	285	
		155	>	OUT =	1710	>	359	
				v	^			
				712	735			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				42	48			
				v	^			
		2	<	IN =	122	<	13	
		7	>	OUT =	122	>	19	
				v	^			
				53	60			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				577	579			
				v	^			
		110	<	IN =	1832	<	298	
		162	>	OUT =	1832	>	378	
				v	^			
				765	795			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				310	316			
				v	^			
		25	<			<	120	
		104	>			>	241	
				v	^			
				405	453			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				310	320			
				v	^			
		30	<	IN =	980	<	120	
		100	>	OUT =	1000	>	240	
				v	^			
				410	450			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				190	190			
				v	^			
		20	<			<	70	
		60	>			>	150	
				v	^			
				250	270			

NEW PROJECTED VOLUMES (PCEs): 2035

				710	610			
				v	^			
		110	<			<	70	
		140	>			>	150	
				v	^			
				720	650			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	20			
				v	^			
		0	<			<	10	
		10	>			>	20	
				v	^			
				30	30			

INITIAL YEAR 2020 VOLUMES:

2020

				540	440			
				v	^			
		90	<	IN =	1050	<	10	
		90	>	OUT =	1050	>	20	
				v	^			
				500	410			

BALANCED YEAR 2020 VOLUMES:

2020

				540	440			
				v	^			
		90	<	IN =	1050	<	10	
		90	>	OUT =	1050	>	20	
				v	^			
				500	410			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			53	238	0			
			<	v	>			
		81	^			^	0	
		0	>			<	0	
		30	v			v	0	
			<	^	>			
			33	532	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				291	613			
				v	^			
		86	<	IN =	967	<	0	
		111	>	OUT =	967	>	0	
				v	^			
				268	565			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			25	170	0			
			<	v	>			
		8	^			^	0	
		0	>			<	0	
		0	v			v	0	
			<	^	>			
			2	292	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			78	408	0			
			<	v	>			
		89	^			^	0	
		0	>			<	0	
		30	v			v	0	
			<	^	>			
			35	824	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				384	418			
				v	^			
		83	<	IN =	1170	<	169	
		99	>	OUT =	1171	>	200	
				v	^			
				470	518			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				23	26			
				v	^			
		3	<	IN =	64	<	7	
		3	>	OUT =	64	>	8	
				v	^			
				27	31			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				407	444			
				v	^			
		86	<	IN =	1234	<	176	
		102	>	OUT =	1235	>	208	
				v	^			
				497	549			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				733	706			
				v	^			
		147	<	IN =	2255	<	374	
		200	>	OUT =	2256	>	443	
				v	^			
				960	948			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				54	56			
				v	^			
		4	<	IN =	149	<	16	
		9	>	OUT =	149	>	23	
				v	^			
				66	70			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				787	762			
				v	^			
		151	<	IN =	2404	<	390	
		209	>	OUT =	2405	>	466	
				v	^			
				1026	1018			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				380	318			
				v	^			
		65	<			<	214	
		107	>			>	258	
				v	^			
				529	469			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				380	320			
				v	^			
		70	<	IN =	1170	<	210	
		110	>	OUT =	1180	>	260	
				v	^			
				530	470			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				230	190			
				v	^			
		40	<			<	130	
		70	>			>	160	
				v	^			
				320	290			

NEW PROJECTED VOLUMES (PCEs): 2035

				720	1100			
				v	^			
		150	<			<	130	
		190	>			>	160	
				v	^			
				760	1150			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	20			
				v	^			
		10	<			<	20	
		10	>			>	20	
				v	^			
				40	30			

INITIAL YEAR 2020 VOLUMES:

2020

				520	930			
				v	^			
		120	<	IN =	1560	<	20	
		130	>	OUT =	1550	>	20	
				v	^			
				480	890			

BALANCED YEAR 2020 VOLUMES:

2020

				520	940			
				v	^			
		120	<	IN =	1560	<	20	
		130	>	OUT =	1560	>	20	
				v	^			
				480	890			

AGUA MANSA ROAD (NS) / EL RIVINO ROAD (EW) - #24

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**18**	SOUTH LEG		NORTH	LEFT	**35**	SOUTH LEG	
BOUND	THRU	**357**	IN ...	**410**	BOUND	THRU	**824**	IN ...	**890**
	RIGHT	**0**	OUT ...	**500**		RIGHT	**0**	OUT ...	**480**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**450**	IN ...	**540**	BOUND	THRU	**408**	IN ...	**520**
	RIGHT	**71**	OUT ...	**440**		RIGHT	**78**	OUT ...	**940**
EAST	LEFT	**61**	WEST LEG		EAST	LEFT	**89**	WEST LEG	
BOUND	THRU	**0**	IN ...	**90**	BOUND	THRU	**0**	IN ...	**130**
	RIGHT	**23**	OUT ...	**90**		RIGHT	**30**	OUT ...	**120**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**10**	BOUND	THRU	**0**	IN ...	**20**
	RIGHT	**0**	OUT ...	**20**		RIGHT	**0**	OUT ...	**20**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**18**	**22**	NORTH LEG		NORTH	LEFT	**35**	**40**	NORTH LEG	
BOUND	THRU	**357**	**380**	RATIO	**4.1%**	BOUND	THRU	**824**	**847**	RATIO	**6.1%**
	RIGHT	**0**	**0**	ADT	23,900		RIGHT	**0**	**0**	ADT	23,900
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**450**	**471**	RATIO	**4.8%**	BOUND	THRU	**408**	**443**	RATIO	**7.3%**
	RIGHT	**71**	**72**	ADT	18,700		RIGHT	**78**	**80**	ADT	18,700
EAST	LEFT	**61**	**62**	EAST LEG		EAST	LEFT	**89**	**93**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**23**	**29**	ADT	0		RIGHT	**30**	**37**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**4.6%**	BOUND	THRU	**0**	**0**	RATIO	**6.3%**
	RIGHT	**0**	**0**	ADT	4,000		RIGHT	**0**	**0**	ADT	4,000

AGUA MANSA ROAD (NS) / EL RIVINO ROAD (EW) - #24

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**18**	SOUTH LEG		NORTH	LEFT	**35**	SOUTH LEG	
BOUND	THRU	**357**	IN ...	**650**	BOUND	THRU	**824**	IN ...	**1,150**
	RIGHT	**0**	OUT ...	**720**		RIGHT	**0**	OUT ...	**760**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**450**	IN ...	**710**	BOUND	THRU	**408**	IN ...	**720**
	RIGHT	**71**	OUT ...	**610**		RIGHT	**78**	OUT ...	**1,100**
EAST	LEFT	**61**	WEST LEG		EAST	LEFT	**89**	WEST LEG	
BOUND	THRU	**0**	IN ...	**140**	BOUND	THRU	**0**	IN ...	**190**
	RIGHT	**23**	OUT ...	**110**		RIGHT	**30**	OUT ...	**150**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**70**	BOUND	THRU	**0**	IN ...	**130**
	RIGHT	**0**	OUT ...	**150**		RIGHT	**0**	OUT ...	**160**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**18**	**50**	NORTH LEG		NORTH	LEFT	**35**	**78**	NORTH LEG	
BOUND	THRU	**357**	**548**	RATIO	**5.6%**	BOUND	THRU	**824**	**1,010**	RATIO	**7.8%**
	RIGHT	**0**	**0**	ADT	23,900		RIGHT	**0**	**0**	ADT	23,900
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**450**	**648**	RATIO	**7.0%**	BOUND	THRU	**408**	**664**	RATIO	**9.9%**
	RIGHT	**71**	**78**	ADT	18,700		RIGHT	**78**	**86**	ADT	18,700
EAST	LEFT	**61**	**67**	EAST LEG		EAST	LEFT	**89**	**98**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**23**	**72**	ADT	0		RIGHT	**30**	**96**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**6.7%**	BOUND	THRU	**0**	**0**	RATIO	**9.0%**
	RIGHT	**0**	**0**	ADT	4,000		RIGHT	**0**	**0**	ADT	4,000

AGUA MANSA ROAD (NS) / HOLLY PLACE (EW) - #25

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	259	85			
			<	v	>			
		0	^			^	15	
		0	>			<	0	
		0	v			v	8	
			<	^	>			
			0	131	57			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				344	146			
				v	^			
		0	<	IN =	555	<	23	
		0	>	OUT =	555	>	142	
				v	^			
				267	188			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	184	20			
			<	v	>			
		0	^			^	27	
		0	>			<	0	
		0	v			v	2	

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

			<	^	>			
			0	198	3			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	443	105			
			<	v	>			
		0	^			^	42	
		0	>			<	0	
		0	v			v	10	
			<	^	>			
			0	329	60			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				339	319			
				v	^			
		0	<	IN =	658	<	0	
		0	>	OUT =	658	>	0	
				v	^			
				339	319			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				21	23			
				v	^			
		0	<	IN =	44	<	0	
		0	>	OUT =	44	>	0	
				v	^			
				21	23			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				360	342			
				v	^			
		0	<	IN =	702	<	0	
		0	>	OUT =	702	>	0	
				v	^			
				360	342			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				712	735			
				v	^			
		0	<	IN =	1447	<	0	
		0	>	OUT =	1447	>	0	
				v	^			
				712	735			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				53	60			
				v	^			
		0	<	IN =	113	<	0	
		0	>	OUT =	113	>	0	
				v	^			
				53	60			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				765	795			
				v	^			
		0	<	IN =	1560	<	0	
		0	>	OUT =	1560	>	0	
				v	^			
				765	795			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				405	453			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				405	453			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				410	450			
				v	^			
		0	<	IN =	870	<	10	
		0	>	OUT =	880	>	20	
				v	^			
				410	450			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				250	270			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				250	270			

NEW PROJECTED VOLUMES (PCEs): 2035

				800	640			
				v	^			
		0	<			<	60	
		0	>			>	180	
				v	^			
				700	660			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	30			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				30	30			

INITIAL YEAR 2020 VOLUMES:

2020

				580	400			
				v	^			
		0	<	IN =	1050	<	50	
		0	>	OUT =	1050	>	170	
				v	^			
				480	420			

BALANCED YEAR 2020 VOLUMES:

2020

				580	400			
				v	^			
		0	<	IN =	1050	<	50	
		0	>	OUT =	1050	>	170	
				v	^			
				480	420			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	196	17			
			<	v	>			
		0	^			^	111	
		0	>			<	0	
		0	v			v	40	
			<	^	>			
			0	469	7			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				213	580			
				v	^			
		0	<	IN =	840	<	151	
		0	>	OUT =	840	>	24	
				v	^			
				236	476			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	163	27			
			<	v	>			
		0	^			^	56	
		0	>			<	0	
		0	v			v	20	

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

			<	^	>			
			0	254	14			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	359	44			
			<	v	>			
		0	^			^	167	
		0	>			<	0	
		0	v			v	60	
			<	^	>			
			0	723	21			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				470	518			
				v	^			
		0	<	IN =	988	<	0	
		0	>	OUT =	988	>	0	
				v	^			
				470	518			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				27	31			
				v	^			
		0	<	IN =	58	<	0	
		0	>	OUT =	58	>	0	
				v	^			
				27	31			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				497	549			
				v	^			
		0	<	IN =	1046	<	0	
		0	>	OUT =	1046	>	0	
				v	^			
				497	549			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				960	948			
				v	^			
		0	<	IN =	1908	<	0	
		0	>	OUT =	1908	>	0	
				v	^			
				960	948			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				66	70			
				v	^			
		0	<	IN =	136	<	0	
		0	>	OUT =	136	>	0	
				v	^			
				66	70			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1026	1018			
				v	^			
		0	<	IN =	2044	<	0	
		0	>	OUT =	2044	>	0	
				v	^			
				1026	1018			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				529	469			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				529	469			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				530	470			
				v	^			
		0	<	IN =	1020	<	20	
		0	>	OUT =	1010	>	10	
				v	^			
				530	470			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				320	290			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				320	290			

NEW PROJECTED VOLUMES (PCEs): 2035

				720	1180			
				v	^			
		0	<			<	240	
		0	>			>	80	
				v	^			
				740	1030			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	30			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				40	30			

INITIAL YEAR 2020 VOLUMES:

2020

				440	920			
				v	^			
		0	<	IN =	1440	<	230	
		0	>	OUT =	1450	>	70	
				v	^			
				460	770			

BALANCED YEAR 2020 VOLUMES:

2020

				440	920			
				v	^			
		0	<	IN =	1450	<	230	
		0	>	OUT =	1450	>	70	
				v	^			
				460	780			

AGUA MANSA ROAD (NS) / HOLLY PLACE (EW) - #25

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**329**	IN ...	**420**	BOUND	THRU	**723**	IN ...	**780**
	RIGHT	**60**	OUT ...	**480**		RIGHT	**21**	OUT ...	**460**
SOUTH	LEFT	**105**	NORTH LEG		SOUTH	LEFT	**44**	NORTH LEG	
BOUND	THRU	**443**	IN ...	**580**	BOUND	THRU	**359**	IN ...	**440**
	RIGHT	**0**	OUT ...	**400**		RIGHT	**0**	OUT ...	**920**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
WEST	LEFT	**10**	EAST LEG		WEST	LEFT	**60**	EAST LEG	
BOUND	THRU	**0**	IN ...	**50**	BOUND	THRU	**0**	IN ...	**230**
	RIGHT	**42**	OUT ...	**170**		RIGHT	**167**	OUT ...	**70**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG
BOUND	THRU	**329**	**359**	RATIO **5.0%**	BOUND	THRU	**723**	**755**	RATIO **7.0%**
	RIGHT	**60**	**61**	ADT 19,600		RIGHT	**21**	**23**	ADT 19,600
SOUTH	LEFT	**105**	**109**	SOUTH LEG	SOUTH	LEFT	**44**	**47**	SOUTH LEG
BOUND	THRU	**443**	**471**	RATIO **4.6%**	BOUND	THRU	**359**	**395**	RATIO **6.3%**
	RIGHT	**0**	**0**	ADT 19,600		RIGHT	**0**	**0**	ADT 19,600
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **5.7%**	BOUND	THRU	**0**	**0**	RATIO **7.8%**
	RIGHT	**0**	**0**	ADT 3,900		RIGHT	**0**	**0**	ADT 3,900
WEST	LEFT	**10**	**10**	WEST LEG	WEST	LEFT	**60**	**65**	WEST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**42**	**43**	ADT 0		RIGHT	**167**	**169**	ADT 0

AGUA MANSA ROAD (NS) / HOLLY PLACE (EW) - #25

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**329**	IN ...	**660**	BOUND	THRU	**723**	IN ...	**1,030**
	RIGHT	**60**	OUT ...	**700**		RIGHT	**21**	OUT ...	**740**
SOUTH	LEFT	**105**	NORTH LEG		SOUTH	LEFT	**44**	NORTH LEG	
BOUND	THRU	**443**	IN ...	**800**	BOUND	THRU	**359**	IN ...	**720**
	RIGHT	**0**	OUT ...	**640**		RIGHT	**0**	OUT ...	**1,180**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
WEST	LEFT	**10**	EAST LEG		WEST	LEFT	**60**	EAST LEG	
BOUND	THRU	**0**	IN ...	**60**	BOUND	THRU	**0**	IN ...	**240**
	RIGHT	**42**	OUT ...	**180**		RIGHT	**167**	OUT ...	**80**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**329**	**591**	RATIO	**7.4%**	BOUND	THRU	**723**	**1,009**	RATIO	**9.8%**
	RIGHT	**60**	**70**	ADT	19,600		RIGHT	**21**	**23**	ADT	19,600
SOUTH	LEFT	**105**	**116**	SOUTH LEG		SOUTH	LEFT	**44**	**57**	SOUTH LEG	
BOUND	THRU	**443**	**689**	RATIO	**6.9%**	BOUND	THRU	**359**	**670**	RATIO	**9.0%**
	RIGHT	**0**	**0**	ADT	19,600		RIGHT	**0**	**0**	ADT	19,600
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**6.3%**	BOUND	THRU	**0**	**0**	RATIO	**8.6%**
	RIGHT	**0**	**0**	ADT	3,900		RIGHT	**0**	**0**	ADT	3,900
WEST	LEFT	**10**	**11**	WEST LEG		WEST	LEFT	**60**	**70**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**42**	**49**	ADT	0		RIGHT	**167**	**184**	ADT	0

AGUA MANSA ROAD (NS) / HALL AVENUE (EW) - #26

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			15	296	0			
			<	v	>			
		4	^			^	0	
		0	>			<	0	
		32	v			v	0	
			<	^	>			
			26	185	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				311	189			
				v	^			
		41	<	IN =	558	<	0	
		36	>	OUT =	558	>	0	
				v	^			
				328	211			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			7	247	0			
			<	v	>			
		14	^			^	0	
		0	>			<	0	
		11	v			v	0	

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

			<	^	>			
			13	223	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			22	543	0			
			<	v	>			
		18	^			^	0	
		0	>			<	0	
		43	v			v	0	
			<	^	>			
			39	408	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				339	319			
				v	^			
		15	<	IN =	687	<	0	
		14	>	OUT =	687	>	0	
				v	^			
				353	334			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				21	23			
				v	^			
		1	<	IN =	46	<	0	
		1	>	OUT =	46	>	0	
				v	^			
				22	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				360	342			
				v	^			
		16	<	IN =	733	<	0	
		15	>	OUT =	733	>	0	
				v	^			
				375	358			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				712	735			
				v	^			
		81	<	IN =	1707	<	0	
		179	>	OUT =	1706	>	0	
				v	^			
				890	816			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				53	60			
				v	^			
		9	<	IN =	137	<	0	
		16	>	OUT =	138	>	0	
				v	^			
				69	68			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				765	795			
				v	^			
		90	<	IN =	1844	<	0	
		195	>	OUT =	1844	>	0	
				v	^			
				959	884			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				405	453			
				v	^			
		74	<			<	0	
		180	>			>	0	
				v	^			
				584	526			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				410	450			
				v	^			
		70	<	IN =	1120	<	0	
		180	>	OUT =	1100	>	0	
				v	^			
				580	530			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				250	270			
				v	^			
		40	<			<	0	
		110	>			>	0	
				v	^			
				350	320			

NEW PROJECTED VOLUMES (PCEs): 2035

				820	700			
				v	^			
		100	<			<	0	
		170	>			>	0	
				v	^			
				940	770			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	30			
				v	^			
		10	<			<	0	
		10	>			>	0	
				v	^			
				40	40			

INITIAL YEAR 2020 VOLUMES:

2020

				600	460			
				v	^			
		70	<	IN =	1160	<	0	
		70	>	OUT =	1160	>	0	
				v	^			
				630	490			

BALANCED YEAR 2020 VOLUMES:

2020

				600	460			
				v	^			
		70	<	IN =	1160	<	0	
		70	>	OUT =	1160	>	0	
				v	^			
				630	490			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			11	195	0			
			<	v	>			
		12	^			^	0	
		0	>			<	0	
		40	v			v	0	
			<	^	>			
			50	324	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				206	336			
				v	^			
		61	<	IN =	632	<	0	
		52	>	OUT =	632	>	0	
				v	^			
				235	374			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			12	194	0			
			<	v	>			
		27	^			^	0	
		0	>			<	0	
		39	v			v	0	

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

			<	^	>			
			29	172	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			23	389	0			
			<	v	>			
		39	^			^	0	
		0	>			<	0	
		79	v			v	0	
			<	^	>			
			79	496	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				470	518			
				v	^			
		14	<	IN =	1016	<	0	
		14	>	OUT =	1016	>	0	
				v	^			
				484	532			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				27	31			
				v	^			
		1	<	IN =	59	<	0	
		1	>	OUT =	59	>	0	
				v	^			
				27	31			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				497	549			
				v	^			
		15	<	IN =	1075	<	0	
		15	>	OUT =	1075	>	0	
				v	^			
				511	563			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				960	948			
				v	^			
		301	<	IN =	2379	<	0	
		170	>	OUT =	2379	>	0	
				v	^			
				1130	1249			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				66	70			
				v	^			
		24	<	IN =	178	<	0	
		18	>	OUT =	178	>	0	
				v	^			
				84	94			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1026	1018			
				v	^			
		325	<	IN =	2557	<	0	
		188	>	OUT =	2557	>	0	
				v	^			
				1214	1343			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				529	469			
				v	^			
		310	<			<	0	
		173	>			>	0	
				v	^			
				703	780			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				530	470			
				v	^			
		310	<	IN =	1480	<	0	
		170	>	OUT =	1480	>	0	
				v	^			
				700	780			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				320	290			
				v	^			
		190	<			<	0	
		100	>			>	0	
				v	^			
				430	470			

NEW PROJECTED VOLUMES (PCEs): 2035

				730	830			
				v	^			
		290	<			<	0	
		220	>			>	0	
				v	^			
				900	1050			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	30			
				v	^			
		20	<			<	0	
		10	>			>	0	
				v	^			
				50	60			

INITIAL YEAR 2020 VOLUMES:

2020

				450	570			
				v	^			
		120	<	IN =	1220	<	0	
		130	>	OUT =	1210	>	0	
				v	^			
				520	640			

BALANCED YEAR 2020 VOLUMES:

2020

				450	570			
				v	^			
		120	<	IN =	1220	<	0	
		130	>	OUT =	1210	>	0	
				v	^			
				520	640			

AGUA MANSA ROAD (NS) / HALL AVENUE (EW) - #26

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**39**	SOUTH LEG		NORTH	LEFT	**79**	SOUTH LEG	
BOUND	THRU	**408**	IN ...	**490**	BOUND	THRU	**496**	IN ...	**640**
	RIGHT	**0**	OUT ...	**630**		RIGHT	**0**	OUT ...	**520**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**543**	IN ...	**600**	BOUND	THRU	**389**	IN ...	**450**
	RIGHT	**22**	OUT ...	**460**		RIGHT	**23**	OUT ...	**570**
EAST	LEFT	**18**	WEST LEG		EAST	LEFT	**39**	WEST LEG	
BOUND	THRU	**0**	IN ...	**70**	BOUND	THRU	**0**	IN ...	**130**
	RIGHT	**43**	OUT ...	**70**		RIGHT	**79**	OUT ...	**120**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**39**	**47**	NORTH LEG	NORTH	LEFT	**79**	**97**	NORTH LEG
BOUND	THRU	**408**	**441**	RATIO **5.4%**	BOUND	THRU	**496**	**533**	RATIO **5.2%**
	RIGHT	**0**	**0**	ADT 19,600		RIGHT	**0**	**0**	ADT 19,600
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG
BOUND	THRU	**543**	**579**	RATIO **5.3%**	BOUND	THRU	**389**	**427**	RATIO **5.5%**
	RIGHT	**22**	**23**	ADT 20,900		RIGHT	**23**	**23**	ADT 20,900
EAST	LEFT	**18**	**19**	EAST LEG	EAST	LEFT	**39**	**39**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**43**	**51**	ADT 0		RIGHT	**79**	**93**	ADT 0
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG
BOUND	THRU	**0**	**0**	RATIO **5.0%**	BOUND	THRU	**0**	**0**	RATIO **9.0%**
	RIGHT	**0**	**0**	ADT 2,800		RIGHT	**0**	**0**	ADT 2,800

AGUA MANSA ROAD (NS) / HALL AVENUE (EW) - #26

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**39**	SOUTH LEG		NORTH	LEFT	**79**	SOUTH LEG	
BOUND	THRU	**408**	IN ...	**770**	BOUND	THRU	**496**	IN ...	**1,050**
	RIGHT	**0**	OUT ...	**940**		RIGHT	**0**	OUT ...	**900**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**543**	IN ...	**820**	BOUND	THRU	**389**	IN ...	**730**
	RIGHT	**22**	OUT ...	**700**		RIGHT	**23**	OUT ...	**830**
EAST	LEFT	**18**	WEST LEG		EAST	LEFT	**39**	WEST LEG	
BOUND	THRU	**0**	IN ...	**170**	BOUND	THRU	**0**	IN ...	**220**
	RIGHT	**43**	OUT ...	**100**		RIGHT	**79**	OUT ...	**290**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**39**	**76**	NORTH LEG		NORTH	LEFT	**79**	**250**	NORTH LEG	
BOUND	THRU	**408**	**666**	RATIO	**7.8%**	BOUND	THRU	**496**	**787**	RATIO	**8.1%**
	RIGHT	**0**	**0**	ADT	19,600		RIGHT	**0**	**0**	ADT	19,600
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**543**	**804**	RATIO	**8.0%**	BOUND	THRU	**389**	**717**	RATIO	**9.3%**
	RIGHT	**22**	**24**	ADT	20,900		RIGHT	**23**	**40**	ADT	20,900
EAST	LEFT	**18**	**34**	EAST LEG		EAST	LEFT	**39**	**43**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**43**	**136**	ADT	0		RIGHT	**79**	**183**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**9.6%**	BOUND	THRU	**0**	**0**	RATIO	**18.4%**
	RIGHT	**0**	**0**	ADT	2,800		RIGHT	**0**	**0**	ADT	2,800

AGUA MANSA ROAD (NS) / BROWN AVENUE (EW) - #27

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			4	256	69			
			<	v	>			
		0	^			^	22	
		1	>			<	0	
		1	v			v	2	
			<	^	>			
			4	184	12			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				329	206			
				v	^			
		8	<	IN =	555	<	24	
		2	>	OUT =	555	>	82	
				v	^			
				259	200			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	244	36			
			<	v	>			
		0	^			^	37	
		2	>			<	0	
		10	v			v	26	
			<	^	>			
			8	223	3			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			4	500	105			
			<	v	>			
		0	^			^	59	
		3	>			<	0	
		11	v			v	28	
			<	^	>			
			12	407	15			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				353	334			
				v	^			
		0	<	IN =	687	<	0	
		0	>	OUT =	687	>	0	
				v	^			
				353	334			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				22	24			
				v	^			
		0	<	IN =	46	<	0	
		0	>	OUT =	46	>	0	
				v	^			
				22	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				375	358			
				v	^			
		0	<	IN =	733	<	0	
		0	>	OUT =	733	>	0	
				v	^			
				375	358			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				890	816			
				v	^			
		0	<	IN =	1706	<	0	
		0	>	OUT =	1706	>	0	
				v	^			
				890	816			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				69	68			
				v	^			
		0	<	IN =	137	<	0	
		0	>	OUT =	137	>	0	
				v	^			
				69	68			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				959	884			
				v	^			
		0	<	IN =	1843	<	0	
		0	>	OUT =	1843	>	0	
				v	^			
				959	884			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				584	526			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				584	526			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				580	530			
				v	^			
		0	<	IN =	1120	<	10	
		0	>	OUT =	1120	>	10	
				v	^			
				580	530			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				350	320			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				350	320			

NEW PROJECTED VOLUMES (PCEs): 2035

				960	790			
				v	^			
		20	<			<	100	
		10	>			>	130	
				v	^			
				890	750			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	40			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				40	40			

INITIAL YEAR 2020 VOLUMES:

2020

				650	510			
				v	^			
		20	<	IN =	1220	<	90	
		10	>	OUT =	1230	>	120	
				v	^			
				580	470			

BALANCED YEAR 2020 VOLUMES:

2020

				660	510			
				v	^			
		20	<	IN =	1230	<	90	
		10	>	OUT =	1230	>	120	
				v	^			
				580	470			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			4	191	36			
			<	v	>			
		6	^			^	170	
		0	>			<	3	
		10	v			v	23	
			<	^	>			
			10	197	81			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				231	373			
				v	^			
		17	<	IN =	731	<	196	
		16	>	OUT =	731	>	117	
				v	^			
				224	288			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			5	199	39			
			<	v	>			
		3	^			^	54	
		6	>			<	2	
		7	v			v	57	
			<	^	>			
			2	151	79			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			9	390	75			
			<	v	>			
		9	^			^	224	
		6	>			<	5	
		17	v			v	80	
			<	^	>			
			12	348	160			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				484	532			
				v	^			
		0	<	IN =	1016	<	0	
		0	>	OUT =	1016	>	0	
				v	^			
				484	532			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				27	31			
				v	^			
		0	<	IN =	58	<	0	
		0	>	OUT =	58	>	0	
				v	^			
				27	31			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				511	563			
				v	^			
		0	<	IN =	1074	<	0	
		0	>	OUT =	1074	>	0	
				v	^			
				511	563			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1130	1249			
				v	^			
		0	<	IN =	2379	<	0	
		0	>	OUT =	2379	>	0	
				v	^			
				1130	1249			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				84	94			
				v	^			
		0	<	IN =	178	<	0	
		0	>	OUT =	178	>	0	
				v	^			
				84	94			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1214	1343			
				v	^			
		0	<	IN =	2557	<	0	
		0	>	OUT =	2557	>	0	
				v	^			
				1214	1343			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				703	780			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				703	780			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				700	780			
				v	^			
		0	<	IN =	1510	<	30	
		0	>	OUT =	1500	>	20	
				v	^			
				700	780			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				430	470			
				v	^			
		0	<			<	20	
		0	>			>	10	
				v	^			
				430	470			

NEW PROJECTED VOLUMES (PCEs): 2035

				900	1050			
				v	^			
		30	<			<	330	
		30	>			>	250	
				v	^			
				920	990			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				50	60			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				50	60			

INITIAL YEAR 2020 VOLUMES:

2020

				520	640			
				v	^			
		30	<	IN =	1440	<	310	
		30	>	OUT =	1450	>	240	
				v	^			
				540	580			

BALANCED YEAR 2020 VOLUMES:

2020

				520	640			
				v	^			
		30	<	IN =	1440	<	310	
		30	>	OUT =	1450	>	240	
				v	^			
				540	580			

AGUA MANSA ROAD (NS) / BROWN AVENUE (EW) - #27

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**12**	SOUTH LEG		NORTH	LEFT	**12**	SOUTH LEG	
BOUND	THRU	**407**	IN ...	**470**	BOUND	THRU	**348**	IN ...	**580**
	RIGHT	**15**	OUT ...	**580**		RIGHT	**160**	OUT ...	**540**
SOUTH	LEFT	**105**	NORTH LEG		SOUTH	LEFT	**75**	NORTH LEG	
BOUND	THRU	**500**	IN ...	**660**	BOUND	THRU	**390**	IN ...	**520**
	RIGHT	**4**	OUT ...	**510**		RIGHT	**9**	OUT ...	**640**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**9**	WEST LEG	
BOUND	THRU	**3**	IN ...	**10**	BOUND	THRU	**6**	IN ...	**30**
	RIGHT	**11**	OUT ...	**20**		RIGHT	**17**	OUT ...	**30**
WEST	LEFT	**28**	EAST LEG		WEST	LEFT	**80**	EAST LEG	
BOUND	THRU	**0**	IN ...	**90**	BOUND	THRU	**5**	IN ...	**310**
	RIGHT	**59**	OUT ...	**120**		RIGHT	**224**	OUT ...	**240**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**12**	**14**	NORTH LEG		NORTH	LEFT	**12**	**15**	NORTH LEG	
BOUND	THRU	**407**	**446**	RATIO	**5.6%**	BOUND	THRU	**348**	**407**	RATIO	**5.6%**
	RIGHT	**15**	**15**	ADT	20,900		RIGHT	**160**	**163**	ADT	20,900
SOUTH	LEFT	**105**	**106**	SOUTH LEG		SOUTH	LEFT	**75**	**76**	SOUTH LEG	
BOUND	THRU	**500**	**546**	RATIO	**5.3%**	BOUND	THRU	**390**	**441**	RATIO	**5.7%**
	RIGHT	**4**	**4**	ADT	19,900		RIGHT	**9**	**10**	ADT	19,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**9**	**9**	EAST LEG	
BOUND	THRU	**3**	**3**	RATIO	**3.0%**	BOUND	THRU	**6**	**6**	RATIO	**7.7%**
	RIGHT	**11**	**11**	ADT	7,300		RIGHT	**17**	**17**	ADT	7,300
WEST	LEFT	**28**	**28**	WEST LEG		WEST	LEFT	**80**	**82**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**4.0%**	BOUND	THRU	**5**	**5**	RATIO	**7.8%**
	RIGHT	**59**	**64**	ADT	800		RIGHT	**224**	**227**	ADT	800

AGUA MANSA ROAD (NS) / BROWN AVENUE (EW) - #27

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**12**	SOUTH LEG		NORTH	LEFT	**12**	SOUTH LEG	
BOUND	THRU	**407**	IN ...	**750**	BOUND	THRU	**348**	IN ...	**990**
	RIGHT	**15**	OUT ...	**890**		RIGHT	**160**	OUT ...	**920**
SOUTH	LEFT	**105**	NORTH LEG		SOUTH	LEFT	**75**	NORTH LEG	
BOUND	THRU	**500**	IN ...	**960**	BOUND	THRU	**390**	IN ...	**900**
	RIGHT	**4**	OUT ...	**790**		RIGHT	**9**	OUT ...	**1,050**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**9**	WEST LEG	
BOUND	THRU	**3**	IN ...	**10**	BOUND	THRU	**6**	IN ...	**30**
	RIGHT	**11**	OUT ...	**20**		RIGHT	**17**	OUT ...	**30**
WEST	LEFT	**28**	EAST LEG		WEST	LEFT	**80**	EAST LEG	
BOUND	THRU	**0**	IN ...	**100**	BOUND	THRU	**5**	IN ...	**330**
	RIGHT	**59**	OUT ...	**130**		RIGHT	**224**	OUT ...	**250**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**12**	**15**	NORTH LEG		NORTH	LEFT	**12**	**16**	NORTH LEG	
BOUND	THRU	**407**	**722**	RATIO	**8.4%**	BOUND	THRU	**348**	**800**	RATIO	**9.4%**
	RIGHT	**15**	**17**	ADT	20,900		RIGHT	**160**	**176**	ADT	20,900
SOUTH	LEFT	**105**	**116**	SOUTH LEG		SOUTH	LEFT	**75**	**83**	SOUTH LEG	
BOUND	THRU	**500**	**848**	RATIO	**8.3%**	BOUND	THRU	**390**	**817**	RATIO	**9.6%**
	RIGHT	**4**	**5**	ADT	19,900		RIGHT	**9**	**11**	ADT	19,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**9**	**10**	EAST LEG	
BOUND	THRU	**3**	**3**	RATIO	**3.2%**	BOUND	THRU	**6**	**7**	RATIO	**8.3%**
	RIGHT	**11**	**12**	ADT	7,300		RIGHT	**17**	**19**	ADT	7,300
WEST	LEFT	**28**	**33**	WEST LEG		WEST	LEFT	**80**	**88**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**4.4%**	BOUND	THRU	**5**	**6**	RATIO	**8.6%**
	RIGHT	**59**	**68**	ADT	800		RIGHT	**224**	**246**	ADT	800

AGUA MANSA ROAD (NS) / REGIONAL PARK ACCESS (EW) - #28

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	242	5			
			<	v	>			
		0	^			^	3	
		0	>			<	0	
		0	v			v	10	
			<	^	>			
			0	200	16			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				247	203			
				v	^			
		0	<	IN =	476	<	13	
		0	>	OUT =	476	>	21	
				v	^			
				252	216			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	291	36			
			<	v	>			
		0	^			^	46	
		0	>			<	0	
		0	v			v	43	
			<	^	>			
			0	241	62			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	533	41			
			<	v	>			
		0	^			^	49	
		0	>			<	0	
		0	v			v	53	
			<	^	>			
			0	441	78			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				353	334			
				v	^			
		0	<	IN =	687	<	0	
		0	>	OUT =	687	>	0	
				v	^			
				353	334			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				22	24			
				v	^			
		0	<	IN =	46	<	0	
		0	>	OUT =	46	>	0	
				v	^			
				22	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				375	358			
				v	^			
		0	<	IN =	733	<	0	
		0	>	OUT =	733	>	0	
				v	^			
				375	358			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				890	816			
				v	^			
		0	<	IN =	1706	<	0	
		0	>	OUT =	1706	>	0	
				v	^			
				890	816			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				69	68			
				v	^			
		0	<	IN =	137	<	0	
		0	>	OUT =	137	>	0	
				v	^			
				69	68			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				959	884			
				v	^			
		0	<	IN =	1843	<	0	
		0	>	OUT =	1843	>	0	
				v	^			
				959	884			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				584	526			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				584	526			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				580	530			
				v	^			
		0	<	IN =	1120	<	10	
		0	>	OUT =	1120	>	10	
				v	^			
				580	530			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				350	320			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				350	320			

NEW PROJECTED VOLUMES (PCEs): 2035

				920	810			
				v	^			
		0	<			<	110	
		0	>			>	130	
				v	^			
				940	840			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	40			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				40	40			

INITIAL YEAR 2020 VOLUMES:

2020

				610	530			
				v	^			
		0	<	IN =	1270	<	100	
		0	>	OUT =	1280	>	120	
				v	^			
				630	560			

BALANCED YEAR 2020 VOLUMES:

2020

				610	530			
				v	^			
		0	<	IN =	1270	<	100	
		0	>	OUT =	1280	>	120	
				v	^			
				630	560			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	208	57			
			<	v	>			
		0	^			^	7	
		0	>			<	0	
		0	v			v	14	
			<	^	>			
			0	408	7			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				265	415			
				v	^			
		0	<	IN =	701	<	21	
		0	>	OUT =	701	>	64	
				v	^			
				222	415			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	163	37			
			<	v	>			
		0	^			^	28	
		0	>			<	0	
		0	v			v	42	
			<	^	>			
			0	172	63			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	371	94			
			<	v	>			
		0	^			^	35	
		0	>			<	0	
		0	v			v	56	
			<	^	>			
			0	580	70			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				484	532			
				v	^			
		0	<	IN =	1016	<	0	
		0	>	OUT =	1016	>	0	
				v	^			
				484	532			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				27	31			
				v	^			
		0	<	IN =	58	<	0	
		0	>	OUT =	58	>	0	
				v	^			
				27	31			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				511	563			
				v	^			
		0	<	IN =	1074	<	0	
		0	>	OUT =	1074	>	0	
				v	^			
				511	563			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1130	1249			
				v	^			
		0	<	IN =	2379	<	0	
		0	>	OUT =	2379	>	0	
				v	^			
				1130	1249			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				84	94			
				v	^			
		0	<	IN =	178	<	0	
		0	>	OUT =	178	>	0	
				v	^			
				84	94			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1214	1343			
				v	^			
		0	<	IN =	2557	<	0	
		0	>	OUT =	2557	>	0	
				v	^			
				1214	1343			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				703	780			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				703	780			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				700	780			
				v	^			
		0	<	IN =	1490	<	10	
		0	>	OUT =	1500	>	20	
				v	^			
				700	780			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				430	470			
				v	^			
		0	<			<	10	
		0	>			>	10	
				v	^			
				430	470			

NEW PROJECTED VOLUMES (PCEs): 2035

				900	1090			
				v	^			
		0	<			<	100	
		0	>			>	170	
				v	^			
				860	1120			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				50	60			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				50	60			

INITIAL YEAR 2020 VOLUMES:

2020

				520	680			
				v	^			
		0	<	IN =	1320	<	90	
		0	>	OUT =	1320	>	160	
				v	^			
				480	710			

BALANCED YEAR 2020 VOLUMES:

2020

				520	680			
				v	^			
		0	<	IN =	1320	<	90	
		0	>	OUT =	1320	>	160	
				v	^			
				480	710			

AGUA MANSA ROAD (NS) / REGIONAL PARK ACCESS (EW) - #28

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**441**	IN ...	**560**	BOUND	THRU	**580**	IN ...	**710**
	RIGHT	**78**	OUT ...	**630**		RIGHT	**70**	OUT ...	**480**
SOUTH	LEFT	**41**	NORTH LEG		SOUTH	LEFT	**94**	NORTH LEG	
BOUND	THRU	**533**	IN ...	**610**	BOUND	THRU	**371**	IN ...	**520**
	RIGHT	**0**	OUT ...	**530**		RIGHT	**0**	OUT ...	**680**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
WEST	LEFT	**53**	EAST LEG		WEST	LEFT	**56**	EAST LEG	
BOUND	THRU	**0**	IN ...	**100**	BOUND	THRU	**0**	IN ...	**90**
	RIGHT	**49**	OUT ...	**120**		RIGHT	**35**	OUT ...	**160**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**441**	**483**	RATIO **5.8%**	BOUND	THRU	**580**	**645**	RATIO **6.0%**	
	RIGHT	**78**	**80**	ADT 19,900		RIGHT	**70**	**71**	ADT 19,900	
SOUTH	LEFT	**41**	**41**	SOUTH LEG	SOUTH	LEFT	**94**	**95**	SOUTH LEG	
BOUND	THRU	**533**	**576**	RATIO **6.0%**	BOUND	THRU	**371**	**425**	RATIO **6.0%**	
	RIGHT	**0**	**0**	ADT 19,900		RIGHT	**0**	**0**	ADT 19,900	
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **6.6%**	BOUND	THRU	**0**	**0**	RATIO **7.6%**	
	RIGHT	**0**	**0**	ADT 3,400		RIGHT	**0**	**0**	ADT 3,400	
WEST	LEFT	**53**	**54**	WEST LEG	WEST	LEFT	**56**	**57**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**	
	RIGHT	**49**	**50**	ADT 0		RIGHT	**35**	**35**	ADT 0	

AGUA MANSA ROAD (NS) / REGIONAL PARK ACCESS (EW) - #28

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**441**	IN ...	**840**	BOUND	THRU	**580**	IN ...	**1,120**
	RIGHT	**78**	OUT ...	**940**		RIGHT	**70**	OUT ...	**860**
SOUTH	LEFT	**41**	NORTH LEG		SOUTH	LEFT	**94**	NORTH LEG	
BOUND	THRU	**533**	IN ...	**920**	BOUND	THRU	**371**	IN ...	**900**
	RIGHT	**0**	OUT ...	**810**		RIGHT	**0**	OUT ...	**1,090**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
WEST	LEFT	**53**	EAST LEG		WEST	LEFT	**56**	EAST LEG	
BOUND	THRU	**0**	IN ...	**110**	BOUND	THRU	**0**	IN ...	**100**
	RIGHT	**49**	OUT ...	**130**		RIGHT	**35**	OUT ...	**170**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**441**	**757**	RATIO	**8.7%**	BOUND	THRU	**580**	**1,053**	RATIO	**10.0%**
	RIGHT	**78**	**86**	ADT	19,900		RIGHT	**70**	**77**	ADT	19,900
SOUTH	LEFT	**41**	**45**	SOUTH LEG		SOUTH	LEFT	**94**	**103**	SOUTH LEG	
BOUND	THRU	**533**	**882**	RATIO	**9.0%**	BOUND	THRU	**371**	**797**	RATIO	**10.0%**
	RIGHT	**0**	**0**	ADT	19,900		RIGHT	**0**	**0**	ADT	19,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.1%**	BOUND	THRU	**0**	**0**	RATIO	**8.3%**
	RIGHT	**0**	**0**	ADT	3,400		RIGHT	**0**	**0**	ADT	3,400
WEST	LEFT	**53**	**58**	WEST LEG		WEST	LEFT	**56**	**63**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**49**	**54**	ADT	0		RIGHT	**35**	**39**	ADT	0

AGUA MANSA ROAD (NS) / MARKET STREET (EW) - #29

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			157	2	56			
			<	v	>			
		176	^				^	81
		474	>				<	291
		5	v				v	3
			<	^	>			
			5	1	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				215	258			
				v	^			
		453	<	IN =	1251	<	375	
		655	>	OUT =	1251	>	530	
				v	^			
				10	6			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			124	2	61			
			<	v	>			
		129	^				^	69
		46	>				<	33
		8	v				v	0
			<	^	>			
			5	2	2			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			281	4	117			
			<	v	>			
		305	^				^	150
		520	>				<	324
		13	v				v	3
			<	^	>			
			10	3	2			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				353	334			
				v	^			
		447	<	IN =	1143	<	228	
		562	>	OUT =	1143	>	362	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				22	24			
				v	^			
		29	<	IN =	71	<	17	
		32	>	OUT =	71	>	18	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				375	358			
				v	^			
		476	<	IN =	1214	<	245	
		594	>	OUT =	1214	>	380	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				890	816			
				v	^			
		773	<	IN =	2373	<	416	
		1067	>	OUT =	2375	>	786	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				69	68			
				v	^			
		63	<	IN =	185	<	52	
		64	>	OUT =	185	>	54	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				959	884			
				v	^			
		836	<	IN =	2558	<	468	
		1131	>	OUT =	2560	>	840	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				584	526			
				v	^			
		360	<				<	223
		537	>				>	460
				v	^			
				0	0			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				580	530			
				v	^			
		360	<	IN =	1340	<	220	
		540	>	OUT =	1350	>	460	
				v	^			
				0	0			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				350	320			
				v	^			
		220	<				<	130
		330	>				>	280
				v	^			
				0	0			

NEW PROJECTED VOLUMES (PCEs): 2035

				750	780			
				v	^			
		840	<				<	610
		1170	>				>	920
				v	^			
				20	20			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	40			
				v	^			
		30	<				<	20
		40	>				>	30
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				440	500			
				v	^			
		650	<	IN =	1840	<	500	
		880	>	OUT =	1840	>	670	
				v	^			
				20	20			

BALANCED YEAR 2020 VOLUMES:

2020

				440	500			
				v	^			
		650	<	IN =	1840	<	500	
		880	>	OUT =	1840	>	670	
				v	^			
				20	20			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			226	1	119			
			<	v	>			
		326	^				^	88
		419	>				<	407
		2	v				v	1
			<	^	>			
			1	1	1			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				346	415			
				v	^			
		634	<	IN =	1592	<	496	
		747	>	OUT =	1592	>	539	
				v	^			
				4	3			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			86	0	26			
			<	v	>			
		167	^				^	72
		22	>				<	44
		2	v				v	0
			<	^	>			
			2	0	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			312	1	145			
			<	v	>			
		493	^				^	160
		441	>				<	451
		4	v				v	1
			<	^	>			
			3	1	1			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				484	532			
				v	^			
		794	<	IN =	1747	<	511	
		752	>	OUT =	1747	>	421	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				27	31			
				v	^			
		38	<	IN =	94	<	24	
		43	>	OUT =	94	>	25	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				511	563			
				v	^			
		832	<	IN =	1841	<	535	
		795	>	OUT =	1841	>	446	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1130	1249			
				v	^			
		1286	<	IN =	3200	<	929	
		1141	>	OUT =	3199	>	664	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				84	94			
				v	^			
		74	<	IN =	236	<	68	
		84	>	OUT =	235	>	67	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1214	1343			
				v	^			
		1360	<	IN =	3436	<	997	
		1225	>	OUT =	3434	>	731	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				703	780			
				v	^			
		528	<				<	462
		430	>				>	285
				v	^			
				0	0			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				700	780			
				v	^			
		530	<	IN =	1590	<	460	
		430	>	OUT =	1600	>	290	
				v	^			
				0	0			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				430	470			
				v	^			
		320	<				<	280
		260	>				>	180
				v	^			
				0	0			

NEW PROJECTED VOLUMES (PCEs): 2035

				890	1120			
				v	^			
		1090	<				<	890
		1200	>				>	770
				v	^			
				10	10			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				50	60			
				v	^			
		40	<				<	30
		30	>				>	20
				v	^			
				0	0			

INITIAL YEAR 2020 VOLUMES:

2020

				510	710			
				v	^			
		810	<	IN =	2130	<	640	
		970	>	OUT =	2140	>	610	
				v	^			
				10	10			

BALANCED YEAR 2020 VOLUMES:

2020

				510	710			
				v	^			
		810	<	IN =	2130	<	640	
		970	>	OUT =	2140	>	610	
				v	^			
				10	10			

AGUA MANSA ROAD (NS) / MARKET STREET (EW) - #29

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**10**	SOUTH LEG		NORTH	LEFT	**3**	SOUTH LEG	
BOUND	THRU	**3**	IN ...	**20**	BOUND	THRU	**1**	IN ...	**10**
	RIGHT	**2**	OUT ...	**20**		RIGHT	**1**	OUT ...	**10**
SOUTH	LEFT	**117**	NORTH LEG		SOUTH	LEFT	**145**	NORTH LEG	
BOUND	THRU	**4**	IN ...	**440**	BOUND	THRU	**1**	IN ...	**510**
	RIGHT	**281**	OUT ...	**500**		RIGHT	**312**	OUT ...	**710**
EAST	LEFT	**305**	WEST LEG		EAST	LEFT	**493**	WEST LEG	
BOUND	THRU	**520**	IN ...	**880**	BOUND	THRU	**441**	IN ...	**970**
	RIGHT	**13**	OUT ...	**650**		RIGHT	**4**	OUT ...	**810**
WEST	LEFT	**3**	EAST LEG		WEST	LEFT	**1**	EAST LEG	
BOUND	THRU	**324**	IN ...	**500**	BOUND	THRU	**451**	IN ...	**640**
	RIGHT	**150**	OUT ...	**670**		RIGHT	**160**	OUT ...	**610**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**10**	**10**	NORTH LEG		NORTH	LEFT	**3**	**3**	NORTH LEG	
BOUND	THRU	**3**	**4**	RATIO	**4.7%**	BOUND	THRU	**1**	**2**	RATIO	**6.1%**
	RIGHT	**2**	**3**	ADT	19,900		RIGHT	**1**	**2**	ADT	19,900
SOUTH	LEFT	**117**	**130**	SOUTH LEG		SOUTH	LEFT	**145**	**166**	SOUTH LEG	
BOUND	THRU	**4**	**4**	RATIO	**37.0%**	BOUND	THRU	**1**	**2**	RATIO	**15.0%**
	RIGHT	**281**	**305**	ADT	100		RIGHT	**312**	**344**	ADT	100
EAST	LEFT	**305**	**330**	EAST LEG		EAST	LEFT	**493**	**527**	EAST LEG	
BOUND	THRU	**520**	**537**	RATIO	**5.1%**	BOUND	THRU	**441**	**446**	RATIO	**5.5%**
	RIGHT	**13**	**13**	ADT	22,900		RIGHT	**4**	**4**	ADT	22,900
WEST	LEFT	**3**	**3**	WEST LEG		WEST	LEFT	**1**	**2**	WEST LEG	
BOUND	THRU	**324**	**332**	RATIO	**5.1%**	BOUND	THRU	**451**	**460**	RATIO	**6.0%**
	RIGHT	**150**	**165**	ADT	29,800		RIGHT	**160**	**181**	ADT	29,800

AGUA MANSA ROAD (NS) / MARKET STREET (EW) - #29

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**10**	SOUTH LEG		NORTH	LEFT	**3**	SOUTH LEG	
BOUND	THRU	**3**	IN ...	**20**	BOUND	THRU	**1**	IN ...	**10**
	RIGHT	**2**	OUT ...	**20**		RIGHT	**1**	OUT ...	**10**
SOUTH	LEFT	**117**	NORTH LEG		SOUTH	LEFT	**145**	NORTH LEG	
BOUND	THRU	**4**	IN ...	**750**	BOUND	THRU	**1**	IN ...	**890**
	RIGHT	**281**	OUT ...	**780**		RIGHT	**312**	OUT ...	**1,120**
EAST	LEFT	**305**	WEST LEG		EAST	LEFT	**493**	WEST LEG	
BOUND	THRU	**520**	IN ...	**1,170**	BOUND	THRU	**441**	IN ...	**1,200**
	RIGHT	**13**	OUT ...	**840**		RIGHT	**4**	OUT ...	**1,090**
WEST	LEFT	**3**	EAST LEG		WEST	LEFT	**1**	EAST LEG	
BOUND	THRU	**324**	IN ...	**610**	BOUND	THRU	**451**	IN ...	**890**
	RIGHT	**150**	OUT ...	**920**		RIGHT	**160**	OUT ...	**770**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**10**	**11**	NORTH LEG	NORTH	LEFT	**3**	**5**	NORTH LEG	
BOUND	THRU	**3**	**6**	RATIO **7.7%**	BOUND	THRU	**1**	**3**	RATIO **10.1%**	
	RIGHT	**2**	**3**	ADT 19,900		RIGHT	**1**	**2**	ADT 19,900	
SOUTH	LEFT	**117**	**260**	SOUTH LEG	SOUTH	LEFT	**145**	**328**	SOUTH LEG	
BOUND	THRU	**4**	**6**	RATIO **43.0%**	BOUND	THRU	**1**	**3**	RATIO **20.0%**	
	RIGHT	**281**	**487**	ADT 100		RIGHT	**312**	**559**	ADT 100	
EAST	LEFT	**305**	**507**	EAST LEG	EAST	LEFT	**493**	**755**	EAST LEG	
BOUND	THRU	**520**	**657**	RATIO **6.8%**	BOUND	THRU	**441**	**485**	RATIO **7.4%**	
	RIGHT	**13**	**14**	ADT 22,900		RIGHT	**4**	**5**	ADT 22,900	
WEST	LEFT	**3**	**3**	WEST LEG	WEST	LEFT	**1**	**2**	WEST LEG	
BOUND	THRU	**324**	**356**	RATIO **6.8%**	BOUND	THRU	**451**	**526**	RATIO **7.8%**	
	RIGHT	**150**	**267**	ADT 29,800		RIGHT	**160**	**362**	ADT 29,800	

MARKET STREET (NS) / HALL AVENUE (EW) - #30

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			15	433	0			
			<	v	>			
	5	^				^	0	
	0	>				<	0	
	7	v				v	0	
			<	^	>			
			6	373	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				448	378			
				v	^			
	21	<	IN =	839		<	0	
	12	>	OUT =	839		>	0	
				v	^			
				440	379			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			6	205	0			
			<	v	>			
	3	^				^	0	
	0	>				<	0	
	6	v				v	0	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2.0 4+: 3.0			14	181	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			21	638	0			
			<	v	>			
	8	^				^	0	
	0	>				<	0	
	13	v				v	0	
			<	^	>			
			20	554	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				362	228			
				v	^			
	13	<	IN =	590		<	0	
	17	>	OUT =	591		>	0	
				v	^			
				350	211			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				18	17			
				v	^			
	0	<	IN =	35		<	0	
	0	>	OUT =	34		>	0	
				v	^			
				17	17			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				380	245			
				v	^			
	13	<	IN =	625		<	0	
	17	>	OUT =	625		>	0	
				v	^			
				367	228			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				786	418			
				v	^			
	2	<	IN =	1215		<	0	
	63	>	OUT =	1215		>	0	
				v	^			
				795	366			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				54	52			
				v	^			
	0	<	IN =	108		<	0	
	3	>	OUT =	107		>	0	
				v	^			
				55	51			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				840	470			
				v	^			
	2	<	IN =	1323		<	0	
	66	>	OUT =	1322		>	0	
				v	^			
				850	417			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				460	225			
				v	^			
	-11	<				<	0	
	49	>				>	0	
				v	^			
				483	189			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				460	230			
				v	^			
	0	<	IN =	700		<	0	
	50	>	OUT =	710		>	0	
				v	^			
				480	190			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				280	140			
				v	^			
	0	<				<	0	
	30	>				>	0	
				v	^			
				290	120			

NEW PROJECTED VOLUMES (PCEs): 2035

				940	700			
				v	^			
	40	<				<	0	
	50	>				>	0	
				v	^			
				940	690			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				30	20			
				v	^			
	0	<				<	0	
	0	>				>	0	
				v	^			
				30	10			

INITIAL YEAR 2020 VOLUMES:

2020

				690	580			
				v	^			
	40	<	IN =	1290		<	0	
	20	>	OUT =	1300		>	0	
				v	^			
				680	580			

BALANCED YEAR 2020 VOLUMES:

2020

				700	580			
				v	^			
	40	<	IN =	1300		<	0	
	20	>	OUT =	1300		>	0	
				v	^			
				680	580			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			39	583	3			
			<	v	>			
	25	^				^	0	
	0	>				<	0	
	7	v				v	0	
			<	^	>			
			15	477	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				625	502			
				v	^			
	54	<	IN =	1149		<	0	
	32	>	OUT =	1149		>	3	
				v	^			
				590	492			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			15	257	0			
			<	v	>			
	5	^				^	0	
	0	>				<	0	
	2	v				v	0	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2 4+: 3.0			5	181	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			54	840	3			
			<	v	>			
	30	^				^	0	
	0	>				<	0	
	9	v				v	0	
			<	^	>			
			20	658	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				421	511			
				v	^			
	28	<	IN =	932		<	0	
	16	>	OUT =	932		>	0	
				v	^			
				393	495			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				25	24			
				v	^			
	1	<	IN =	49		<	0	
	0	>	OUT =	49		>	0	
				v	^			
				24	24			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				446	535			
				v	^			
	29	<	IN =	981		<	0	
	16	>	OUT =	981		>	0	
				v	^			
				417	519			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				664	929			
				v	^			
	119	<	IN =	1615		<	0	
	77	>	OUT =	1615		>	0	
				v	^			
				567	874			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				67	68			
				v	^			
	5	<	IN =	136		<	0	
	3	>	OUT =	137		>	0	
				v	^			
				64	66			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				731	997			
				v	^			
	124	<	IN =	1751		<	0	
	80	>	OUT =	1752		>	0	
				v	^			
				631	940			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				285	462			
				v	^			
	95	<				<	0	
	64	>				>	0	
				v	^			
				214	421			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				290	460			
				v	^			
	100	<	IN =	770		<	0	
	60	>	OUT =	770		>	0	
				v	^			
				210	420			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				180	280			
				v	^			
	60	<				<	0	
	40	>				>	0	
				v	^			
				130	260			

NEW PROJECTED VOLUMES (PCEs): 2035

				1080	970			
				v	^			
	130	<				<	0	
	80	>				>	0	
				v	^			
				980	940			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				20	30			
				v	^			
	10	<				<	0	
	0	>				>	0	
				v	^			
				20	30			

INITIAL YEAR 2020 VOLUMES:

2020

				920	720			
				v	^			
	80	<	IN =	1670		<	0	
	40	>	OUT =	1670		>	0	
				v	^			
				870	710			

BALANCED YEAR 2020 VOLUMES:

2020

				920	720			
				v	^			
	80	<	IN =	1670		<	0	
	40	>	OUT =	1670		>	0	
				v	^			
				870	710			

MARKET STREET (NS) / HALL AVENUE (EW) - #30

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**20**	SOUTH LEG		NORTH	LEFT	**20**	SOUTH LEG	
BOUND	THRU	**554**	IN ...	**580**	BOUND	THRU	**658**	IN ...	**710**
	RIGHT	**0**	OUT ...	**680**		RIGHT	**0**	OUT ...	**870**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**3**	NORTH LEG	
BOUND	THRU	**638**	IN ...	**700**	BOUND	THRU	**840**	IN ...	**920**
	RIGHT	**21**	OUT ...	**580**		RIGHT	**54**	OUT ...	**720**
EAST	LEFT	**8**	WEST LEG		EAST	LEFT	**30**	WEST LEG	
BOUND	THRU	**0**	IN ...	**20**	BOUND	THRU	**0**	IN ...	**40**
	RIGHT	**13**	OUT ...	**40**		RIGHT	**9**	OUT ...	**80**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**20**	**20**	NORTH LEG	NORTH	LEFT	**20**	**22**	NORTH LEG
BOUND	THRU	**554**	**571**	RATIO **5.6%**	BOUND	THRU	**658**	**689**	RATIO **7.2%**
	RIGHT	**0**	**0**	ADT 22,900		RIGHT	**0**	**0**	ADT 22,900
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**3**	**3**	SOUTH LEG
BOUND	THRU	**638**	**669**	RATIO **4.4%**	BOUND	THRU	**840**	**861**	RATIO **5.4%**
	RIGHT	**21**	**23**	ADT 29,100		RIGHT	**54**	**58**	ADT 29,100
EAST	LEFT	**8**	**9**	EAST LEG	EAST	LEFT	**30**	**31**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**13**	**13**	ADT 0		RIGHT	**9**	**9**	ADT 0
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG
BOUND	THRU	**0**	**0**	RATIO **3.4%**	BOUND	THRU	**0**	**0**	RATIO **6.3%**
	RIGHT	**0**	**0**	ADT 1,900		RIGHT	**0**	**0**	ADT 1,900

MARKET STREET (NS) / HALL AVENUE (EW) - #30

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**20**	SOUTH LEG		NORTH	LEFT	**20**	SOUTH LEG	
BOUND	THRU	**554**	IN ...	**690**	BOUND	THRU	**658**	IN ...	**940**
	RIGHT	**0**	OUT ...	**940**		RIGHT	**0**	OUT ...	**980**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**3**	NORTH LEG	
BOUND	THRU	**638**	IN ...	**940**	BOUND	THRU	**840**	IN ...	**1,080**
	RIGHT	**21**	OUT ...	**700**		RIGHT	**54**	OUT ...	**970**
EAST	LEFT	**8**	WEST LEG		EAST	LEFT	**30**	WEST LEG	
BOUND	THRU	**0**	IN ...	**50**	BOUND	THRU	**0**	IN ...	**80**
	RIGHT	**13**	OUT ...	**40**		RIGHT	**9**	OUT ...	**130**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**20**	**22**	NORTH LEG	NORTH	LEFT	**20**	**35**	NORTH LEG	
BOUND	THRU	**554**	**679**	RATIO **7.1%**	BOUND	THRU	**658**	**906**	RATIO **8.9%**	
	RIGHT	**0**	**0**	ADT 22,900		RIGHT	**0**	**0**	ADT 22,900	
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**3**	**3**	SOUTH LEG	
BOUND	THRU	**638**	**911**	RATIO **5.6%**	BOUND	THRU	**840**	**964**	RATIO **6.6%**	
	RIGHT	**21**	**23**	ADT 29,100		RIGHT	**54**	**95**	ADT 29,100	
EAST	LEFT	**8**	**21**	EAST LEG	EAST	LEFT	**30**	**64**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**	
	RIGHT	**13**	**29**	ADT 0		RIGHT	**9**	**16**	ADT 0	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **5.0%**	BOUND	THRU	**0**	**0**	RATIO **11.1%**	
	RIGHT	**0**	**0**	ADT 1,900		RIGHT	**0**	**0**	ADT 1,900	

MARKET STREET (NS) / RIVERA AVENUE (EW) - #31

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	500	50			
			<	v	>			
	0	^				^	52	
	3	>				<	4	
	37	v				v	171	
			<	^	>			
			60	548	175			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				550	600			
				v	^			
	64	<	IN =	1600		<	227	
	40	>	OUT =	1600		>	228	
				v	^			
				708	783			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	244	5			
			<	v	>			
	2	^				^	7	
	0	>				<	0	
	42	v				v	17	
			<	^	>			
			3	254	4			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	744	55			
			<	v	>			
	2	^				^	59	
	3	>				<	4	
	79	v				v	188	
			<	^	>			
			63	802	179			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				519	613			
				v	^			
	0	<	IN =	1799		<	306	
	0	>	OUT =	1800		>	412	
				v	^			
				775	974			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				35	35			
				v	^			
	0	<	IN =	105		<	19	
	0	>	OUT =	105		>	21	
				v	^			
				49	51			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				554	648			
				v	^			
	0	<	IN =	1904		<	325	
	0	>	OUT =	1905		>	433	
				v	^			
				824	1025			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1161	983			
				v	^			
	0	<	IN =	2916		<	374	
	0	>	OUT =	2915		>	610	
				v	^			
				1322	1381			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				115	85			
				v	^			
	0	<	IN =	240		<	24	
	0	>	OUT =	240		>	38	
				v	^			
				117	101			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1276	1068			
				v	^			
	0	<	IN =	3156		<	398	
	0	>	OUT =	3155		>	648	
				v	^			
				1439	1482			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				722	420			
				v	^			
	0	<				<	73	
	0	>				>	215	
				v	^			
				615	457			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				720	420			
				v	^			
	10	<	IN =	1260		<	70	
	10	>	OUT =	1270		>	220	
				v	^			
				620	460			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				440	260			
				v	^			
	10	<				<	40	
	10	>				>	130	
				v	^			
				380	280			

NEW PROJECTED VOLUMES (PCEs): 2035

				1240	1120			
				v	^			
	80	<				<	290	
	90	>				>	370	
				v	^			
				1390	1320			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				50	30			
				v	^			
	0	<				<	10	
	0	>				>	20	
				v	^			
				40	30			

INITIAL YEAR 2020 VOLUMES:

2020

				850	890			
				v	^			
	70	<	IN =	2260		<	260	
	80	>	OUT =	2270		>	260	
				v	^			
				1050	1070			

BALANCED YEAR 2020 VOLUMES:

2020

				850	890			
				v	^			
	70	<	IN =	2260		<	260	
	80	>	OUT =	2270		>	260	
				v	^			
				1050	1070			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	737	78			
			<	v	>			
	3	^				^	44	
	20	>				<	5	
	129	v				v	309	
			<	^	>			
			45	412	275			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				815	459			
				v	^			
	50	<	IN =	2057		<	358	
	152	>	OUT =	2057		>	373	
				v	^			
				1175	732			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	120	3			
			<	v	>			
	0	^				^	10	
	0	>				<	0	
	9	v				v	13	
			<	^	>			
			2	225	8			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	857	81			
			<	v	>			
	3	^				^	54	
	20	>				<	5	
	138	v				v	322	
			<	^	>			
			47	637	283			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				776	732			
				v	^			
	0	<	IN =	2216		<	405	
	0	>	OUT =	2217		>	390	
				v	^			
				1095	1035			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				40	45			
				v	^			
	0	<	IN =	128		<	22	
	0	>	OUT =	128		>	27	
				v	^			
				56	66			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				816	777			
				v	^			
	0	<	IN =	2344		<	427	
	0	>	OUT =	2345		>	417	
				v	^			
				1151	1101			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1321	1284			
				v	^			
	0	<	IN =	3403		<	508	
	0	>	OUT =	3402		>	546	
				v	^			
				1572	1574			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				111	122			
				v	^			
	0	<	IN =	276		<	30	
	0	>	OUT =	277		>	40	
				v	^			
				115	135			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1432	1406			
				v	^			
	0	<	IN =	3679		<	538	
	0	>	OUT =	3679		>	586	
				v	^			
				1687	1709			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				616	629			
				v	^			
	0	<				<	111	
	0	>				>	169	
				v	^			
				536	608			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				620	630			
				v	^			
	10	<	IN =	1360		<	110	
	20	>	OUT =	1350		>	170	
				v	^			
				540	610			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				380	380			
				v	^			
	10	<				<	70	
	10	>				>	100	
				v	^			
				330	370			

NEW PROJECTED VOLUMES (PCEs): 2035

				1320	1070			
				v	^			
	60	<				<	450	
	170	>				>	480	
				v	^			
				1650	1340			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	50			
				v	^			
	0	<				<	10	
	0	>				>	10	
				v	^			
				40	40			

INITIAL YEAR 2020 VOLUMES:

2020

				980	740			
				v	^			
	50	<	IN =	2540		<	390	
	160	>	OUT =	2540		>	390	
				v	^			
				1360	1010			

BALANCED YEAR 2020 VOLUMES:

2020

				980	740			
				v	^			
	50	<	IN =	2540		<	390	
	160	>	OUT =	2540		>	390	
				v	^			
				1360	1010			

MARKET STREET (NS) / RIVERA AVENUE (EW) - #31

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**63**	SOUTH LEG		NORTH	LEFT	**47**	SOUTH LEG	
BOUND	THRU	**802**	IN ...	**1,070**	BOUND	THRU	**637**	IN ...	**1,010**
	RIGHT	**179**	OUT ...	**1,050**		RIGHT	**283**	OUT ...	**1,360**
SOUTH	LEFT	**55**	NORTH LEG		SOUTH	LEFT	**81**	NORTH LEG	
BOUND	THRU	**744**	IN ...	**850**	BOUND	THRU	**857**	IN ...	**980**
	RIGHT	**0**	OUT ...	**890**		RIGHT	**0**	OUT ...	**740**
EAST	LEFT	**2**	WEST LEG		EAST	LEFT	**3**	WEST LEG	
BOUND	THRU	**3**	IN ...	**80**	BOUND	THRU	**20**	IN ...	**160**
	RIGHT	**79**	OUT ...	**70**		RIGHT	**138**	OUT ...	**50**
WEST	LEFT	**188**	EAST LEG		WEST	LEFT	**322**	EAST LEG	
BOUND	THRU	**4**	IN ...	**260**	BOUND	THRU	**5**	IN ...	**390**
	RIGHT	**59**	OUT ...	**260**		RIGHT	**54**	OUT ...	**390**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**63**	**65**	NORTH LEG		NORTH	LEFT	**47**	**48**	NORTH LEG	
BOUND	THRU	**802**	**822**	RATIO	**5.1%**	BOUND	THRU	**637**	**679**	RATIO	**5.1%**
	RIGHT	**179**	**191**	ADT	33,900		RIGHT	**283**	**286**	ADT	33,900
SOUTH	LEFT	**55**	**66**	SOUTH LEG		SOUTH	LEFT	**81**	**84**	SOUTH LEG	
BOUND	THRU	**744**	**785**	RATIO	**4.9%**	BOUND	THRU	**857**	**895**	RATIO	**5.4%**
	RIGHT	**0**	**0**	ADT	43,600		RIGHT	**0**	**0**	ADT	43,600
EAST	LEFT	**2**	**2**	EAST LEG		EAST	LEFT	**3**	**3**	EAST LEG	
BOUND	THRU	**3**	**3**	RATIO	**5.2%**	BOUND	THRU	**20**	**20**	RATIO	**7.7%**
	RIGHT	**79**	**80**	ADT	10,100		RIGHT	**138**	**140**	ADT	10,100
WEST	LEFT	**188**	**190**	WEST LEG		WEST	LEFT	**322**	**328**	WEST LEG	
BOUND	THRU	**4**	**5**	RATIO	**5.3%**	BOUND	THRU	**5**	**5**	RATIO	**7.4%**
	RIGHT	**59**	**66**	ADT	2,900		RIGHT	**54**	**57**	ADT	2,900

MARKET STREET (NS) / RIVERA AVENUE (EW) - #31

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**63**	SOUTH LEG		NORTH	LEFT	**47**	SOUTH LEG	
BOUND	THRU	**802**	IN ...	**1,320**	BOUND	THRU	**637**	IN ...	**1,340**
	RIGHT	**179**	OUT ...	**1,390**		RIGHT	**283**	OUT ...	**1,650**
SOUTH	LEFT	**55**	NORTH LEG		SOUTH	LEFT	**81**	NORTH LEG	
BOUND	THRU	**744**	IN ...	**1,240**	BOUND	THRU	**857**	IN ...	**1,320**
	RIGHT	**0**	OUT ...	**1,120**		RIGHT	**0**	OUT ...	**1,070**
EAST	LEFT	**2**	WEST LEG		EAST	LEFT	**3**	WEST LEG	
BOUND	THRU	**3**	IN ...	**90**	BOUND	THRU	**20**	IN ...	**170**
	RIGHT	**79**	OUT ...	**80**		RIGHT	**138**	OUT ...	**60**
WEST	LEFT	**188**	EAST LEG		WEST	LEFT	**322**	EAST LEG	
BOUND	THRU	**4**	IN ...	**290**	BOUND	THRU	**5**	IN ...	**450**
	RIGHT	**59**	OUT ...	**370**		RIGHT	**54**	OUT ...	**480**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**63**	**74**	NORTH LEG		NORTH	LEFT	**47**	**54**	NORTH LEG	
BOUND	THRU	**802**	**1,028**	RATIO	**6.9%**	BOUND	THRU	**637**	**972**	RATIO	**7.0%**
	RIGHT	**179**	**241**	ADT	33,900		RIGHT	**283**	**323**	ADT	33,900
SOUTH	LEFT	**55**	**124**	SOUTH LEG		SOUTH	LEFT	**81**	**133**	SOUTH LEG	
BOUND	THRU	**744**	**1,111**	RATIO	**6.3%**	BOUND	THRU	**857**	**1,167**	RATIO	**6.9%**
	RIGHT	**0**	**0**	ADT	43,600		RIGHT	**0**	**0**	ADT	43,600
EAST	LEFT	**2**	**3**	EAST LEG		EAST	LEFT	**3**	**5**	EAST LEG	
BOUND	THRU	**3**	**5**	RATIO	**6.7%**	BOUND	THRU	**20**	**24**	RATIO	**9.2%**
	RIGHT	**79**	**87**	ADT	10,100		RIGHT	**138**	**152**	ADT	10,100
WEST	LEFT	**188**	**207**	WEST LEG		WEST	LEFT	**322**	**354**	WEST LEG	
BOUND	THRU	**4**	**6**	RATIO	**6.0%**	BOUND	THRU	**5**	**6**	RATIO	**8.3%**
	RIGHT	**59**	**89**	ADT	2,900		RIGHT	**54**	**94**	ADT	2,900

MARKET STREET (NS) / SR-60 FREEWAY WB RAMPS (EW) - #32

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			88	665	0			
			<	v	>			
		0	^			^	529	
		0	>			<	0	
		0	v			v	88	
			<	^	>			
			198	256	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				753	785			
				v	^			
		286	<	IN =	1824	<	617	
		0	>	OUT =	1824	>	0	
				v	^			
				753	454			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			63	221	0			
			<	v	>			
		0	^			^	195	
		0	>			<	0	
		0	v			v	25	
			<	^	>			
			19	63	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			151	886	0			
			<	v	>			
		0	^			^	724	
		0	>			<	0	
		0	v			v	113	
			<	^	>			
			217	319	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				775	974			
				v	^			
		338	<	IN =	2037	<	682	
		0	>	OUT =	2037	>	0	
				v	^			
				725	580			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				49	51			
				v	^			
		38	<	IN =	130	<	35	
		0	>	OUT =	130	>	0	
				v	^			
				41	46			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				824	1025			
				v	^			
		376	<	IN =	2167	<	717	
		0	>	OUT =	2167	>	0	
				v	^			
				766	626			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1327	1381			
				v	^			
		440	<	IN =	3153	<	919	
		0	>	OUT =	3151	>	0	
				v	^			
				1330	907			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				117	101			
				v	^			
		43	<	IN =	257	<	71	
		0	>	OUT =	256	>	0	
				v	^			
				112	69			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1444	1482			
				v	^			
		483	<	IN =	3410	<	990	
		0	>	OUT =	3407	>	0	
				v	^			
				1442	976			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				620	457			
				v	^			
		107	<			<	273	
		0	>			>	0	
				v	^			
				676	350			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				620	460			
				v	^			
		110	<	IN =	1240	<	270	
		0	>	OUT =	1250	>	0	
				v	^			
				680	350			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				380	280			
				v	^			
		70	<			<	160	
		0	>			>	0	
				v	^			
				410	210			

NEW PROJECTED VOLUMES (PCEs): 2035

				1420	1320			
				v	^			
		440	<			<	1000	
		0	>			>	0	
				v	^			
				1410	750			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	30			
				v	^			
		10	<			<	20	
		0	>			>	0	
				v	^			
				50	30			

INITIAL YEAR 2020 VOLUMES:

2020

				1080	1070			
				v	^			
		380	<	IN =	2510	<	860	
		0	>	OUT =	2500	>	0	
				v	^			
				1050	570			

BALANCED YEAR 2020 VOLUMES:

2020

				1080	1070			
				v	^			
		380	<	IN =	2510	<	860	
		0	>	OUT =	2500	>	0	
				v	^			
				1050	570			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			151	1019	0			
			<	v	>			
		0	^			^	421	
		0	>			<	0	
		0	v			v	83	
			<	^	>			
			461	328	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1170	749			
				v	^			
		612	<	IN =	2463	<	504	
		0	>	OUT =	2463	>	0	
				v	^			
				1102	789			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			34	88	0			
			<	v	>			
		0	^			^	165	
		0	>			<	0	
		0	v			v	5	
			<	^	>			
			15	32	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			185	1107	0			
			<	v	>			
		0	^			^	586	
		0	>			<	0	
		0	v			v	88	
			<	^	>			
			476	360	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1095	1035			
				v	^			
		607	<	IN =	2688	<	666	
		0	>	OUT =	2688	>	0	
				v	^			
				1046	927			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				56	66			
				v	^			
		47	<	IN =	160	<	44	
		0	>	OUT =	160	>	0	
				v	^			
				47	60			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1151	1101			
				v	^			
		654	<	IN =	2848	<	710	
		0	>	OUT =	2848	>	0	
				v	^			
				1093	987			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1572	1574			
				v	^			
		1251	<	IN =	4317	<	849	
		0	>	OUT =	4317	>	0	
				v	^			
				1492	1896			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				115	135			
				v	^			
		63	<	IN =	307	<	95	
		0	>	OUT =	307	>	0	
				v	^			
				109	97			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1687	1709			
				v	^			
		1314	<	IN =	4624	<	944	
		0	>	OUT =	4624	>	0	
				v	^			
				1601	1993			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				536	608			
				v	^			
		660	<			<	234	
		0	>			>	0	
				v	^			
				508	1006			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				540	610			
				v	^			
		660	<	IN =	1780	<	230	
		0	>	OUT =	1780	>	0	
				v	^			
				510	1010			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				330	370			
				v	^			
		400	<			<	140	
		0	>			>	0	
				v	^			
				310	610			

NEW PROJECTED VOLUMES (PCEs): 2035

				1620	1320			
				v	^			
		1060	<			<	810	
		0	>			>	0	
				v	^			
				1510	1450			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				40	40			
				v	^			
		50	<			<	20	
		0	>			>	0	
				v	^			
				40	70			

INITIAL YEAR 2020 VOLUMES:

2020

				1330	990			
				v	^			
		710	<	IN =	2930	<	690	
		0	>	OUT =	2940	>	0	
				v	^			
				1240	910			

BALANCED YEAR 2020 VOLUMES:

2020

				1330	990			
				v	^			
		710	<	IN =	2930	<	690	
		0	>	OUT =	2940	>	0	
				v	^			
				1240	910			

MARKET STREET (NS) / SR-60 FREEWAY WB RAMPS (EW) - #32

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**217**	SOUTH LEG		NORTH	LEFT	**476**	SOUTH LEG	
BOUND	THRU	**319**	IN ...	**570**	BOUND	THRU	**360**	IN ...	**910**
	RIGHT	**0**	OUT ...	**1,050**		RIGHT	**0**	OUT ...	**1,240**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**886**	IN ...	**1,080**	BOUND	THRU	**1,107**	IN ...	**1,330**
	RIGHT	**151**	OUT ...	**1,070**		RIGHT	**185**	OUT ...	**990**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**380**		RIGHT	**0**	OUT ...	**710**
WEST	LEFT	**113**	EAST LEG		WEST	LEFT	**88**	EAST LEG	
BOUND	THRU	**0**	IN ...	**860**	BOUND	THRU	**0**	IN ...	**690**
	RIGHT	**724**	OUT ...	**0**		RIGHT	**586**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**217**	**231**	NORTH LEG		NORTH	LEFT	**476**	**522**	NORTH LEG	
BOUND	THRU	**319**	**336**	RATIO	**5.6%**	BOUND	THRU	**360**	**391**	RATIO	**6.1%**
	RIGHT	**0**	**0**	ADT	38,300		RIGHT	**0**	**0**	ADT	38,300
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**886**	**928**	RATIO	**4.8%**	BOUND	THRU	**1,107**	**1,147**	RATIO	**6.4%**
	RIGHT	**151**	**153**	ADT	33,900		RIGHT	**185**	**188**	ADT	33,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.6%**	BOUND	THRU	**0**	**0**	RATIO	**6.1%**
	RIGHT	**0**	**0**	ADT	11,300		RIGHT	**0**	**0**	ADT	11,300
WEST	LEFT	**113**	**122**	WEST LEG		WEST	LEFT	**88**	**93**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**3.7%**	BOUND	THRU	**0**	**0**	RATIO	**6.8%**
	RIGHT	**724**	**734**	ADT	10,400		RIGHT	**586**	**599**	ADT	10,400

MARKET STREET (NS) / SR-60 FREEWAY WB RAMPS (EW) - #32

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**217**	SOUTH LEG		NORTH	LEFT	**476**	SOUTH LEG	
BOUND	THRU	**319**	IN ...	**750**	BOUND	THRU	**360**	IN ...	**1,450**
	RIGHT	**0**	OUT ...	**1,410**		RIGHT	**0**	OUT ...	**1,510**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**886**	IN ...	**1,420**	BOUND	THRU	**1,107**	IN ...	**1,620**
	RIGHT	**151**	OUT ...	**1,320**		RIGHT	**185**	OUT ...	**1,320**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**440**		RIGHT	**0**	OUT ...	**1,060**
WEST	LEFT	**113**	EAST LEG		WEST	LEFT	**88**	EAST LEG	
BOUND	THRU	**0**	IN ...	**1,000**	BOUND	THRU	**0**	IN ...	**810**
	RIGHT	**724**	OUT ...	**0**		RIGHT	**586**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**217**	**277**	NORTH LEG		NORTH	LEFT	**476**	**834**	NORTH LEG	
BOUND	THRU	**319**	**472**	RATIO	**7.2%**	BOUND	THRU	**360**	**619**	RATIO	**7.7%**
	RIGHT	**0**	**0**	ADT	38,300		RIGHT	**0**	**0**	ADT	38,300
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**886**	**1,260**	RATIO	**6.4%**	BOUND	THRU	**1,107**	**1,399**	RATIO	**8.7%**
	RIGHT	**151**	**166**	ADT	33,900		RIGHT	**185**	**226**	ADT	33,900
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**8.8%**	BOUND	THRU	**0**	**0**	RATIO	**7.2%**
	RIGHT	**0**	**0**	ADT	11,300		RIGHT	**0**	**0**	ADT	11,300
WEST	LEFT	**113**	**150**	WEST LEG		WEST	LEFT	**88**	**111**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**4.3%**	BOUND	THRU	**0**	**0**	RATIO	**10.2%**
	RIGHT	**724**	**848**	ADT	10,400		RIGHT	**586**	**701**	ADT	10,400

MARKET STREET (NS) / SR-60 FREEWAY EB RAMPS (EW) - #33

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	462	311			
			<	v	>			
		148	^			^	0	
		0	>			<	0	
		676	v			v	0	
			<	^	>			
			0	313	146			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				773	461			
				v	^			
		0	<	IN =	2056	<	0	
		824	>	OUT =	2056	>	457	
				v	^			
				1138	459			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	111	137			
			<	v	>			
		26	^			^	0	
		0	>			<	0	
		55	v			v	0	

PCE FACTORS BY AXLE:

			<	^	>			
2:	1.5	3:	2.0	4+:	3.0	0	55	11

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	573	448			
			<	v	>			
		174	^			^	0	
		0	>			<	0	
		731	v			v	0	
			<	^	>			
			0	368	157			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				725	580			
				v	^			
		0	<	IN =	1678	<	0	
		416	>	OUT =	1678	>	486	
				v	^			
				612	537			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				41	46			
				v	^			
		0	<	IN =	110	<	0	
		29	>	OUT =	111	>	34	
				v	^			
				31	40			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				766	626			
				v	^			
		0	<	IN =	1788	<	0	
		445	>	OUT =	1789	>	520	
				v	^			
				643	577			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1327	907			
				v	^			
		0	<	IN =	2974	<	0	
		884	>	OUT =	2974	>	604	
				v	^			
				1463	763			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				112	69			
				v	^			
		0	<	IN =	219	<	0	
		46	>	OUT =	220	>	85	
				v	^			
				66	61			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.000

				1439	976			
				v	^			
		0	<	IN =	3193	<	0	
		930	>	OUT =	3194	>	689	
				v	^			
				1529	824			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				673	350			
				v	^			
		0	<			<	0	
		485	>			>	169	
				v	^			
				886	247			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				670	350			
				v	^			
		0	<	IN =	1410	<	0	
		490	>	OUT =	1410	>	170	
				v	^			
				890	250			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				410	210			
				v	^			
		0	<			<	0	
		300	>			>	100	
				v	^			
				540	150			

NEW PROJECTED VOLUMES (PCEs): 2035

				1430	750			
				v	^			
		0	<			<	0	
		1210	>			>	710	
				v	^			
				1840	680			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				50	30			
				v	^			
		0	<			<	0	
		40	>			>	10	
				v	^			
				60	20			

INITIAL YEAR 2020 VOLUMES:

2020

				1070	570			
				v	^			
		0	<	IN =	2570	<	0	
		950	>	OUT =	2550	>	620	
				v	^			
				1360	550			

BALANCED YEAR 2020 VOLUMES:

2020

				1070	570			
				v	^			
		0	<	IN =	2570	<	0	
		950	>	OUT =	2560	>	620	
				v	^			
				1370	550			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	657	443			
			<	v	>			
		121	^			^	0	
		2	>			<	0	
		733	v			v	0	
			<	^	>			
			0	666	82			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1100	787			
				v	^			
		0	<	IN =	2704	<	0	
		856	>	OUT =	2704	>	527	
				v	^			
				1390	748			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	52	52			
			<	v	>			
		25	^			^	0	
		0	>			<	0	
		67	v			v	0	

PCE FACTORS BY AXLE:

			<	^	>			
2:	1.5	3:	2	4+:	3.0	0	30	7

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	709	495			
			<	v	>			
		146	^			^	0	
		2	>			<	0	
		800	v			v	0	
			<	^	>			
			0	696	89			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1046	927			
				v	^			
		0	<	IN =	2424	<	0	
		524	>	OUT =	2424	>	662	
				v	^			
				835	854			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				47	60			
				v	^			
		0	<	IN =	148	<	0	
		51	>	OUT =	148	>	34	
				v	^			
				54	50			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				1093	987			
				v	^			
		0	<	IN =	2572	<	0	
		575	>	OUT =	2572	>	696	
				v	^			
				889	904			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1482	1896			
				v	^			
		0	<	IN =	4162	<	0	
		774	>	OUT =	4162	>	988	
				v	^			
				1278	1906			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				109	97			
				v	^			
		0	<	IN =	273	<	0	
		72	>	OUT =	274	>	82	
				v	^			
				95	92			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00
PHF FOR TRUCKS: 1.00

				1591	1993			
				v	^			
		0	<	IN =	4435	<	0	
		846	>	OUT =	4436	>	1070	
				v	^			
				1373	1998			

RAW GROWTH (PCEs): 2007 TO 2035
CONVERSION OF TRUCKS TO: 2035
FACTOR = 1.00

				498	1006			
				v	^			
		0	<			<	0	
		271	>			>	374	
				v	^			
				484	1094			

ADJUSTED GROWTH (PCEs): 2007 TO 2035
10 MINIMUM GROWTH %

				500	1010			
				v	^			
		0	<	IN =	1860	<	0	
		270	>	OUT =	1860	>	370	
				v	^			
				480	1090			

PRORATED GROWTH (PCEs): 2018 TO 2035
17 YEARS

				300	610			
				v	^			
		0	<			<	0	
		160	>			>	220	
				v	^			
				290	660			

NEW PROJECTED VOLUMES (PCEs): 2035

				1500	1450			
				v	^			
		0	<			<	0	
		1110	>			>	810	
				v	^			
				1800	1450			

YEAR 2020 GROWTH: 2018 TO 2020
2 YEARS

				40	70			
				v	^			
		0	<			<	0	
		20	>			>	30	
				v	^			
				30	80			

INITIAL YEAR 2020 VOLUMES:

2020

				1240	910			
				v	^			
		0	<	IN =	3080	<	0	
		970	>	OUT =	3070	>	620	
				v	^			
				1540	870			

BALANCED YEAR 2020 VOLUMES:

2020

				1240	910			
				v	^			
		0	<	IN =	3080	<	0	
		970	>	OUT =	3080	>	620	
				v	^			
				1550	870			

MARKET STREET (NS) / SR-60 FREEWAY EB RAMPS (EW) - #33

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**368**	IN ...	**550**	BOUND	THRU	**696**	IN ...	**870**
	RIGHT	**157**	OUT ...	**1,370**		RIGHT	**89**	OUT ...	**1,550**
SOUTH	LEFT	**448**	NORTH LEG		SOUTH	LEFT	**495**	NORTH LEG	
BOUND	THRU	**573**	IN ...	**1,070**	BOUND	THRU	**709**	IN ...	**1,240**
	RIGHT	**0**	OUT ...	**570**		RIGHT	**0**	OUT ...	**910**
EAST	LEFT	**174**	WEST LEG		EAST	LEFT	**146**	WEST LEG	
BOUND	THRU	**0**	IN ...	**950**	BOUND	THRU	**2**	IN ...	**970**
	RIGHT	**731**	OUT ...	**0**		RIGHT	**800**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**620**		RIGHT	**0**	OUT ...	**620**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG
BOUND	THRU	**368**	**388**	RATIO **4.8%**	BOUND	THRU	**696**	**766**	RATIO **6.3%**
	RIGHT	**157**	**160**	ADT 34,100		RIGHT	**89**	**104**	ADT 34,100
SOUTH	LEFT	**448**	**460**	SOUTH LEG	SOUTH	LEFT	**495**	**514**	SOUTH LEG
BOUND	THRU	**573**	**606**	RATIO **5.3%**	BOUND	THRU	**709**	**726**	RATIO **6.7%**
	RIGHT	**0**	**0**	ADT 36,100		RIGHT	**0**	**0**	ADT 36,100
EAST	LEFT	**174**	**182**	EAST LEG	EAST	LEFT	**146**	**148**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **6.0%**	BOUND	THRU	**2**	**2**	RATIO **6.0%**
	RIGHT	**731**	**764**	ADT 10,400		RIGHT	**800**	**824**	ADT 10,400
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG
BOUND	THRU	**0**	**0**	RATIO **7.0%**	BOUND	THRU	**0**	**0**	RATIO **7.2%**
	RIGHT	**0**	**0**	ADT 13,600		RIGHT	**0**	**0**	ADT 13,600

MARKET STREET (NS) / SR-60 FREEWAY EB RAMPS (EW) - #33

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**368**	IN ...	**680**	BOUND	THRU	**696**	IN ...	**1,450**
	RIGHT	**157**	OUT ...	**1,840**		RIGHT	**89**	OUT ...	**1,800**
SOUTH	LEFT	**448**	NORTH LEG		SOUTH	LEFT	**495**	NORTH LEG	
BOUND	THRU	**573**	IN ...	**1,430**	BOUND	THRU	**709**	IN ...	**1,500**
	RIGHT	**0**	OUT ...	**750**		RIGHT	**0**	OUT ...	**1,450**
EAST	LEFT	**174**	WEST LEG		EAST	LEFT	**146**	WEST LEG	
BOUND	THRU	**0**	IN ...	**1,210**	BOUND	THRU	**2**	IN ...	**1,110**
	RIGHT	**731**	OUT ...	**0**		RIGHT	**800**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**710**		RIGHT	**0**	OUT ...	**810**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**368**	**510**	RATIO **6.4%**	BOUND	THRU	**696**	**1,278**	RATIO **8.7%**	
	RIGHT	**157**	**173**	ADT 34,100		RIGHT	**89**	**172**	ADT 34,100	
SOUTH	LEFT	**448**	**544**	SOUTH LEG	SOUTH	LEFT	**495**	**636**	SOUTH LEG	
BOUND	THRU	**573**	**877**	RATIO **7.0%**	BOUND	THRU	**709**	**864**	RATIO **9.0%**	
	RIGHT	**0**	**0**	ADT 36,100		RIGHT	**0**	**0**	ADT 36,100	
EAST	LEFT	**174**	**240**	EAST LEG	EAST	LEFT	**146**	**172**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **6.9%**	BOUND	THRU	**2**	**2**	RATIO **7.8%**	
	RIGHT	**731**	**963**	ADT 10,400		RIGHT	**800**	**936**	ADT 10,400	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **8.8%**	BOUND	THRU	**0**	**0**	RATIO **8.2%**	
	RIGHT	**0**	**0**	ADT 13,600		RIGHT	**0**	**0**	ADT 13,600	

RIVERSIDE AVENUE (NS) / 1-10 FREEWAY WB RAMPS (EW) - #34

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			478	1028	0			
			<	v	>			
0	^					^	326	
0	>					<	0	
0	v					v	262	
			<	^	>			
			91	659	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1506	985			
				v	^			
		569	<	IN =	2844	<	588	
		0	>	OUT =	2844	>	0	
				v	^			
				1290	750			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			56	70	0			
			<	v	>			
0	^					^	37	
0	>					<	0	
0	v					v	142	
			<	^	>			
			209	110	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			534	1098	0			
			<	v	>			
0	^					^	363	
0	>					<	0	
0	v					v	404	
			<	^	>			
			300	769	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1818	1330			
				v	^			
		567	<	IN =	3605	<	347	
		0	>	OUT =	3605	>	0	
				v	^			
				1708	1440			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				58	60			
				v	^			
		44	<	IN =	145	<	11	
		0	>	OUT =	146	>	0	
				v	^			
				42	76			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1876	1390			
				v	^			
		611	<	IN =	3750	<	358	
		0	>	OUT =	3751	>	0	
				v	^			
				1750	1516			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2567	1825			
				v	^			
		588	<	IN =	4926	<	480	
		0	>	OUT =	4926	>	0	
				v	^			
				2513	1879			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				115	114			
				v	^			
		52	<	IN =	268	<	26	
		0	>	OUT =	268	>	0	
				v	^			
				102	127			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				2682	1939			
				v	^			
		640	<	IN =	5194	<	506	
		0	>	OUT =	5194	>	0	
				v	^			
				2615	2006			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				806	549			
				v	^			
		29	<			<	148	
		0	>			>	0	
				v	^			
				865	490			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				810	550			
				v	^			
		80	<	IN =	1450	<	150	
		0	>	OUT =	1500	>	0	
				v	^			
				870	490			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				490	330			
				v	^			
		50	<			<	90	
		0	>			>	0	
				v	^			
				530	300			

NEW PROJECTED VOLUMES (PCEs): 2035

				2120	1460			
				v	^			
		880	<			<	860	
		0	>			>	0	
				v	^			
				2030	1370			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				60	40			
				v	^			
		10	<			<	10	
		0	>			>	0	
				v	^			
				60	40			

INITIAL YEAR 2020 VOLUMES:

2020

				1690	1170			
				v	^			
		840	<	IN =	3580	<	780	
		0	>	OUT =	3570	>	0	
				v	^			
				1560	1110			

BALANCED YEAR 2020 VOLUMES:

2020

				1690	1170			
				v	^			
		840	<	IN =	3580	<	780	
		0	>	OUT =	3570	>	0	
				v	^			
				1560	1110			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			347	938	0			
			<	v	>			
0	^					^	524	
0	>					<	6	
0	v					v	199	
			<	^	>			
			181	1300	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1285	1824			
				v	^			
		534	<	IN =	3495	<	729	
		0	>	OUT =	3495	>	0	
				v	^			
				1137	1481			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			20	75	0			
			<	v	>			
0	^					^	42	
0	>					<	2	
0	v					v	157	
			<	^	>			
			147	73	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			367	1013	0			
			<	v	>			
0	^					^	566	
0	>					<	8	
0	v					v	356	
			<	^	>			
			328	1373	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1652	2006			
				v	^			
		451	<	IN =	4116	<	465	
		0	>	OUT =	4116	>	0	
				v	^			
				1659	1999			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				70	65			
				v	^			
		40	<	IN =	161	<	12	
		0	>	OUT =	161	>	0	
				v	^			
				56	79			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1722	2071			
				v	^			
		491	<	IN =	4277	<	477	
		0	>	OUT =	4277	>	0	
				v	^			
				1715	2078			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2581	2669			
				v	^			
		880	<	IN =	5942	<	504	
		0	>	OUT =	5942	>	0	
				v	^			
				2393	2857			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				135	119			
				v	^			
		59	<	IN =	301	<	34	
		0	>	OUT =	300	>	0	
				v	^			
				122	132			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2716	2788			
				v	^			
		939	<	IN =	6243	<	538	
		0	>	OUT =	6242	>	0	
				v	^			
				2515	2989			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				994	717			
				v	^			
		448	<			<	61	
		0	>			>	0	
				v	^			
				800	911			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				990	720			
				v	^			
		450	<	IN =	1990	<	90	
		0	>	OUT =	1970	>	0	
				v	^			
				800	910			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				600	440			
				v	^			
		270	<			<	50	
		0	>			>	0	
				v	^			
				490	550			

NEW PROJECTED VOLUMES (PCEs): 2035

				1980	2380			
				v	^			
		970	<			<	980	
		0	>			>	0	
				v	^			
				1860	2250			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				70	50			
				v	^			
		30	<			<	10	
		0	>			>	0	
				v	^			
				60	70			

INITIAL YEAR 2020 VOLUMES:

2020

				1450	1990			
				v	^			
		730	<	IN =	4160	<	940	
		0	>	OUT =	4150	>	0	
				v	^			
				1430	1770			

BALANCED YEAR 2020 VOLUMES:

2020

				1450	1990			
				v	^			
		730	<	IN =	4160	<	940	
		0	>	OUT =	4150	>	0	
				v	^			
				1430	1770			

RIVERSIDE AVENUE (NS) / 1-10 FREEWAY WB RAMPS (EW) - #34

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**300**	SOUTH LEG		NORTH	LEFT	**328**	SOUTH LEG	
BOUND	THRU	**769**	IN ...	**1,110**	BOUND	THRU	**1,373**	IN ...	**1,770**
	RIGHT	**0**	OUT ...	**1,560**		RIGHT	**0**	OUT ...	**1,430**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,098**	IN ...	**1,690**	BOUND	THRU	**1,013**	IN ...	**1,450**
	RIGHT	**534**	OUT ...	**1,170**		RIGHT	**367**	OUT ...	**1,990**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**840**		RIGHT	**0**	OUT ...	**730**
WEST	LEFT	**404**	EAST LEG		WEST	LEFT	**356**	EAST LEG	
BOUND	THRU	**0**	IN ...	**780**	BOUND	THRU	**8**	IN ...	**940**
	RIGHT	**363**	OUT ...	**0**		RIGHT	**566**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**300**	**304**	NORTH LEG	NORTH	LEFT	**328**	**342**	NORTH LEG	
BOUND	THRU	**769**	**803**	RATIO **5.4%**	BOUND	THRU	**1,373**	**1,424**	RATIO **6.6%**	
	RIGHT	**0**	**0**	ADT 52,500		RIGHT	**0**	**0**	ADT 52,500	
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,098**	**1,149**	RATIO **5.0%**	BOUND	THRU	**1,013**	**1,066**	RATIO **6.0%**	
	RIGHT	**534**	**540**	ADT 53,300		RIGHT	**367**	**380**	ADT 53,300	
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO **6.3%**	BOUND	THRU	**0**	**0**	RATIO **7.7%**	
	RIGHT	**0**	**0**	ADT 12,300		RIGHT	**0**	**0**	ADT 12,300	
WEST	LEFT	**404**	**411**	WEST LEG	WEST	LEFT	**356**	**364**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO **8.1%**	BOUND	THRU	**8**	**8**	RATIO **7.0%**	
	RIGHT	**363**	**367**	ADT 10,400		RIGHT	**566**	**573**	ADT 10,400	

RIVERSIDE AVENUE (NS) / 1-10 FREEWAY WB RAMPS (EW) - #34

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**300**	SOUTH LEG		NORTH	LEFT	**328**	SOUTH LEG	
BOUND	THRU	**769**	IN ...	**1,370**	BOUND	THRU	**1,373**	IN ...	**2,250**
	RIGHT	**0**	OUT ...	**2,030**		RIGHT	**0**	OUT ...	**1,860**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,098**	IN ...	**2,120**	BOUND	THRU	**1,013**	IN ...	**1,980**
	RIGHT	**534**	OUT ...	**1,460**		RIGHT	**367**	OUT ...	**2,380**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**880**		RIGHT	**0**	OUT ...	**970**
WEST	LEFT	**404**	EAST LEG		WEST	LEFT	**356**	EAST LEG	
BOUND	THRU	**0**	IN ...	**860**	BOUND	THRU	**8**	IN ...	**980**
	RIGHT	**363**	OUT ...	**0**		RIGHT	**566**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**300**	**330**	NORTH LEG		NORTH	LEFT	**328**	**448**	NORTH LEG	
BOUND	THRU	**769**	**1,059**	RATIO	**6.9%**	BOUND	THRU	**1,373**	**1,801**	RATIO	**8.4%**
	RIGHT	**0**	**0**	ADT	52,500		RIGHT	**0**	**0**	ADT	52,500
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,098**	**1,567**	RATIO	**6.4%**	BOUND	THRU	**1,013**	**1,468**	RATIO	**7.7%**
	RIGHT	**534**	**587**	ADT	53,300		RIGHT	**367**	**514**	ADT	53,300
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.0%**	BOUND	THRU	**0**	**0**	RATIO	**8.3%**
	RIGHT	**0**	**0**	ADT	12,300		RIGHT	**0**	**0**	ADT	12,300
WEST	LEFT	**404**	**463**	WEST LEG		WEST	LEFT	**356**	**392**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**8.8%**	BOUND	THRU	**8**	**9**	RATIO	**9.3%**
	RIGHT	**363**	**401**	ADT	10,400		RIGHT	**566**	**623**	ADT	10,400

RIVERSIDE AVENUE (NS) / I-10 FREEWAY EB RAMPS (EW) - #35

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	857	449			
			<	v	>			
		316	^			^	0	
		1	>			<	0	
		287	v			v	0	
			<	^	>			
			0	443	157			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1306	759			
				v	^			
		0	<	IN =	2510	<	0	
		604	>	OUT =	2510	>	607	
				v	^			
				1144	600			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	174	40			
			<	v	>			
		42	^			^	0	
		2	>			<	0	
		158	v			v	0	
			<	^	>			
			0	274	237			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	1031	489			
			<	v	>			
		358	^			^	0	
		3	>			<	0	
		445	v			v	0	
			<	^	>			
			0	717	394			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1708	1440			
				v	^			
		0	<	IN =	3364	<	0	
		418	>	OUT =	3363	>	401	
				v	^			
				1522	1238			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				42	76			
				v	^			
		0	<	IN =	155	<	0	
		34	>	OUT =	154	>	9	
				v	^			
				69	79			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1750	1516			
				v	^			
		0	<	IN =	3519	<	0	
		452	>	OUT =	3517	>	410	
				v	^			
				1591	1317			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2513	1879			
				v	^			
		0	<	IN =	5024	<	0	
		544	>	OUT =	5024	>	507	
				v	^			
				2638	1967			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				102	127			
				v	^			
		0	<	IN =	292	<	0	
		40	>	OUT =	292	>	29	
				v	^			
				136	150			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				2615	2006			
				v	^			
		0	<	IN =	5316	<	0	
		584	>	OUT =	5316	>	536	
				v	^			
				2774	2117			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				865	490			
				v	^			
		0	<			<	0	
		132	>			>	126	
				v	^			
				1183	800			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				870	490			
				v	^			
		0	<	IN =	1800	<	0	
		130	>	OUT =	1800	>	130	
				v	^			
				1180	800			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				530	300			
				v	^			
		0	<			<	0	
		80	>			>	80	
				v	^			
				720	490			

NEW PROJECTED VOLUMES (PCEs): 2035

				2050	1380			
				v	^			
		0	<			<	0	
		890	>			>	970	
				v	^			
				2200	1600			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				60	40			
				v	^			
		0	<			<	0	
		10	>			>	10	
				v	^			
				80	60			

INITIAL YEAR 2020 VOLUMES:

2020

				1580	1120			
				v	^			
		0	<	IN =	3570	<	0	
		820	>	OUT =	3580	>	900	
				v	^			
				1560	1170			

BALANCED YEAR 2020 VOLUMES:

2020

				1580	1120			
				v	^			
		0	<	IN =	3570	<	0	
		820	>	OUT =	3580	>	900	
				v	^			
				1560	1170			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			0	699	383			
			<	v	>			
		598	^			^	0	
		2	>			<	0	
		178	v			v	0	
			<	^	>			
			0	951	271			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1082	1549			
				v	^			
		0	<	IN =	3082	<	0	
		778	>	OUT =	3082	>	656	
				v	^			
				877	1222			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	252	29			
			<	v	>			
		29	^			^	0	
		0	>			<	0	
		141	v			v	0	
			<	^	>			
			0	178	227			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			0	951	412			
			<	v	>			
		627	^			^	0	
		2	>			<	0	
		319	v			v	0	
			<	^	>			
			0	1129	498			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1659	1999			
				v	^			
		0	<	IN =	3887	<	0	
		479	>	OUT =	3887	>	375	
				v	^			
				1513	1749			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				56	79			
				v	^			
		0	<	IN =	178	<	0	
		41	>	OUT =	179	>	12	
				v	^			
				88	81			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1715	2078			
				v	^			
		0	<	IN =	4065	<	0	
		520	>	OUT =	4066	>	387	
				v	^			
				1601	1830			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2393	2857			
				v	^			
		0	<	IN =	6092	<	0	
		486	>	OUT =	6092	>	662	
				v	^			
				2573	3213			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				122	132			
				v	^			
		0	<	IN =	333	<	0	
		49	>	OUT =	335	>	36	
				v	^			
				167	162			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2515	2989			
				v	^			
		0	<	IN =	6425	<	0	
		535	>	OUT =	6427	>	698	
				v	^			
				2740	3375			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				800	911			
				v	^			
		0	<			<	0	
		15	>			>	311	
				v	^			
				1139	1545			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				800	910			
				v	^			
		0	<	IN =	2440	<	0	
		90	>	OUT =	2360	>	310	
				v	^			
				1140	1550			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				490	550			
				v	^			
		0	<			<	0	
		50	>			>	190	
				v	^			
				690	940			

NEW PROJECTED VOLUMES (PCEs): 2035

				1850	2310			
				v	^			
		0	<			<	0	
		1000	>			>	1100	
				v	^			
				1960	2570			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				60	70			
				v	^			
		0	<			<	0	
		10	>			>	20	
				v	^			
				80	110			

INITIAL YEAR 2020 VOLUMES:

2020

				1420	1830			
				v	^			
		0	<	IN =	4120	<	0	
		960	>	OUT =	4110	>	930	
				v	^			
				1350	1740			

BALANCED YEAR 2020 VOLUMES:

2020

				1420	1830			
				v	^			
		0	<	IN =	4120	<	0	
		960	>	OUT =	4110	>	930	
				v	^			
				1350	1740			

RIVERSIDE AVENUE (NS) / I-10 FREEWAY EB RAMPS (EW) - #35

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**717**	IN ...	**1,170**	BOUND	THRU	**1,129**	IN ...	**1,740**
	RIGHT	**394**	OUT ...	**1,560**		RIGHT	**498**	OUT ...	**1,350**
SOUTH	LEFT	**489**	NORTH LEG		SOUTH	LEFT	**412**	NORTH LEG	
BOUND	THRU	**1,031**	IN ...	**1,580**	BOUND	THRU	**951**	IN ...	**1,420**
	RIGHT	**0**	OUT ...	**1,120**		RIGHT	**0**	OUT ...	**1,830**
EAST	LEFT	**358**	WEST LEG		EAST	LEFT	**627**	WEST LEG	
BOUND	THRU	**3**	IN ...	**820**	BOUND	THRU	**2**	IN ...	**960**
	RIGHT	**445**	OUT ...	**0**		RIGHT	**319**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**900**		RIGHT	**0**	OUT ...	**930**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**717**	**763**	RATIO	**5.0%**	BOUND	THRU	**1,129**	**1,211**	RATIO	**6.1%**
	RIGHT	**394**	**410**	ADT	53,900		RIGHT	**498**	**525**	ADT	53,900
SOUTH	LEFT	**489**	**495**	SOUTH LEG		SOUTH	LEFT	**412**	**417**	SOUTH LEG	
BOUND	THRU	**1,031**	**1,097**	RATIO	**4.7%**	BOUND	THRU	**951**	**1,013**	RATIO	**5.3%**
	RIGHT	**0**	**0**	ADT	58,200		RIGHT	**0**	**0**	ADT	58,200
EAST	LEFT	**358**	**362**	EAST LEG		EAST	LEFT	**627**	**635**	EAST LEG	
BOUND	THRU	**3**	**3**	RATIO	**7.3%**	BOUND	THRU	**2**	**2**	RATIO	**7.6%**
	RIGHT	**445**	**463**	ADT	12,500		RIGHT	**319**	**337**	ADT	12,500
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**6.6%**	BOUND	THRU	**0**	**0**	RATIO	**7.8%**
	RIGHT	**0**	**0**	ADT	12,500		RIGHT	**0**	**0**	ADT	12,500

RIVERSIDE AVENUE (NS) / I-10 FREEWAY EB RAMPS (EW) - #35

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**717**	IN ...	**1,600**	BOUND	THRU	**1,129**	IN ...	**2,570**
	RIGHT	**394**	OUT ...	**2,200**		RIGHT	**498**	OUT ...	**1,960**
SOUTH	LEFT	**489**	NORTH LEG		SOUTH	LEFT	**412**	NORTH LEG	
BOUND	THRU	**1,031**	IN ...	**2,050**	BOUND	THRU	**951**	IN ...	**1,850**
	RIGHT	**0**	OUT ...	**1,380**		RIGHT	**0**	OUT ...	**2,310**
EAST	LEFT	**358**	WEST LEG		EAST	LEFT	**627**	WEST LEG	
BOUND	THRU	**3**	IN ...	**890**	BOUND	THRU	**2**	IN ...	**1,000**
	RIGHT	**445**	OUT ...	**0**		RIGHT	**319**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**970**		RIGHT	**0**	OUT ...	**1,100**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**717**	**1,074**	RATIO	**6.7%**	BOUND	THRU	**1,129**	**1,788**	RATIO	**8.2%**
	RIGHT	**394**	**525**	ADT	53,900		RIGHT	**498**	**750**	ADT	53,900
SOUTH	LEFT	**489**	**538**	SOUTH LEG		SOUTH	LEFT	**412**	**453**	SOUTH LEG	
BOUND	THRU	**1,031**	**1,615**	RATIO	**6.5%**	BOUND	THRU	**951**	**1,492**	RATIO	**7.7%**
	RIGHT	**0**	**0**	ADT	58,200		RIGHT	**0**	**0**	ADT	58,200
EAST	LEFT	**358**	**394**	EAST LEG		EAST	LEFT	**627**	**690**	EAST LEG	
BOUND	THRU	**3**	**3**	RATIO	**8.5%**	BOUND	THRU	**2**	**2**	RATIO	**9.6%**
	RIGHT	**445**	**585**	ADT	12,500		RIGHT	**319**	**468**	ADT	12,500
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.9%**	BOUND	THRU	**0**	**0**	RATIO	**9.3%**
	RIGHT	**0**	**0**	ADT	12,500		RIGHT	**0**	**0**	ADT	12,500

RIVERSIDE AVENUE (NS) / SLOVER AVENUE (EW) - #36

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			214	921	16			
			<	v	>			
		169	^			^	8	
		12	>			<	12	
		23	v			v	10	
			<	^	>			
			44	427	7			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				1151	604			
				v	^			
		270	<	IN =	1863	<	30	
		204	>	OUT =	1863	>	35	
				v	^			
				954	478			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			36	264	19			
			<	v	>			
		69	^			^	58	
		5	>			<	5	
		30	v			v	28	
			<	^	>			
			16	393	5			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			250	1185	35			
			<	v	>			
		238	^			^	66	
		17	>			<	17	
		53	v			v	38	
			<	^	>			
			60	820	12			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1522	1238			
				v	^			
		255	<	IN =	2847	<	58	
		132	>	OUT =	2847	>	20	
				v	^			
				1334	1135			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				69	79			
				v	^			
		6	<	IN =	151	<	1	
		5	>	OUT =	151	>	1	
				v	^			
				65	76			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1591	1317			
				v	^			
		261	<	IN =	2998	<	59	
		137	>	OUT =	2998	>	21	
				v	^			
				1399	1211			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2638	1967			
				v	^			
		303	<	IN =	4694	<	14	
		259	>	OUT =	4694	>	12	
				v	^			
				2412	1783			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				136	150			
				v	^			
		12	<	IN =	290	<	1	
		14	>	OUT =	290	>	1	
				v	^			
				127	139			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				2774	2117			
				v	^			
		315	<	IN =	4984	<	15	
		273	>	OUT =	4984	>	13	
				v	^			
				2539	1922			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1183	800			
				v	^			
		54	<			<	-44	
		136	>			>	-8	
				v	^			
				1140	711			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1180	800			
				v	^			
		50	<	IN =	2040	<	10	
		140	>	OUT =	2000	>	10	
				v	^			
				1140	710			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				720	490			
				v	^			
		30	<			<	10	
		90	>			>	10	
				v	^			
				690	430			

NEW PROJECTED VOLUMES (PCEs): 2035

				2190	1610			
				v	^			
		360	<			<	130	
		400	>			>	70	
				v	^			
				1970	1320			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				80	60			
				v	^			
		0	<			<	0	
		10	>			>	0	
				v	^			
				80	50			

INITIAL YEAR 2020 VOLUMES:

2020

				1550	1180			
				v	^			
		330	<	IN =	2930	<	120	
		320	>	OUT =	2930	>	60	
				v	^			
				1360	940			

BALANCED YEAR 2020 VOLUMES:

2020

				1550	1180			
				v	^			
		330	<	IN =	2930	<	120	
		320	>	OUT =	2930	>	60	
				v	^			
				1360	940			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			157	739	12			
			<	v	>			
		313	^			^	13	
		63	>			<	7	
		91	v			v	16	
			<	^	>			
			31	886	14			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				908	1212			
				v	^			
		195	<	IN =	2342	<	36	
		467	>	OUT =	2342	>	89	
				v	^			
				846	931			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			67	262	20			
			<	v	>			
		64	^			^	17	
		9	>			<	10	
		55	v			v	24	
			<	^	>			
			15	313	9			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			224	1001	32			
			<	v	>			
		377	^			^	30	
		72	>			<	17	
		146	v			v	40	
			<	^	>			
			46	1199	23			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1513	1749			
				v	^			
		203	<	IN =	3417	<	66	
		299	>	OUT =	3418	>	88	
				v	^			
				1378	1539			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				88	81			
				v	^			
		6	<	IN =	174	<	2	
		7	>	OUT =	172	>	2	
				v	^			
				83	77			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1601	1830			
				v	^			
		209	<	IN =	3591	<	68	
		306	>	OUT =	3590	>	90	
				v	^			
				1461	1616			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2573	3213			
				v	^			
		330	<	IN =	6119	<	150	
		507	>	OUT =	6120	>	181	
				v	^			
				2396	2889			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				167	162			
				v	^			
		15	<	IN =	345	<	8	
		23	>	OUT =	345	>	8	
				v	^			
				160	147			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2740	3375			
				v	^			
		345	<	IN =	6464	<	158	
		530	>	OUT =	6465	>	189	
				v	^			
				2556	3036			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1139	1545			
				v	^			
		136	<			<	90	
		224	>			>	99	
				v	^			
				1095	1420			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1140	1550			
				v	^			
		140	<	IN =	2870	<	90	
		220	>	OUT =	2890	>	100	
				v	^			
				1100	1420			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				690	940			
				v	^			
		90	<			<	50	
		130	>			>	60	
				v	^			
				670	860			

NEW PROJECTED VOLUMES (PCEs): 2035

				1950	2550			
				v	^			
		380	<			<	140	
		730	>			>	190	
				v	^			
				1860	2130			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				80	110			
				v	^			
		10	<			<	10	
		20	>			>	10	
				v	^			
				80	100			

INITIAL YEAR 2020 VOLUMES:

2020

				1340	1720			
				v	^			
		300	<	IN =	3430	<	100	
		620	>	OUT =	3430	>	140	
				v	^			
				1270	1370			

BALANCED YEAR 2020 VOLUMES:

2020

				1340	1720			
				v	^			
		300	<	IN =	3430	<	100	
		620	>	OUT =	3430	>	140	
				v	^			
				1270	1370			

RIVERSIDE AVENUE (NS) / SLOVER AVENUE (EW) - #36

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**60**	SOUTH LEG		NORTH	LEFT	**46**	SOUTH LEG	
BOUND	THRU	**820**	IN ...	**940**	BOUND	THRU	**1,199**	IN ...	**1,370**
	RIGHT	**12**	OUT ...	**1,360**		RIGHT	**23**	OUT ...	**1,270**
SOUTH	LEFT	**35**	NORTH LEG		SOUTH	LEFT	**32**	NORTH LEG	
BOUND	THRU	**1,185**	IN ...	**1,550**	BOUND	THRU	**1,001**	IN ...	**1,340**
	RIGHT	**250**	OUT ...	**1,180**		RIGHT	**224**	OUT ...	**1,720**
EAST	LEFT	**238**	WEST LEG		EAST	LEFT	**377**	WEST LEG	
BOUND	THRU	**17**	IN ...	**320**	BOUND	THRU	**72**	IN ...	**620**
	RIGHT	**53**	OUT ...	**330**		RIGHT	**146**	OUT ...	**300**
WEST	LEFT	**38**	EAST LEG		WEST	LEFT	**40**	EAST LEG	
BOUND	THRU	**17**	IN ...	**120**	BOUND	THRU	**17**	IN ...	**100**
	RIGHT	**66**	OUT ...	**60**		RIGHT	**30**	OUT ...	**140**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**60**	**61**	NORTH LEG		NORTH	LEFT	**46**	**48**	NORTH LEG	
BOUND	THRU	**820**	**867**	RATIO	**4.7%**	BOUND	THRU	**1,199**	**1,295**	RATIO	**5.3%**
	RIGHT	**12**	**12**	ADT	58,200		RIGHT	**23**	**26**	ADT	58,200
SOUTH	LEFT	**35**	**35**	SOUTH LEG		SOUTH	LEFT	**32**	**36**	SOUTH LEG	
BOUND	THRU	**1,185**	**1,265**	RATIO	**4.3%**	BOUND	THRU	**1,001**	**1,072**	RATIO	**4.9%**
	RIGHT	**250**	**253**	ADT	54,000		RIGHT	**224**	**232**	ADT	54,000
EAST	LEFT	**238**	**248**	EAST LEG		EAST	LEFT	**377**	**390**	EAST LEG	
BOUND	THRU	**17**	**17**	RATIO	**6.4%**	BOUND	THRU	**72**	**78**	RATIO	**8.3%**
	RIGHT	**53**	**56**	ADT	2,900		RIGHT	**146**	**152**	ADT	2,900
WEST	LEFT	**38**	**38**	WEST LEG		WEST	LEFT	**40**	**46**	WEST LEG	
BOUND	THRU	**17**	**17**	RATIO	**5.3%**	BOUND	THRU	**17**	**19**	RATIO	**7.5%**
	RIGHT	**66**	**67**	ADT	12,300		RIGHT	**30**	**35**	ADT	12,300

RIVERSIDE AVENUE (NS) / SLOVER AVENUE (EW) - #36

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**60**	SOUTH LEG		NORTH	LEFT	**46**	SOUTH LEG	
BOUND	THRU	**820**	IN ...	**1,320**	BOUND	THRU	**1,199**	IN ...	**2,130**
	RIGHT	**12**	OUT ...	**1,970**		RIGHT	**23**	OUT ...	**1,860**
SOUTH	LEFT	**35**	NORTH LEG		SOUTH	LEFT	**32**	NORTH LEG	
BOUND	THRU	**1,185**	IN ...	**2,190**	BOUND	THRU	**1,001**	IN ...	**1,950**
	RIGHT	**250**	OUT ...	**1,610**		RIGHT	**224**	OUT ...	**2,550**
EAST	LEFT	**238**	WEST LEG		EAST	LEFT	**377**	WEST LEG	
BOUND	THRU	**17**	IN ...	**400**	BOUND	THRU	**72**	IN ...	**730**
	RIGHT	**53**	OUT ...	**360**		RIGHT	**146**	OUT ...	**380**
WEST	LEFT	**38**	EAST LEG		WEST	LEFT	**40**	EAST LEG	
BOUND	THRU	**17**	IN ...	**130**	BOUND	THRU	**17**	IN ...	**140**
	RIGHT	**66**	OUT ...	**70**		RIGHT	**30**	OUT ...	**190**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**60**	**67**	NORTH LEG	NORTH	LEFT	**46**	**64**	NORTH LEG	
BOUND	THRU	**820**	**1,229**	RATIO **6.5%**	BOUND	THRU	**1,199**	**2,039**	RATIO **7.8%**	
	RIGHT	**12**	**14**	ADT 58,200		RIGHT	**23**	**42**	ADT 58,200	
SOUTH	LEFT	**35**	**40**	SOUTH LEG	SOUTH	LEFT	**32**	**55**	SOUTH LEG	
BOUND	THRU	**1,185**	**1,855**	RATIO **6.1%**	BOUND	THRU	**1,001**	**1,613**	RATIO **7.4%**	
	RIGHT	**250**	**279**	ADT 54,000		RIGHT	**224**	**293**	ADT 54,000	
EAST	LEFT	**238**	**309**	EAST LEG	EAST	LEFT	**377**	**461**	EAST LEG	
BOUND	THRU	**17**	**19**	RATIO **7.2%**	BOUND	THRU	**72**	**94**	RATIO **11.4%**	
	RIGHT	**53**	**72**	ADT 2,900		RIGHT	**146**	**180**	ADT 2,900	
WEST	LEFT	**38**	**43**	WEST LEG	WEST	LEFT	**40**	**67**	WEST LEG	
BOUND	THRU	**17**	**19**	RATIO **6.2%**	BOUND	THRU	**17**	**23**	RATIO **9.1%**	
	RIGHT	**66**	**73**	ADT 12,300		RIGHT	**30**	**50**	ADT 12,300	

RIVERSIDE AVENUE (NS) / SANTA ANA AVENUE (EW) - #37

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			72	864	23			
			<	v	>			
45	^					^	12	
4	>					<	1	
38	v					v	8	
			<	^	>			
			46	477	8			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				959	534			
				v	^			
119	<	IN =		1598		<	21	
87	>	OUT =		1598		>	35	
				v	^			
				910	531			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			23	215	34			
			<	v	>			
63	^					^	36	
3	>					<	3	
30	v					v	12	
			<	^	>			
			21	289	2			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			95	1079	57			
			<	v	>			
108	^					^	48	
7	>					<	4	
68	v					v	20	
			<	^	>			
			67	766	10			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1334	1135			
				v	^			
172	<	IN =		2785		<	20	
144	>	OUT =		2784		>	43	
				v	^			
				1434	1287			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				65	76			
				v	^			
11	<	IN =		163		<	13	
11	>	OUT =		163		>	12	
				v	^			
				64	74			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1399	1211			
				v	^			
183	<	IN =		2948		<	33	
155	>	OUT =		2947		>	55	
				v	^			
				1498	1361			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2412	1783			
				v	^			
163	<	IN =		4579		<	38	
222	>	OUT =		4580		>	105	
				v	^			
				2529	1907			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				127	139			
				v	^			
13	<	IN =		293		<	8	
14	>	OUT =		292		>	7	
				v	^			
				133	144			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				2539	1922			
				v	^			
176	<	IN =		4872		<	46	
236	>	OUT =		4872		>	112	
				v	^			
				2662	2051			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1140	711			
				v	^			
-7	<					<	13	
81	>					>	57	
				v	^			
				1164	690			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1140	710			
				v	^			
20	<	IN =		1920		<	10	
80	>	OUT =		1950		>	60	
				v	^			
				1160	690			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				690	430			
				v	^			
10	<					<	10	
50	>					>	40	
				v	^			
				700	420			

NEW PROJECTED VOLUMES (PCEs): 2035

				1920	1350			
				v	^			
180	<					<	80	
230	>					>	110	
				v	^			
				1870	1260			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				80	50			
				v	^			
0	<					<	0	
10	>					>	0	
				v	^			
				80	50			

INITIAL YEAR 2020 VOLUMES:

2020

				1310	970			
				v	^			
170	<	IN =		2460		<	70	
190	>	OUT =		2460		>	70	
				v	^			
				1250	890			

BALANCED YEAR 2020 VOLUMES:

2020

				1310	970			
				v	^			
170	<	IN =		2460		<	70	
190	>	OUT =		2460		>	70	
				v	^			
				1250	890			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			72	793	11			
			<	v	>			
57	^					^	37	
2	>					<	10	
56	v					v	16	
			<	^	>			
			54	877	14			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				876	971			
				v	^			
136	<	IN =		1999		<	63	
115	>	OUT =		1999		>	27	
				v	^			
				865	945			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			18	290	14			
			<	v	>			
41	^					^	20	
0	>					<	0	
8	v					v	17	
			<	^	>			
			30	289	14			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			90	1083	25			
			<	v	>			
98	^					^	57	
2	>					<	10	
64	v					v	33	
			<	^	>			
			84	1166	28			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1378	1539			
				v	^			
163	<	IN =		3288		<	54	
207	>	OUT =		3288		>	30	
				v	^			
				1556	1649			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				83	77			
				v	^			
10	<	IN =		186		<	14	
16	>	OUT =		187		>	14	
				v	^			
				86	73			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1461	1616			
				v	^			
173	<	IN =		3474		<	68	
223	>	OUT =		3475		>	44	
				v	^			
				1642	1722			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2396	2889			
				v	^			
221	<	IN =		5736		<	134	
231	>	OUT =		5736		>	69	
				v	^			
				2557	2975			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				160	147			
				v	^			
12	<	IN =		335		<	9	
16	>	OUT =		335		>	9	
				v	^			
				167	150			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2556	3036			
				v	^			
233	<	IN =		6071		<	143	
247	>	OUT =		6071		>	78	
				v	^			
				2724	3125			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1095	1420			
				v	^			
60	<					<	75	
24	>					>	34	
				v	^			
				1082	1403			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1100	1420			
				v	^			
60	<	IN =		2600		<	80	
20	>	OUT =		2590		>	30	
				v	^			
				1080	1400			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				670	860			
				v	^			
40	<					<	50	
10	>					>	20	
				v	^			
				660	850			

NEW PROJECTED VOLUMES (PCEs): 2035

				1870	2180			
				v	^			
220	<					<	150	
170	>					>	80	
				v	^			
				1840	2130			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				80	100			
				v	^			
0	<					<	10	
0	>					>	0	
				v	^			
				80	100			

INITIAL YEAR 2020 VOLUMES:

2020

				1280	1420			
				v	^			
180	<	IN =		2930		<	110	
160	>	OUT =		2920		>	60	
				v	^			
				1260	1380			

BALANCED YEAR 2020 VOLUMES:

2020

				1280	1420			
				v	^			
180	<	IN =		2930		<	110	
160	>	OUT =		2920		>	60	
				v	^			
				1260	1380			

RIVERSIDE AVENUE (NS) / SANTA ANA AVENUE (EW) - #37

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**67**	SOUTH LEG		NORTH	LEFT	**84**	SOUTH LEG	
BOUND	THRU	**766**	IN ...	**890**	BOUND	THRU	**1,166**	IN ...	**1,380**
	RIGHT	**10**	OUT ...	**1,250**		RIGHT	**28**	OUT ...	**1,260**
SOUTH	LEFT	**57**	NORTH LEG		SOUTH	LEFT	**25**	NORTH LEG	
BOUND	THRU	**1,079**	IN ...	**1,310**	BOUND	THRU	**1,083**	IN ...	**1,280**
	RIGHT	**95**	OUT ...	**970**		RIGHT	**90**	OUT ...	**1,420**
EAST	LEFT	**108**	WEST LEG		EAST	LEFT	**98**	WEST LEG	
BOUND	THRU	**7**	IN ...	**190**	BOUND	THRU	**2**	IN ...	**160**
	RIGHT	**68**	OUT ...	**170**		RIGHT	**64**	OUT ...	**180**
WEST	LEFT	**20**	EAST LEG		WEST	LEFT	**33**	EAST LEG	
BOUND	THRU	**4**	IN ...	**70**	BOUND	THRU	**10**	IN ...	**110**
	RIGHT	**48**	OUT ...	**70**		RIGHT	**57**	OUT ...	**60**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**67**	**69**	NORTH LEG	NORTH	LEFT	**84**	**85**	NORTH LEG
BOUND	THRU	**766**	**811**	RATIO **4.2%**	BOUND	THRU	**1,166**	**1,262**	RATIO **5.0%**
	RIGHT	**10**	**10**	ADT 54,000		RIGHT	**28**	**31**	ADT 54,000
SOUTH	LEFT	**57**	**58**	SOUTH LEG	SOUTH	LEFT	**25**	**27**	SOUTH LEG
BOUND	THRU	**1,079**	**1,159**	RATIO **4.7%**	BOUND	THRU	**1,083**	**1,161**	RATIO **5.8%**
	RIGHT	**95**	**97**	ADT 45,600		RIGHT	**90**	**91**	ADT 45,600
EAST	LEFT	**108**	**112**	EAST LEG	EAST	LEFT	**98**	**99**	EAST LEG
BOUND	THRU	**7**	**7**	RATIO **5.9%**	BOUND	THRU	**2**	**2**	RATIO **6.8%**
	RIGHT	**68**	**71**	ADT 2,500		RIGHT	**64**	**65**	ADT 2,500
WEST	LEFT	**20**	**20**	WEST LEG	WEST	LEFT	**33**	**37**	WEST LEG
BOUND	THRU	**4**	**4**	RATIO **7.2%**	BOUND	THRU	**10**	**10**	RATIO **7.0%**
	RIGHT	**48**	**49**	ADT 5,000		RIGHT	**57**	**63**	ADT 5,000

RIVERSIDE AVENUE (NS) / SANTA ANA AVENUE (EW) - #37

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**67**	SOUTH LEG		NORTH	LEFT	**84**	SOUTH LEG	
BOUND	THRU	**766**	IN ...	**1,260**	BOUND	THRU	**1,166**	IN ...	**2,130**
	RIGHT	**10**	OUT ...	**1,870**		RIGHT	**28**	OUT ...	**1,840**
SOUTH	LEFT	**57**	NORTH LEG		SOUTH	LEFT	**25**	NORTH LEG	
BOUND	THRU	**1,079**	IN ...	**1,920**	BOUND	THRU	**1,083**	IN ...	**1,870**
	RIGHT	**95**	OUT ...	**1,350**		RIGHT	**90**	OUT ...	**2,180**
EAST	LEFT	**108**	WEST LEG		EAST	LEFT	**98**	WEST LEG	
BOUND	THRU	**7**	IN ...	**230**	BOUND	THRU	**2**	IN ...	**170**
	RIGHT	**68**	OUT ...	**180**		RIGHT	**64**	OUT ...	**220**
WEST	LEFT	**20**	EAST LEG		WEST	LEFT	**33**	EAST LEG	
BOUND	THRU	**4**	IN ...	**80**	BOUND	THRU	**10**	IN ...	**150**
	RIGHT	**48**	OUT ...	**110**		RIGHT	**57**	OUT ...	**80**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**67**	**76**	NORTH LEG	NORTH	LEFT	**84**	**103**	NORTH LEG	
BOUND	THRU	**766**	**1,168**	RATIO **6.1%**	BOUND	THRU	**1,166**	**1,988**	RATIO **7.5%**	
	RIGHT	**10**	**16**	ADT 54,000		RIGHT	**28**	**42**	ADT 54,000	
SOUTH	LEFT	**57**	**85**	SOUTH LEG	SOUTH	LEFT	**25**	**36**	SOUTH LEG	
BOUND	THRU	**1,079**	**1,753**	RATIO **6.9%**	BOUND	THRU	**1,083**	**1,725**	RATIO **8.7%**	
	RIGHT	**95**	**105**	ADT 45,600		RIGHT	**90**	**106**	ADT 45,600	
EAST	LEFT	**108**	**129**	EAST LEG	EAST	LEFT	**98**	**108**	EAST LEG	
BOUND	THRU	**7**	**9**	RATIO **7.7%**	BOUND	THRU	**2**	**2**	RATIO **9.2%**	
	RIGHT	**68**	**93**	ADT 2,500		RIGHT	**64**	**70**	ADT 2,500	
WEST	LEFT	**20**	**25**	WEST LEG	WEST	LEFT	**33**	**50**	WEST LEG	
BOUND	THRU	**4**	**4**	RATIO **8.3%**	BOUND	THRU	**10**	**11**	RATIO **8.0%**	
	RIGHT	**48**	**53**	ADT 5,000		RIGHT	**57**	**89**	ADT 5,000	

RIVERSIDE AVENUE (NS) / JURUPA AVENUE (EW) - #38

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			44	828	0			
			<	v	>			
		31	^			^	0	
		0	>			<	0	
		65	v			v	0	
			<	^	>			
			62	493	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				872	524			
				v	^			
		106	<	IN =	1523	<	0	
		96	>	OUT =	1523	>	0	
				v	^			
				893	555			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			16	218	0			
			<	v	>			
		3	^			^	0	
		0	>			<	0	
		61	v			v	0	

PCE FACTORS BY AXLE:

			<	^	>			
			13	292	0			

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			60	1046	0			
			<	v	>			
		34	^			^	0	
		0	>			<	0	
		126	v			v	0	
			<	^	>			
			75	785	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1451	1324			
				v	^			
		30	<	IN =	2826	<	0	
		22	>	OUT =	2826	>	0	
				v	^			
				1472	1353			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				77	87			
				v	^			
		2	<	IN =	167	<	0	
		2	>	OUT =	167	>	0	
				v	^			
				78	88			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1528	1411			
				v	^			
		32	<	IN =	2993	<	0	
		24	>	OUT =	2993	>	0	
				v	^			
				1550	1441			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2569	2000			
				v	^			
		64	<	IN =	4701	<	0	
		75	>	OUT =	4702	>	0	
				v	^			
				2638	2057			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				142	153			
				v	^			
		5	<	IN =	303	<	0	
		4	>	OUT =	304	>	0	
				v	^			
				146	157			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				2711	2153			
				v	^			
		69	<	IN =	5004	<	0	
		79	>	OUT =	5006	>	0	
				v	^			
				2784	2214			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1183	742			
				v	^			
		37	<			<	0	
		55	>			>	0	
				v	^			
				1234	773			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1180	740			
				v	^			
		40	<	IN =	2010	<	0	
		60	>	OUT =	2010	>	0	
				v	^			
				1230	770			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				720	450			
				v	^			
		20	<			<	0	
		40	>			>	0	
				v	^			
				750	470			

NEW PROJECTED VOLUMES (PCEs): 2035

				1830	1270			
				v	^			
		160	<			<	0	
		200	>			>	0	
				v	^			
				1920	1330			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				80	50			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				90	60			

INITIAL YEAR 2020 VOLUMES:

2020

				1190	870			
				v	^			
		140	<	IN =	2270	<	0	
		160	>	OUT =	2270	>	0	
				v	^			
				1260	920			

BALANCED YEAR 2020 VOLUMES:

2020

				1190	870			
				v	^			
		140	<	IN =	2270	<	0	
		160	>	OUT =	2270	>	0	
				v	^			
				1260	920			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			64	772	0			
			<	v	>			
		33	^			^	0	
		0	>			<	0	
		107	v			v	0	
			<	^	>			
			50	861	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				836	894			
				v	^			
		114	<	IN =	1887	<	0	
		140	>	OUT =	1887	>	0	
				v	^			
				879	911			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			21	290	0			
			<	v	>			
		4	^			^	0	
		0	>			<	0	
		17	v			v	0	

PCE FACTORS BY AXLE:

			<	^	>			
			37	305	0			

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			85	1062	0			
			<	v	>			
		37	^			^	0	
		0	>			<	0	
		124	v			v	0	
			<	^	>			
			87	1166	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1432	1569			
				v	^			
		163	<	IN =	3288	<	0	
		207	>	OUT =	3288	>	0	
				v	^			
				1556	1649			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				97	91			
				v	^			
		10	<	IN =	186	<	0	
		16	>	OUT =	187	>	0	
				v	^			
				86	73			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1529	1660			
				v	^			
		173	<	IN =	3474	<	0	
		223	>	OUT =	3475	>	0	
				v	^			
				1642	1722			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2677	3040			
				v	^			
		251	<	IN =	6086	<	0	
		147	>	OUT =	6087	>	0	
				v	^			
				2796	3262			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				178	160			
				v	^			
		13	<	IN =	358	<	0	
		10	>	OUT =	358	>	0	
				v	^			
				185	170			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2855	3200			
				v	^			
		264	<	IN =	6444	<	0	
		157	>	OUT =	6445	>	0	
				v	^			
				2981	3432			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1326	1540			
				v	^			
		91	<			<	0	
		-66	>			>	0	
				v	^			
				1339	1710			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1330	1540			
				v	^			
		90	<	IN =	3060	<	0	
		20	>	OUT =	2970	>	0	
				v	^			
				1340	1710			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				810	940			
				v	^			
		50	<			<	0	
		10	>			>	0	
				v	^			
				810	1040			

NEW PROJECTED VOLUMES (PCEs): 2035

				1960	2140			
				v	^			
		220	<			<	0	
		170	>			>	0	
				v	^			
				2000	2290			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				100	110			
				v	^			
		10	<			<	0	
		0	>			>	0	
				v	^			
				100	120			

INITIAL YEAR 2020 VOLUMES:

2020

				1250	1310			
				v	^			
		180	<	IN =	2780	<	0	
		160	>	OUT =	2780	>	0	
				v	^			
				1290	1370			

BALANCED YEAR 2020 VOLUMES:

2020

				1250	1310			
				v	^			
		180	<	IN =	2780	<	0	
		160	>	OUT =	2780	>	0	
				v	^			
				1290	1370			

RIVERSIDE AVENUE (NS) / JURUPA AVENUE (EW) - #38

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**75**	SOUTH LEG		NORTH	LEFT	**87**	SOUTH LEG	
BOUND	THRU	**785**	IN ...	**920**	BOUND	THRU	**1,166**	IN ...	**1,370**
	RIGHT	**0**	OUT ...	**1,260**		RIGHT	**0**	OUT ...	**1,290**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,046**	IN ...	**1,190**	BOUND	THRU	**1,062**	IN ...	**1,250**
	RIGHT	**60**	OUT ...	**870**		RIGHT	**85**	OUT ...	**1,310**
EAST	LEFT	**34**	WEST LEG		EAST	LEFT	**37**	WEST LEG	
BOUND	THRU	**0**	IN ...	**160**	BOUND	THRU	**0**	IN ...	**160**
	RIGHT	**126**	OUT ...	**140**		RIGHT	**124**	OUT ...	**180**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**75**	**79**	NORTH LEG		NORTH	LEFT	**87**	**93**	NORTH LEG	
BOUND	THRU	**785**	**838**	RATIO	**4.5%**	BOUND	THRU	**1,166**	**1,274**	RATIO	**5.5%**
	RIGHT	**0**	**0**	ADT	46,200		RIGHT	**0**	**0**	ADT	46,200
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,046**	**1,132**	RATIO	**4.2%**	BOUND	THRU	**1,062**	**1,165**	RATIO	**5.1%**
	RIGHT	**60**	**61**	ADT	51,700		RIGHT	**85**	**87**	ADT	51,700
EAST	LEFT	**34**	**34**	EAST LEG		EAST	LEFT	**37**	**37**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**126**	**128**	ADT	0		RIGHT	**124**	**125**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**6.6%**	BOUND	THRU	**0**	**0**	RATIO	**7.4%**
	RIGHT	**0**	**0**	ADT	4,600		RIGHT	**0**	**0**	ADT	4,600

RIVERSIDE AVENUE (NS) / JURUPA AVENUE (EW) - #38

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**75**	SOUTH LEG		NORTH	LEFT	**87**	SOUTH LEG	
BOUND	THRU	**785**	IN ...	**1,330**	BOUND	THRU	**1,166**	IN ...	**2,290**
	RIGHT	**0**	OUT ...	**1,920**		RIGHT	**0**	OUT ...	**2,000**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**1,046**	IN ...	**1,830**	BOUND	THRU	**1,062**	IN ...	**1,960**
	RIGHT	**60**	OUT ...	**1,270**		RIGHT	**85**	OUT ...	**2,140**
EAST	LEFT	**34**	WEST LEG		EAST	LEFT	**37**	WEST LEG	
BOUND	THRU	**0**	IN ...	**200**	BOUND	THRU	**0**	IN ...	**170**
	RIGHT	**126**	OUT ...	**160**		RIGHT	**124**	OUT ...	**220**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**75**	**89**	NORTH LEG		NORTH	LEFT	**87**	**125**	NORTH LEG	
BOUND	THRU	**785**	**1,230**	RATIO	**6.7%**	BOUND	THRU	**1,166**	**2,108**	RATIO	**8.9%**
	RIGHT	**0**	**0**	ADT	46,200		RIGHT	**0**	**0**	ADT	46,200
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**1,046**	**1,760**	RATIO	**6.3%**	BOUND	THRU	**1,062**	**1,863**	RATIO	**8.2%**
	RIGHT	**60**	**71**	ADT	51,700		RIGHT	**85**	**95**	ADT	51,700
EAST	LEFT	**34**	**40**	EAST LEG		EAST	LEFT	**37**	**41**	EAST LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**126**	**160**	ADT	0		RIGHT	**124**	**137**	ADT	0
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**0**	**0**	RATIO	**7.8%**	BOUND	THRU	**0**	**0**	RATIO	**8.7%**
	RIGHT	**0**	**0**	ADT	4,600		RIGHT	**0**	**0**	ADT	4,600

RIVERSIDE AVENUE (NS) / AGUA MANSA ROAD (EW) - #39

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			79	683	31			
			<	v	>			
73	^					^	24	
98	>					<	187	
56	v					v	51	
			<	^	>			
			81	431	27			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				793	528			
				v	^			
347	<	IN =		1821		<	262	
227	>	OUT =		1821		>	156	
				v	^			
				790	539			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			66	166	22			
			<	v	>			
57	^					^	35	
49	>					<	51	
34	v					v	23	
			<	^	>			
			36	153	16			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			145	849	53			
			<	v	>			
130	^					^	59	
147	>					<	238	
90	v					v	74	
			<	^	>			
			117	584	43			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1472	1353			
				v	^			
456	<	IN =		3391		<	356	
494	>	OUT =		3391		>	376	
				v	^			
				1206	1069			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				78	88			
				v	^			
25	<	IN =		198		<	22	
26	>	OUT =		198		>	22	
				v	^			
				63	72			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1550	1441			
				v	^			
481	<	IN =		3589		<	378	
520	>	OUT =		3589		>	398	
				v	^			
				1269	1141			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2638	2057			
				v	^			
860	<	IN =		5465		<	514	
972	>	OUT =		5466		>	596	
				v	^			
				1953	1341			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				146	157			
				v	^			
54	<	IN =		355		<	35	
65	>	OUT =		353		>	36	
				v	^			
				106	109			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				2784	2214			
				v	^			
914	<	IN =		5820		<	549	
1037	>	OUT =		5819		>	632	
				v	^			
				2059	1450			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1234	773			
				v	^			
433	<					<	171	
517	>					>	234	
				v	^			
				790	309			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1230	770			
				v	^			
430	<	IN =		2230		<	170	
520	>	OUT =		2220		>	230	
				v	^			
				790	310			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				750	470			
				v	^			
260	<					<	100	
320	>					>	140	
				v	^			
				480	190			

NEW PROJECTED VOLUMES (PCEs): 2035

				1800	1240			
				v	^			
760	<					<	470	
690	>					>	380	
				v	^			
				1490	930			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				90	60			
				v	^			
30	<					<	10	
40	>					>	20	
				v	^			
				60	20			

INITIAL YEAR 2020 VOLUMES:

2020

				1140	830			
				v	^			
530	<	IN =		2690		<	380	
410	>	OUT =		2690		>	260	
				v	^			
				1070	760			

BALANCED YEAR 2020 VOLUMES:

2020

				1140	830			
				v	^			
530	<	IN =		2690		<	380	
410	>	OUT =		2690		>	260	
				v	^			
				1070	760			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			88	765	32			
			<	v	>			
110	^					^	21	
417	>					<	138	
94	v					v	21	
			<	^	>			
			69	665	75			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				885	796			
				v	^			
295	<	IN =		2495		<	180	
621	>	OUT =		2495		>	524	
				v	^			
				880	809			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			52	113	35			
			<	v	>			
62	^					^	51	
37	>					<	59	
41	v					v	11	
			<	^	>			
			53	135	19			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			140	878	67			
			<	v	>			
172	^					^	72	
454	>					<	197	
135	v					v	32	
			<	^	>			
			122	800	94			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1755	1823			
				v	^			
624	<	IN =		4457		<	527	
643	>	OUT =		4457		>	529	
				v	^			
				1481	1532			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				110	95			
				v	^			
30	<	IN =		248		<	27	
33	>	OUT =		249		>	31	
				v	^			
				93	78			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1865	1918			
				v	^			
654	<	IN =		4705		<	554	
676	>	OUT =		4706		>	560	
				v	^			
				1574	1610			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				2796	3262			
				v	^			
1120	<	IN =		6998		<	641	
1137	>	OUT =		6998		>	674	
				v	^			
				1942	2424			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				185	170			
				v	^			
67	<	IN =		415		<	38	
74	>	OUT =		416		>	47	
				v	^			
				132	118			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				2981	3432			
				v	^			
1187	<	IN =		7413		<	679	
1211	>	OUT =		7414		>	721	
				v	^			
				2074	2542			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				1116	1514			
				v	^			
533	<					<	125	
535	>					>	161	
				v	^			
				500	932			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				1120	1510			
				v	^			
530	<	IN =		2720		<	130	
540	>	OUT =		2700		>	160	
				v	^			
				500	930			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				680	920			
				v	^			
320	<					<	80	
330	>					>	100	
				v	^			
				300	560			

NEW PROJECTED VOLUMES (PCEs): 2035

				1770	1960			
				v	^			
780	<					<	380	
1090	>					>	720	
				v	^			
				1350	1580			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				80	110			
				v	^			
40	<					<	10	
40	>					>	10	
				v	^			
				40	70			

INITIAL YEAR 2020 VOLUMES:

2020

				1170	1150			
				v	^			
500	<	IN =		3370		<	310	
800	>	OUT =		3370		>	630	
				v	^			
				1090	1090			

BALANCED YEAR 2020 VOLUMES:

2020

				1170	1150			
				v	^			
500	<	IN =		3370		<	310	
800	>	OUT =		3370		>	630	
				v	^			
				1090	1090			

RIVERSIDE AVENUE (NS) / AGUA MANSA ROAD (EW) - #39

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**117**	SOUTH LEG		NORTH	LEFT	**122**	SOUTH LEG	
BOUND	THRU	**584**	IN ...	**760**	BOUND	THRU	**800**	IN ...	**1,090**
	RIGHT	**43**	OUT ...	**1,070**		RIGHT	**94**	OUT ...	**1,090**
SOUTH	LEFT	**53**	NORTH LEG		SOUTH	LEFT	**67**	NORTH LEG	
BOUND	THRU	**849**	IN ...	**1,140**	BOUND	THRU	**878**	IN ...	**1,170**
	RIGHT	**145**	OUT ...	**830**		RIGHT	**140**	OUT ...	**1,150**
EAST	LEFT	**130**	WEST LEG		EAST	LEFT	**172**	WEST LEG	
BOUND	THRU	**147**	IN ...	**410**	BOUND	THRU	**454**	IN ...	**800**
	RIGHT	**90**	OUT ...	**530**		RIGHT	**135**	OUT ...	**500**
WEST	LEFT	**74**	EAST LEG		WEST	LEFT	**32**	EAST LEG	
BOUND	THRU	**238**	IN ...	**380**	BOUND	THRU	**197**	IN ...	**310**
	RIGHT	**59**	OUT ...	**260**		RIGHT	**72**	OUT ...	**630**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**117**	**118**	NORTH LEG		NORTH	LEFT	**122**	**129**	NORTH LEG	
BOUND	THRU	**584**	**607**	RATIO	**3.8%**	BOUND	THRU	**800**	**873**	RATIO	**4.5%**
	RIGHT	**43**	**44**	ADT	51,700		RIGHT	**94**	**95**	ADT	51,700
SOUTH	LEFT	**53**	**60**	SOUTH LEG		SOUTH	LEFT	**67**	**73**	SOUTH LEG	
BOUND	THRU	**849**	**908**	RATIO	**5.3%**	BOUND	THRU	**878**	**927**	RATIO	**6.3%**
	RIGHT	**145**	**171**	ADT	34,800		RIGHT	**140**	**168**	ADT	34,800
EAST	LEFT	**130**	**158**	EAST LEG		EAST	LEFT	**172**	**200**	EAST LEG	
BOUND	THRU	**147**	**160**	RATIO	**5.9%**	BOUND	THRU	**454**	**466**	RATIO	**8.6%**
	RIGHT	**90**	**93**	ADT	11,000		RIGHT	**135**	**137**	ADT	11,000
WEST	LEFT	**74**	**75**	WEST LEG		WEST	LEFT	**32**	**32**	WEST LEG	
BOUND	THRU	**238**	**246**	RATIO	**4.2%**	BOUND	THRU	**197**	**204**	RATIO	**5.8%**
	RIGHT	**59**	**65**	ADT	22,600		RIGHT	**72**	**77**	ADT	22,600

RIVERSIDE AVENUE (NS) / AGUA MANSA ROAD (EW) - #39

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**117**	SOUTH LEG		NORTH	LEFT	**122**	SOUTH LEG	
BOUND	THRU	**584**	IN ...	**930**	BOUND	THRU	**800**	IN ...	**1,580**
	RIGHT	**43**	OUT ...	**1,490**		RIGHT	**94**	OUT ...	**1,350**
SOUTH	LEFT	**53**	NORTH LEG		SOUTH	LEFT	**67**	NORTH LEG	
BOUND	THRU	**849**	IN ...	**1,800**	BOUND	THRU	**878**	IN ...	**1,770**
	RIGHT	**145**	OUT ...	**1,240**		RIGHT	**140**	OUT ...	**1,960**
EAST	LEFT	**130**	WEST LEG		EAST	LEFT	**172**	WEST LEG	
BOUND	THRU	**147**	IN ...	**690**	BOUND	THRU	**454**	IN ...	**1,090**
	RIGHT	**90**	OUT ...	**760**		RIGHT	**135**	OUT ...	**780**
WEST	LEFT	**74**	EAST LEG		WEST	LEFT	**32**	EAST LEG	
BOUND	THRU	**238**	IN ...	**470**	BOUND	THRU	**197**	IN ...	**380**
	RIGHT	**59**	OUT ...	**380**		RIGHT	**72**	OUT ...	**720**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**117**	**129**	NORTH LEG		NORTH	LEFT	**122**	**143**	NORTH LEG	
BOUND	THRU	**584**	**788**	RATIO	**5.8%**	BOUND	THRU	**800**	**1,381**	RATIO	**7.2%**
	RIGHT	**43**	**47**	ADT	51,700		RIGHT	**94**	**103**	ADT	51,700
SOUTH	LEFT	**53**	**109**	SOUTH LEG		SOUTH	LEFT	**67**	**124**	SOUTH LEG	
BOUND	THRU	**849**	**1,321**	RATIO	**7.1%**	BOUND	THRU	**878**	**1,215**	RATIO	**8.7%**
	RIGHT	**145**	**348**	ADT	34,800		RIGHT	**140**	**402**	ADT	34,800
EAST	LEFT	**130**	**346**	EAST LEG		EAST	LEFT	**172**	**453**	EAST LEG	
BOUND	THRU	**147**	**236**	RATIO	**8.0%**	BOUND	THRU	**454**	**525**	RATIO	**10.4%**
	RIGHT	**90**	**109**	ADT	11,000		RIGHT	**135**	**149**	ADT	11,000
WEST	LEFT	**74**	**81**	WEST LEG		WEST	LEFT	**32**	**35**	WEST LEG	
BOUND	THRU	**238**	**301**	RATIO	**6.5%**	BOUND	THRU	**197**	**234**	RATIO	**8.4%**
	RIGHT	**59**	**106**	ADT	22,600		RIGHT	**72**	**126**	ADT	22,600

RANCHO AVENUE (NS) / AGUA MANSA ROAD (EW) - #40

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			263	660	45			
			<	v	>			
		74	^			^	23	
		25	>			<	27	
		19	v			v	3	
			<	^	>			
			42	259	11			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				968	356			
				v	^			
		332	<	IN =	1451	<	53	
		118	>	OUT =	1451	>	81	
				v	^			
				682	312			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			53	71	3			
			<	v	>			
		78	^			^	8	
		8	>			<	11	
		14	v			v	0	
			<	^	>			
			12	38	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			316	731	48			
			<	v	>			
		152	^			^	31	
		33	>			<	38	
		33	v			v	3	
			<	^	>			
			54	297	11			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				884	707			
				v	^			
		311	<	IN =	1700	<	0	
		301	>	OUT =	1700	>	0	
				v	^			
				682	515			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				30	34			
				v	^			
		18	<	IN =	78	<	0	
		20	>	OUT =	78	>	0	
				v	^			
				26	28			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				914	741			
				v	^			
		329	<	IN =	1778	<	0	
		321	>	OUT =	1778	>	0	
				v	^			
				708	543			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1296	898			
				v	^			
		365	<	IN =	2449	<	0	
		419	>	OUT =	2449	>	0	
				v	^			
				1186	734			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				60	56			
				v	^			
		24	<	IN =	135	<	0	
		26	>	OUT =	134	>	0	
				v	^			
				54	49			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.000

				1356	954			
				v	^			
		389	<	IN =	2584	<	0	
		445	>	OUT =	2583	>	0	
				v	^			
				1240	783			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				442	213			
				v	^			
		60	<			<	0	
		124	>			>	0	
				v	^			
				532	240			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				440	210			
				v	^			
		60	<	IN =	810	<	10	
		120	>	OUT =	810	>	10	
				v	^			
				530	240			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				270	130			
				v	^			
		40	<			<	10	
		70	>			>	10	
				v	^			
				320	150			

NEW PROJECTED VOLUMES (PCEs): 2035

				1370	610			
				v	^			
		450	<			<	80	
		290	>			>	100	
				v	^			
				1090	510			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				30	20			
				v	^			
		0	<			<	0	
		10	>			>	0	
				v	^			
				40	20			

INITIAL YEAR 2020 VOLUMES:

2020

				1130	500			
				v	^			
		410	<	IN =	1810	<	70	
		230	>	OUT =	1810	>	90	
				v	^			
				810	380			

BALANCED YEAR 2020 VOLUMES:

2020

				1130	500			
				v	^			
		410	<	IN =	1810	<	70	
		230	>	OUT =	1810	>	90	
				v	^			
				810	380			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2018

			106	576	2			
			<	v	>			
		405	^			^	6	
		62	>			<	18	
		82	v			v	1	
			<	^	>			
			29	333	1			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2018

				684	744			
				v	^			
		153	<	IN =	1621	<	25	
		549	>	OUT =	1621	>	65	
				v	^			
				659	363			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			35	44	0			
			<	v	>			
		36	^			^	0	
		6	>			<	2	
		20	v			v	0	
			<	^	>			
			9	20	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2018

			141	620	2			
			<	v	>			
		441	^			^	6	
		68	>			<	20	
		102	v			v	1	
			<	^	>			
			38	353	1			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2007

				1016	1221			
				v	^			
		445	<	IN =	2369	<	0	
		490	>	OUT =	2370	>	0	
				v	^			
				704	863			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2007

				45	43			
				v	^			
		24	<	IN =	103	<	0	
		26	>	OUT =	104	>	0	
				v	^			
				37	32			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1061	1264			
				v	^			
		469	<	IN =	2472	<	0	
		516	>	OUT =	2474	>	0	
				v	^			
				741	895			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2035

				1298	1802			
				v	^			
		451	<	IN =	3428	<	0	
		532	>	OUT =	3428	>	0	
				v	^			
				1175	1598			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2035

				78	82			
				v	^			
		27	<	IN =	184	<	0	
		34	>	OUT =	184	>	0	
				v	^			
				75	72			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 1.00

PHF FOR TRUCKS: 1.00

				1376	1884			
				v	^			
		478	<	IN =	3612	<	0	
		566	>	OUT =	3612	>	0	
				v	^			
				1250	1670			

RAW GROWTH (PCEs): 2007 TO 2035

CONVERSION OF TRUCKS TO: 2035

FACTOR = 1.00

				315	620			
				v	^			
		9	<			<	0	
		50	>			>	0	
				v	^			
				509	775			

ADJUSTED GROWTH (PCEs): 2007 TO 2035

10 MINIMUM GROWTH %

				320	620			
				v	^			
		20	<	IN =	1160	<	0	
		60	>	OUT =	1160	>	10	
				v	^			
				510	780			

PRORATED GROWTH (PCEs): 2018 TO 2035

17 YEARS

				190	380			
				v	^			
		10	<			<	0	
		40	>			>	10	
				v	^			
				310	470			

NEW PROJECTED VOLUMES (PCEs): 2035

				950	1180			
				v	^			
		210	<			<	30	
		650	>			>	80	
				v	^			
				1030	860			

YEAR 2020 GROWTH: 2018 TO 2020

2 YEARS

				20	40			
				v	^			
		0	<			<	0	
		0	>			>	0	
				v	^			
				40	60			

INITIAL YEAR 2020 VOLUMES:

2020

				780	840			
				v	^			
		200	<	IN =	1870	<	30	
		610	>	OUT =	1870	>	70	
				v	^			
				760	450			

BALANCED YEAR 2020 VOLUMES:

2020

				780	840			
				v	^			
		200	<	IN =	1870	<	30	
		610	>	OUT =	1870	>	70	
				v	^			
				760	450			

RANCHO AVENUE (NS) / AGUA MANSA ROAD (EW) - #40

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**54**	SOUTH LEG		NORTH	LEFT	**38**	SOUTH LEG	
BOUND	THRU	**297**	IN ...	**380**	BOUND	THRU	**353**	IN ...	**450**
	RIGHT	**11**	OUT ...	**810**		RIGHT	**1**	OUT ...	**760**
SOUTH	LEFT	**48**	NORTH LEG		SOUTH	LEFT	**2**	NORTH LEG	
BOUND	THRU	**731**	IN ...	**1,130**	BOUND	THRU	**620**	IN ...	**780**
	RIGHT	**316**	OUT ...	**500**		RIGHT	**141**	OUT ...	**840**
EAST	LEFT	**152**	WEST LEG		EAST	LEFT	**441**	WEST LEG	
BOUND	THRU	**33**	IN ...	**230**	BOUND	THRU	**68**	IN ...	**610**
	RIGHT	**33**	OUT ...	**410**		RIGHT	**102**	OUT ...	**200**
WEST	LEFT	**3**	EAST LEG		WEST	LEFT	**1**	EAST LEG	
BOUND	THRU	**38**	IN ...	**70**	BOUND	THRU	**20**	IN ...	**30**
	RIGHT	**31**	OUT ...	**90**		RIGHT	**6**	OUT ...	**70**

YEAR 2020 TRAFFIC CONDITIONS (IN PCEs)										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**54**	**57**	NORTH LEG		NORTH	LEFT	**38**	**44**	NORTH LEG	
BOUND	THRU	**297**	**311**	RATIO	**6.7%**	BOUND	THRU	**353**	**404**	RATIO	**6.7%**
	RIGHT	**11**	**11**	ADT	24,500		RIGHT	**1**	**1**	ADT	24,500
SOUTH	LEFT	**48**	**49**	SOUTH LEG		SOUTH	LEFT	**2**	**2**	SOUTH LEG	
BOUND	THRU	**731**	**770**	RATIO	**6.0%**	BOUND	THRU	**620**	**647**	RATIO	**6.1%**
	RIGHT	**316**	**320**	ADT	19,900		RIGHT	**141**	**143**	ADT	19,900
EAST	LEFT	**152**	**159**	EAST LEG		EAST	LEFT	**441**	**446**	EAST LEG	
BOUND	THRU	**33**	**33**	RATIO	**12.7%**	BOUND	THRU	**68**	**69**	RATIO	**7.8%**
	RIGHT	**33**	**37**	ADT	1,300		RIGHT	**102**	**112**	ADT	1,300
WEST	LEFT	**3**	**3**	WEST LEG		WEST	LEFT	**1**	**1**	WEST LEG	
BOUND	THRU	**38**	**38**	RATIO	**6.9%**	BOUND	THRU	**20**	**22**	RATIO	**9.0%**
	RIGHT	**31**	**31**	ADT	9,300		RIGHT	**6**	**7**	ADT	9,300

RANCHO AVENUE (NS) / AGUA MANSA ROAD (EW) - #40

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2035 TOTAL
NORTH	LEFT	**54**	SOUTH LEG		NORTH	LEFT	**38**	SOUTH LEG	
BOUND	THRU	**297**	IN ...	**510**	BOUND	THRU	**353**	IN ...	**860**
	RIGHT	**11**	OUT ...	**1,090**		RIGHT	**1**	OUT ...	**1,030**
SOUTH	LEFT	**48**	NORTH LEG		SOUTH	LEFT	**2**	NORTH LEG	
BOUND	THRU	**731**	IN ...	**1,370**	BOUND	THRU	**620**	IN ...	**950**
	RIGHT	**316**	OUT ...	**610**		RIGHT	**141**	OUT ...	**1,180**
EAST	LEFT	**152**	WEST LEG		EAST	LEFT	**441**	WEST LEG	
BOUND	THRU	**33**	IN ...	**290**	BOUND	THRU	**68**	IN ...	**650**
	RIGHT	**33**	OUT ...	**450**		RIGHT	**102**	OUT ...	**210**
WEST	LEFT	**3**	EAST LEG		WEST	LEFT	**1**	EAST LEG	
BOUND	THRU	**38**	IN ...	**80**	BOUND	THRU	**20**	IN ...	**30**
	RIGHT	**31**	OUT ...	**100**		RIGHT	**6**	OUT ...	**80**

YEAR 2035 TRAFFIC CONDITIONS (IN PCEs)									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2035 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**54**	**89**	NORTH LEG	NORTH	LEFT	**38**	**82**	NORTH LEG
BOUND	THRU	**297**	**400**	RATIO **8.3%**	BOUND	THRU	**353**	**770**	RATIO **9.3%**
	RIGHT	**11**	**16**	ADT 24,500		RIGHT	**1**	**3**	ADT 24,500
SOUTH	LEFT	**48**	**53**	SOUTH LEG	SOUTH	LEFT	**2**	**2**	SOUTH LEG
BOUND	THRU	**731**	**1,019**	RATIO **8.0%**	BOUND	THRU	**620**	**857**	RATIO **9.5%**
	RIGHT	**316**	**348**	ADT 19,900		RIGHT	**141**	**155**	ADT 19,900
EAST	LEFT	**152**	**180**	EAST LEG	EAST	LEFT	**441**	**485**	EAST LEG
BOUND	THRU	**33**	**42**	RATIO **15.0%**	BOUND	THRU	**68**	**76**	RATIO **8.6%**
	RIGHT	**33**	**66**	ADT 1,300		RIGHT	**102**	**171**	ADT 1,300
WEST	LEFT	**3**	**5**	WEST LEG	WEST	LEFT	**1**	**2**	WEST LEG
BOUND	THRU	**38**	**45**	RATIO **8.3%**	BOUND	THRU	**20**	**22**	RATIO **10.7%**
	RIGHT	**31**	**34**	ADT 9,300		RIGHT	**6**	**7**	ADT 9,300

APPENDIX F

LEVEL OF SERVICE WORKSHEETS

EXISTING

Viridian

Vistro File: C:\...\AME.vistro
Report File: C:\...\AME.pdf

Scenario 1 Existing Morning Peak Hour
10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.086	54.5	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.957	43.4	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.671	17.5	B
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.613	10.4	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Right	1.225	28.1	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.471	11.3	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	69.3	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.840	27.7	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	EB Thru	0.021	43.5	E
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.008	33.6	D
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	4.273	47.5	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.769	20.1	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.854	44.5	E
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.848	30.5	C
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.691	10.5	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.201	9.5	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.003	11.1	B
	Agua Mansa Rd (NS) at El						

24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.340	28.9	D
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.025	13.5	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.037	12.2	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	NB Left	0.471	10.1	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.240	7.8	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	6.708	49.8	D
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.055	28.2	D
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	EB Right	0.456	19.6	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.695	10.8	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.812	19.3	B
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.809	21.3	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.772	18.5	B
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.795	20.9	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.655	10.0	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.601	7.5	A
39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.702	8.7	A
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.641	9.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	54.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.086

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	306	1234	0	0	1068	751	0	0	0	456	0	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	306	1234	0	0	1068	751	0	0	0	456	0	522
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	319	0	0	276	194	0	0	0	118	0	135
Total Analysis Volume [veh/h]	316	1276	0	0	1104	777	0	0	0	472	0	540
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	25	85	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	125	125	125	125		125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	22	82	57	57		37	37
g / C, Green / Cycle	0.18	0.66	0.46	0.46		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.20	0.37	0.23	0.51		0.30	0.33
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1701	1530
c, Capacity [veh/h]	286	2248	2234	697		504	453
d1, Uniform Delay [s]	51.58	11.81	23.96	34.10		44.09	44.09
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	59.16	1.05	0.78	70.09		19.83	59.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.11	0.57	0.49	1.11		1.00	1.12
d, Delay for Lane Group [s/veh]	110.75	12.85	24.74	104.19		63.92	103.92
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	13.63	9.55	7.78	34.10		18.21	21.42
50th-Percentile Queue Length [ft/ln]	340.72	238.71	194.41	852.46		455.35	535.53
95th-Percentile Queue Length [veh/ln]	20.68	14.62	12.35	47.32		25.29	31.03
95th-Percentile Queue Length [ft/ln]	516.88	365.40	308.74	1182.96		632.35	775.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	110.75	12.85	0.00	0.00	24.74	104.19	0.00	0.00	0.00	63.92	63.92	101.41
Movement LOS	F	B			C	F				E	E	F
d_A, Approach Delay [s/veh]	32.28			57.56			0.00			83.92		
Approach LOS	C			E			A			F		
d_I, Intersection Delay [s/veh]	54.54											
Intersection LOS	D											
Intersection V/C	1.086											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.957

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	978	414	478	1033	0	555	0	362	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	978	414	478	1033	0	555	0	362	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	257	109	126	272	0	146	0	95	0	0	0
Total Analysis Volume [veh/h]	0	1028	435	503	1086	0	584	0	381	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	39	0	43	82	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	125	125	125	125	125	125	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	36	36	40	79	40	40	
g / C, Green / Cycle	0.29	0.29	0.32	0.63	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.28	0.31	0.32	0.29	0.32	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1569	
c, Capacity [veh/h]	1413	441	518	2167	518	502	
d1, Uniform Delay [s]	40.23	44.43	42.10	12.43	40.87	42.42	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.31	39.61	12.69	0.83	6.30	15.82	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

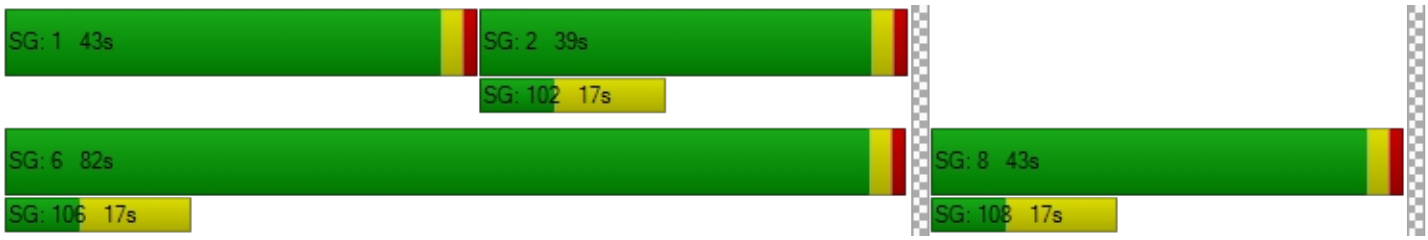
X, volume / capacity	0.73	0.99	0.97	0.50	0.91	0.99	
d, Delay for Lane Group [s/veh]	43.54	84.04	54.79	13.26	47.17	58.24	
Lane Group LOS	D	F	D	B	D	E	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.92	18.16	16.99	8.13	14.64	17.25	
50th-Percentile Queue Length [ft/ln]	248.06	453.89	424.67	203.35	366.11	431.37	
95th-Percentile Queue Length [veh/ln]	15.09	25.14	23.75	12.81	20.92	24.07	
95th-Percentile Queue Length [ft/ln]	377.21	628.59	593.65	320.28	523.01	601.68	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	43.54	84.04	54.79	13.26	0.00	49.18	58.24	58.24	0.00	0.00	0.00
Movement LOS		D	F	D	B		D	E	E			
d_A, Approach Delay [s/veh]	55.59			26.41			52.85			0.00		
Approach LOS	E			C			D			A		
d_I, Intersection Delay [s/veh]	43.39											
Intersection LOS	D											
Intersection V/C	0.957											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	130	813	16	83	864	93	168	116	67	16	196	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	813	16	83	864	93	168	116	67	16	196	117
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	207	4	21	220	24	43	30	17	4	50	30
Total Analysis Volume [veh/h]	132	828	16	85	880	95	171	118	68	16	200	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	51	0	30	61	0	25	38	0	11	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	48	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	18	18	5	17	17	7	12	12	1	7	7
g / C, Green / Cycle	0.12	0.37	0.37	0.10	0.35	0.35	0.14	0.26	0.26	0.03	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.08	0.24	0.24	0.05	0.28	0.28	0.11	0.03	0.04	0.01	0.09	0.10
s, saturation flow rate [veh/h]	1619	1800	1788	1619	1800	1739	1619	3427	1530	1619	1800	1583
c, Capacity [veh/h]	195	661	656	161	622	601	224	883	394	46	266	234
d1, Uniform Delay [s]	20.42	12.70	12.70	20.77	14.33	14.33	20.14	13.84	13.98	23.12	19.39	19.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.03	1.04	1.05	2.68	2.39	2.47	5.36	0.07	0.21	4.43	2.36	3.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.64	0.64	0.53	0.80	0.80	0.76	0.13	0.17	0.35	0.62	0.66
d, Delay for Lane Group [s/veh]	24.44	13.75	13.76	23.44	16.72	16.81	25.50	13.91	14.19	27.55	21.75	22.59
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	3.30	3.28	0.95	4.45	4.32	1.99	0.44	0.53	0.22	1.73	1.65
50th-Percentile Queue Length [ft/ln]	37.49	82.47	81.95	23.63	111.29	107.92	49.85	11.03	13.16	5.52	43.33	41.37
95th-Percentile Queue Length [veh/ln]	2.70	5.94	5.90	1.70	7.91	7.72	3.59	0.79	0.95	0.40	3.12	2.98
95th-Percentile Queue Length [ft/ln]	67.48	148.45	147.51	42.53	197.79	193.10	89.73	19.85	23.70	9.93	77.99	74.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.44	13.75	13.76	23.44	16.76	16.81	25.50	13.91	14.19	27.55	21.89	22.59
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.20			17.30			19.52			22.41		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.46											
Intersection LOS	B											
Intersection V/C	0.671											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.613

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	86	842	36	62	801	60	62	94	75	72	109	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	842	36	62	801	60	62	94	75	72	109	45
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	230	10	17	218	16	17	26	20	20	30	12
Total Analysis Volume [veh/h]	94	918	39	68	874	65	68	103	82	79	119	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	61	0	26	71	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	12	12	3	12	12	7	7
g / C, Green / Cycle	0.13	0.39	0.39	0.10	0.37	0.37	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.06	0.27	0.27	0.04	0.26	0.26	0.17	0.17
s, saturation flow rate [veh/h]	1619	1800	1774	1619	1800	1757	1498	1420
c, Capacity [veh/h]	205	711	701	165	666	650	472	460
d1, Uniform Delay [s]	12.80	7.90	7.90	13.32	8.53	8.53	11.49	11.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.59	1.14	1.16	1.64	1.44	1.47	0.95	0.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.68	0.68	0.41	0.71	0.71	0.54	0.54
d, Delay for Lane Group [s/veh]	14.39	9.04	9.06	14.97	9.96	10.00	12.44	12.48
Lane Group LOS	B	A	A	B	A	A	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.56	1.81	1.78	0.43	1.96	1.92	1.31	1.28
50th-Percentile Queue Length [ft/ln]	14.10	45.17	44.61	10.69	48.98	47.96	32.75	32.08
95th-Percentile Queue Length [veh/ln]	1.02	3.25	3.21	0.77	3.53	3.45	2.36	2.31
95th-Percentile Queue Length [ft/ln]	25.38	81.30	80.30	19.25	88.16	86.32	58.95	57.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.39	9.05	9.06	14.97	9.98	10.00	12.44	12.44	12.44	12.48	12.48	12.48
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	9.53			10.32			12.44			12.48		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.41											
Intersection LOS	B											
Intersection V/C	0.613											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	28.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.225

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	35	759	38	72	867	35	46	75	29	55	75	151
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	759	38	72	867	35	46	75	29	55	75	151
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	214	11	20	244	10	13	21	8	15	21	43
Total Analysis Volume [veh/h]	39	855	43	81	976	39	52	84	33	62	84	170
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	19	19	5	21	21	27	27	27	27
g / C, Green / Cycle	0.06	0.31	0.31	0.09	0.34	0.34	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.25	0.05	0.28	0.28	0.62	0.02	0.80	0.11
s, saturation flow rate [veh/h]	1619	1800	1770	1619	1800	1776	218	1530	184	1530
c, Capacity [veh/h]	93	563	554	143	618	610	181	688	168	688
d1, Uniform Delay [s]	27.38	18.98	18.98	26.33	18.11	18.11	14.58	9.32	15.83	10.26
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.97	11.59	11.77	3.52	12.02	12.18	6.21	0.03	12.75	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.80	0.80	0.57	0.83	0.83	0.75	0.05	0.87	0.25
d, Delay for Lane Group [s/veh]	30.34	30.56	30.74	29.85	30.13	30.29	20.79	9.35	28.58	10.44
Lane Group LOS	C	C	C	C	C	C	C	A	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.59	7.00	6.91	1.19	7.82	7.74	1.24	0.22	1.60	1.24
50th-Percentile Queue Length [ft/ln]	14.77	175.06	172.82	29.81	195.50	193.57	30.96	5.45	39.88	31.01
95th-Percentile Queue Length [veh/ln]	1.06	11.34	11.22	2.15	12.41	12.31	2.23	0.39	2.87	2.23
95th-Percentile Queue Length [ft/ln]	26.58	283.56	280.62	53.65	310.15	307.66	55.74	9.81	71.79	55.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.34	30.65	30.74	29.85	30.21	30.29	20.79	20.79	9.35	28.58	28.58	10.44
Movement LOS	C	C	C	C	C	C	C	C	A	C	C	B
d_A, Approach Delay [s/veh]	30.64			30.19			18.56			18.82		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	28.15											
Intersection LOS	C											
Intersection V/C	1.225											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	566	50	71	911	7	20	8	19	64	4	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	566	50	71	911	7	20	8	19	64	4	62
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	166	15	21	268	2	6	2	6	19	1	18
Total Analysis Volume [veh/h]	9	665	59	83	1071	8	24	9	22	75	5	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	71	71	6	76	76	11	11	11
g / C, Green / Cycle	0.02	0.71	0.71	0.06	0.76	0.76	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.19	0.19	0.05	0.28	0.28	0.12	0.09	0.05
s, saturation flow rate [veh/h]	1810	1900	1846	1810	1900	1895	441	928	1615
c, Capacity [veh/h]	29	1353	1315	115	1444	1440	98	167	169
d1, Uniform Delay [s]	48.70	5.13	5.14	46.00	4.03	4.03	42.73	43.87	42.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.07	0.49	0.51	8.31	0.74	0.75	5.00	2.14	1.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

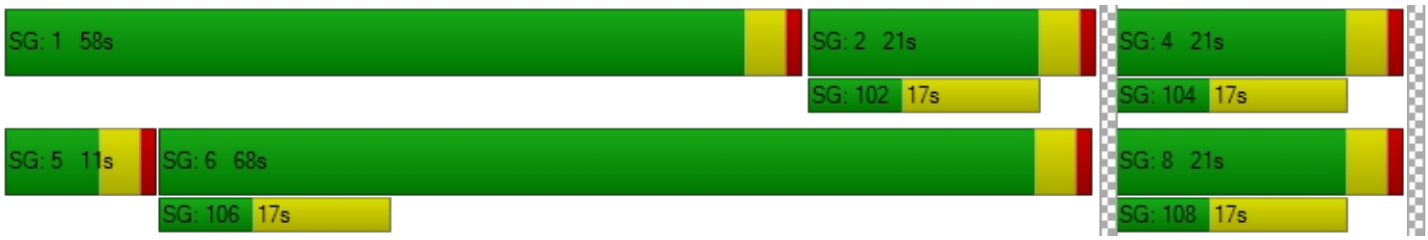
X, volume / capacity	0.31	0.27	0.27	0.72	0.37	0.37	0.56	0.48	0.43
d, Delay for Lane Group [s/veh]	54.77	5.63	5.65	54.31	4.78	4.78	47.73	46.01	43.78
Lane Group LOS	D	A	A	D	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	2.52	2.46	2.28	3.17	3.16	1.51	2.02	1.76
50th-Percentile Queue Length [ft/ln]	6.74	62.92	61.40	56.96	79.27	79.10	37.63	50.60	44.06
95th-Percentile Queue Length [veh/ln]	0.49	4.53	4.42	4.10	5.71	5.69	2.71	3.64	3.17
95th-Percentile Queue Length [ft/ln]	12.14	113.26	110.53	102.53	142.69	142.37	67.74	91.08	79.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.77	5.64	5.65	54.31	4.78	4.78	47.73	47.73	47.73	46.01	46.01	43.78
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.24			8.32			47.73			44.94		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.29											
Intersection LOS	B											
Intersection V/C	0.471											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	69.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	196	0	0	292	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	784	0	0	1169	12	6	0	19	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.09	0.00	0.04	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.23	0.00	0.00	9.27	0.00	0.00	59.62	69.34	15.60	43.57	67.18	10.88
Movement LOS	B	A	A	A	A	A	F	F	C	E	F	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.72	0.00	0.00	0.00	0.00	0.00	10.81	10.81	10.81	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.29			0.00			26.17			40.54		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	0.44											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	27.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.840

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	59	70	138	143	5	4	8	3	70	10	0
Total Analysis Volume [veh/h]	14	237	281	552	572	18	15	31	12	281	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	35	46	0	0	21	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	83	83	83	83	83	83	83	83	83	83
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	17	17	28	43	43	5	5	17	17
g / C, Green / Cycle	0.02	0.21	0.21	0.33	0.52	0.52	0.06	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.07	0.17	0.31	0.16	0.01	0.01	0.02	0.18	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	1820	1615
c, Capacity [veh/h]	42	749	335	606	1877	838	113	113	371	329
d1, Uniform Delay [s]	40.09	28.05	31.74	26.54	11.47	9.77	36.98	37.57	32.08	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.49	0.24	5.66	5.72	0.09	0.01	0.53	2.12	6.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

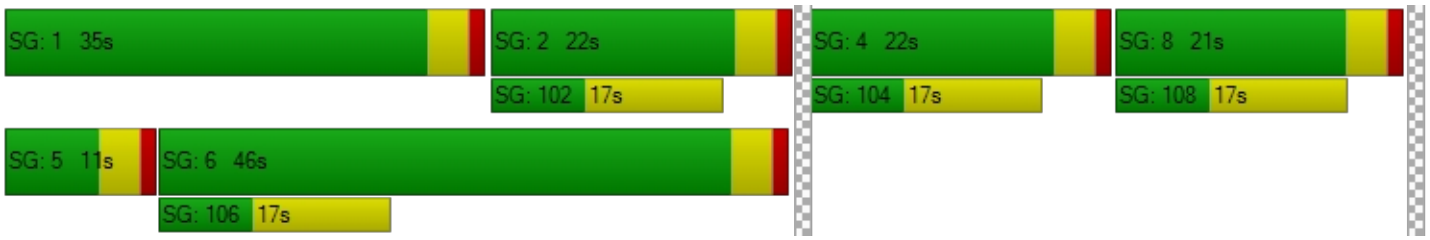
X, volume / capacity	0.33	0.32	0.84	0.91	0.30	0.02	0.13	0.38	0.86	0.00
d, Delay for Lane Group [s/veh]	44.58	28.29	37.39	32.26	11.56	9.78	37.51	39.69	38.08	0.00
Lane Group LOS	D	C	D	C	B	A	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.33	1.98	5.78	10.89	2.83	0.15	0.30	0.89	6.65	0.00
50th-Percentile Queue Length [ft/ln]	8.27	49.62	144.59	272.31	70.67	3.81	7.53	22.36	166.23	0.00
95th-Percentile Queue Length [veh/ln]	0.60	3.57	9.73	16.31	5.09	0.27	0.54	1.61	10.88	0.00
95th-Percentile Queue Length [ft/ln]	14.88	89.32	243.19	407.63	127.20	6.87	13.55	40.25	271.95	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.58	28.29	37.39	32.26	11.56	9.78	37.51	39.69	39.69	38.08	38.08	0.00
Movement LOS	D	C	D	C	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	33.53			21.54			39.12			38.08		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.72											
Intersection LOS	C											
Intersection V/C	0.840											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	489	25	84	760	1	1	2	16	7	3	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	489	25	84	760	1	1	2	16	7	3	15
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	130	7	22	201	0	0	1	4	2	1	4
Total Analysis Volume [veh/h]	23	519	27	89	806	1	1	2	17	7	3	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.09	0.01	0.00	0.01	0.02	0.03	0.05	0.03	0.02
d_M, Delay for Movement [s/veh]	9.48	0.00	0.00	8.81	0.00	0.00	40.08	43.46	11.64	33.62	43.10	11.50
Movement LOS	A	A	A	A	A	A	E	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	0.26	0.13	0.00	0.19	0.19	0.19	0.34	0.34	0.34
95th-Percentile Queue Length [ft/ln]	2.05	1.02	0.00	6.62	3.31	0.00	4.66	4.66	4.66	8.62	8.62	8.62
d_A, Approach Delay [s/veh]	0.38			0.88			16.24			21.10		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.24											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	33.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	534	8	6	787	0	0	0	3	11	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	534	8	6	787	0	0	0	3	11	1	3
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	142	2	2	209	0	0	0	1	3	0	1
Total Analysis Volume [veh/h]	9	568	9	6	837	0	0	0	3	12	1	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	9.52	0.00	0.00	8.60	0.00	0.00	28.83	32.62	11.14	25.23	33.60	11.36
Movement LOS	A	A	A	A	A	A	D	D	B	D	D	B
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.02	0.01	0.00	0.02	0.02	0.02	0.24	0.24	0.24
95th-Percentile Queue Length [ft/ln]	0.75	0.38	0.00	0.45	0.22	0.00	0.38	0.38	0.38	5.99	5.99	5.99
d_A, Approach Delay [s/veh]	0.15			0.06			11.14			23.15		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.37											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	47.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.273

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	427	12	5	802	20	12	13	19	60	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	427	12	5	802	20	12	13	19	60	22	9
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	116	3	1	218	5	3	4	5	16	6	2
Total Analysis Volume [veh/h]	20	464	13	5	871	22	13	14	21	65	24	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	25	0	11	25	0	0	64	0	0	64	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	31	31	1	29	29	56	56	56	56
g / C, Green / Cycle	0.03	0.31	0.31	0.01	0.29	0.29	0.56	0.56	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.13	0.00	0.24	0.24	0.37	0.01	3.51	0.01
s, saturation flow rate [veh/h]	1810	1900	1882	1810	1900	1884	74	1615	25	1615
c, Capacity [veh/h]	54	596	590	16	556	552	94	900	76	900
d1, Uniform Delay [s]	47.59	26.96	26.96	49.23	32.73	32.73	24.29	9.93	39.83	9.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.18	2.01	2.04	10.04	11.84	11.94	1.64	0.01	154.20	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

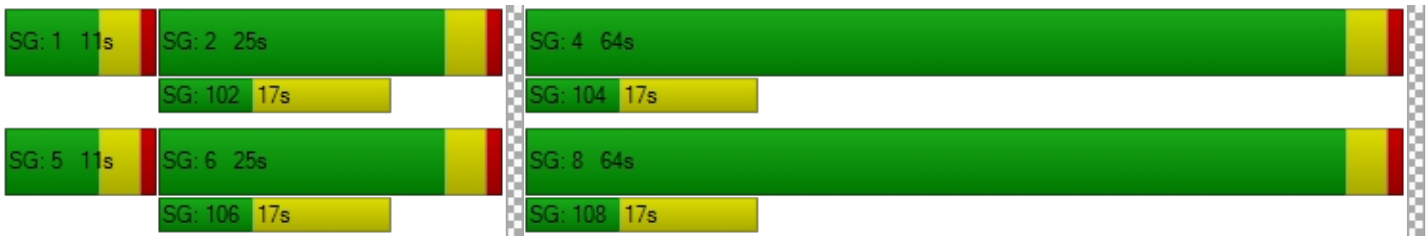
X, volume / capacity	0.37	0.40	0.40	0.30	0.81	0.81	0.29	0.02	1.16	0.01
d, Delay for Lane Group [s/veh]	51.76	28.97	29.01	59.27	44.57	44.67	25.94	9.94	194.03	9.86
Lane Group LOS	D	C	C	E	D	D	C	A	F	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	4.77	4.74	0.17	11.68	11.60	0.45	0.20	5.18	0.10
50th-Percentile Queue Length [ft/ln]	13.73	119.33	118.59	4.23	292.09	289.94	11.14	5.06	129.38	2.39
95th-Percentile Queue Length [veh/ln]	0.99	8.36	8.32	0.30	17.29	17.18	0.80	0.36	9.32	0.17
95th-Percentile Queue Length [ft/ln]	24.72	208.91	207.89	7.62	432.24	429.57	20.06	9.10	232.88	4.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.76	28.99	29.01	59.27	44.62	44.67	25.94	25.94	9.94	194.03	194.03	9.86
Movement LOS	D	C	C	E	D	D	C	C	A	F	F	A
d_A, Approach Delay [s/veh]	29.90			44.70			18.94			175.43		
Approach LOS	C			D			B			F		
d_I, Intersection Delay [s/veh]	47.52											
Intersection LOS	D											
Intersection V/C	4.273											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	531	0	0	790	22	10	0	156	347	88	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	531	0	0	790	22	10	0	156	347	88	66
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	150	0	0	223	6	3	0	44	98	25	19
Total Analysis Volume [veh/h]	37	599	0	0	892	25	11	0	176	392	99	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	21	0	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	9	9	19	19
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.14	0.14	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.06	0.17	0.24	0.24	0.01	0.11	0.27	0.05
s, saturation flow rate [veh/h]	619	3618	1900	1882	1810	1615	1827	1615
c, Capacity [veh/h]	188	1291	678	672	255	227	568	502
d1, Uniform Delay [s]	25.97	15.56	17.12	17.17	23.32	26.01	20.38	15.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.51	0.26	1.19	1.23	0.07	5.54	4.07	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

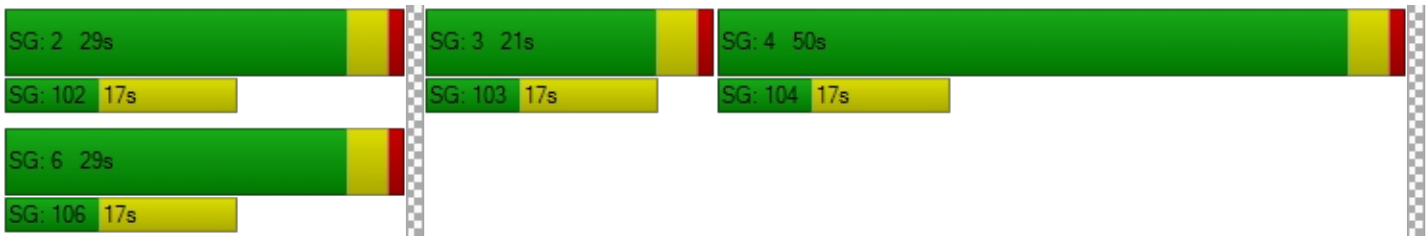
X, volume / capacity	0.20	0.46	0.68	0.68	0.04	0.77	0.86	0.15
d, Delay for Lane Group [s/veh]	26.48	15.82	18.30	18.40	23.39	31.56	24.45	15.75
Lane Group LOS	C	B	B	B	C	C	C	B
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.52	3.02	5.24	5.26	0.14	2.73	6.75	0.72
50th-Percentile Queue Length [ft/ln]	12.92	75.62	130.94	131.49	3.46	68.28	168.76	18.10
95th-Percentile Queue Length [veh/ln]	0.93	5.44	8.99	9.02	0.25	4.92	11.01	1.30
95th-Percentile Queue Length [ft/ln]	23.26	136.11	224.78	225.53	6.22	122.91	275.28	32.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.48	15.82	0.00	0.00	18.35	18.40	23.39	0.00	31.56	24.45	24.45	15.75
Movement LOS	C	B			B	B	C		C	C	C	B
d_A, Approach Delay [s/veh]	16.44			18.35			31.08			23.31		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.07											
Intersection LOS	C											
Intersection V/C	0.769											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	44.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	337	584	775	536	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	584	775	536	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	167	222	153	0	0
Total Analysis Volume [veh/h]	386	669	888	614	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.85	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	44.45	0.00	0.00	0.00	0.00	0.00
Movement LOS	E	A	A	A		
95th-Percentile Queue Length [veh/ln]	8.59	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	214.83	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.26		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	6.71					
Intersection LOS	E					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	544	523	144	617	0	351	26	242	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	544	523	144	617	0	351	26	242	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	155	149	41	176	0	100	7	69	3	0	1
Total Analysis Volume [veh/h]	0	622	598	165	705	0	401	30	277	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	35	0	15	50	0	0	29	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	11	59	27	27	3	3
g / C, Green / Cycle	0.44	0.44	0.11	0.59	0.27	0.27	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.32	0.38	0.09	0.19	0.24	0.17	0.01	0.00
s, saturation flow rate [veh/h]	1900	1620	1810	3618	1816	1615	1810	1615
c, Capacity [veh/h]	831	708	199	2123	484	431	48	43
d1, Uniform Delay [s]	23.42	25.51	43.76	10.64	35.38	32.57	47.88	47.63
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.72	13.07	8.58	0.42	5.80	1.61	2.91	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

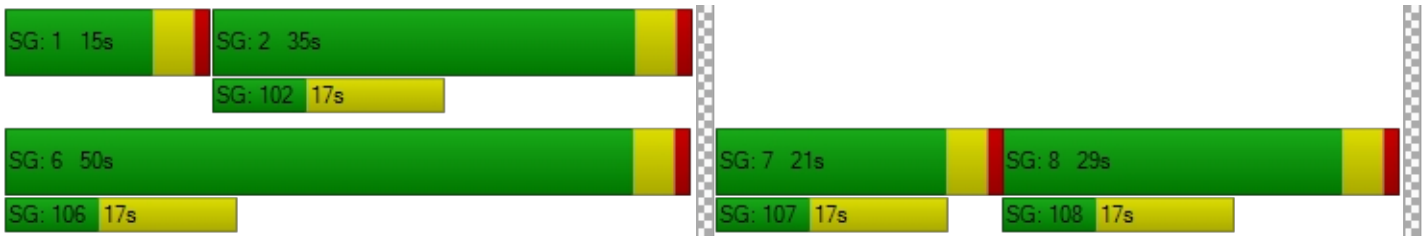
X, volume / capacity	0.73	0.86	0.83	0.33	0.89	0.64	0.27	0.07
d, Delay for Lane Group [s/veh]	29.14	38.58	52.33	11.06	41.18	34.18	50.79	48.30
Lane Group LOS	C	D	D	B	D	C	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.77	15.04	4.45	3.88	10.69	6.05	0.36	0.08
50th-Percentile Queue Length [ft/ln]	319.16	375.94	111.28	97.12	267.21	151.35	8.91	2.02
95th-Percentile Queue Length [veh/ln]	18.63	21.40	7.91	6.99	16.05	10.09	0.64	0.15
95th-Percentile Queue Length [ft/ln]	465.65	534.93	197.78	174.81	401.25	252.22	16.04	3.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	29.33	38.58	52.33	11.06	0.00	41.18	41.18	34.18	50.79	0.00	48.30
Movement LOS		C	D	D	B		D	D	C	D		D
d_A, Approach Delay [s/veh]	33.86			18.89			38.44			50.33		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.48											
Intersection LOS	C											
Intersection V/C	0.848											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	27	750	47	49	648	74	155	33	19	10	20	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	750	47	49	648	74	155	33	19	10	20	100
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	202	13	13	175	20	42	9	5	3	5	27
Total Analysis Volume [veh/h]	29	809	51	53	699	80	167	36	20	11	22	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	68	0	11	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	11	11	3	12	12	8	8	8
g / C, Green / Cycle	0.05	0.32	0.32	0.08	0.36	0.36	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.03	0.03	0.19	0.05	0.19	0.02	0.07
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1156	1800	1615
c, Capacity [veh/h]	91	1174	524	149	1290	576	462	571	385
d1, Uniform Delay [s]	15.51	9.94	7.97	14.67	8.68	7.37	12.94	9.98	10.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.00	0.73	0.08	1.44	0.36	0.11	0.78	0.04	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.69	0.10	0.36	0.54	0.14	0.48	0.06	0.28
d, Delay for Lane Group [s/veh]	17.50	10.67	8.05	16.11	9.03	7.48	13.72	10.02	10.90
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	1.93	0.19	0.37	1.44	0.28	1.35	0.15	0.54
50th-Percentile Queue Length [ft/ln]	5.72	48.24	4.87	9.34	35.97	7.12	33.73	3.74	13.38
95th-Percentile Queue Length [veh/ln]	0.41	3.47	0.35	0.67	2.59	0.51	2.43	0.27	0.96
95th-Percentile Queue Length [ft/ln]	10.29	86.82	8.76	16.80	64.75	12.81	60.72	6.74	24.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.50	10.67	8.05	16.11	9.03	7.48	13.72	13.72	13.72	10.02	10.02	10.90
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.74			9.34			13.72			10.70		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.50											
Intersection LOS	B											
Intersection V/C	0.691											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.201

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	48	0	39	57	80	0	0	79	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	48	0	39	57	80	0	0	79	53
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	13	0	11	16	22	0	0	22	15
Total Analysis Volume [veh/h]	0	0	0	54	0	44	64	90	0	0	89	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	27	0	0	32	72	0	0	40	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	R	L	C	C	R
C, Cycle Length [s]	27	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	4	4	3	11	5	5
g / C, Green / Cycle	0.00	0.14	0.14	0.10	0.42	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.03	0.03	0.04	0.05	0.05	0.04
s, saturation flow rate [veh/h]	1900	1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]	1	248	222	183	804	334	284
d1, Uniform Delay [s]	0.00	10.48	10.45	11.44	4.77	9.74	9.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.43	0.43	1.14	0.06	0.42	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

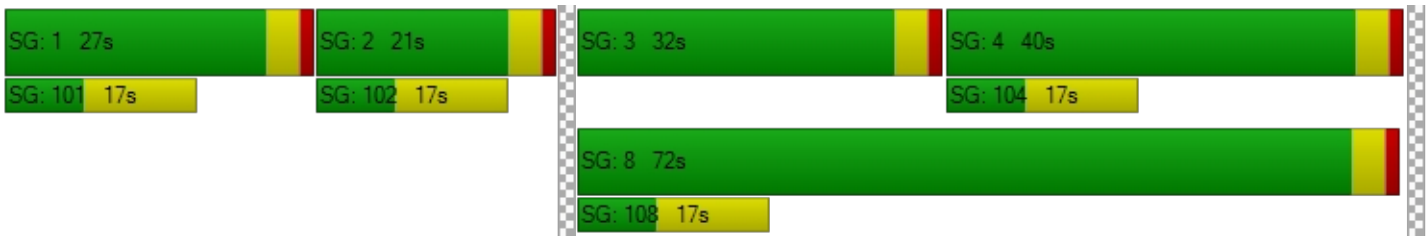
X, volume / capacity	0.00	0.22	0.20	0.35	0.11	0.27	0.21
d, Delay for Lane Group [s/veh]	0.00	10.91	10.89	12.58	4.83	10.16	9.99
Lane Group LOS	A	B	B	B	A	B	A
Critical Lane Group	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.23	0.19	0.32	0.15	0.35	0.23
50th-Percentile Queue Length [ft/ln]	0.00	5.82	4.79	7.94	3.84	8.80	5.84
95th-Percentile Queue Length [veh/ln]	0.00	0.42	0.34	0.57	0.28	0.63	0.42
95th-Percentile Queue Length [ft/ln]	0.00	10.47	8.61	14.29	6.91	15.84	10.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	10.91	0.00	10.89	12.58	4.83	0.00	0.00	10.16	9.99
Movement LOS	A	A	A	B		B	B	A			B	A
d_A, Approach Delay [s/veh]	0.00			10.90			8.05			10.09		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	9.51											
Intersection LOS	A											
Intersection V/C	0.201											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	2	2	9	6	11	2	88	38	1	101	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	2	2	9	6	11	2	88	38	1	101	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	1	1	3	2	3	1	27	12	0	31	2
Total Analysis Volume [veh/h]	46	2	2	11	7	14	2	109	47	1	125	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.87	11.07	9.34	10.47	11.00	9.09	7.46	0.00	0.00	7.51	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.04	6.04	6.04	3.32	3.32	3.32	0.10	0.10	0.10	0.05	0.05	0.05
d_A, Approach Delay [s/veh]	10.82			9.98			0.09			0.06		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	2.37											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	28.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.340

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	357	450	71	61	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	357	450	71	61	23
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	6	113	143	23	19	0
Total Analysis Volume [veh/h]	23	453	571	90	77	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.01	0.00	0.34	0.00
d_M, Delay for Movement [s/veh]	8.94	0.00	0.00	0.00	28.88	12.28
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	1.44	0.00
95th-Percentile Queue Length [ft/ln]	1.89	0.00	0.00	0.00	35.89	0.00
d_A, Approach Delay [s/veh]	0.43		0.00		28.88	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	2.00					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	329	60	105	443	10	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	329	60	105	443	10	42
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	16	28	119	3	11
Total Analysis Volume [veh/h]	355	65	113	478	11	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.10	0.00	0.03	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	8.47	0.00	13.50	10.81
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.33	0.00	0.08	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	8.15	0.00	1.94	5.43
d_A, Approach Delay [s/veh]	0.00		1.62		11.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.49					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	408	543	22	18	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	408	543	22	18	43
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	107	143	6	5	11
Total Analysis Volume [veh/h]	41	429	571	23	19	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.01	0.00	0.04	0.06
d_M, Delay for Movement [s/veh]	8.79	0.00	0.00	0.00	12.23	10.35
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.00	0.11	0.20
95th-Percentile Queue Length [ft/ln]	3.23	0.00	0.00	0.00	2.86	5.01
d_A, Approach Delay [s/veh]	0.77		0.00		10.91	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.94					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	407	15	105	500	4	0	3	11	28	0	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	407	15	105	500	4	0	3	11	28	0	59
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	109	4	28	134	1	0	1	3	7	0	16
Total Analysis Volume [veh/h]	13	435	16	112	535	4	0	3	12	30	0	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	44	0	24	53	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	30	30	30	30	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	7	7	4	10	10	0	1	1	2	3	3
g / C, Green / Cycle	0.02	0.23	0.23	0.14	0.35	0.35	0.00	0.04	0.04	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.01	0.06	0.15	0.00	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	46	825	368	263	1257	561	1	86	73	98	188	160
d1, Uniform Delay [s]	14.50	10.27	9.13	11.81	7.57	6.47	0.00	13.85	13.93	13.79	0.00	12.81
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.26	0.52	0.05	1.10	0.23	0.00	0.00	0.16	1.05	1.74	0.00	1.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.53	0.04	0.43	0.43	0.01	0.00	0.03	0.16	0.31	0.00	0.39
d, Delay for Lane Group [s/veh]	17.76	10.80	9.18	12.91	7.80	6.48	0.00	14.01	14.98	15.53	0.00	14.39
Lane Group LOS	B	B	A	B	A	A	A	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.11	0.95	0.06	0.59	0.85	0.01	0.00	0.02	0.08	0.20	0.00	0.38
50th-Percentile Queue Length [ft/ln]	2.78	23.65	1.57	14.80	21.30	0.28	0.00	0.48	2.08	5.04	0.00	9.42
95th-Percentile Queue Length [veh/ln]	0.20	1.70	0.11	1.07	1.53	0.02	0.00	0.03	0.15	0.36	0.00	0.68
95th-Percentile Queue Length [ft/ln]	5.00	42.57	2.83	26.65	38.35	0.50	0.00	0.87	3.74	9.06	0.00	16.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.76	10.80	9.18	12.91	7.80	6.48	0.00	14.01	14.98	15.53	0.00	14.39
Movement LOS	B	B	A	B	A	A	A	B	B	B	A	B
d_A, Approach Delay [s/veh]	10.94			8.67			14.78			14.76		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.07											
Intersection LOS	B											
Intersection V/C	0.471											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.240

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	441	78	41	533	53	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	441	78	41	533	53	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	125	22	12	151	15	14
Total Analysis Volume [veh/h]	501	89	47	605	60	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	62	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	81	81	0	0	11	11
g / C, Green / Cycle	0.81	0.81	0.00	0.00	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.14	0.06	0.05	0.32	0.07	0.03
s, saturation flow rate [veh/h]	3618	1615	911	1900	828	1615
c, Capacity [veh/h]	2922	1304	72	0	147	181
d1, Uniform Delay [s]	2.15	1.96	50.00	0.00	44.57	40.82
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.10	37.85	0.00	1.81	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.07	0.65	0.00	0.41	0.31
d, Delay for Lane Group [s/veh]	2.27	2.06	87.85	0.00	46.38	41.78
Lane Group LOS	A	A	F	A	D	D
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	0.27	1.99	0.00	1.52	1.31
50th-Percentile Queue Length [ft/ln]	19.20	6.72	49.76	0.00	38.02	32.77
95th-Percentile Queue Length [veh/ln]	1.38	0.48	3.58	0.00	2.74	2.36
95th-Percentile Queue Length [ft/ln]	34.57	12.09	89.57	0.00	68.44	58.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.27	2.06	87.85	0.00	46.38	41.78
Movement LOS	A	A	F	A	D	D
d_A, Approach Delay [s/veh]	2.24		6.33		44.16	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.79					
Intersection LOS	A					
Intersection V/C	0.240					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	49.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	6.708

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	30	1	72	79	134	3	1	84	39
Total Analysis Volume [veh/h]	10	3	2	121	4	290	315	537	13	3	334	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	39	49	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	36	36	20	52	52	1	32	32
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.20	0.52	0.52	0.01	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.34	0.00	5.63	0.18	0.17	0.15	0.01	0.00	0.09	0.10
s, saturation flow rate [veh/h]	38	1615	22	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	77	579	79	579	357	1865	833	11	1175	525
d1, Uniform Delay [s]	26.96	20.64	49.48	25.13	39.09	13.79	11.84	49.53	25.14	25.25
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	0.00	316.37	0.67	7.27	0.39	0.03	12.16	0.61	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.00	1.59	0.50	0.88	0.29	0.02	0.27	0.28	0.30
d, Delay for Lane Group [s/veh]	27.98	20.64	365.85	25.80	46.36	14.18	11.88	61.69	25.75	26.68
Lane Group LOS	C	C	F	C	D	B	B	E	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	0.03	8.88	5.39	8.14	3.44	0.15	0.11	3.02	2.93
50th-Percentile Queue Length [ft/ln]	5.43	0.76	221.93	134.63	203.44	86.05	3.67	2.81	75.59	73.36
95th-Percentile Queue Length [veh/ln]	0.39	0.05	15.98	9.19	12.82	6.20	0.26	0.20	5.44	5.28
95th-Percentile Queue Length [ft/ln]	9.77	1.36	399.48	229.77	320.39	154.89	6.61	5.05	136.07	132.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.98	27.98	20.64	365.85	365.85	25.80	46.36	14.18	11.88	61.69	25.75	26.68
Movement LOS	C	C	C	F	F	C	D	B	B	E	C	C
d_A, Approach Delay [s/veh]	27.00			128.22			25.86			26.26		
Approach LOS	C			F			C			C		
d_I, Intersection Delay [s/veh]	49.76											
Intersection LOS	D											
Intersection V/C	6.708											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	554	638	21	8	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	554	638	21	8	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	150	173	6	2	4
Total Analysis Volume [veh/h]	22	600	691	23	9	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.05	0.03
d_M, Delay for Movement [s/veh]	9.12	0.00	0.00	0.00	28.18	13.43
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.17	0.10
95th-Percentile Queue Length [ft/ln]	1.89	0.00	0.00	0.00	4.31	2.45
d_A, Approach Delay [s/veh]	0.32		0.00		19.20	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	63	802	179	55	744	0	2	3	79	188	4	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	802	179	55	744	0	2	3	79	188	4	59
Peak Hour Factor	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	224	50	15	208	0	1	1	22	53	1	16
Total Analysis Volume [veh/h]	70	896	200	61	831	0	2	3	88	210	4	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	31	31	11	31	0	0	57	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	80	94	6	80	80	8	8	10	10	10
g / C, Green / Cycle	0.05	0.67	0.78	0.05	0.66	0.66	0.07	0.07	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.04	0.25	0.12	0.03	0.22	0.22	0.00	0.05	0.06	0.06	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1863	1615	1810	1813	1615
c, Capacity [veh/h]	96	2405	1260	92	1260	1260	129	112	148	148	132
d1, Uniform Delay [s]	56.01	8.96	3.32	55.96	8.73	8.73	52.14	54.99	53.80	53.80	52.78
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.23	0.44	0.27	7.90	0.15	0.15	0.12	11.45	6.54	6.52	2.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

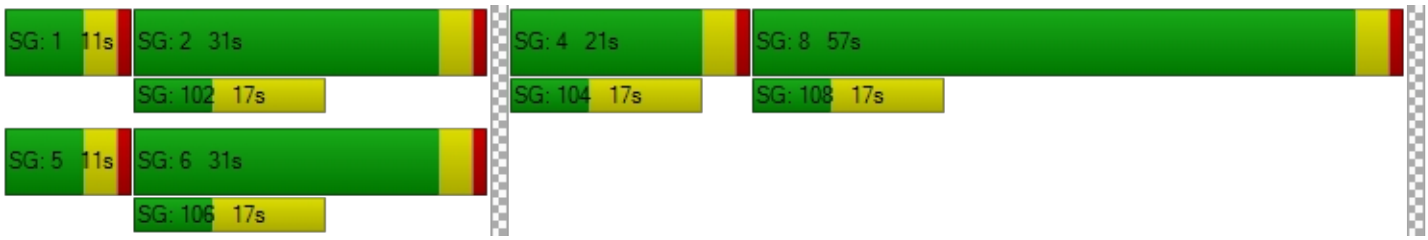
X, volume / capacity	0.73	0.37	0.16	0.66	0.33	0.33	0.04	0.79	0.72	0.72	0.50
d, Delay for Lane Group [s/veh]	66.25	9.40	3.59	63.86	8.88	8.88	52.26	66.44	60.34	60.32	55.69
Lane Group LOS	E	A	A	E	A	A	D	E	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.36	5.08	1.11	2.02	4.49	4.49	0.15	2.98	3.42	3.42	2.02
50th-Percentile Queue Length [ft/ln]	59.04	126.94	27.74	50.44	112.27	112.27	3.64	74.39	85.51	85.62	50.39
95th-Percentile Queue Length [veh/ln]	4.25	8.77	2.00	3.63	7.97	7.97	0.26	5.36	6.16	6.16	3.63
95th-Percentile Queue Length [ft/ln]	106.26	219.33	49.93	90.79	199.15	199.15	6.55	133.91	153.92	154.11	90.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.25	9.40	3.59	63.86	8.88	8.88	52.26	52.26	66.44	60.33	60.32	55.69
Movement LOS	E	A	A	E	A	A	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	11.82			12.64			65.68			59.24		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	19.64											
Intersection LOS	B											
Intersection V/C	0.456											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.695

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	217	319	0	0	886	151	0	0	0	113	0	724
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	217	319	0	0	886	151	0	0	0	113	0	724
Peak Hour Factor	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	62	91	0	0	253	43	0	0	0	32	0	0
Total Analysis Volume [veh/h]	248	364	0	0	1011	172	0	0	0	129	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	61	99	0	0	38	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	40	40	40	40		40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	7	27	16	16		5	5
g / C, Green / Cycle	0.18	0.67	0.39	0.39		0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.14	0.10	0.28	0.11		0.07	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	332	2419	1397	624		241	215
d1, Uniform Delay [s]	15.60	2.47	10.56	8.51		16.33	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.37	0.03	0.72	0.24		1.84	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

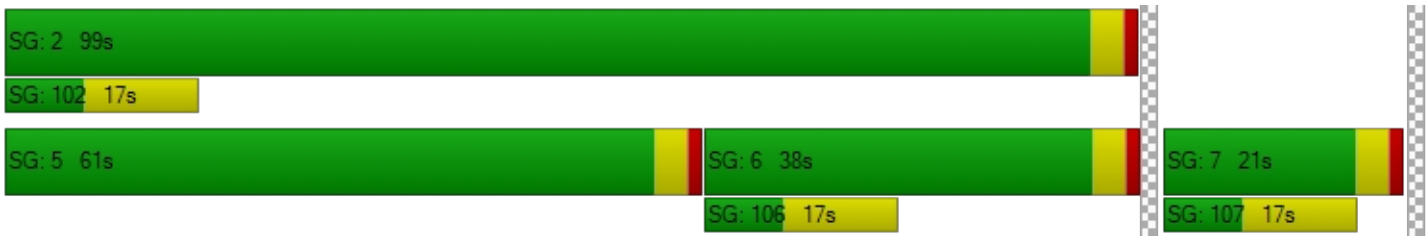
X, volume / capacity	0.75	0.15	0.72	0.28		0.53	0.00
d, Delay for Lane Group [s/veh]	18.97	2.49	11.28	8.75		18.17	0.00
Lane Group LOS	B	A	B	A		B	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	2.11	0.18	2.94	0.81		1.07	0.00
50th-Percentile Queue Length [ft/ln]	52.73	4.43	73.45	20.22		26.75	0.00
95th-Percentile Queue Length [veh/ln]	3.80	0.32	5.29	1.46		1.93	0.00
95th-Percentile Queue Length [ft/ln]	94.92	7.98	132.22	36.39		48.14	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.97	2.49	0.00	0.00	11.28	8.75	0.00	0.00	0.00	18.17	0.00	0.00
Movement LOS	B	A			B	A				B		A
d_A, Approach Delay [s/veh]	9.17			10.91			0.00			18.17		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	10.85											
Intersection LOS	B											
Intersection V/C	0.695											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	368	157	448	573	0	174	0	731	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	368	157	448	573	0	174	0	731	0	0	0
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	100	42	121	155	0	47	0	198	0	0	0
Total Analysis Volume [veh/h]	0	398	170	485	620	0	188	0	791	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	22	0	51	73	0	47	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	62	62	62	62	62	62	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	10	10	19	33	21	21	
g / C, Green / Cycle	0.16	0.16	0.31	0.53	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.27	0.17	0.10	0.28	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	573	256	557	1920	615	972	
d1, Uniform Delay [s]	24.65	24.52	20.29	8.23	15.06	18.65	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.52	2.95	4.38	0.10	0.28	1.71	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

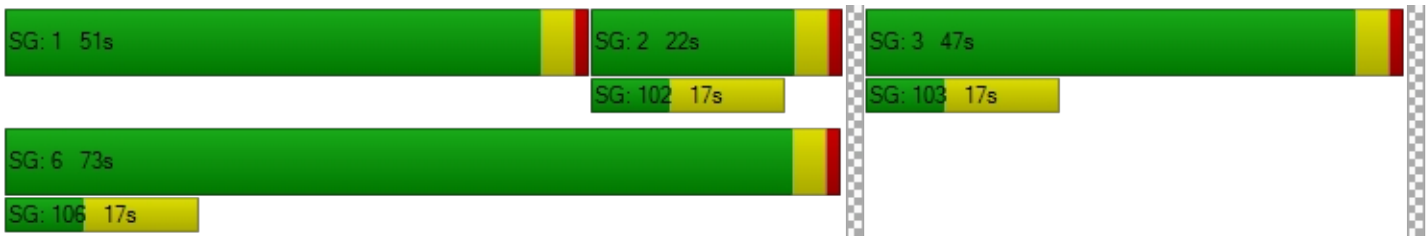
X, volume / capacity	0.69	0.66	0.87	0.32	0.31	0.81	
d, Delay for Lane Group [s/veh]	26.17	27.47	24.67	8.33	15.33	20.36	
Lane Group LOS	C	C	C	A	B	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.71	2.41	6.65	1.96	1.82	4.85	
50th-Percentile Queue Length [ft/ln]	67.70	60.19	166.18	49.06	45.52	121.32	
95th-Percentile Queue Length [veh/ln]	4.87	4.33	10.88	3.53	3.28	8.47	
95th-Percentile Queue Length [ft/ln]	121.86	108.34	271.88	88.31	81.93	211.63	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.17	27.47	24.67	8.33	0.00	15.33	0.00	20.36	0.00	0.00	0.00
Movement LOS		C	C	C	A		B		C			
d_A, Approach Delay [s/veh]	26.56			15.50			19.40			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	19.31											
Intersection LOS	B											
Intersection V/C	0.812											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.809

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	769	0	0	1098	534	0	0	0	404	0	363
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	769	0	0	1098	534	0	0	0	404	0	363
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	235	0	0	336	163	0	0	0	124	0	111
Total Analysis Volume [veh/h]	367	941	0	0	1344	654	0	0	0	494	0	444
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	69	0	0	52	0	0	0	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	94	94	94	94		94	94	94
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	14	65	48	48		23	23	23
g / C, Green / Cycle	0.15	0.69	0.51	0.51		0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.21	0.43		0.19	0.20	0.21
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1635	1530
c, Capacity [veh/h]	453	3387	3307	774		398	402	376
d1, Uniform Delay [s]	38.65	5.59	14.51	20.13		33.06	33.38	33.85
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.51	0.04	0.08	2.64		3.06	3.60	5.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.28	0.41	0.84		0.76	0.79	0.84
d, Delay for Lane Group [s/veh]	42.16	5.63	14.59	22.77		36.12	36.97	38.92
Lane Group LOS	D	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.26	2.04	4.27	12.06		6.64	7.09	7.24
50th-Percentile Queue Length [ft/ln]	106.59	50.96	106.83	301.46		165.93	177.21	181.07
95th-Percentile Queue Length [veh/ln]	7.65	3.67	7.66	17.75		10.86	11.45	11.66
95th-Percentile Queue Length [ft/ln]	191.24	91.72	191.59	443.84		271.56	286.37	291.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.16	5.63	0.00	0.00	14.59	22.77	0.00	0.00	0.00	36.44	36.97	38.34
Movement LOS	D	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	15.88			17.27			0.00			37.35		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	21.28											
Intersection LOS	C											
Intersection V/C	0.809											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.772

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	717	394	489	1031	0	358	3	445	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	717	394	489	1031	0	358	3	445	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	210	115	143	302	0	105	1	130	0	0	0
Total Analysis Volume [veh/h]	0	841	462	573	1209	0	420	4	522	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	40	0	27	67	0	0	28	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	68	68	68	68	68	68	68	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	25	25	16	44	18	18	18	
g / C, Green / Cycle	0.37	0.37	0.24	0.65	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.30	0.19	0.35	0.19	0.20	0.21	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1594	1530	
c, Capacity [veh/h]	1251	559	708	2222	427	420	404	
d1, Uniform Delay [s]	18.22	19.70	24.49	6.52	22.80	23.16	23.38	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.63	3.19	2.27	0.21	2.26	2.91	3.53	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

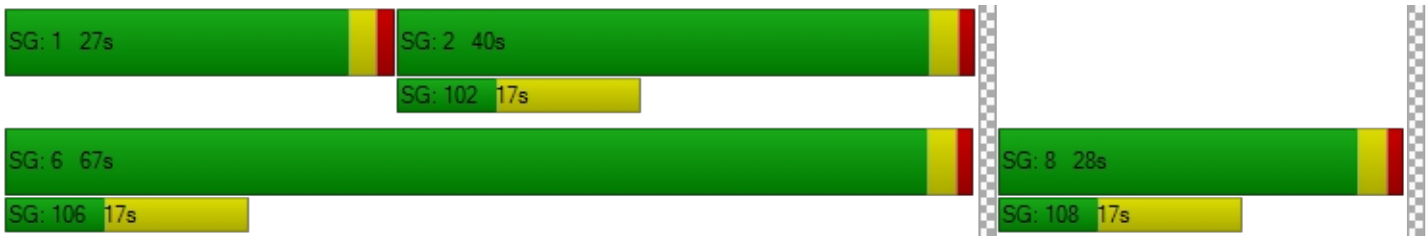
X, volume / capacity	0.67	0.83	0.81	0.54	0.72	0.76	0.79	
d, Delay for Lane Group [s/veh]	18.86	22.90	26.76	6.73	25.06	26.07	26.90	
Lane Group LOS	B	C	C	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.20	6.54	4.31	3.59	4.43	4.78	4.85	
50th-Percentile Queue Length [ft/ln]	129.95	163.47	107.85	89.67	110.79	119.49	121.36	
95th-Percentile Queue Length [veh/ln]	8.94	10.73	7.72	6.46	7.88	8.37	8.47	
95th-Percentile Queue Length [ft/ln]	223.43	268.31	193.01	161.41	197.10	209.13	211.70	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	18.86	22.90	26.76	6.73	0.00	25.32	26.07	26.57	0.00	0.00	0.00
Movement LOS		B	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	20.29			13.17			26.02			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	18.49											
Intersection LOS	B											
Intersection V/C	0.772											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	820	12	35	1185	250	238	17	53	38	17	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	820	12	35	1185	250	238	17	53	38	17	66
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	239	3	10	345	73	69	5	15	11	5	19
Total Analysis Volume [veh/h]	70	955	14	41	1380	291	277	20	62	44	20	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	47	0	46	83	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	87	87	87	87	87	87	87	87	87	87	87	87
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	48	48	4	46	46	26	26	26	26	26	26
g / C, Green / Cycle	0.07	0.55	0.55	0.05	0.53	0.53	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.27	0.03	0.47	0.49	0.21	0.01	0.04	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1619	1800	1791	1619	1800	1694	1319	1800	1530	1337	1800	1530
c, Capacity [veh/h]	106	989	984	82	962	905	395	534	454	410	534	454
d1, Uniform Delay [s]	39.76	12.13	12.13	40.29	17.85	18.42	32.10	21.79	22.46	25.70	21.79	22.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.73	0.38	0.38	4.62	2.82	4.00	2.26	0.03	0.14	0.11	0.03	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

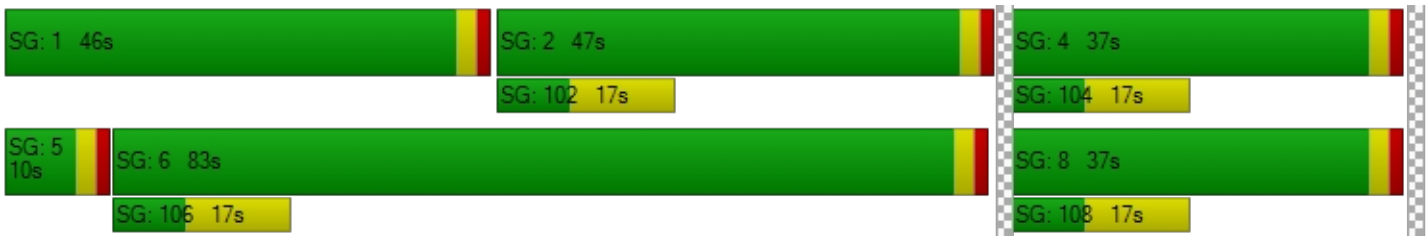
X, volume / capacity	0.66	0.49	0.49	0.50	0.88	0.91	0.70	0.04	0.14	0.11	0.04	0.17
d, Delay for Lane Group [s/veh]	46.49	12.51	12.51	44.91	20.67	22.41	34.36	21.82	22.60	25.82	21.82	22.87
Lane Group LOS	D	B	B	D	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.64	5.44	5.41	0.95	14.14	14.47	5.70	0.29	0.93	0.71	0.29	1.17
50th-Percentile Queue Length [ft/ln]	41.01	135.97	135.29	23.74	353.60	361.75	142.60	7.24	23.23	17.81	7.24	29.16
95th-Percentile Queue Length [veh/ln]	2.95	9.26	9.23	1.71	20.31	20.71	9.62	0.52	1.67	1.28	0.52	2.10
95th-Percentile Queue Length [ft/ln]	73.82	231.58	230.67	42.73	507.80	517.71	240.51	13.04	41.81	32.06	13.04	52.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.49	12.51	12.51	44.91	21.34	22.41	34.36	21.82	22.60	25.82	21.82	22.87
Movement LOS	D	B	B	D	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.80			22.09			31.63			23.64		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	20.88											
Intersection LOS	C											
Intersection V/C	0.795											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	766	10	57	1079	95	108	7	68	20	4	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	766	10	57	1079	95	108	7	68	20	4	48
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	218	3	16	307	27	31	2	19	6	1	14
Total Analysis Volume [veh/h]	76	872	11	65	1229	108	123	8	77	23	5	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	58	35	0	75	52	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	18	18	3	18	18	7	7	7	7	7
g / C, Green / Cycle	0.10	0.49	0.49	0.09	0.48	0.48	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.25	0.25	0.04	0.38	0.38	0.13	0.05	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1792	1619	1800	1750	1039	1530	1430	1800	1530
c, Capacity [veh/h]	168	878	874	151	859	835	373	277	194	326	277
d1, Uniform Delay [s]	15.94	6.58	6.58	16.19	8.27	8.30	15.65	13.35	18.90	12.71	13.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.90	0.45	0.45	1.93	1.65	1.73	0.56	0.54	0.27	0.02	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.50	0.50	0.43	0.79	0.79	0.35	0.28	0.12	0.02	0.20
d, Delay for Lane Group [s/veh]	17.84	7.03	7.03	18.11	9.92	10.04	16.21	13.89	19.17	12.73	13.50
Lane Group LOS	B	A	A	B	A	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.61	1.58	1.58	0.53	3.23	3.18	0.96	0.50	0.19	0.03	0.35
50th-Percentile Queue Length [ft/ln]	15.24	39.59	39.43	13.26	80.76	79.62	23.88	12.57	4.78	0.75	8.78
95th-Percentile Queue Length [veh/ln]	1.10	2.85	2.84	0.96	5.81	5.73	1.72	0.90	0.34	0.05	0.63
95th-Percentile Queue Length [ft/ln]	27.44	71.27	70.98	23.88	145.36	143.31	42.98	22.62	8.61	1.36	15.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.84	7.03	7.03	18.11	9.97	10.04	16.21	16.21	13.89	19.17	12.73	13.50
Movement LOS	B	A	A	B	A	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.89			10.35			15.35			15.02		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.00											
Intersection LOS	B											
Intersection V/C	0.655											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	75	785	1046	60	34	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	785	1046	60	34	126
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	221	294	17	10	35
Total Analysis Volume [veh/h]	84	882	1175	67	38	142
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	16	104	88	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	23	16	16	6	6
g / C, Green / Cycle	0.11	0.66	0.46	0.46	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.05	0.26	0.35	0.35	0.02	0.09
s, saturation flow rate [veh/h]	1619	3427	1800	1766	1619	1530
c, Capacity [veh/h]	184	2254	823	807	272	257
d1, Uniform Delay [s]	14.27	2.72	7.75	7.83	12.20	13.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	0.11	1.44	1.58	0.23	1.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.39	0.75	0.77	0.14	0.55
d, Delay for Lane Group [s/veh]	16.03	2.83	9.19	9.41	12.43	14.98
Lane Group LOS	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.58	0.26	2.51	2.56	0.21	0.92
50th-Percentile Queue Length [ft/ln]	14.59	6.58	62.68	63.89	5.35	23.05
95th-Percentile Queue Length [veh/ln]	1.05	0.47	4.51	4.60	0.39	1.66
95th-Percentile Queue Length [ft/ln]	26.27	11.84	112.83	115.01	9.63	41.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.03	2.83	9.29	9.41	12.43	14.98
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.98		9.30		14.44	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.53					
Intersection LOS	A					
Intersection V/C	0.601					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	117	584	43	53	849	145	130	147	90	74	238	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	584	43	53	849	145	130	147	90	74	238	59
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	170	12	15	247	42	38	43	26	21	69	17
Total Analysis Volume [veh/h]	136	678	50	62	986	168	151	171	105	86	276	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	27	43	0	16	28	0	16	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	8	20	20	4	16	16	8	0	0	8	0	0
g / C, Green / Cycle	0.20	0.50	0.50	0.09	0.39	0.39	0.20	0.00	0.00	0.20	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.14	0.20	0.20	0.06	0.29	0.11	0.13	0.10	0.07	0.07	0.15	0.05
s, saturation flow rate [veh/h]	958	1800	1757	958	3427	1530	1121	1800	1530	1233	1800	1530
c, Capacity [veh/h]	319	894	873	217	1339	598	342	0	0	359	0	0
d1, Uniform Delay [s]	17.26	6.51	6.51	19.86	10.66	8.53	17.14	0.00	0.00	15.94	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	0.30	0.31	0.71	0.81	0.25	0.89	0.00	0.00	0.34	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

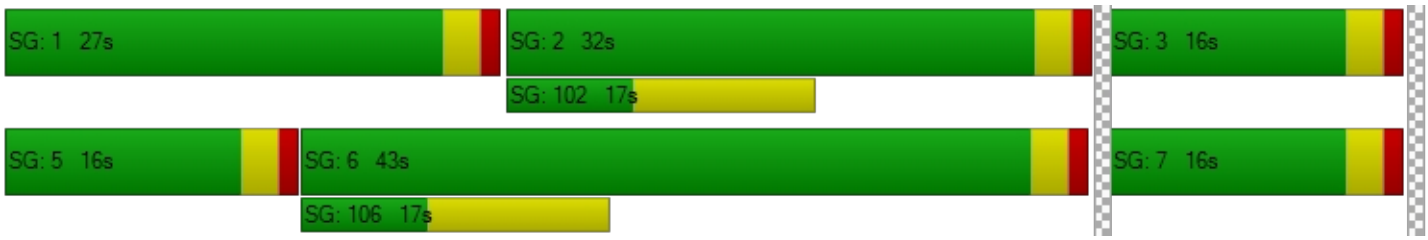
X, volume / capacity	0.43	0.41	0.41	0.29	0.74	0.28	0.44	0.00	0.00	0.24	0.00	0.00
d, Delay for Lane Group [s/veh]	18.17	6.81	6.82	20.57	11.46	8.78	18.04	0.00	0.00	16.28	0.00	0.00
Lane Group LOS	B	A	A	C	B	A	B	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.15	1.39	1.36	0.57	2.96	0.81	1.27	0.00	0.00	0.66	0.00	0.00
50th-Percentile Queue Length [ft/ln]	28.84	34.72	33.94	14.33	74.11	20.24	31.69	0.00	0.00	16.51	0.00	0.00
95th-Percentile Queue Length [veh/ln]	2.08	2.50	2.44	1.03	5.34	1.46	2.28	0.00	0.00	1.19	0.00	0.00
95th-Percentile Queue Length [ft/ln]	51.90	62.49	61.10	25.80	133.40	36.43	57.05	0.00	0.00	29.72	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.17	6.82	6.82	20.57	11.46	8.78	18.04	0.00	0.00	16.28	0.00	0.00
Movement LOS	B	A	A	C	B	A	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	8.61			11.56			6.38			3.25		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	8.72											
Intersection LOS	A											
Intersection V/C	0.702											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	297	11	48	731	316	152	33	33	3	38	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	297	11	48	731	316	152	33	33	3	38	31
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	79	3	13	194	84	40	9	9	1	10	8
Total Analysis Volume [veh/h]	57	315	12	51	776	335	161	35	35	3	40	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	50	0	60	92	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	15	15	3	14	14	7	7
g / C, Green / Cycle	0.09	0.44	0.44	0.08	0.43	0.43	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.03	0.32	0.33	0.16	0.04
s, saturation flow rate [veh/h]	1619	1800	1777	1619	1800	1618	1413	1717
c, Capacity [veh/h]	142	795	785	131	782	703	475	465
d1, Uniform Delay [s]	14.23	5.66	5.67	14.40	7.82	7.83	12.47	10.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.81	0.13	0.13	1.89	1.45	1.63	0.77	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

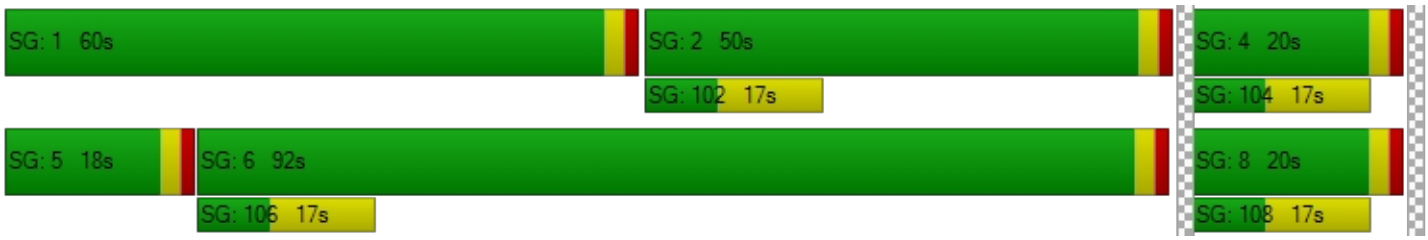
X, volume / capacity	0.40	0.21	0.21	0.39	0.75	0.75	0.49	0.16
d, Delay for Lane Group [s/veh]	16.05	5.79	5.80	16.29	9.26	9.46	13.25	11.09
Lane Group LOS	B	A	A	B	A	A	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.39	0.43	0.43	0.36	2.30	2.11	1.31	0.37
50th-Percentile Queue Length [ft/ln]	9.85	10.77	10.70	8.99	57.44	52.80	32.84	9.24
95th-Percentile Queue Length [veh/ln]	0.71	0.78	0.77	0.65	4.14	3.80	2.36	0.67
95th-Percentile Queue Length [ft/ln]	17.74	19.38	19.25	16.18	103.40	95.04	59.11	16.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.05	5.79	5.80	16.29	9.31	9.46	13.25	13.25	13.25	11.09	11.09	11.09
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.31			9.66			13.25			11.09		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.68											
Intersection LOS	A											
Intersection V/C	0.641											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro
Report File: C:\...\PME.pdf

Scenario 1 Existing Evening Peak Hour
10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.929	35.6	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.824	36.1	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.641	17.4	B
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.637	11.3	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Right	1.547	31.0	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.694	19.4	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	121.9	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.893	37.8	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Left	0.327	106.4	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	55.5	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	4.315	40.3	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.780	24.8	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.509	20.1	C
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.903	33.7	C
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.697	10.5	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.416	9.4	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.285	17.4	C
	Agua Mansa Rd (NS) at El						

24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.584	56.3	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.431	20.4	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.098	13.2	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.618	14.2	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.732	3.6	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	218.418	195.1	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.307	54.2	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.553	22.6	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.803	16.5	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.892	31.2	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.651	12.2	B
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.780	19.8	B
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.765	19.7	B
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.632	9.2	A
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.582	7.0	A
39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.709	8.4	A
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.780	16.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.929

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	300	1396	0	0	1014	625	0	0	0	283	4	527
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	1396	0	0	1014	625	0	0	0	283	4	527
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	362	0	0	263	162	0	0	0	73	1	137
Total Analysis Volume [veh/h]	311	1447	0	0	1051	648	0	0	0	293	4	546
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	31	90	0	0	59	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	27	87	58	58		37	37
g / C, Green / Cycle	0.21	0.67	0.44	0.44		0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.19	0.42	0.21	0.42		0.26	0.27
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1654	1530
c, Capacity [veh/h]	334	2300	2167	676		468	433
d1, Uniform Delay [s]	50.77	12.19	25.79	35.15		45.20	45.85
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	11.64	1.32	0.78	25.79		7.72	11.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.63	0.49	0.96		0.92	0.96
d, Delay for Lane Group [s/veh]	62.41	13.51	26.57	60.94		52.92	57.84
Lane Group LOS	E	B	C	E		D	E
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	11.02	11.68	7.85	24.24		14.37	14.49
50th-Percentile Queue Length [ft/ln]	275.39	292.11	196.31	606.11		359.26	362.24
95th-Percentile Queue Length [veh/ln]	16.46	17.29	12.45	32.32		20.59	20.73
95th-Percentile Queue Length [ft/ln]	411.46	432.25	311.20	807.99		514.68	518.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.41	13.51	0.00	0.00	26.57	60.94	0.00	0.00	0.00	52.92	52.92	56.68
Movement LOS	E	B			C	E				D	D	E
d_A, Approach Delay [s/veh]	22.16			39.68			0.00			55.33		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	35.59											
Intersection LOS	D											
Intersection V/C	0.929											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1059	377	390	911	0	664	2	171	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1059	377	390	911	0	664	2	171	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	278	99	102	239	0	174	1	45	0	0	0
Total Analysis Volume [veh/h]	0	1112	396	410	957	0	697	2	180	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	20	0	44	64	0	0	66	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	47	47	35	85	39	39	
g / C, Green / Cycle	0.36	0.36	0.27	0.65	0.30	0.30	
(v / s)_i Volume / Saturation Flow Rate	0.23	0.26	0.25	0.28	0.27	0.27	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1636	
c, Capacity [veh/h]	1778	555	436	2244	484	489	
d1, Uniform Delay [s]	34.20	35.67	46.55	10.77	43.53	44.02	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.68	7.65	10.28	0.60	5.77	7.27	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

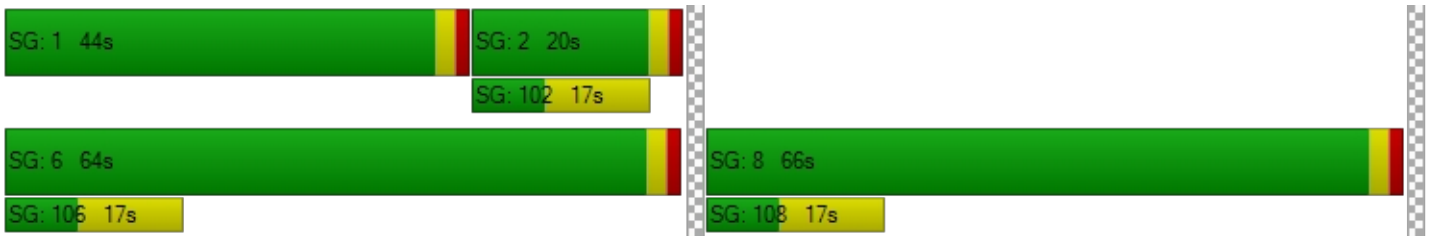
X, volume / capacity	0.63	0.71	0.94	0.43	0.89	0.92	
d, Delay for Lane Group [s/veh]	35.87	43.32	56.82	11.36	49.30	51.29	
Lane Group LOS	D	D	E	B	D	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.92	11.93	14.17	6.55	13.95	14.85	
50th-Percentile Queue Length [ft/ln]	248.06	298.24	354.14	163.65	348.73	371.25	
95th-Percentile Queue Length [veh/ln]	15.09	17.59	20.34	10.74	20.07	21.17	
95th-Percentile Queue Length [ft/ln]	377.21	439.85	508.45	268.54	501.85	529.25	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	35.87	43.32	56.82	11.36	0.00	50.05	51.29	51.29	0.00	0.00	0.00
Movement LOS		D	D	E	B		D	D	D			
d_A, Approach Delay [s/veh]	37.83			25.00			50.32			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	36.08											
Intersection LOS	D											
Intersection V/C	0.824											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	63	885	39	95	728	84	226	361	114	21	116	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	885	39	95	728	84	226	361	114	21	116	92
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	227	10	24	187	22	58	93	29	5	30	24
Total Analysis Volume [veh/h]	65	910	40	98	748	86	232	371	117	22	119	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	60	0	16	59	0	34	44	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	16	16	5	17	17	9	14	14	2	7	7
g / C, Green / Cycle	0.08	0.33	0.33	0.11	0.35	0.35	0.18	0.28	0.28	0.04	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.27	0.06	0.24	0.24	0.14	0.11	0.08	0.01	0.06	0.07
s, saturation flow rate [veh/h]	1619	1800	1773	1619	1800	1736	1619	3427	1530	1619	1800	1549
c, Capacity [veh/h]	137	601	592	171	639	616	296	960	429	61	242	208
d1, Uniform Delay [s]	21.57	14.94	14.94	21.04	13.46	13.46	19.25	14.36	13.87	23.20	19.72	19.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.54	2.46	2.50	3.00	1.20	1.24	4.52	0.26	0.34	3.58	1.34	1.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.80	0.80	0.57	0.66	0.66	0.78	0.39	0.27	0.36	0.46	0.50
d, Delay for Lane Group [s/veh]	24.11	17.40	17.44	24.03	14.65	14.70	23.77	14.62	14.21	26.79	21.06	21.65
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.75	4.47	4.41	1.12	3.51	3.40	2.62	1.48	0.92	0.29	1.14	1.10
50th-Percentile Queue Length [ft/ln]	18.73	111.85	110.36	27.94	87.87	84.92	65.46	37.06	23.06	7.24	28.60	27.42
95th-Percentile Queue Length [veh/ln]	1.35	7.94	7.86	2.01	6.33	6.11	4.71	2.67	1.66	0.52	2.06	1.97
95th-Percentile Queue Length [ft/ln]	33.71	198.58	196.50	50.28	158.16	152.86	117.83	66.70	41.51	13.04	51.49	49.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.11	17.42	17.44	24.03	14.67	14.70	23.77	14.62	14.21	26.79	21.10	21.65
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.85			15.66			17.50			21.85		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.38											
Intersection LOS	B											
Intersection V/C	0.641											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	97	875	55	58	708	52	61	146	102	35	101	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	875	55	58	708	52	61	146	102	35	101	33
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	237	15	16	192	14	17	40	28	9	27	9
Total Analysis Volume [veh/h]	105	948	60	63	767	56	66	158	111	38	109	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	78	0	13	71	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	13	13	3	12	12	9	9
g / C, Green / Cycle	0.13	0.38	0.38	0.09	0.35	0.35	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.06	0.28	0.28	0.04	0.23	0.23	0.20	0.11
s, saturation flow rate [veh/h]	1619	1800	1763	1619	1800	1757	1661	1596
c, Capacity [veh/h]	213	690	676	152	623	608	555	539
d1, Uniform Delay [s]	13.71	9.00	9.00	14.51	9.45	9.45	11.64	10.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	1.56	1.60	1.80	1.25	1.28	1.06	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.74	0.74	0.41	0.67	0.67	0.60	0.34
d, Delay for Lane Group [s/veh]	15.48	10.56	10.60	16.31	10.69	10.72	12.70	10.83
Lane Group LOS	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.70	2.36	2.32	0.44	1.98	1.94	1.87	0.89
50th-Percentile Queue Length [ft/ln]	17.41	59.08	58.05	11.11	49.52	48.48	46.64	22.30
95th-Percentile Queue Length [veh/ln]	1.25	4.25	4.18	0.80	3.57	3.49	3.36	1.61
95th-Percentile Queue Length [ft/ln]	31.34	106.34	104.48	20.00	89.13	87.27	83.96	40.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.48	10.58	10.60	16.31	10.71	10.72	12.70	12.70	12.70	10.83	10.83	10.83
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.04			11.11			12.70			10.83		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.27											
Intersection LOS	B											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.547

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	933	64	109	745	40	56	185	48	67	61	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	933	64	109	745	40	56	185	48	67	61	51
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	239	16	28	191	10	14	47	12	17	16	13
Total Analysis Volume [veh/h]	61	955	66	112	763	41	57	189	49	69	62	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	21	0	10	21	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	19	19	6	21	21	26	26	26	26
g / C, Green / Cycle	0.08	0.32	0.32	0.10	0.34	0.34	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.29	0.07	0.23	0.23	0.55	0.03	1.04	0.03
s, saturation flow rate [veh/h]	1619	1800	1759	1619	1800	1768	446	1530	126	1530
c, Capacity [veh/h]	123	571	559	162	614	603	267	662	146	662
d1, Uniform Delay [s]	26.68	19.65	19.65	26.17	16.85	16.85	15.28	10.00	19.76	10.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.04	20.13	20.52	5.18	5.50	5.59	12.67	0.05	16.96	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

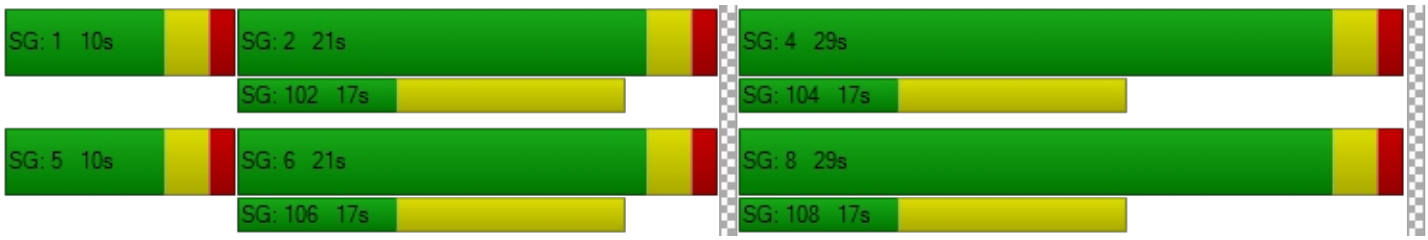
X, volume / capacity	0.49	0.90	0.90	0.69	0.66	0.66	0.92	0.07	0.90	0.08
d, Delay for Lane Group [s/veh]	29.71	39.78	40.17	31.35	22.34	22.44	27.95	10.04	36.72	10.07
Lane Group LOS	C	D	D	C	C	C	C	B	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.90	9.35	9.20	1.69	5.18	5.10	2.94	0.34	2.50	0.36
50th-Percentile Queue Length [ft/ln]	22.49	233.77	230.04	42.37	129.51	127.61	73.42	8.54	62.41	9.08
95th-Percentile Queue Length [veh/ln]	1.62	14.37	14.18	3.05	8.91	8.81	5.29	0.61	4.49	0.65
95th-Percentile Queue Length [ft/ln]	40.48	359.14	354.42	76.26	222.82	220.24	132.15	15.37	112.34	16.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.71	39.96	40.17	31.35	22.39	22.44	27.95	27.95	10.04	36.72	36.72	10.07
Movement LOS	C	D	D	C	C	C	C	C	B	D	D	B
d_A, Approach Delay [s/veh]	39.39			23.49			24.98			29.15		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	31.03											
Intersection LOS	C											
Intersection V/C	1.547											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1142	77	308	947	15	19	8	19	62	14	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	1142	77	308	947	15	19	8	19	62	14	154
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	295	20	80	245	4	5	2	5	16	4	40
Total Analysis Volume [veh/h]	12	1181	80	319	979	16	20	8	20	64	14	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	56	56	20	74	74	12	12	12
g / C, Green / Cycle	0.02	0.56	0.56	0.20	0.74	0.74	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.34	0.34	0.18	0.26	0.26	0.06	0.07	0.10
s, saturation flow rate [veh/h]	1810	1900	1858	1810	1900	1889	862	1126	1615
c, Capacity [veh/h]	37	1065	1041	362	1405	1398	154	200	194
d1, Uniform Delay [s]	48.35	14.56	14.58	38.90	4.60	4.60	40.04	41.80	43.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.87	2.48	2.55	7.05	0.70	0.71	1.14	1.23	8.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

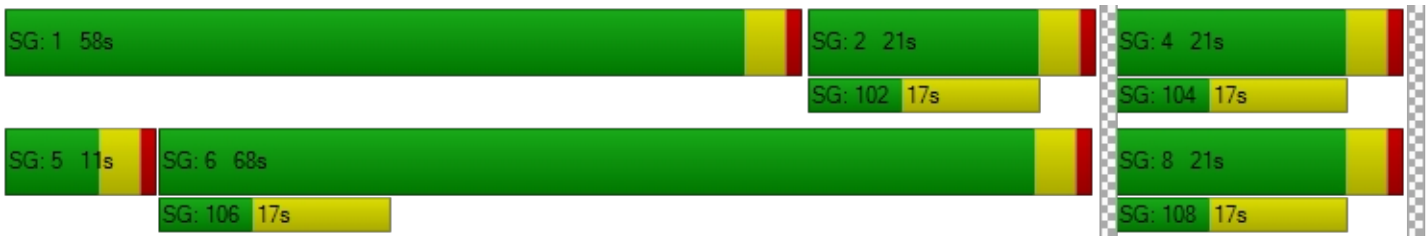
X, volume / capacity	0.32	0.60	0.60	0.88	0.35	0.36	0.31	0.39	0.82
d, Delay for Lane Group [s/veh]	53.22	17.04	17.13	45.95	5.30	5.31	41.17	43.03	51.40
Lane Group LOS	D	B	B	D	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.34	9.66	9.49	8.21	3.20	3.19	1.11	1.89	4.26
50th-Percentile Queue Length [ft/ln]	8.62	241.48	237.33	205.22	80.10	79.76	27.85	47.25	106.46
95th-Percentile Queue Length [veh/ln]	0.62	14.76	14.55	12.91	5.77	5.74	2.01	3.40	7.64
95th-Percentile Queue Length [ft/ln]	15.51	368.91	363.65	322.69	144.18	143.57	50.13	85.05	191.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.22	17.08	17.13	45.95	5.30	5.31	41.17	41.17	41.17	43.03	43.03	51.40
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.43			15.17			41.17			48.64		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	19.37											
Intersection LOS	B											
Intersection V/C	0.694											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	121.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	306	0	0	262	4	6	0	9	0	0	0
Total Analysis Volume [veh/h]	18	1223	0	0	1048	15	22	0	35	0	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.37	0.00	0.07	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.58	0.00	0.00	11.24	0.00	0.00	86.25	121.86	32.68	79.96	102.51	13.17
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.00	0.00	1.95	1.95	1.95	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	2.09	0.00	0.00	0.00	0.00	0.00	48.81	48.81	48.81	0.17	0.17	0.17
d_A, Approach Delay [s/veh]	0.15			0.00			53.36			13.17		
Approach LOS	A			A			F			B		
d_I, Intersection Delay [s/veh]	1.37											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	4	97	117	118	118	6	7	15	1	74	10	0
Total Analysis Volume [veh/h]	16	388	467	474	474	23	30	60	3	297	40	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	30	0	28	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	116	116	116	116	116	116	116	116	116	116
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	37	37	33	67	67	7	7	24	24
g / C, Green / Cycle	0.02	0.32	0.32	0.28	0.57	0.57	0.06	0.06	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.11	0.29	0.26	0.13	0.01	0.02	0.03	0.19	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	1820	1615
c, Capacity [veh/h]	44	1144	511	512	2080	928	104	108	374	332
d1, Uniform Delay [s]	55.70	30.38	38.15	40.40	12.06	10.63	52.41	53.32	44.94	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.93	0.17	6.90	7.67	0.06	0.01	1.52	4.90	8.04	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

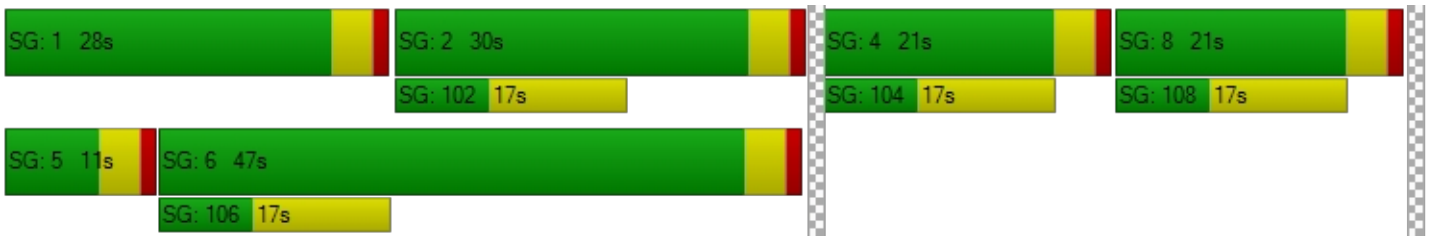
X, volume / capacity	0.36	0.34	0.91	0.93	0.23	0.02	0.29	0.58	0.90	0.00
d, Delay for Lane Group [s/veh]	60.64	30.55	45.06	48.07	12.12	10.64	53.93	58.23	52.99	0.00
Lane Group LOS	E	C	D	D	B	B	D	E	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.52	4.18	13.55	14.06	2.96	0.25	0.88	1.94	10.22	0.00
50th-Percentile Queue Length [ft/ln]	13.02	104.60	338.63	351.50	74.06	6.37	22.03	48.41	255.51	0.00
95th-Percentile Queue Length [veh/ln]	0.94	7.53	19.58	20.21	5.33	0.46	1.59	3.49	15.46	0.00
95th-Percentile Queue Length [ft/ln]	23.44	188.28	489.52	505.24	133.31	11.47	39.65	87.15	386.58	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.64	30.55	45.06	48.07	12.12	10.64	53.93	58.23	58.23	52.99	52.99	0.00
Movement LOS	E	C	D	D	B	B	D	E	E	D	D	A
d_A, Approach Delay [s/veh]	38.88			29.63			56.84			52.99		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	37.76											
Intersection LOS	D											
Intersection V/C	0.893											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	106.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.327

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	867	73	108	692	4	4	15	15	18	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	867	73	108	692	4	4	15	15	18	10	26
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	223	19	28	178	1	1	4	4	5	3	7
Total Analysis Volume [veh/h]	14	891	75	111	711	4	4	15	15	18	10	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.15	0.01	0.00	0.06	0.28	0.02	0.33	0.17	0.05
d_M, Delay for Movement [s/veh]	9.09	0.00	0.00	10.90	0.00	0.00	77.27	93.32	31.08	106.43	102.21	47.48
Movement LOS	A	A	A	B	A	A	F	F	D	F	F	E
95th-Percentile Queue Length [veh/ln]	0.05	0.02	0.00	0.52	0.26	0.00	1.44	1.44	1.44	2.50	2.50	2.50
95th-Percentile Queue Length [ft/ln]	1.19	0.60	0.00	13.12	6.56	0.00	35.89	35.89	35.89	62.42	62.42	62.42
d_A, Approach Delay [s/veh]	0.13			1.46			63.97			76.72		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	4.08											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	55.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	948	25	17	721	2	0	0	9	12	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	948	25	17	721	2	0	0	9	12	0	14
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	249	7	4	189	1	0	0	2	3	0	4
Total Analysis Volume [veh/h]	4	995	26	18	757	2	0	0	9	13	0	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.01	0.14	0.00	0.03
d_M, Delay for Movement [s/veh]	9.20	0.00	0.00	10.38	0.00	0.00	36.70	53.06	10.85	47.30	55.51	16.09
Movement LOS	A	A	A	B	A	A	E	F	B	E	F	C
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.08	0.04	0.00	0.04	0.04	0.04	0.58	0.58	0.58
95th-Percentile Queue Length [ft/ln]	0.35	0.17	0.00	1.90	0.95	0.00	1.10	1.10	1.10	14.47	14.47	14.47
d_A, Approach Delay [s/veh]	0.04			0.24			10.85			30.58		
Approach LOS	A			A			B			D		
d_I, Intersection Delay [s/veh]	0.64											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	40.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.315

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	816	42	15	635	15	30	17	20	54	16	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	816	42	15	635	15	30	17	20	54	16	9
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	222	11	4	173	4	8	5	5	15	4	2
Total Analysis Volume [veh/h]	49	889	46	16	692	16	33	19	22	59	17	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	28	0	11	28	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	34	34	3	31	31	51	51	51	51
g / C, Green / Cycle	0.05	0.34	0.34	0.03	0.31	0.31	0.51	0.51	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.25	0.01	0.19	0.19	1.22	0.01	3.54	0.01
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1885	43	1615	21	1615
c, Capacity [veh/h]	94	650	639	45	599	594	81	828	75	828
d1, Uniform Delay [s]	46.18	28.79	28.79	47.94	28.85	28.85	28.67	12.03	42.55	11.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	6.93	7.05	4.58	4.29	4.33	33.16	0.01	107.86	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

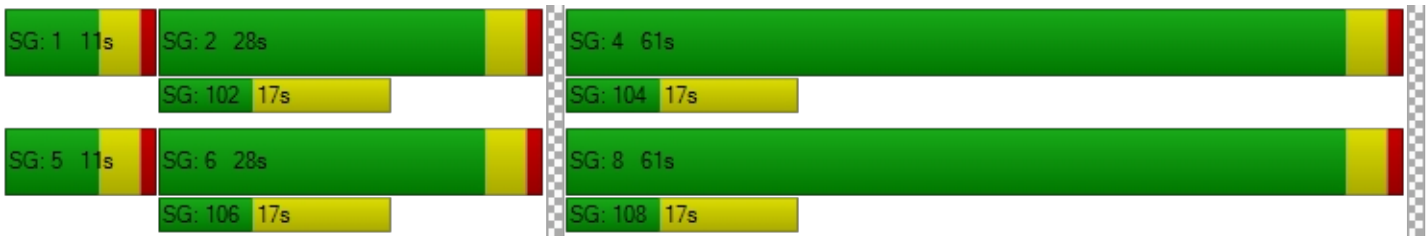
X, volume / capacity	0.52	0.73	0.73	0.35	0.59	0.59	0.64	0.03	1.01	0.01
d, Delay for Lane Group [s/veh]	50.57	35.72	35.83	52.52	33.13	33.17	61.82	12.05	150.41	11.95
Lane Group LOS	D	D	D	D	C	C	E	B	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.30	10.92	10.75	0.45	7.78	7.73	1.47	0.24	4.11	0.11
50th-Percentile Queue Length [ft/ln]	32.39	273.02	268.84	11.21	194.44	193.17	36.74	6.00	102.79	2.71
95th-Percentile Queue Length [veh/ln]	2.33	16.34	16.13	0.81	12.35	12.29	2.64	0.43	7.40	0.19
95th-Percentile Queue Length [ft/ln]	58.31	408.52	403.29	20.18	308.79	307.14	66.12	10.80	185.02	4.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.57	35.77	35.83	52.52	33.15	33.17	61.82	61.82	12.05	150.41	150.41	11.95
Movement LOS	D	D	D	D	C	C	E	E	B	F	F	B
d_A, Approach Delay [s/veh]	36.51			33.58			47.02			134.31		
Approach LOS	D			C			D			F		
d_I, Intersection Delay [s/veh]	40.29											
Intersection LOS	D											
Intersection V/C	4.315											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	868	0	0	806	25	29	0	134	456	96	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	868	0	0	806	25	29	0	134	456	96	53
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	231	0	0	215	7	8	0	36	121	26	14
Total Analysis Volume [veh/h]	71	924	0	0	858	27	31	0	143	486	102	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	23	0	21	0	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	82	82	82	82	82	82	82	82
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	32	32	32	32	9	9	29	29
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.11	0.11	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.11	0.26	0.23	0.24	0.02	0.09	0.32	0.03
s, saturation flow rate [veh/h]	638	3618	1900	1880	1810	1615	1825	1615
c, Capacity [veh/h]	197	1393	732	724	207	185	647	572
d1, Uniform Delay [s]	31.73	20.87	20.26	20.32	32.79	35.36	25.27	17.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.55	0.81	0.84	0.33	6.75	5.32	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

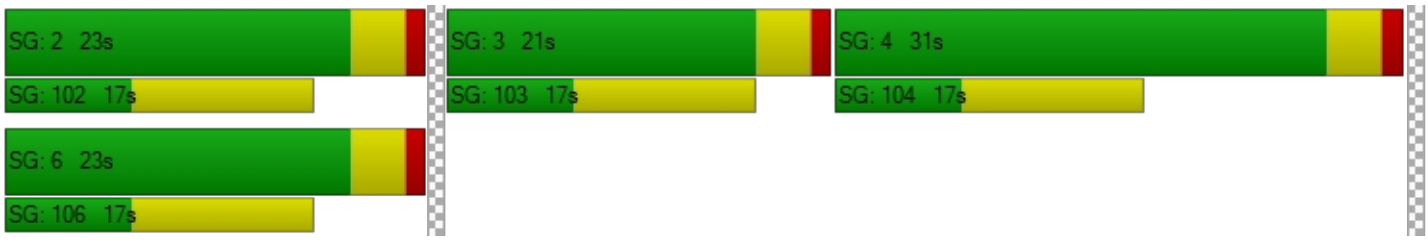
X, volume / capacity	0.36	0.66	0.60	0.61	0.15	0.77	0.91	0.10
d, Delay for Lane Group [s/veh]	32.84	21.42	21.07	21.16	33.12	42.11	30.59	17.82
Lane Group LOS	C	C	C	C	C	D	C	B
Critical Lane Group	No	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.34	7.01	6.58	6.61	0.56	3.06	11.22	0.70
50th-Percentile Queue Length [ft/ln]	33.47	175.21	164.54	165.18	14.11	76.48	280.39	17.44
95th-Percentile Queue Length [veh/ln]	2.41	11.35	10.79	10.82	1.02	5.51	16.71	1.26
95th-Percentile Queue Length [ft/ln]	60.24	283.75	269.72	270.56	25.40	137.67	417.69	31.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.84	21.42	0.00	0.00	21.11	21.16	33.12	0.00	42.11	30.59	30.59	17.82
Movement LOS	C	C			C	C	C		D	C	C	B
d_A, Approach Delay [s/veh]	22.23			21.12			40.51			29.48		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	24.78											
Intersection LOS	C											
Intersection V/C	0.780											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	971	916	446	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	971	916	446	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	257	242	118	0	0
Total Analysis Volume [veh/h]	243	1026	968	471	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.51	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	20.08	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	A	A	A		
95th-Percentile Queue Length [veh/ln]	2.83	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	70.81	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	3.84		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.80					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.903

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	593	292	83	826	0	608	35	374	13	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	593	292	83	826	0	608	35	374	13	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	158	78	22	220	0	162	9	100	3	0	1
Total Analysis Volume [veh/h]	0	632	311	88	880	0	647	37	398	14	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	22	0	11	33	0	0	21	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	6	31	30	30	2	2
g / C, Green / Cycle	0.28	0.28	0.08	0.41	0.40	0.40	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.25	0.28	0.05	0.24	0.38	0.25	0.01	0.00
s, saturation flow rate [veh/h]	1900	1702	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	528	473	142	1483	727	647	53	48
d1, Uniform Delay [s]	26.03	27.07	33.48	17.27	21.64	17.89	35.62	35.43
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.09	40.66	4.30	1.76	6.79	0.96	2.56	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

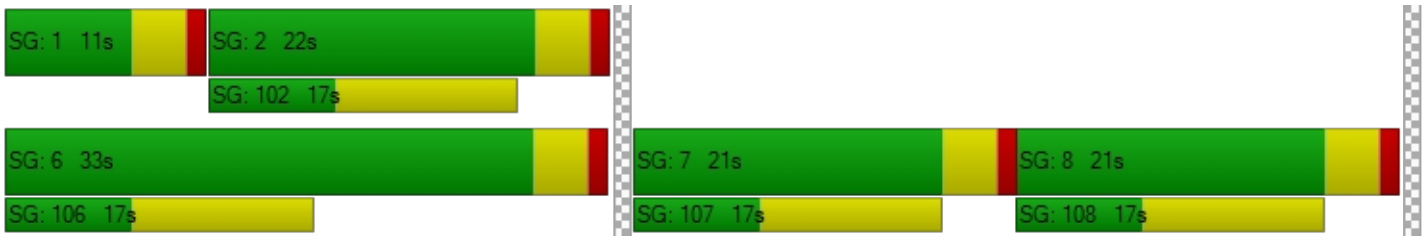
X, volume / capacity	0.89	1.00	0.62	0.59	0.94	0.62	0.26	0.08
d, Delay for Lane Group [s/veh]	46.12	67.73	37.78	19.02	28.43	18.84	38.18	36.17
Lane Group LOS	D	E	D	B	C	B	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.59	13.29	1.68	5.85	11.89	5.23	0.28	0.08
50th-Percentile Queue Length [ft/ln]	264.73	332.25	41.99	146.24	297.21	130.77	7.07	1.99
95th-Percentile Queue Length [veh/ln]	15.93	19.27	3.02	9.82	17.54	8.98	0.51	0.14
95th-Percentile Queue Length [ft/ln]	398.15	481.72	75.59	245.40	438.58	224.54	12.72	3.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	51.61	67.73	37.78	19.02	0.00	28.43	28.43	18.84	38.18	0.00	36.17
Movement LOS		D	E	D	B		C	C	B	D		D
d_A, Approach Delay [s/veh]	56.92			20.73			24.90			37.73		
Approach LOS	E			C			C			D		
d_I, Intersection Delay [s/veh]	33.67											
Intersection LOS	C											
Intersection V/C	0.903											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.697

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	560	61	174	924	153	102	55	12	12	34	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	560	61	174	924	153	102	55	12	12	34	70
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	146	16	46	242	40	27	14	3	3	9	18
Total Analysis Volume [veh/h]	32	586	64	182	967	160	107	58	13	13	36	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	9	9	6	13	13	6	6	6
g / C, Green / Cycle	0.05	0.27	0.27	0.17	0.39	0.39	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.04	0.10	0.27	0.10	0.16	0.03	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1107	1831	1615
c, Capacity [veh/h]	101	994	444	314	1421	634	385	488	310
d1, Uniform Delay [s]	15.15	10.47	9.14	12.67	8.40	6.83	13.60	11.19	11.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.78	0.56	0.15	1.69	0.58	0.21	0.86	0.09	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

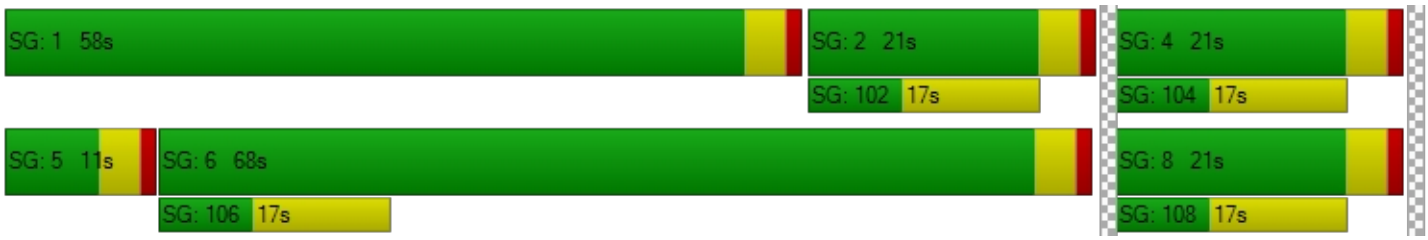
X, volume / capacity	0.32	0.59	0.14	0.58	0.68	0.25	0.46	0.10	0.24
d, Delay for Lane Group [s/veh]	16.92	11.03	9.29	14.36	8.98	7.04	14.46	11.27	11.80
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.24	1.42	0.27	1.11	1.93	0.53	1.11	0.24	0.38
50th-Percentile Queue Length [ft/ln]	6.02	35.55	6.86	27.86	48.34	13.15	27.87	6.06	9.58
95th-Percentile Queue Length [veh/ln]	0.43	2.56	0.49	2.01	3.48	0.95	2.01	0.44	0.69
95th-Percentile Queue Length [ft/ln]	10.84	63.98	12.35	50.14	87.01	23.67	50.16	10.90	17.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.92	11.03	9.29	14.36	8.98	7.04	14.46	14.46	14.46	11.27	11.27	11.80
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.14			9.49			14.46			11.59		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.48											
Intersection LOS	B											
Intersection V/C	0.697											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.416

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	0	65	104	380	0	0	211	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	31	0	65	104	380	0	0	211	60
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	8	0	17	28	101	0	0	56	16
Total Analysis Volume [veh/h]	0	0	0	33	0	69	111	404	0	0	224	64
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	21	0	0	17	48	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	R	L	C	C	R
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	4	4	4	15	6	6
g / C, Green / Cycle	0.00	0.13	0.13	0.14	0.48	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.04	0.06	0.21	0.12	0.04
s, saturation flow rate [veh/h]	1900	1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]	1	245	219	258	911	397	337
d1, Uniform Delay [s]	0.00	11.88	12.18	12.22	5.37	11.07	10.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.25	0.82	1.13	0.34	1.26	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

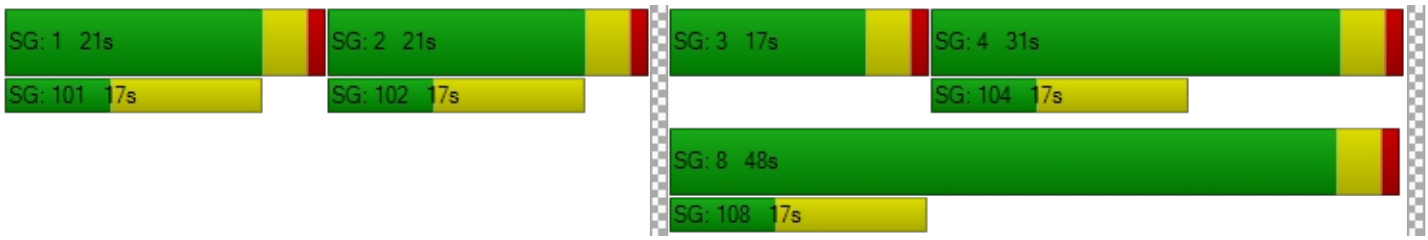
X, volume / capacity	0.00	0.13	0.32	0.43	0.44	0.56	0.19
d, Delay for Lane Group [s/veh]	0.00	12.13	13.00	13.36	5.71	12.33	10.44
Lane Group LOS	A	B	B	B	A	B	B
Critical Lane Group	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.00	0.17	0.38	0.62	0.91	1.14	0.29
50th-Percentile Queue Length [ft/ln]	0.00	4.27	9.49	15.39	22.79	28.48	7.19
95th-Percentile Queue Length [veh/ln]	0.00	0.31	0.68	1.11	1.64	2.05	0.52
95th-Percentile Queue Length [ft/ln]	0.00	7.68	17.08	27.70	41.02	51.27	12.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.13	0.00	13.00	13.36	5.71	0.00	0.00	12.33	10.44
Movement LOS	A	A	A	B		B	B	A			B	B
d_A, Approach Delay [s/veh]	0.00			12.72			7.36			11.91		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	9.41											
Intersection LOS	A											
Intersection V/C	0.416											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.285

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	1	1	3	4	5	7	314	89	0	160	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	1	1	3	4	5	7	314	89	0	160	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	0	0	1	1	1	2	87	25	0	44	3
Total Analysis Volume [veh/h]	116	1	1	3	4	6	8	347	98	0	177	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.29	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.39	17.26	14.02	13.86	14.39	9.34	7.59	0.00	0.00	8.20	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.18	1.18	1.18	0.08	0.08	0.08	0.02	0.02	0.02	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.52	29.52	29.52	1.88	1.88	1.88	0.38	0.38	0.38	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.36			11.93			0.13			0.00		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	2.93											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	56.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	824	408	78	89	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	824	408	78	89	30
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	212	105	20	23	0
Total Analysis Volume [veh/h]	36	847	419	80	91	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.58	0.00
d_M, Delay for Movement [s/veh]	8.46	0.00	0.00	0.00	56.34	10.94
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	3.06	0.00
95th-Percentile Queue Length [ft/ln]	2.60	0.00	0.00	0.00	76.49	0.00
d_A, Approach Delay [s/veh]	0.35		0.00		56.34	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	3.69					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	20.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	723	21	44	359	60	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	723	21	44	359	60	167
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	189	5	11	94	16	44
Total Analysis Volume [veh/h]	755	22	46	375	63	175
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.05	0.00	0.14	0.43
d_M, Delay for Movement [s/veh]	0.00	0.00	9.49	0.00	14.51	20.42
Movement LOS	A	A	A	A	B	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.17	0.00	0.49	2.12
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.29	0.00	12.36	52.95
d_A, Approach Delay [s/veh]	0.00		1.04		18.86	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.43					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.098

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	496	389	23	39	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	496	389	23	39	79
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	153	120	7	12	24
Total Analysis Volume [veh/h]	98	612	480	28	48	98
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.00	0.00	0.10	0.13
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	13.16	10.38
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.30	0.00	0.00	0.00	0.32	0.44
95th-Percentile Queue Length [ft/ln]	7.56	0.00	0.00	0.00	8.11	10.93
d_A, Approach Delay [s/veh]	1.20		0.00		11.29	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.83					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	348	160	75	390	9	9	6	17	80	5	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	348	160	75	390	9	9	6	17	80	5	224
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	108	50	23	122	3	3	2	5	25	2	70
Total Analysis Volume [veh/h]	15	434	200	94	486	11	11	7	21	100	6	279
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	31	0	16	35	0	11	36	0	17	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	8	8	4	11	11	1	5	5	5	9	9
g / C, Green / Cycle	0.03	0.21	0.21	0.12	0.30	0.30	0.02	0.13	0.13	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.12	0.05	0.13	0.01	0.01	0.00	0.01	0.06	0.00	0.17
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	51	753	336	214	1081	483	38	241	205	222	434	369
d1, Uniform Delay [s]	17.99	13.45	13.51	15.48	10.72	9.35	18.21	14.45	14.58	15.38	11.27	13.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.21	0.70	1.68	1.41	0.29	0.02	4.14	0.05	0.22	1.43	0.01	3.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.58	0.59	0.44	0.45	0.02	0.29	0.03	0.10	0.45	0.01	0.76
d, Delay for Lane Group [s/veh]	21.20	14.15	15.19	16.88	11.02	9.37	22.34	14.50	14.80	16.81	11.28	16.75
Lane Group LOS	C	B	B	B	B	A	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.15	1.40	1.38	0.71	1.29	0.05	0.12	0.05	0.14	0.75	0.03	2.07
50th-Percentile Queue Length [ft/ln]	3.87	34.98	34.62	17.74	32.23	1.29	3.12	1.18	3.62	18.79	0.82	51.73
95th-Percentile Queue Length [veh/ln]	0.28	2.52	2.49	1.28	2.32	0.09	0.22	0.08	0.26	1.35	0.06	3.72
95th-Percentile Queue Length [ft/ln]	6.97	62.97	62.31	31.94	58.01	2.32	5.61	2.12	6.52	33.82	1.47	93.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.20	14.15	15.19	16.88	11.02	9.37	22.34	14.50	14.80	16.81	11.28	16.75
Movement LOS	C	B	B	B	B	A	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.63			11.92			16.87			16.68		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.20											
Intersection LOS	B											
Intersection V/C	0.618											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	580	70	94	371	56	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	580	70	94	371	56	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	157	19	25	100	15	9
Total Analysis Volume [veh/h]	626	76	102	401	60	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	60	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.39	0.39	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.17	0.05	0.13	0.21	0.06	0.02
s, saturation flow rate [veh/h]	3618	1615	812	1900	999	1615
c, Capacity [veh/h]	1403	626	406	0	474	261
d1, Uniform Delay [s]	4.02	3.49	8.87	0.00	8.20	6.39
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.09	1.48	0.00	0.12	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.12	0.25	0.00	0.13	0.15
d, Delay for Lane Group [s/veh]	4.25	3.58	10.36	0.00	8.32	6.64
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	0.02	0.40	0.00	0.12	0.07
50th-Percentile Queue Length [ft/ln]	2.12	0.59	10.03	0.00	3.10	1.66
95th-Percentile Queue Length [veh/ln]	0.15	0.04	0.72	0.00	0.22	0.12
95th-Percentile Queue Length [ft/ln]	3.81	1.06	18.06	0.00	5.58	2.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.25	3.58	10.36	0.00	8.32	6.64
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.17		2.10		7.67	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.64					
Intersection LOS	A					
Intersection V/C	0.732					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	195.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	218.418

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	39	0	83	132	118	1	0	120	43
Total Analysis Volume [veh/h]	3	1	1	155	1	333	526	471	4	1	481	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	61	0	0	61	0	18	28	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	57	57	14	31	31	0	17	17
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.14	0.31	0.31	0.00	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.18	0.00	191.78	0.21	0.29	0.13	0.00	0.00	0.13	0.11
s, saturation flow rate [veh/h]	22	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	76	920	72	920	256	1115	498	3	610	272
d1, Uniform Delay [s]	25.13	9.26	49.81	11.66	42.92	27.51	23.99	49.84	39.87	38.67
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.00	564.74	0.24	476.18	1.18	0.03	40.29	10.00	10.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

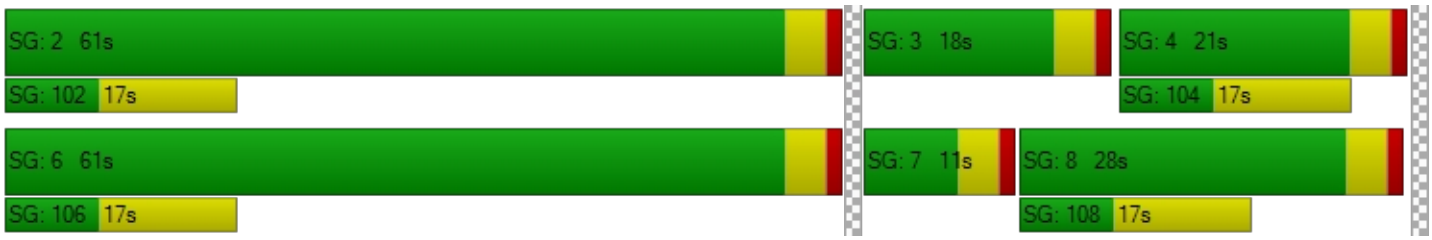
X, volume / capacity	0.05	0.00	2.16	0.36	2.05	0.42	0.01	0.29	0.79	0.63
d, Delay for Lane Group [s/veh]	25.42	9.26	614.55	11.89	519.10	28.68	24.01	90.13	49.87	49.19
Lane Group LOS	C	A	F	B	F	C	C	F	D	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.01	13.13	3.86	40.18	4.60	0.07	0.06	6.45	4.66
50th-Percentile Queue Length [ft/ln]	1.72	0.23	328.24	96.57	1004.46	115.11	1.74	1.59	161.20	116.45
95th-Percentile Queue Length [veh/ln]	0.12	0.02	23.63	6.95	63.06	8.12	0.13	0.11	10.61	8.20
95th-Percentile Queue Length [ft/ln]	3.09	0.41	590.83	173.83	1576.43	203.08	3.13	2.87	265.32	204.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.42	25.42	9.26	614.55	614.55	11.89	519.10	28.68	24.01	90.13	49.87	49.19
Movement LOS	C	C	A	F	F	B	F	C	C	F	D	D
d_A, Approach Delay [s/veh]	22.18			204.15			286.36			49.76		
Approach LOS	C			F			F			D		
d_I, Intersection Delay [s/veh]	195.10											
Intersection LOS	F											
Intersection V/C	218.418											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	54.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.307

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	658	840	54	30	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	658	840	54	30	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	175	224	14	8	2
Total Analysis Volume [veh/h]	21	701	895	58	32	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.31	0.03
d_M, Delay for Movement [s/veh]	10.08	0.00	0.00	0.00	54.17	16.27
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.00	1.18	0.09
95th-Percentile Queue Length [ft/ln]	2.22	0.00	0.00	0.00	29.41	2.34
d_A, Approach Delay [s/veh]	0.29		0.00		45.15	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	1.23					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	637	283	81	857	0	3	20	138	322	5	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	637	283	81	857	0	3	20	138	322	5	54
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	173	77	22	233	0	1	5	38	88	1	15
Total Analysis Volume [veh/h]	51	693	308	88	933	0	3	22	150	350	5	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	11	21	0	0	47	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	54	70	6	55	55	11	11	13	13	13
g / C, Green / Cycle	0.05	0.54	0.70	0.06	0.55	0.55	0.11	0.11	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.19	0.05	0.25	0.25	0.01	0.09	0.10	0.10	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1889	1615	1810	1812	1615
c, Capacity [veh/h]	96	1937	1133	116	1038	1038	216	185	228	229	204
d1, Uniform Delay [s]	46.14	13.35	5.50	46.05	13.65	13.65	39.75	43.24	42.34	42.34	39.64
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.47	0.52	0.59	9.73	0.31	0.31	0.24	8.27	5.61	5.61	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

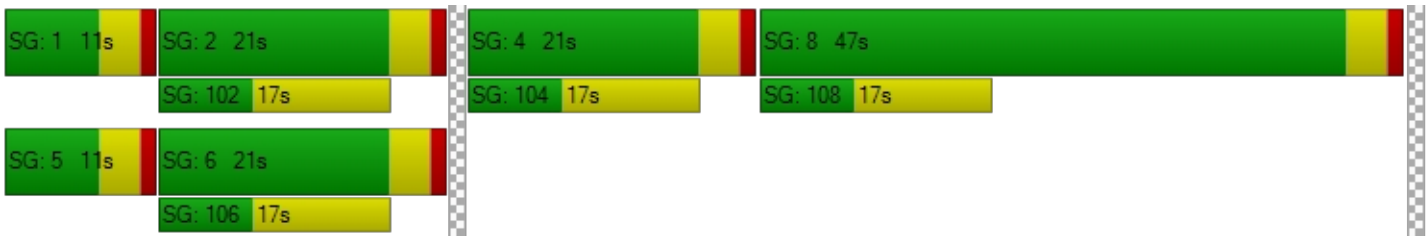
X, volume / capacity	0.53	0.36	0.27	0.76	0.45	0.45	0.12	0.81	0.78	0.78	0.29
d, Delay for Lane Group [s/veh]	50.61	13.87	6.10	55.78	13.95	13.95	39.98	51.50	47.95	47.94	40.41
Lane Group LOS	D	B	A	E	B	B	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.35	4.43	2.24	2.45	6.10	6.10	0.56	4.02	4.56	4.57	1.35
50th-Percentile Queue Length [ft/ln]	33.71	110.82	56.07	61.29	152.38	152.38	14.11	100.40	114.09	114.22	33.85
95th-Percentile Queue Length [veh/ln]	2.43	7.89	4.04	4.41	10.14	10.14	1.02	7.23	8.07	8.07	2.44
95th-Percentile Queue Length [ft/ln]	60.69	197.14	100.92	110.32	253.60	253.60	25.40	180.72	201.67	201.86	60.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.61	13.87	6.10	55.78	13.95	13.95	39.98	39.98	51.50	47.95	47.94	40.41
Movement LOS	D	B	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.38			17.56			49.86			46.87		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.59											
Intersection LOS	C											
Intersection V/C	0.553											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	476	360	0	0	1107	185	0	0	0	88	0	586
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	476	360	0	0	1107	185	0	0	0	88	0	586
Peak Hour Factor	0.9550	0.9550	0.8760	0.8760	0.9550	0.9550	0.8760	0.8760	0.8760	0.9550	0.8760	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	125	94	0	0	290	48	0	0	0	23	0	0
Total Analysis Volume [veh/h]	498	377	0	0	1159	194	0	0	0	92	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	42	79	0	0	37	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	62	62	62	62		62	62
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	19	48	25	25		6	6
g / C, Green / Cycle	0.31	0.78	0.40	0.40		0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.28	0.10	0.32	0.12		0.05	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	570	2823	1449	647		163	146
d1, Uniform Delay [s]	20.00	1.66	16.32	12.61		26.93	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	4.39	0.02	1.06	0.26		3.03	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

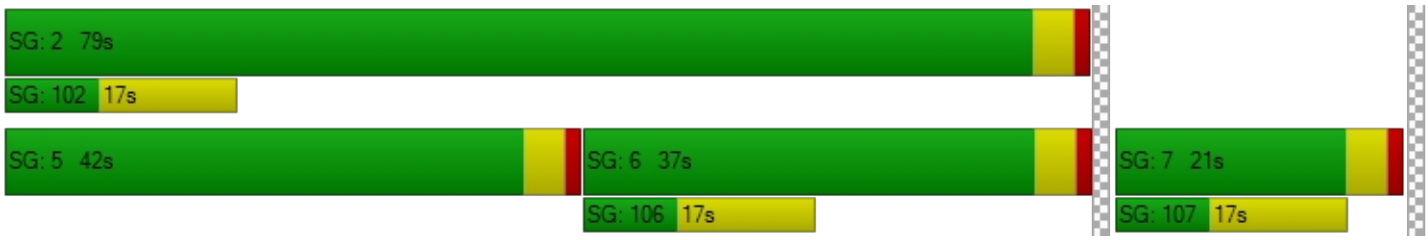
X, volume / capacity	0.87	0.13	0.80	0.30		0.56	0.00
d, Delay for Lane Group [s/veh]	24.39	1.69	17.38	12.87		29.96	0.00
Lane Group LOS	C	A	B	B		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	6.78	0.19	6.51	1.67		1.37	0.00
50th-Percentile Queue Length [ft/ln]	169.47	4.86	162.75	41.86		34.21	0.00
95th-Percentile Queue Length [veh/ln]	11.05	0.35	10.69	3.01		2.46	0.00
95th-Percentile Queue Length [ft/ln]	276.22	8.74	267.36	75.35		61.57	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.39	1.69	0.00	0.00	17.38	12.87	0.00	0.00	0.00	29.96	0.00	0.00
Movement LOS	C	A			B	B				C		A
d_A, Approach Delay [s/veh]	14.61			16.74			0.00			29.96		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.46											
Intersection LOS	B											
Intersection V/C	0.803											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.892

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	696	89	495	709	0	146	0	800	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	696	89	495	709	0	146	0	800	0	0	0
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	184	24	131	187	0	39	0	211	0	0	0
Total Analysis Volume [veh/h]	0	736	94	523	749	0	154	0	846	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	27	0	36	63	0	37	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	103	103	103	103	103	103	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	24	24	32	61	35	35	
g / C, Green / Cycle	0.24	0.24	0.31	0.59	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.06	0.29	0.21	0.09	0.30	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	855	382	566	2127	605	957	
d1, Uniform Delay [s]	37.85	32.02	34.32	11.07	25.02	32.51	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.70	0.33	6.90	0.10	0.22	2.95	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

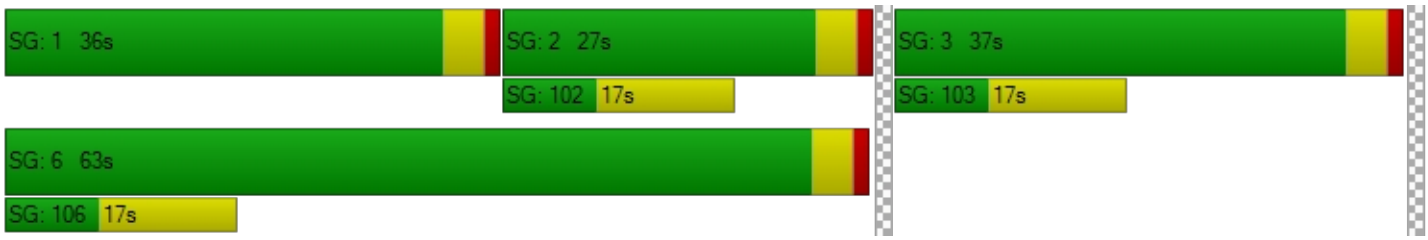
X, volume / capacity	0.86	0.25	0.92	0.35	0.25	0.88	
d, Delay for Lane Group [s/veh]	40.55	32.35	41.21	11.17	25.24	35.46	
Lane Group LOS	D	C	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.11	1.93	13.46	4.25	2.76	10.12	
50th-Percentile Queue Length [ft/ln]	227.68	48.34	336.45	106.21	69.09	253.11	
95th-Percentile Queue Length [veh/ln]	14.06	3.48	19.47	7.63	4.97	15.34	
95th-Percentile Queue Length [ft/ln]	351.41	87.01	486.86	190.71	124.37	383.57	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	40.55	32.35	41.21	11.17	0.00	25.24	0.00	35.46	0.00	0.00	0.00
Movement LOS		D	C	D	B		C		D			
d_A, Approach Delay [s/veh]	39.62			23.52			33.88			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	31.17											
Intersection LOS	C											
Intersection V/C	0.892											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	328	1373	0	0	1013	367	0	0	0	356	8	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	328	1373	0	0	1013	367	0	0	0	356	8	566
Peak Hour Factor	0.9740	0.9740	0.8170	0.8170	0.9740	0.9740	0.8170	0.8170	0.8170	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	352	0	0	260	94	0	0	0	91	2	145
Total Analysis Volume [veh/h]	337	1410	0	0	1040	377	0	0	0	366	8	581
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	28	83	0	0	55	0	0	0	0	0	47	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	49	49	49	49		49	49	49
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	8	29	18	18		14	14	14
g / C, Green / Cycle	0.17	0.59	0.36	0.36		0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.11	0.29	0.16	0.25		0.19	0.21	0.21
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1566	1530
c, Capacity [veh/h]	496	2889	2357	552		468	452	442
d1, Uniform Delay [s]	19.23	5.82	11.96	13.34		15.36	15.68	15.77
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	0.13	0.13	1.51		1.59	2.13	2.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.49	0.44	0.68		0.66	0.72	0.73
d, Delay for Lane Group [s/veh]	20.87	5.95	12.09	14.85		16.95	17.82	18.12
Lane Group LOS	C	A	B	B		B	B	B
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.72	1.82	1.82	3.15		2.80	3.05	3.08
50th-Percentile Queue Length [ft/ln]	43.03	45.60	45.58	78.66		69.90	76.17	76.95
95th-Percentile Queue Length [veh/ln]	3.10	3.28	3.28	5.66		5.03	5.48	5.54
95th-Percentile Queue Length [ft/ln]	77.45	82.09	82.05	141.58		125.81	137.11	138.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.87	5.95	0.00	0.00	12.09	14.85	0.00	0.00	0.00	17.07	17.82	17.98
Movement LOS	C	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	8.83			12.82			0.00			17.64		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	12.25											
Intersection LOS	B											
Intersection V/C	0.651											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1129	498	412	951	0	627	2	319	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1129	498	412	951	0	627	2	319	0	0	0
Peak Hour Factor	0.8530	0.9720	0.9720	0.9720	0.9720	0.8530	0.9720	0.9720	0.9720	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	290	128	106	245	0	161	1	82	0	0	0
Total Analysis Volume [veh/h]	0	1162	512	424	978	0	645	2	328	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	64	0	27	91	0	0	39	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	75	75	75	75	75	75	75	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	33	33	14	49	20	20	20	
g / C, Green / Cycle	0.43	0.43	0.18	0.66	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.33	0.36	0.14	0.29	0.19	0.19	0.21	
s, saturation flow rate [veh/h]	3427	1549	2959	3427	1619	1715	1530	
c, Capacity [veh/h]	1491	674	537	2249	427	453	404	
d1, Uniform Delay [s]	17.80	18.76	29.41	6.22	25.24	25.30	25.93	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.77	2.68	2.65	0.13	2.43	2.38	3.98	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.83	0.79	0.43	0.73	0.74	0.81	
d, Delay for Lane Group [s/veh]	18.57	21.44	32.07	6.35	27.68	27.68	29.90	
Lane Group LOS	B	C	C	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.52	8.26	3.71	2.97	5.12	5.47	5.65	
50th-Percentile Queue Length [ft/ln]	188.02	206.53	92.70	74.32	127.99	136.84	141.23	
95th-Percentile Queue Length [veh/ln]	12.02	12.98	6.67	5.35	8.83	9.31	9.55	
95th-Percentile Queue Length [ft/ln]	300.46	324.38	166.86	133.77	220.76	232.76	238.69	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	18.68	21.44	32.07	6.35	0.00	27.68	27.68	29.88	0.00	0.00	0.00
Movement LOS		B	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	19.52			14.13			28.43			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.80											
Intersection LOS	B											
Intersection V/C	0.780											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	46	1199	23	32	1001	224	377	72	146	40	17	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	1199	23	32	1001	224	377	72	146	40	17	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	319	6	9	266	60	100	19	39	11	5	8
Total Analysis Volume [veh/h]	49	1274	24	34	1064	238	401	77	155	43	18	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	50	0	43	83	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	30	30	3	29	29	25	25	25	25	25	25
g / C, Green / Cycle	0.06	0.44	0.44	0.05	0.43	0.43	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.36	0.36	0.02	0.37	0.37	0.29	0.04	0.10	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1788	1619	1800	1688	1376	1800	1530	1167	1800	1530
c, Capacity [veh/h]	102	801	795	80	776	728	559	668	567	422	668	567
d1, Uniform Delay [s]	30.21	16.12	16.13	30.80	17.19	17.28	21.29	13.80	14.70	18.53	13.35	13.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.44	2.06	2.08	3.51	2.99	3.37	1.74	0.08	0.26	0.10	0.02	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

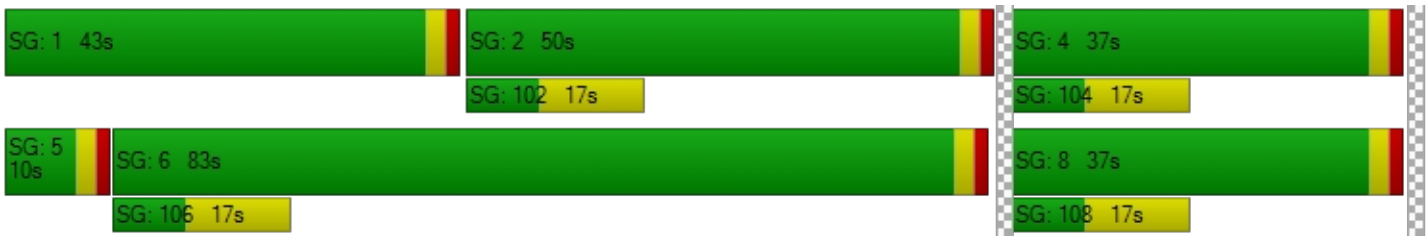
X, volume / capacity	0.48	0.81	0.81	0.42	0.86	0.87	0.72	0.12	0.27	0.10	0.03	0.06
d, Delay for Lane Group [s/veh]	33.65	18.18	18.22	34.31	20.18	20.66	23.03	13.88	14.96	18.63	13.36	13.54
Lane Group LOS	C	B	B	C	C	C	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.83	8.04	8.00	0.59	8.83	8.47	5.68	0.72	1.55	0.49	0.16	0.29
50th-Percentile Queue Length [ft/ln]	20.76	200.97	200.08	14.76	220.80	211.67	141.99	17.97	38.78	12.19	4.06	7.32
95th-Percentile Queue Length [veh/ln]	1.49	12.69	12.64	1.06	13.71	13.24	9.59	1.29	2.79	0.88	0.29	0.53
95th-Percentile Queue Length [ft/ln]	37.37	317.22	316.06	26.57	342.64	330.97	239.70	32.34	69.81	21.95	7.30	13.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.65	18.20	18.22	34.31	20.36	20.66	23.03	13.88	14.96	18.63	13.36	13.54
Movement LOS	C	B	B	C	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.76			20.77			19.94			15.86		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.69											
Intersection LOS	B											
Intersection V/C	0.765											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	1166	28	25	1083	90	98	2	64	33	10	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	1166	28	25	1083	90	98	2	64	33	10	57
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	311	7	7	289	24	26	1	17	9	3	15
Total Analysis Volume [veh/h]	90	1244	30	27	1156	96	105	2	68	35	11	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	61	49	0	61	49	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	18	18	2	16	16	6	6	6	6	6
g / C, Green / Cycle	0.12	0.53	0.53	0.05	0.46	0.46	0.17	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.36	0.36	0.02	0.35	0.35	0.12	0.04	0.02	0.01	0.04
s, saturation flow rate [veh/h]	1619	1800	1785	1619	1800	1752	925	1530	1437	1800	1530
c, Capacity [veh/h]	191	951	943	76	823	801	359	258	207	303	258
d1, Uniform Delay [s]	14.47	6.06	6.07	16.23	7.99	8.00	15.05	12.72	17.57	12.22	12.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.80	0.83	0.84	2.77	1.56	1.62	0.46	0.54	0.38	0.05	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

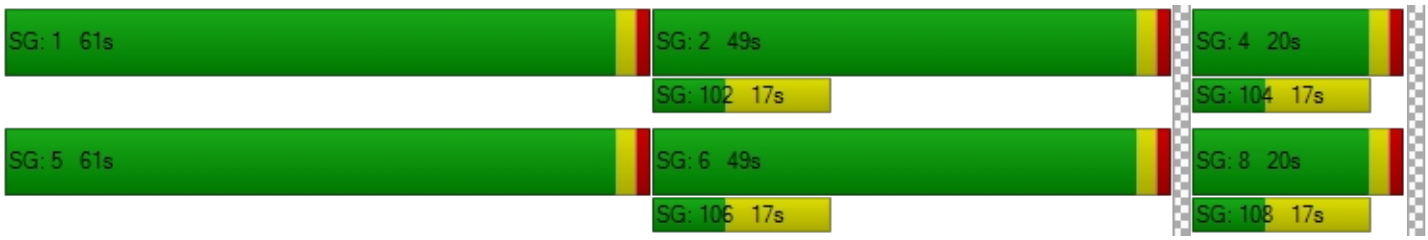
X, volume / capacity	0.47	0.67	0.67	0.35	0.77	0.77	0.30	0.26	0.17	0.04	0.24
d, Delay for Lane Group [s/veh]	16.27	6.90	6.91	19.00	9.54	9.61	15.51	13.25	17.96	12.27	13.12
Lane Group LOS	B	A	A	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.64	1.93	1.92	0.23	2.72	2.67	0.72	0.41	0.27	0.06	0.36
50th-Percentile Queue Length [ft/ln]	16.00	48.26	48.01	5.86	67.92	66.68	17.88	10.23	6.68	1.54	9.10
95th-Percentile Queue Length [veh/ln]	1.15	3.47	3.46	0.42	4.89	4.80	1.29	0.74	0.48	0.11	0.66
95th-Percentile Queue Length [ft/ln]	28.80	86.87	86.43	10.55	122.26	120.02	32.19	18.41	12.03	2.78	16.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.27	6.90	6.91	19.00	9.57	9.61	15.51	15.51	13.25	17.96	12.27	13.12
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.52			9.78			14.63			14.62		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.19											
Intersection LOS	A											
Intersection V/C	0.632											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	87	1166	1062	85	37	124
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1166	1062	85	37	124
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	301	275	22	10	32
Total Analysis Volume [veh/h]	90	1206	1098	88	38	128
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	17	105	88	0	25	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	22	15	15	6	6
g / C, Green / Cycle	0.12	0.65	0.44	0.44	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.35	0.33	0.34	0.02	0.08
s, saturation flow rate [veh/h]	1619	3427	1800	1754	1619	1530
c, Capacity [veh/h]	194	2243	800	780	269	254
d1, Uniform Delay [s]	13.69	3.08	7.68	7.78	11.90	12.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.72	0.20	1.37	1.56	0.24	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.54	0.74	0.76	0.14	0.50
d, Delay for Lane Group [s/veh]	15.41	3.28	9.05	9.34	12.13	14.23
Lane Group LOS	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.59	0.36	2.30	2.36	0.21	0.78
50th-Percentile Queue Length [ft/ln]	14.84	8.90	57.49	58.95	5.14	19.60
95th-Percentile Queue Length [veh/ln]	1.07	0.64	4.14	4.24	0.37	1.41
95th-Percentile Queue Length [ft/ln]	26.71	16.03	103.49	106.12	9.26	35.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.41	3.28	9.18	9.34	12.13	14.23
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	4.12		9.19		13.75	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.00					
Intersection LOS	A					
Intersection V/C	0.582					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	122	800	94	67	878	140	172	454	135	32	197	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	800	94	67	878	140	172	454	135	32	197	72
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	205	24	17	225	36	44	117	35	8	51	18
Total Analysis Volume [veh/h]	125	821	97	69	901	144	177	466	139	33	202	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	45	0	19	47	0	66	133	0	66	60	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	8	19	19	4	15	15	9	0	0	9	0	0
g / C, Green / Cycle	0.21	0.47	0.47	0.09	0.36	0.36	0.22	0.00	0.00	0.22	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26	0.09	0.26	0.09	0.15	0.26	0.09	0.04	0.11	0.05
s, saturation flow rate [veh/h]	781	1800	1734	781	3427	1530	1199	1800	1530	941	1800	1530
c, Capacity [veh/h]	301	843	812	217	1230	549	379	0	0	335	0	0
d1, Uniform Delay [s]	17.16	7.81	7.81	19.81	11.41	9.28	16.55	0.00	0.00	14.62	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	0.57	0.60	0.83	0.86	0.25	0.90	0.00	0.00	0.13	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

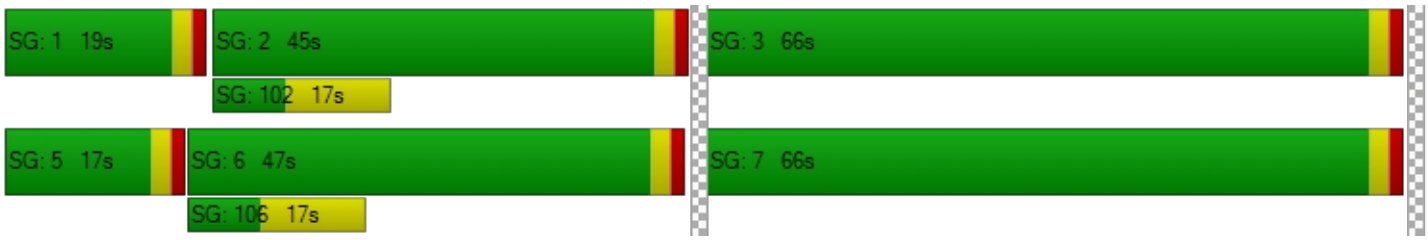
X, volume / capacity	0.41	0.55	0.55	0.32	0.73	0.26	0.47	0.00	0.00	0.10	0.00	0.00
d, Delay for Lane Group [s/veh]	18.07	8.39	8.41	20.64	12.27	9.53	17.45	0.00	0.00	14.75	0.00	0.00
Lane Group LOS	B	A	A	C	B	A	B	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.06	2.13	2.05	0.65	2.86	0.74	1.45	0.00	0.00	0.24	0.00	0.00
50th-Percentile Queue Length [ft/ln]	26.62	53.18	51.36	16.20	71.39	18.57	36.31	0.00	0.00	5.89	0.00	0.00
95th-Percentile Queue Length [veh/ln]	1.92	3.83	3.70	1.17	5.14	1.34	2.61	0.00	0.00	0.42	0.00	0.00
95th-Percentile Queue Length [ft/ln]	47.91	95.72	92.46	29.17	128.50	33.43	65.36	0.00	0.00	10.60	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.07	8.39	8.41	20.64	12.27	9.53	17.45	0.00	0.00	14.75	0.00	0.00
Movement LOS	B	A	A	C	B	A	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	9.56			12.43			3.95			1.58		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	8.43											
Intersection LOS	A											
Intersection V/C	0.709											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	353	1	2	620	141	441	68	102	1	20	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	353	1	2	620	141	441	68	102	1	20	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	93	0	1	163	37	116	18	27	0	5	2
Total Analysis Volume [veh/h]	40	372	1	2	653	148	464	72	107	1	21	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	33	0	37	60	0	0	60	0	0	60	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	18	18	0	15	15	25	25
g / C, Green / Cycle	0.06	0.35	0.35	0.00	0.29	0.29	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.10	0.00	0.23	0.23	0.44	0.02
s, saturation flow rate [veh/h]	1619	1800	1798	1619	1800	1686	1478	1739
c, Capacity [veh/h]	97	625	625	6	525	492	822	898
d1, Uniform Delay [s]	23.48	12.31	12.31	25.73	16.88	16.89	12.50	7.25
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.81	0.26	0.26	26.55	2.67	2.87	1.67	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

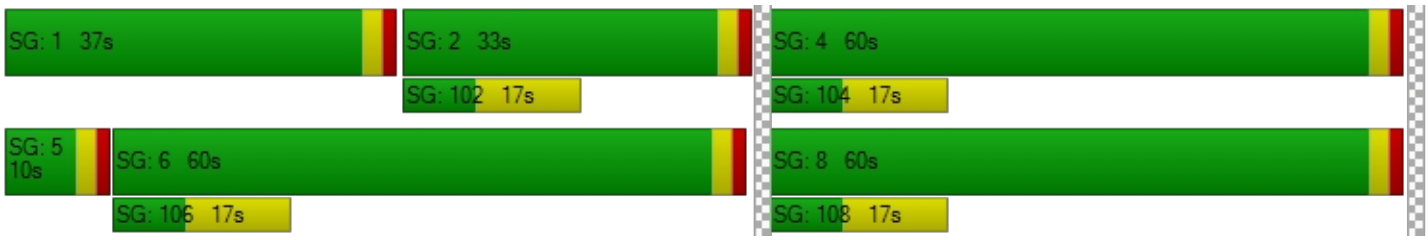
X, volume / capacity	0.41	0.30	0.30	0.32	0.79	0.79	0.78	0.03
d, Delay for Lane Group [s/veh]	26.29	12.57	12.58	52.28	19.55	19.76	14.17	7.27
Lane Group LOS	C	B	B	D	B	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.51	1.40	1.40	0.07	4.30	4.07	5.63	0.14
50th-Percentile Queue Length [ft/ln]	12.78	34.97	34.95	1.73	107.58	101.71	140.71	3.39
95th-Percentile Queue Length [veh/ln]	0.92	2.52	2.52	0.12	7.71	7.32	9.52	0.24
95th-Percentile Queue Length [ft/ln]	23.00	62.94	62.90	3.12	192.64	183.07	237.97	6.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.29	12.57	12.58	52.28	19.62	19.76	14.17	14.17	14.17	7.27	7.27	7.27
Movement LOS	C	B	B	D	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	13.90			19.73			14.17			7.27		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	16.38											
Intersection LOS	B											
Intersection V/C	0.780											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



EXISTING PLUS PROJECT – ALTERNATIVE 1

Viridian

Vistro File: C:\...\AME.vistro

Scenario 2 Existing Plus Project Morning Peak Hour - Alternative 1

Report File: C:\...\AMEP.pdf

10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.098	56.5	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.983	47.3	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.693	18.1	B
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.647	11.2	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Right	1.266	34.2	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.499	13.2	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.003	10.5	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.583	6.3	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	118.6	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.857	30.5	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	0.039	54.7	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.010	41.8	E
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	4.284	48.3	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.772	20.7	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.884	50.0	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.928	39.3	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.694	10.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.005	8.8	A
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.010	10.4	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.240	9.6	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.003	8.8	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.004	13.1	B
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.005	9.5	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.537	45.5	E
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.027	14.2	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.079	12.7	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.475	11.2	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.259	7.5	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	10.977	57.0	E
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.079	39.5	E
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	EB Right	0.523	19.0	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.706	10.9	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.836	21.6	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.824	23.7	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.784	19.1	B
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.818	22.8	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.676	10.4	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.627	7.7	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.726	10.3	B
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.661	10.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	56.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.098

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	306	1234	0	0	1068	751	0	0	0	456	0	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	8	0	0	24	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	322	1242	0	0	1092	751	0	0	0	458	0	522
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	321	0	0	282	194	0	0	0	118	0	135
Total Analysis Volume [veh/h]	333	1284	0	0	1129	777	0	0	0	474	0	540
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	25	85	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	125	125	125	125		125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	22	82	57	57		37	37
g / C, Green / Cycle	0.18	0.66	0.46	0.46		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.21	0.37	0.23	0.51		0.30	0.33
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1701	1530
c, Capacity [veh/h]	286	2248	2234	697		504	453
d1, Uniform Delay [s]	51.58	11.85	24.12	34.10		44.09	44.09
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	83.08	1.06	0.82	70.09		20.26	60.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.17	0.57	0.51	1.11		1.01	1.12
d, Delay for Lane Group [s/veh]	134.66	12.91	24.94	104.19		64.35	104.82
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	15.53	9.65	8.01	34.10		18.28	21.53
50th-Percentile Queue Length [ft/ln]	388.17	241.14	200.20	852.46		456.97	538.37
95th-Percentile Queue Length [veh/ln]	23.66	14.74	12.65	47.32		25.40	31.21
95th-Percentile Queue Length [ft/ln]	591.41	368.47	316.22	1182.96		635.00	780.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	134.66	12.91	0.00	0.00	24.94	104.19	0.00	0.00	0.00	64.35	64.35	102.35
Movement LOS	F	B			C	F				E	E	F
d_A, Approach Delay [s/veh]	37.98			57.24			0.00			84.59		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	56.49											
Intersection LOS	E											
Intersection V/C	1.098											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	47.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.983

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	978	414	478	1033	0	555	0	362	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	1	0	26	0	0	0	61	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1002	415	478	1059	0	555	0	423	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	263	109	126	278	0	146	0	111	0	0	0
Total Analysis Volume [veh/h]	0	1054	436	503	1114	0	584	0	445	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	39	0	43	82	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	125	125	125	125	125	125	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	36	36	40	79	40	40	
g / C, Green / Cycle	0.29	0.29	0.32	0.63	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.28	0.31	0.33	0.31	0.34	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1557	
c, Capacity [veh/h]	1413	441	518	2167	518	498	
d1, Uniform Delay [s]	40.51	44.47	42.10	12.58	41.98	42.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.62	40.14	12.69	0.88	11.76	37.88	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

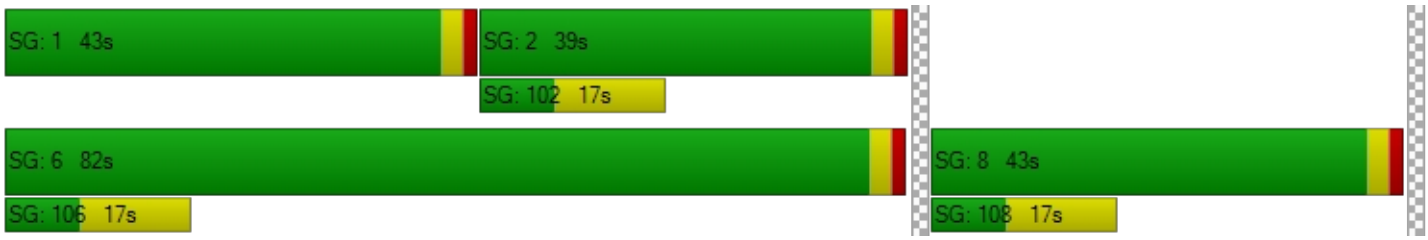
X, volume / capacity	0.75	0.99	0.97	0.51	0.96	1.06	
d, Delay for Lane Group [s/veh]	44.13	84.61	54.79	13.46	53.74	80.56	
Lane Group LOS	D	F	D	B	D	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.27	18.26	16.99	8.45	16.71	20.46	
50th-Percentile Queue Length [ft/ln]	256.73	456.57	424.67	211.21	417.85	511.59	
95th-Percentile Queue Length [veh/ln]	15.52	25.27	23.75	13.22	23.42	28.99	
95th-Percentile Queue Length [ft/ln]	388.11	631.78	593.65	330.38	585.47	724.85	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	44.13	84.61	54.79	13.46	0.00	57.10	80.56	80.56	0.00	0.00	0.00
Movement LOS		D	F	D	B		E	F	F			
d_A, Approach Delay [s/veh]	55.97			26.31			67.53			0.00		
Approach LOS	E			C			E			A		
d_I, Intersection Delay [s/veh]	47.25											
Intersection LOS	D											
Intersection V/C	0.983											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.693

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	130	813	16	83	864	93	168	116	67	16	196	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	25	0	0	87	0	0	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	838	16	83	951	93	168	116	76	16	196	117
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	213	4	21	242	24	43	30	19	4	50	30
Total Analysis Volume [veh/h]	134	853	16	85	968	95	171	118	77	16	200	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	51	0	30	61	0	25	38	0	11	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	51	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	20	20	5	19	19	7	13	13	1	7	7
g / C, Green / Cycle	0.12	0.39	0.39	0.10	0.37	0.37	0.14	0.25	0.25	0.03	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.08	0.24	0.24	0.05	0.30	0.30	0.11	0.03	0.05	0.01	0.09	0.10
s, saturation flow rate [veh/h]	1619	1800	1788	1619	1800	1744	1619	3427	1530	1619	1800	1583
c, Capacity [veh/h]	189	699	694	156	662	642	222	872	389	46	261	230
d1, Uniform Delay [s]	21.92	12.73	12.73	22.20	14.70	14.71	21.44	14.83	15.08	24.57	20.73	20.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.87	0.92	0.92	2.94	2.51	2.60	5.52	0.07	0.25	4.52	2.53	3.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.62	0.62	0.54	0.81	0.82	0.77	0.14	0.20	0.35	0.63	0.67
d, Delay for Lane Group [s/veh]	26.80	13.65	13.65	25.14	17.21	17.30	26.96	14.90	15.33	29.10	23.26	24.16
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.67	3.54	3.52	1.02	5.19	5.05	2.14	0.48	0.66	0.23	1.88	1.79
50th-Percentile Queue Length [ft/ln]	41.85	88.51	87.96	25.62	129.71	126.26	53.56	12.06	16.38	5.87	46.99	44.86
95th-Percentile Queue Length [veh/ln]	3.01	6.37	6.33	1.84	8.92	8.74	3.86	0.87	1.18	0.42	3.38	3.23
95th-Percentile Queue Length [ft/ln]	75.33	159.32	158.34	46.11	223.10	218.40	96.41	21.70	29.49	10.56	84.58	80.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.80	13.65	13.65	25.14	17.25	17.30	26.96	14.90	15.33	29.10	23.41	24.16
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.41			17.84			20.62			23.95		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.06											
Intersection LOS	B											
Intersection V/C	0.693											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.647

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	86	842	36	62	801	60	62	94	75	72	109	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	27	0	0	96	0	0	0	21	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	869	36	62	897	60	62	94	96	72	109	45
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	237	10	17	245	16	17	26	26	20	30	12
Total Analysis Volume [veh/h]	99	948	39	68	978	65	68	103	105	79	119	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	61	0	26	71	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	15	15	3	14	14	8	8
g / C, Green / Cycle	0.12	0.42	0.42	0.10	0.39	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.06	0.28	0.28	0.04	0.29	0.29	0.18	0.18
s, saturation flow rate [veh/h]	1619	1800	1775	1619	1800	1761	1509	1383
c, Capacity [veh/h]	201	750	740	158	702	687	476	454
d1, Uniform Delay [s]	14.46	8.32	8.32	15.05	9.31	9.32	12.66	12.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	1.01	1.02	1.84	1.64	1.68	1.12	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.66	0.66	0.43	0.75	0.75	0.58	0.54
d, Delay for Lane Group [s/veh]	16.31	9.33	9.34	16.88	10.96	11.00	13.78	13.47
Lane Group LOS	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.70	2.15	2.13	0.50	2.63	2.58	1.70	1.49
50th-Percentile Queue Length [ft/ln]	17.60	53.87	53.21	12.59	65.69	64.48	42.52	37.34
95th-Percentile Queue Length [veh/ln]	1.27	3.88	3.83	0.91	4.73	4.64	3.06	2.69
95th-Percentile Queue Length [ft/ln]	31.68	96.96	95.78	22.66	118.24	116.06	76.53	67.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.31	9.34	9.34	16.88	10.98	11.00	13.78	13.78	13.78	13.47	13.47	13.47
Movement LOS	B	A	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	9.97			11.34			13.78			13.47		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	11.24											
Intersection LOS	B											
Intersection V/C	0.647											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.266

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	35	759	38	72	867	35	46	75	29	55	75	151
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	32	0	0	117	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	791	38	72	984	35	46	75	34	55	75	151
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	223	11	20	277	10	13	21	10	15	21	43
Total Analysis Volume [veh/h]	39	891	43	81	1108	39	52	84	38	62	84	170
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	19	19	5	21	21	27	27	27	27
g / C, Green / Cycle	0.06	0.31	0.31	0.09	0.34	0.34	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.05	0.32	0.32	0.62	0.02	0.80	0.11
s, saturation flow rate [veh/h]	1619	1800	1771	1619	1800	1779	218	1530	184	1530
c, Capacity [veh/h]	93	563	554	143	618	611	181	688	168	688
d1, Uniform Delay [s]	27.38	19.23	19.23	26.33	19.08	19.09	14.58	9.35	15.83	10.26
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.97	13.73	13.93	3.52	23.01	23.32	6.21	0.03	12.75	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.84	0.84	0.57	0.93	0.93	0.75	0.06	0.87	0.25
d, Delay for Lane Group [s/veh]	30.34	32.97	33.16	29.85	42.09	42.41	20.79	9.38	28.58	10.44
Lane Group LOS	C	C	C	C	D	D	C	A	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.59	7.62	7.52	1.19	10.80	10.73	1.24	0.25	1.60	1.24
50th-Percentile Queue Length [ft/ln]	14.77	190.44	188.12	29.81	269.92	268.22	30.96	6.30	39.88	31.01
95th-Percentile Queue Length [veh/ln]	1.06	12.14	12.02	2.15	16.19	16.10	2.23	0.45	2.87	2.23
95th-Percentile Queue Length [ft/ln]	26.58	303.60	300.59	53.65	404.64	402.52	55.74	11.33	71.79	55.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.34	33.06	33.16	29.85	42.24	42.41	20.79	20.79	9.38	28.58	28.58	10.44
Movement LOS	C	C	C	C	D	D	C	C	A	C	C	B
d_A, Approach Delay [s/veh]	32.95			41.43			18.30			18.82		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	34.22											
Intersection LOS	C											
Intersection V/C	1.266											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	566	50	71	911	7	20	8	19	64	4	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	19	0	58	73	0	0	0	0	2	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	585	50	129	984	7	20	8	19	66	4	77
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	172	15	38	289	2	6	2	6	19	1	23
Total Analysis Volume [veh/h]	9	687	59	152	1156	8	24	9	22	78	5	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	67	67	10	75	75	11	11	11
g / C, Green / Cycle	0.02	0.67	0.67	0.10	0.75	0.75	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.20	0.20	0.08	0.31	0.31	0.13	0.09	0.06
s, saturation flow rate [veh/h]	1810	1900	1848	1810	1900	1895	431	918	1615
c, Capacity [veh/h]	29	1265	1231	189	1434	1430	99	170	177
d1, Uniform Delay [s]	48.70	6.97	6.97	43.80	4.35	4.35	42.27	43.56	42.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.07	0.60	0.62	7.74	0.86	0.86	4.81	2.15	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

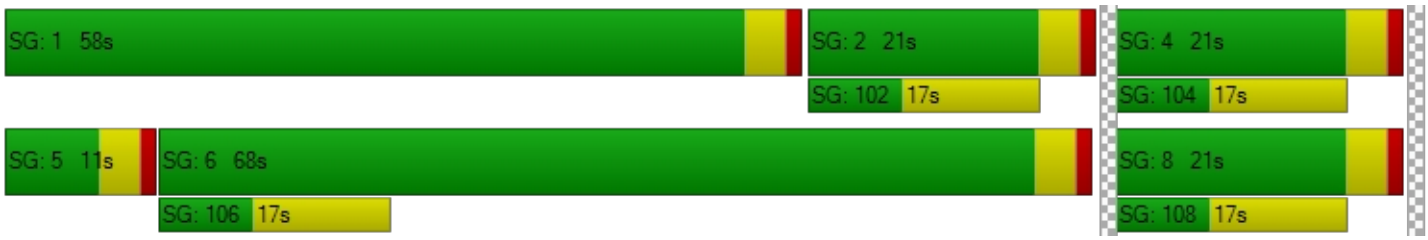
X, volume / capacity	0.31	0.30	0.30	0.80	0.41	0.41	0.56	0.49	0.51
d, Delay for Lane Group [s/veh]	54.77	7.57	7.59	51.54	5.20	5.20	47.08	45.71	44.26
Lane Group LOS	D	A	A	D	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	3.24	3.16	4.06	3.66	3.65	1.50	2.10	2.19
50th-Percentile Queue Length [ft/ln]	6.74	80.89	78.95	101.45	91.42	91.26	37.54	52.38	54.81
95th-Percentile Queue Length [veh/ln]	0.49	5.82	5.68	7.30	6.58	6.57	2.70	3.77	3.95
95th-Percentile Queue Length [ft/ln]	12.14	145.61	142.11	182.62	164.55	164.26	67.58	94.28	98.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.77	7.58	7.59	51.54	5.20	5.20	47.08	47.08	47.08	45.71	45.71	44.26
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.15			10.56			47.08			44.95		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	13.23											
Intersection LOS	B											
Intersection V/C	0.499											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	20	0	75	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	641	20	0	1069	0	2
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	6	0	281	0	1
Total Analysis Volume [veh/h]	675	24	0	1125	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	10.53
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.23
d_A, Approach Delay [s/veh]	0.00		0.00		10.53	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	6.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	241	74	1	68	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	644	241	74	995	68	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	63	19	262	18	4
Total Analysis Volume [veh/h]	678	254	78	1047	72	18
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	53	0	26	79	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	3	16	4	4
g / C, Green / Cycle	0.32	0.32	0.12	0.58	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.19	0.16	0.04	0.29	0.04	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1163	519	210	2106	232	207
d1, Uniform Delay [s]	7.83	7.55	11.29	3.40	10.94	10.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.72	1.09	0.18	0.75	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.49	0.37	0.50	0.31	0.09
d, Delay for Lane Group [s/veh]	8.30	8.27	12.38	3.58	11.69	10.80
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.04	0.80	0.38	0.29	0.33	0.08
50th-Percentile Queue Length [ft/ln]	26.00	20.00	9.50	7.16	8.31	1.98
95th-Percentile Queue Length [veh/ln]	1.87	1.44	0.68	0.52	0.60	0.14
95th-Percentile Queue Length [ft/ln]	46.79	36.00	17.10	12.89	14.96	3.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.30	8.27	12.38	3.58	11.69	10.80
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.29		4.19		11.51	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.28					
Intersection LOS	A					
Intersection V/C	0.583					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	118.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	261	1	1	68	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	938	1	1	1078	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	271	0	0	312	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	1086	1	1	1248	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

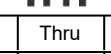
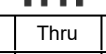
V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.13	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	11.69	0.00	0.00	10.55	0.00	0.00	88.01	118.56	18.59	76.47	115.62	13.75
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	2.92	0.00	0.00	0.12	0.06	0.00	15.17	15.17	15.17	1.48	1.48	1.48
d_A, Approach Delay [s/veh]	0.22			0.01			35.25			76.47		
Approach LOS	A			A			E			F		
d_I, Intersection Delay [s/veh]	0.51											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.857

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	115	9	39	30	0	0	0	0	4	0	147
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	336	271	555	564	17	14	29	11	266	36	470
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	90	73	149	151	5	4	8	3	71	10	0
Total Analysis Volume [veh/h]	14	360	290	594	604	18	15	31	12	285	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	35	46	0	0	21	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	93	93	93	93	93	93	93	93	93	93
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	20	20	33	51	51	5	5	19	19
g / C, Green / Cycle	0.02	0.21	0.21	0.36	0.54	0.54	0.06	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.18	0.33	0.17	0.01	0.01	0.02	0.18	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	1820	1615
c, Capacity [veh/h]	41	766	342	643	1968	879	106	106	370	328
d1, Uniform Delay [s]	44.87	32.17	35.31	28.87	11.64	9.81	41.69	42.35	36.03	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.71	0.45	5.84	6.25	0.09	0.01	0.61	2.49	6.68	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

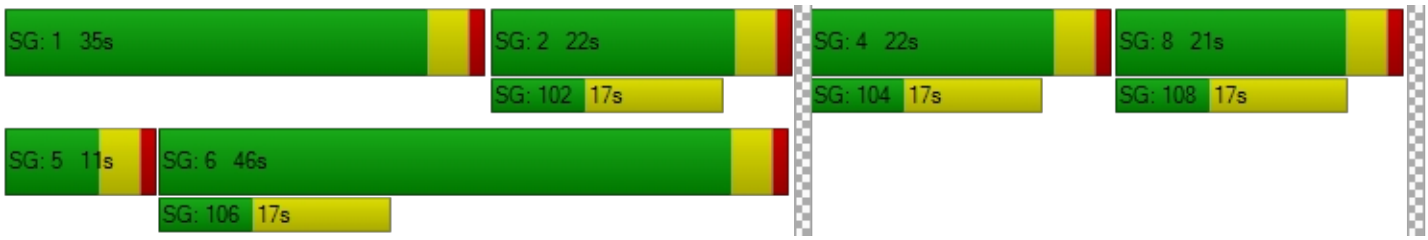
X, volume / capacity	0.34	0.47	0.85	0.92	0.31	0.02	0.14	0.41	0.88	0.00
d, Delay for Lane Group [s/veh]	49.57	32.62	41.15	35.12	11.73	9.81	42.29	44.84	42.71	0.00
Lane Group LOS	D	C	D	D	B	A	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.37	3.55	6.74	13.32	3.26	0.16	0.34	1.02	7.68	0.00
50th-Percentile Queue Length [ft/ln]	9.25	88.70	168.59	333.03	81.42	4.11	8.57	25.48	191.92	0.00
95th-Percentile Queue Length [veh/ln]	0.67	6.39	11.00	19.31	5.86	0.30	0.62	1.83	12.22	0.00
95th-Percentile Queue Length [ft/ln]	16.66	159.65	275.06	482.67	146.55	7.41	15.42	45.86	305.52	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.57	32.62	41.15	35.12	11.73	9.81	42.29	44.84	44.84	42.71	42.71	0.00
Movement LOS	D	C	D	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	36.70			23.13			44.18			42.71		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	30.46											
Intersection LOS	C											
Intersection V/C	0.857											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	54.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	489	25	84	760	1	1	2	16	7	3	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	613	25	84	794	1	1	2	16	7	3	15
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	163	7	22	210	0	0	1	4	2	1	4
Total Analysis Volume [veh/h]	23	650	27	89	842	1	1	2	17	7	3	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.10	0.01	0.00	0.01	0.03	0.03	0.07	0.04	0.02
d_M, Delay for Movement [s/veh]	9.62	0.00	0.00	9.31	0.00	0.00	47.74	54.67	12.02	43.11	54.73	13.06
Movement LOS	A	A	A	A	A	A	E	F	B	E	F	B
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	0.30	0.15	0.00	0.22	0.22	0.22	0.45	0.45	0.45
95th-Percentile Queue Length [ft/ln]	2.11	1.06	0.00	7.48	3.74	0.00	5.41	5.41	5.41	11.13	11.13	11.13
d_A, Approach Delay [s/veh]	0.32			0.89			18.07			25.96		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	1.24											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	41.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	534	8	6	787	0	0	0	3	11	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	658	8	6	821	0	0	0	3	11	1	3
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	175	2	2	218	0	0	0	1	3	0	1
Total Analysis Volume [veh/h]	9	700	9	6	873	0	0	0	3	12	1	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.08	0.01	0.00
d_M, Delay for Movement [s/veh]	9.66	0.00	0.00	9.03	0.00	0.00	33.41	40.01	11.31	31.58	41.79	12.77
Movement LOS	A	A	A	A	A	A	D	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.02	0.01	0.00	0.02	0.02	0.02	0.31	0.31	0.31
95th-Percentile Queue Length [ft/ln]	0.78	0.39	0.00	0.50	0.25	0.00	0.39	0.39	0.39	7.77	7.77	7.77
d_A, Approach Delay [s/veh]	0.12			0.06			11.31			28.69		
Approach LOS	A			A			B			D		
d_I, Intersection Delay [s/veh]	0.39											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	48.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.284

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	427	12	5	802	20	12	13	19	60	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	551	12	5	836	20	12	13	19	60	22	9
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	150	3	1	227	5	3	4	5	16	6	2
Total Analysis Volume [veh/h]	20	598	13	5	908	22	13	14	21	65	24	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	25	0	11	25	0	0	64	0	0	64	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	31	31	1	29	29	56	56	56	56
g / C, Green / Cycle	0.03	0.31	0.31	0.01	0.29	0.29	0.56	0.56	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.16	0.00	0.25	0.25	0.37	0.01	3.51	0.01
s, saturation flow rate [veh/h]	1810	1900	1886	1810	1900	1884	74	1615	25	1615
c, Capacity [veh/h]	54	596	591	16	556	552	94	900	76	900
d1, Uniform Delay [s]	47.59	28.09	28.10	49.23	33.15	33.15	24.29	9.93	39.83	9.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.18	3.16	3.19	10.04	14.14	14.24	1.64	0.01	154.20	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

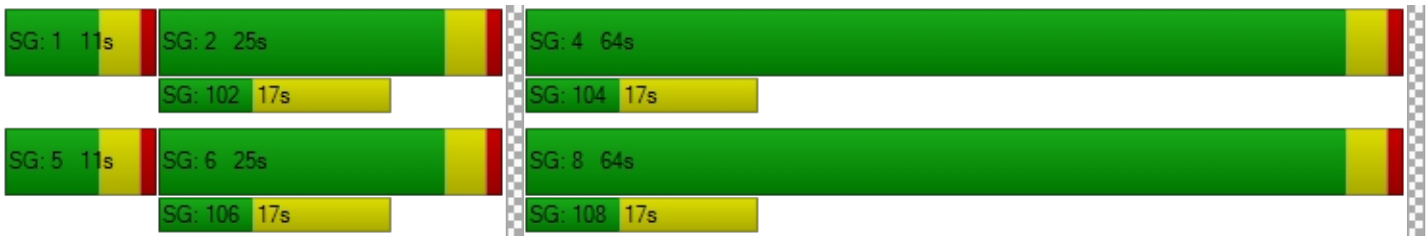
X, volume / capacity	0.37	0.51	0.51	0.30	0.84	0.84	0.29	0.02	1.16	0.01
d, Delay for Lane Group [s/veh]	51.76	31.25	31.28	59.27	47.29	47.39	25.94	9.94	194.03	9.86
Lane Group LOS	D	C	C	E	D	D	C	A	F	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	6.45	6.41	0.17	12.58	12.49	0.45	0.20	5.18	0.10
50th-Percentile Queue Length [ft/ln]	13.73	161.17	160.25	4.23	314.45	312.23	11.14	5.06	129.38	2.39
95th-Percentile Queue Length [veh/ln]	0.99	10.61	10.56	0.30	18.39	18.28	0.80	0.36	9.32	0.17
95th-Percentile Queue Length [ft/ln]	24.72	265.27	264.05	7.62	459.85	457.12	20.06	9.10	232.88	4.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.76	31.26	31.28	59.27	47.34	47.39	25.94	25.94	9.94	194.03	194.03	9.86
Movement LOS	D	C	C	E	D	D	C	C	A	F	F	A
d_A, Approach Delay [s/veh]	31.91			47.41			18.94			175.43		
Approach LOS	C			D			B			F		
d_I, Intersection Delay [s/veh]	48.30											
Intersection LOS	D											
Intersection V/C	4.284											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.772

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	531	0	0	790	22	10	0	156	347	88	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	119	0	0	34	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	650	0	0	824	22	10	0	156	347	88	71
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	183	0	0	233	6	3	0	44	98	25	20
Total Analysis Volume [veh/h]	37	734	0	0	930	25	11	0	176	392	99	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	21	0	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	66	66	66	66	66	66	66	66
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	9	9	20	20
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.14	0.14	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.25	0.25	0.01	0.11	0.27	0.05
s, saturation flow rate [veh/h]	597	3618	1900	1883	1810	1615	1827	1615
c, Capacity [veh/h]	184	1335	701	695	253	226	565	499
d1, Uniform Delay [s]	26.93	16.45	17.52	17.57	24.53	27.37	21.51	16.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.35	1.17	1.22	0.07	5.77	4.28	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

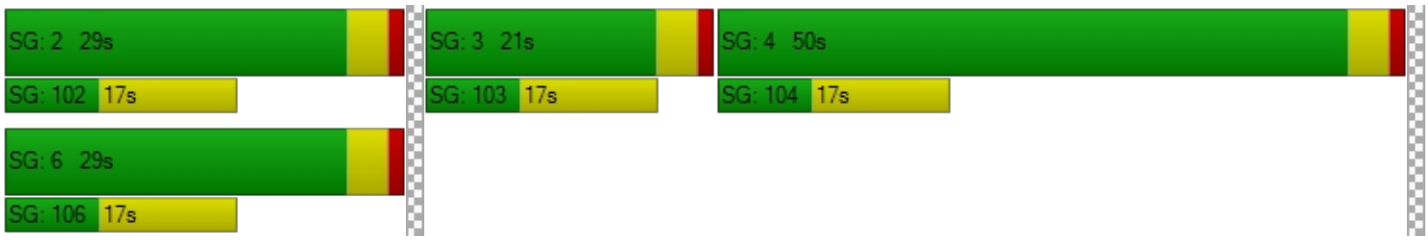
X, volume / capacity	0.20	0.55	0.68	0.69	0.04	0.78	0.87	0.16
d, Delay for Lane Group [s/veh]	27.46	16.81	18.69	18.79	24.60	33.13	25.79	16.70
Lane Group LOS	C	B	B	B	C	C	C	B
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	4.04	5.73	5.76	0.15	2.89	7.20	0.84
50th-Percentile Queue Length [ft/ln]	13.61	101.01	143.36	143.96	3.67	72.34	180.11	20.99
95th-Percentile Queue Length [veh/ln]	0.98	7.27	9.66	9.69	0.26	5.21	11.61	1.51
95th-Percentile Queue Length [ft/ln]	24.50	181.83	241.55	242.34	6.61	130.22	290.16	37.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.46	16.81	0.00	0.00	18.74	18.79	24.60	0.00	33.13	25.79	25.79	16.70
Movement LOS	C	B			B	B	C		C	C	C	B
d_A, Approach Delay [s/veh]	17.32			18.74			32.63			24.52		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.67											
Intersection LOS	C											
Intersection V/C	0.772											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	50.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	337	584	775	536	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	119	7	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	703	782	563	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	201	224	161	0	0
Total Analysis Volume [veh/h]	386	805	896	645	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.88	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	50.04	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	9.27	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	231.75	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.22		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	7.07					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	39.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.928

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	544	523	144	617	0	351	26	242	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	0	0	7	0	94	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	569	523	144	624	0	445	26	242	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	163	149	41	178	0	127	7	69	3	0	1
Total Analysis Volume [veh/h]	0	650	598	165	713	0	509	30	277	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	35	0	15	50	0	0	29	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	11	53	32	32	3	3
g / C, Green / Cycle	0.38	0.38	0.11	0.53	0.32	0.32	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.33	0.38	0.09	0.20	0.30	0.17	0.01	0.00
s, saturation flow rate [veh/h]	1900	1625	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	728	622	197	1924	586	521	46	41
d1, Uniform Delay [s]	28.37	30.88	43.73	13.66	32.66	27.71	47.86	47.61
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.46	36.69	9.07	0.55	6.51	0.84	3.25	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

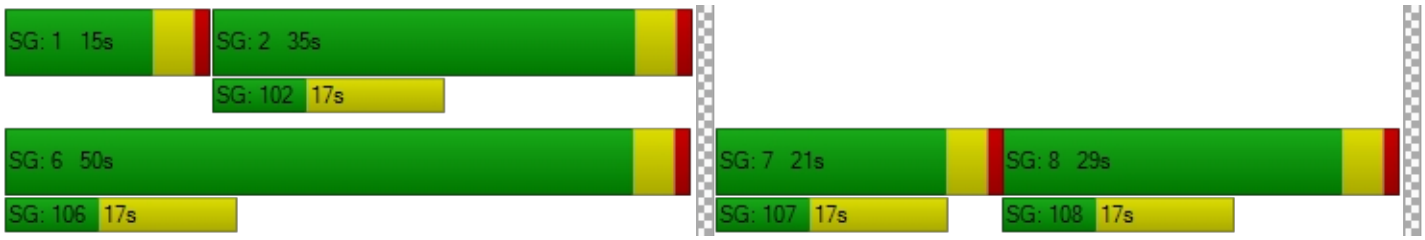
X, volume / capacity	0.86	1.00	0.84	0.37	0.92	0.53	0.28	0.07
d, Delay for Lane Group [s/veh]	40.83	67.57	52.81	14.21	39.16	28.55	51.11	48.35
Lane Group LOS	D	F	D	B	D	C	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	15.77	20.73	4.47	4.65	13.27	5.45	0.36	0.08
50th-Percentile Queue Length [ft/ln]	394.27	518.29	111.75	116.14	331.81	136.19	8.97	2.03
95th-Percentile Queue Length [veh/ln]	22.28	28.25	7.94	8.18	19.25	9.28	0.65	0.15
95th-Percentile Queue Length [ft/ln]	557.09	706.25	198.44	204.51	481.18	231.89	16.14	3.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	41.90	67.57	52.81	14.21	0.00	39.16	39.16	28.55	51.11	0.00	48.35
Movement LOS		D	E	D	B		D	D	C	D		D
d_A, Approach Delay [s/veh]	54.20			21.47			35.56			50.60		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	39.32											
Intersection LOS	D											
Intersection V/C	0.928											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	27	750	47	49	648	74	155	33	19	10	20	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	775	47	49	655	74	155	33	19	10	20	100
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	209	13	13	177	20	42	9	5	3	5	27
Total Analysis Volume [veh/h]	29	836	51	53	707	80	167	36	20	11	22	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	68	0	11	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	11	11	3	13	13	8	8	8
g / C, Green / Cycle	0.05	0.33	0.33	0.08	0.36	0.36	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.23	0.03	0.03	0.20	0.05	0.19	0.02	0.07
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1161	1799	1615
c, Capacity [veh/h]	91	1201	536	148	1316	588	459	567	384
d1, Uniform Delay [s]	15.79	9.99	7.93	14.95	8.66	7.33	13.18	10.19	10.73
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	0.74	0.08	1.45	0.34	0.10	0.80	0.04	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.70	0.10	0.36	0.54	0.14	0.49	0.06	0.28
d, Delay for Lane Group [s/veh]	17.80	10.73	8.01	16.40	9.00	7.44	13.98	10.23	11.12
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	2.04	0.20	0.38	1.48	0.29	1.39	0.15	0.55
50th-Percentile Queue Length [ft/ln]	5.84	50.89	4.92	9.56	36.88	7.19	34.68	3.86	13.78
95th-Percentile Queue Length [veh/ln]	0.42	3.66	0.35	0.69	2.66	0.52	2.50	0.28	0.99
95th-Percentile Queue Length [ft/ln]	10.52	91.61	8.85	17.21	66.38	12.94	62.42	6.95	24.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.80	10.73	8.01	16.40	9.00	7.44	13.98	13.98	13.98	10.23	10.23	11.12
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.80			9.32			13.98			10.91		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.56											
Intersection LOS	B											
Intersection V/C	0.694											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	46	12	35	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	175	12	35	148
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	46	3	9	39
Total Analysis Volume [veh/h]	0	5	184	13	37	156
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	8.79	0.00	0.00	7.67	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.08	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.40	0.00	0.00	2.05	0.00
d_A, Approach Delay [s/veh]	8.79		0.00		1.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.83					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	10	34	17	14	46
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	10	163	17	14	176
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	43	4	4	46
Total Analysis Volume [veh/h]	7	11	172	18	15	185
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.42	8.79	0.00	0.00	7.61	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.79	0.87	0.00	0.00	0.81	0.00
d_A, Approach Delay [s/veh]	9.42		0.00		0.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.240

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	48	0	39	57	80	0	0	79	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	15	0	6	0	1	23	20	47	54	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	15	48	6	39	58	103	20	47	133	54
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	4	13	2	11	16	29	6	13	37	15
Total Analysis Volume [veh/h]	7	3	17	54	7	44	65	115	22	53	149	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	24	0	0	31	75	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	1	2	3	13	13	6	6
g / C, Green / Cycle	0.05	0.05	0.09	0.10	0.44	0.44	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.03	0.04	0.03	0.01	0.06	0.06
s, saturation flow rate [veh/h]	1810	1652	1810	1810	3618	1615	1900	1723
c, Capacity [veh/h]	88	81	159	183	1602	715	382	347
d1, Uniform Delay [s]	12.96	13.07	12.24	11.95	4.58	4.49	9.63	9.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	1.58	1.26	1.16	0.02	0.02	0.38	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

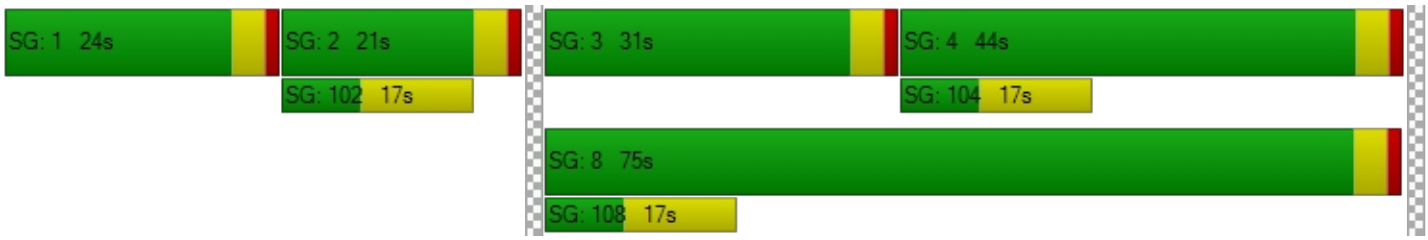
X, volume / capacity	0.08	0.25	0.34	0.35	0.07	0.03	0.27	0.30
d, Delay for Lane Group [s/veh]	13.34	14.64	13.49	13.11	4.59	4.51	10.02	10.18
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	0.13	0.30	0.34	0.09	0.04	0.42	0.43
50th-Percentile Queue Length [ft/ln]	1.04	3.23	7.40	8.58	2.36	0.93	10.53	10.73
95th-Percentile Queue Length [veh/ln]	0.08	0.23	0.53	0.62	0.17	0.07	0.76	0.77
95th-Percentile Queue Length [ft/ln]	1.88	5.81	13.31	15.44	4.24	1.68	18.95	19.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.34	14.64	14.64	13.49	0.00	0.00	13.11	4.59	4.51	0.00	10.07	10.18
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	14.30			13.49			7.33			10.10		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	9.56											
Intersection LOS	A											
Intersection V/C	0.240											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	128	0	0	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	34	4	5	101
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	162	4	5	250
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	43	1	1	66
Total Analysis Volume [veh/h]	0	3	171	4	5	263
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.75	0.00	0.00	7.56	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.23	0.00	0.00	0.27	0.00
d_A, Approach Delay [s/veh]	8.75		0.00		0.14	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	2	2	9	6	11	2	88	38	1	101	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	0	1	0	0	0	0	15	22	4	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	2	3	9	6	11	2	103	60	5	157	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	1	1	3	2	3	1	32	19	2	49	2
Total Analysis Volume [veh/h]	108	2	4	11	7	14	2	127	74	6	194	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.97	13.09	10.64	11.53	12.10	9.52	7.60	0.00	0.00	7.61	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.74	0.74	0.74	0.15	0.15	0.15	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	18.51	18.51	18.51	3.84	3.84	3.84	0.11	0.11	0.11	0.27	0.27	0.27
d_A, Approach Delay [s/veh]	12.89			10.78			0.07			0.22		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.38											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	45	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	47	17	9	4	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	88	62	9	4	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	23	16	2	1	3
Total Analysis Volume [veh/h]	15	93	65	9	4	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	9.53	8.63
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.02	0.04
95th-Percentile Queue Length [ft/ln]	0.74	0.00	0.00	0.00	0.38	1.06
d_A, Approach Delay [s/veh]	1.02		0.00		8.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.35					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	45.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	357	450	71	61	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	66	60	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	381	516	131	77	23
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	6	121	164	42	24	0
Total Analysis Volume [veh/h]	23	484	655	166	98	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.01	0.00	0.54	0.00
d_M, Delay for Movement [s/veh]	9.53	0.00	0.00	0.00	45.51	13.55
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.00	2.76	0.00
95th-Percentile Queue Length [ft/ln]	2.17	0.00	0.00	0.00	68.94	0.00
d_A, Approach Delay [s/veh]	0.43		0.00		45.51	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	3.28					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	329	60	105	443	10	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	0	0	66	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	353	60	105	509	10	42
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	16	28	137	3	11
Total Analysis Volume [veh/h]	381	65	113	549	11	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.10	0.01	0.03	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	8.56	0.00	14.20	11.02
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.33	0.00	0.08	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	8.35	0.00	2.11	5.63
d_A, Approach Delay [s/veh]	0.00		1.46		11.64	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	408	543	22	18	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	4	14	52	20	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	412	557	74	38	53
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	108	146	19	10	14
Total Analysis Volume [veh/h]	49	433	586	78	40	56
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.01	0.00	0.08	0.08
d_M, Delay for Movement [s/veh]	9.07	0.00	0.00	0.00	12.72	10.51
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	4.14	0.00	0.00	0.00	6.41	6.41
d_A, Approach Delay [s/veh]	0.92		0.00		11.43	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.24					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	407	15	105	500	4	0	3	11	28	0	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	8	0	0	10	14	4	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	415	15	105	510	18	4	3	20	28	0	59
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	111	4	28	136	5	1	1	5	7	0	16
Total Analysis Volume [veh/h]	59	444	16	112	545	19	4	3	21	30	0	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	44	0	24	53	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	30	30	30	30	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	7	7	4	8	8	0	2	2	2	3	3
g / C, Green / Cycle	0.09	0.23	0.23	0.14	0.28	0.28	0.01	0.05	0.05	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.01	0.06	0.15	0.01	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	170	819	366	262	1002	447	15	101	86	98	188	160
d1, Uniform Delay [s]	13.01	10.46	9.27	11.96	9.44	8.11	15.11	13.77	13.93	13.95	0.00	12.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	0.56	0.05	1.11	0.46	0.04	8.58	0.12	1.46	1.74	0.00	1.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.54	0.04	0.43	0.54	0.04	0.26	0.03	0.24	0.31	0.00	0.39
d, Delay for Lane Group [s/veh]	14.22	11.02	9.32	13.07	9.90	8.15	23.69	13.89	15.40	15.68	0.00	14.54
Lane Group LOS	B	B	A	B	A	A	C	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.35	0.99	0.06	0.60	1.10	0.07	0.06	0.02	0.14	0.20	0.00	0.38
50th-Percentile Queue Length [ft/ln]	8.75	24.80	1.61	15.06	27.58	1.68	1.47	0.47	3.61	5.10	0.00	9.55
95th-Percentile Queue Length [veh/ln]	0.63	1.79	0.12	1.08	1.99	0.12	0.11	0.03	0.26	0.37	0.00	0.69
95th-Percentile Queue Length [ft/ln]	15.75	44.64	2.89	27.10	49.64	3.02	2.65	0.84	6.49	9.18	0.00	17.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.22	11.02	9.32	13.07	9.90	8.15	23.69	13.89	15.40	15.68	0.00	14.54
Movement LOS	B	B	A	B	A	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.34			10.37			16.42			14.91		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.20											
Intersection LOS	B											
Intersection V/C	0.475											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.259

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	441	78	41	533	53	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	0	0	19	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	492	78	41	552	53	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	140	22	12	157	15	14
Total Analysis Volume [veh/h]	558	89	47	627	60	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	62	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	81	81	0	0	11	11
g / C, Green / Cycle	0.81	0.81	0.00	0.00	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.15	0.06	0.05	0.33	0.07	0.03
s, saturation flow rate [veh/h]	3618	1615	865	1900	811	1615
c, Capacity [veh/h]	2917	1302	72	0	147	184
d1, Uniform Delay [s]	2.22	1.99	50.00	0.00	44.50	40.68
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.10	37.85	0.00	1.82	0.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.07	0.65	0.00	0.41	0.30
d, Delay for Lane Group [s/veh]	2.37	2.09	87.85	0.00	46.32	41.61
Lane Group LOS	A	A	F	A	D	D
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.89	0.27	1.99	0.00	1.52	1.31
50th-Percentile Queue Length [ft/ln]	22.15	6.82	49.85	0.00	38.02	32.69
95th-Percentile Queue Length [veh/ln]	1.59	0.49	3.59	0.00	2.74	2.35
95th-Percentile Queue Length [ft/ln]	39.87	12.27	89.74	0.00	68.44	58.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.37	2.09	87.85	0.00	46.32	41.61
Movement LOS	A	A	F	A	D	D
d_A, Approach Delay [s/veh]	2.33		6.13		44.05	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.48					
Intersection LOS	A					
Intersection V/C	0.259					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	57.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	10.977

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	4	9	39	0	0	147	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	132	4	285	314	559	13	3	471	192
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	34	1	74	81	144	3	1	122	50
Total Analysis Volume [veh/h]	10	3	2	136	4	294	324	577	13	3	486	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	39	49	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	36	36	20	51	51	1	32	32
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.20	0.51	0.51	0.01	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.36	0.00	9.35	0.18	0.18	0.16	0.01	0.00	0.13	0.12
s, saturation flow rate [veh/h]	36	1615	15	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	77	581	76	581	365	1861	831	11	1153	515
d1, Uniform Delay [s]	26.93	20.56	49.53	25.11	38.84	14.05	11.90	49.53	26.85	26.49
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.03	0.00	422.26	0.68	7.28	0.43	0.03	12.29	1.13	2.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.00	1.84	0.51	0.89	0.31	0.02	0.27	0.42	0.38
d, Delay for Lane Group [s/veh]	27.96	20.56	471.80	25.79	46.12	14.48	11.94	61.82	27.98	28.66
Lane Group LOS	C	C	F	C	D	B	B	E	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.22	0.03	10.85	5.47	8.36	3.76	0.15	0.11	4.69	3.93
50th-Percentile Queue Length [ft/ln]	5.43	0.76	271.13	136.75	209.01	93.88	3.68	2.81	117.18	98.31
95th-Percentile Queue Length [veh/ln]	0.39	0.05	19.52	9.31	13.10	6.76	0.26	0.20	8.24	7.08
95th-Percentile Queue Length [ft/ln]	9.77	1.36	488.03	232.64	327.56	168.99	6.62	5.06	205.95	176.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.96	27.96	20.56	471.80	471.80	25.79	46.12	14.48	11.94	61.82	27.98	28.66
Movement LOS	C	C	C	F	F	C	D	B	B	E	C	C
d_A, Approach Delay [s/veh]	26.98			169.66			25.66			28.33		
Approach LOS	C			F			C			C		
d_I, Intersection Delay [s/veh]	57.05											
Intersection LOS	E											
Intersection V/C	10.977											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	39.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	554	638	21	8	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	743	692	21	8	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	201	187	6	2	4
Total Analysis Volume [veh/h]	22	805	750	23	9	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.08	0.03
d_M, Delay for Movement [s/veh]	9.34	0.00	0.00	0.00	39.52	14.13
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.25	0.11
95th-Percentile Queue Length [ft/ln]	1.99	0.00	0.00	0.00	6.35	2.66
d_A, Approach Delay [s/veh]	0.25		0.00		24.07	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	63	802	179	55	744	0	2	3	79	188	4	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	54	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	991	179	55	798	0	2	3	79	188	4	59
Peak Hour Factor	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	277	50	15	223	0	1	1	22	53	1	16
Total Analysis Volume [veh/h]	70	1107	200	61	892	0	2	3	88	210	4	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	31	31	11	31	0	0	57	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	80	94	6	80	80	8	8	10	10	10
g / C, Green / Cycle	0.05	0.67	0.78	0.05	0.66	0.66	0.07	0.07	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.12	0.03	0.23	0.23	0.00	0.05	0.06	0.06	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1863	1615	1810	1813	1615
c, Capacity [veh/h]	95	2406	1260	92	1260	1260	129	112	148	148	132
d1, Uniform Delay [s]	56.01	9.69	3.31	55.96	8.90	8.90	52.14	54.99	53.80	53.80	52.78
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.30	0.64	0.27	7.94	0.17	0.17	0.12	11.54	6.58	6.56	2.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

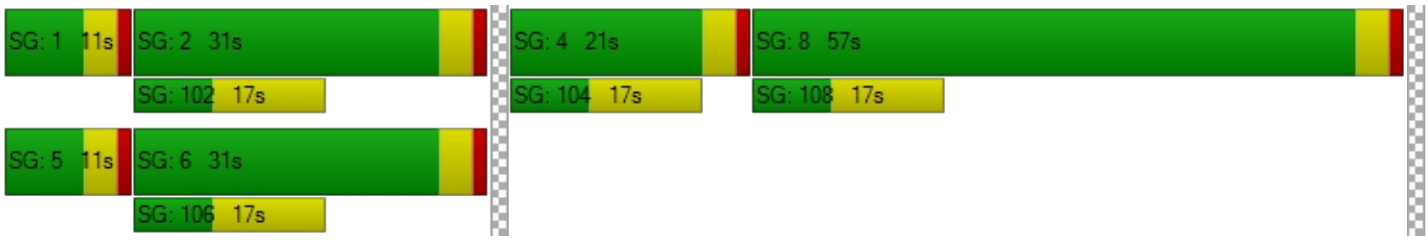
X, volume / capacity	0.73	0.46	0.16	0.66	0.35	0.35	0.04	0.79	0.72	0.72	0.50
d, Delay for Lane Group [s/veh]	66.32	10.33	3.58	63.90	9.06	9.06	52.26	66.53	60.38	60.36	55.70
Lane Group LOS	E	B	A	E	A	A	D	E	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.36	6.81	1.11	2.02	4.92	4.92	0.15	2.98	3.42	3.43	2.02
50th-Percentile Queue Length [ft/ln]	59.07	170.26	27.72	50.46	122.97	122.97	3.64	74.45	85.54	85.64	50.39
95th-Percentile Queue Length [veh/ln]	4.25	11.09	2.00	3.63	8.56	8.56	0.26	5.36	6.16	6.17	3.63
95th-Percentile Queue Length [ft/ln]	106.32	277.25	49.89	90.82	213.91	213.91	6.55	134.00	153.96	154.16	90.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.32	10.33	3.58	63.90	9.06	9.06	52.26	52.26	66.53	60.37	60.36	55.70
Movement LOS	E	B	A	E	A	A	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	12.20			12.57			65.77			59.27		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	19.05											
Intersection LOS	B											
Intersection V/C	0.523											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	217	319	0	0	886	151	0	0	0	113	0	724
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	0	0	54	0	0	0	0	0	0	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	217	353	0	0	940	151	0	0	0	113	0	879
Peak Hour Factor	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	62	101	0	0	268	43	0	0	0	32	0	0
Total Analysis Volume [veh/h]	248	403	0	0	1073	172	0	0	0	129	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	61	99	0	0	38	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	42	42	42	42		42	42
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	8	29	17	17		5	5
g / C, Green / Cycle	0.18	0.68	0.40	0.40		0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.30	0.11		0.07	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	330	2463	1461	652		235	210
d1, Uniform Delay [s]	16.38	2.42	10.68	8.40		17.23	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.46	0.03	0.73	0.21		1.99	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

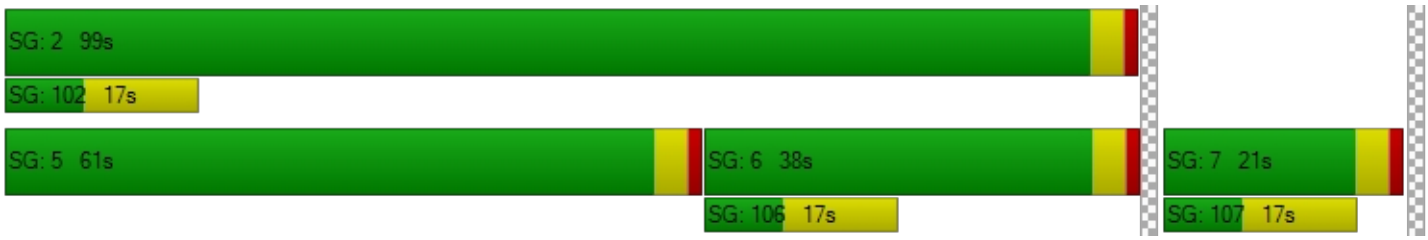
X, volume / capacity	0.75	0.16	0.73	0.26		0.55	0.00
d, Delay for Lane Group [s/veh]	19.84	2.45	11.41	8.62		19.22	0.00
Lane Group LOS	B	A	B	A		B	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	2.24	0.21	3.28	0.83		1.15	0.00
50th-Percentile Queue Length [ft/ln]	56.06	5.13	81.90	20.70		28.63	0.00
95th-Percentile Queue Length [veh/ln]	4.04	0.37	5.90	1.49		2.06	0.00
95th-Percentile Queue Length [ft/ln]	100.90	9.24	147.43	37.26		51.54	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.84	2.45	0.00	0.00	11.41	8.62	0.00	0.00	0.00	19.22	0.00	0.00
Movement LOS	B	A			B	A				B		A
d_A, Approach Delay [s/veh]	9.08			11.02			0.00			19.22		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	10.92											
Intersection LOS	B											
Intersection V/C	0.706											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	368	157	448	573	0	174	0	731	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	0	45	9	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	399	157	493	582	0	174	0	731	0	0	3
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	108	42	133	157	0	47	0	198	0	0	1
Total Analysis Volume [veh/h]	0	432	170	534	630	0	188	0	791	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	22	0	51	73	0	47	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	69	69	69	69	69	69	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	11	11	23	38	23	23	
g / C, Green / Cycle	0.16	0.16	0.33	0.55	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.30	0.17	0.10	0.28	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	591	264	599	1996	603	952	
d1, Uniform Delay [s]	27.63	27.19	22.08	8.46	17.25	21.37	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.76	2.63	4.87	0.09	0.29	1.95	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

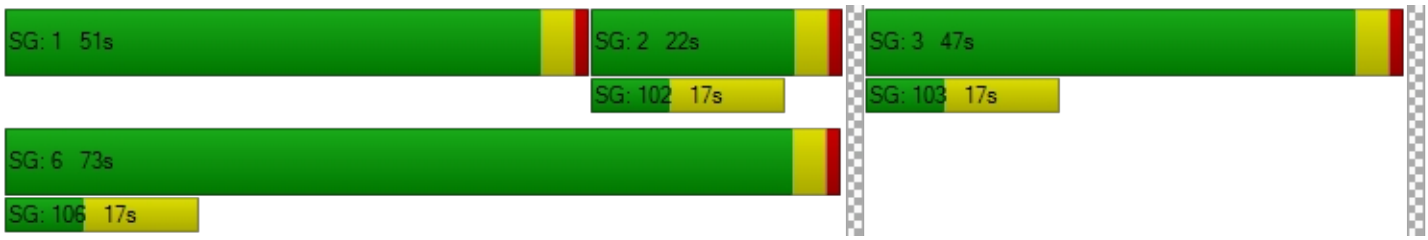
X, volume / capacity	0.73	0.64	0.89	0.32	0.31	0.83	
d, Delay for Lane Group [s/veh]	29.39	29.82	26.95	8.55	17.54	23.32	
Lane Group LOS	C	C	C	A	B	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.39	2.71	8.40	2.22	2.14	5.71	
50th-Percentile Queue Length [ft/ln]	84.81	67.71	209.91	55.51	53.51	142.73	
95th-Percentile Queue Length [veh/ln]	6.11	4.87	13.15	4.00	3.85	9.63	
95th-Percentile Queue Length [ft/ln]	152.66	121.87	328.72	99.92	96.31	240.69	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	29.39	29.82	26.95	8.55	0.00	17.54	0.00	23.32	0.00	0.00	0.00
Movement LOS		C	C	C	A		B		C			
d_A, Approach Delay [s/veh]	29.51			16.99			22.21			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	21.60											
Intersection LOS	C											
Intersection V/C	0.836											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	769	0	0	1098	534	0	0	0	404	0	363
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	7	0	0	22	0	0	0	0	57	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	303	776	0	0	1120	534	0	0	0	461	0	363
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	237	0	0	343	163	0	0	0	141	0	111
Total Analysis Volume [veh/h]	371	950	0	0	1371	654	0	0	0	564	0	444
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	69	0	0	52	0	0	0	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	104	104	104	104		104	104	104
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	16	71	52	52		27	27	27
g / C, Green / Cycle	0.15	0.68	0.50	0.50		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.19	0.21	0.43		0.20	0.21	0.22
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1655	1530
c, Capacity [veh/h]	450	3344	3278	767		422	431	398
d1, Uniform Delay [s]	42.83	6.53	16.39	22.62		35.60	35.92	36.71
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.90	0.05	0.09	2.81		2.95	3.37	5.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.28	0.42	0.85		0.77	0.79	0.86
d, Delay for Lane Group [s/veh]	46.73	6.58	16.47	25.43		38.56	39.29	42.20
Lane Group LOS	D	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.83	2.49	5.02	13.76		7.82	8.38	8.76
50th-Percentile Queue Length [ft/ln]	120.73	62.26	125.45	344.12		195.39	209.58	219.05
95th-Percentile Queue Length [veh/ln]	8.43	4.48	8.69	19.85		12.40	13.13	13.62
95th-Percentile Queue Length [ft/ln]	210.83	112.06	217.30	496.23		310.01	328.29	340.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.73	6.58	0.00	0.00	16.47	25.43	0.00	0.00	0.00	38.86	39.29	41.49
Movement LOS	D	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	17.85			19.37			0.00			40.04		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	23.69											
Intersection LOS	C											
Intersection V/C	0.824											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	717	394	489	1031	0	358	3	445	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	17	0	79	0	0	0	4	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	727	411	489	1110	0	358	3	449	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	213	120	143	325	0	105	1	132	0	0	0
Total Analysis Volume [veh/h]	0	852	482	573	1301	0	420	4	526	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	40	0	27	67	0	0	28	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	72	72	72	72	72	72	72	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	27	27	17	47	19	19	19	
g / C, Green / Cycle	0.38	0.38	0.24	0.65	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.32	0.19	0.38	0.19	0.20	0.21	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1593	1530	
c, Capacity [veh/h]	1287	575	701	2242	424	418	401	
d1, Uniform Delay [s]	18.63	20.44	25.91	6.92	24.11	24.50	24.73	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.59	3.37	2.41	0.24	2.34	3.06	3.73	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

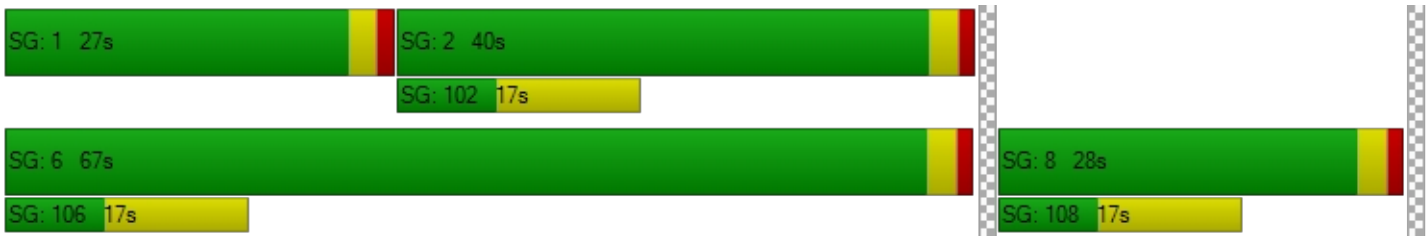
X, volume / capacity	0.66	0.84	0.82	0.58	0.72	0.77	0.80	
d, Delay for Lane Group [s/veh]	19.22	23.81	28.32	7.15	26.45	27.55	28.46	
Lane Group LOS	B	C	C	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.52	7.26	4.61	4.27	4.74	5.13	5.21	
50th-Percentile Queue Length [ft/ln]	137.97	181.43	115.17	106.71	118.55	128.13	130.27	
95th-Percentile Queue Length [veh/ln]	9.37	11.68	8.13	7.66	8.31	8.84	8.95	
95th-Percentile Queue Length [ft/ln]	234.29	291.88	203.17	191.42	207.84	220.95	223.86	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.22	23.81	28.32	7.15	0.00	26.73	27.55	28.10	0.00	0.00	0.00
Movement LOS		B	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	20.88			13.63			27.50			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	19.12											
Intersection LOS	B											
Intersection V/C	0.784											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	820	12	35	1185	250	238	17	53	38	17	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	0	83	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	847	12	35	1268	250	238	17	56	38	17	66
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	247	3	10	369	73	69	5	16	11	5	19
Total Analysis Volume [veh/h]	70	986	14	41	1476	291	277	20	65	44	20	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	47	0	46	83	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	99	99	99	99	99	99	99	99	99	99	99	99
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	57	57	5	55	55	29	29	29	29	29	29
g / C, Green / Cycle	0.06	0.57	0.57	0.05	0.56	0.56	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.04	0.28	0.28	0.03	0.49	0.52	0.21	0.01	0.04	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1619	1800	1791	1619	1800	1700	1319	1800	1530	1333	1800	1530
c, Capacity [veh/h]	98	1027	1022	77	1005	949	381	524	445	392	524	445
d1, Uniform Delay [s]	45.91	12.71	12.71	46.27	19.21	20.04	36.96	25.28	26.11	29.71	25.28	26.33
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.40	0.36	0.36	5.50	2.85	4.40	2.67	0.03	0.15	0.13	0.03	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

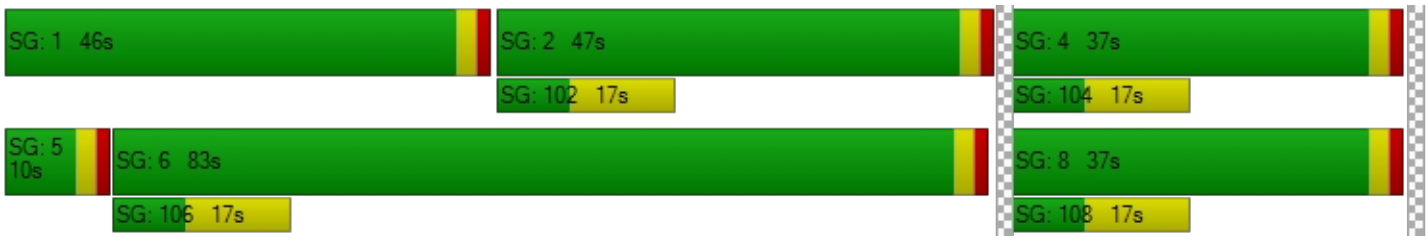
X, volume / capacity	0.72	0.49	0.49	0.53	0.89	0.92	0.73	0.04	0.15	0.11	0.04	0.17
d, Delay for Lane Group [s/veh]	55.30	13.07	13.07	51.77	22.06	24.44	39.62	25.31	26.26	29.84	25.31	26.51
Lane Group LOS	E	B	B	D	C	C	D	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.94	6.33	6.30	1.10	17.20	18.02	6.69	0.34	1.15	0.84	0.34	1.38
50th-Percentile Queue Length [ft/ln]	48.53	158.35	157.59	27.56	430.10	450.48	167.13	8.54	28.77	20.92	8.54	34.38
95th-Percentile Queue Length [veh/ln]	3.49	10.46	10.42	1.98	24.01	24.98	10.93	0.61	2.07	1.51	0.61	2.48
95th-Percentile Queue Length [ft/ln]	87.36	261.54	260.53	49.61	600.16	624.52	273.13	15.37	51.79	37.66	15.37	61.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.30	13.07	13.07	51.77	23.01	24.44	39.62	25.31	26.26	29.84	25.31	26.51
Movement LOS	E	B	B	D	C	C	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	15.83			23.89			36.43			27.38		
Approach LOS	B			C			D			C		
d_I, Intersection Delay [s/veh]	22.83											
Intersection LOS	C											
Intersection V/C	0.818											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	766	10	57	1079	95	108	7	68	20	4	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	0	86	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	793	10	57	1165	95	108	7	71	20	4	48
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	226	3	16	332	27	31	2	20	6	1	14
Total Analysis Volume [veh/h]	76	903	11	65	1327	108	123	8	81	23	5	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	58	35	0	75	52	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	21	21	4	20	20	7	7	7	7	7
g / C, Green / Cycle	0.10	0.51	0.51	0.09	0.50	0.50	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.25	0.25	0.04	0.40	0.41	0.12	0.05	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1792	1619	1800	1753	1055	1530	1430	1800	1530
c, Capacity [veh/h]	162	915	911	146	897	874	362	276	178	325	276
d1, Uniform Delay [s]	17.31	6.61	6.61	17.56	8.57	8.62	16.81	14.44	20.36	13.71	14.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	0.43	0.43	2.11	1.78	1.90	0.61	0.58	0.32	0.02	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.50	0.50	0.44	0.81	0.81	0.36	0.29	0.13	0.02	0.20
d, Delay for Lane Group [s/veh]	19.43	7.03	7.04	19.68	10.35	10.51	17.41	15.02	20.69	13.73	14.53
Lane Group LOS	B	A	A	B	B	B	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.68	1.76	1.76	0.59	3.84	3.81	1.06	0.59	0.21	0.03	0.39
50th-Percentile Queue Length [ft/ln]	16.96	44.05	43.88	14.71	95.96	95.25	26.51	14.76	5.31	0.84	9.77
95th-Percentile Queue Length [veh/ln]	1.22	3.17	3.16	1.06	6.91	6.86	1.91	1.06	0.38	0.06	0.70
95th-Percentile Queue Length [ft/ln]	30.52	79.30	78.98	26.49	172.73	171.46	47.72	26.57	9.57	1.52	17.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.43	7.04	7.04	19.68	10.42	10.51	17.41	17.41	15.02	20.69	13.73	14.53
Movement LOS	B	A	A	B	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	7.99			10.83			16.50			16.19		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.41											
Intersection LOS	B											
Intersection V/C	0.676											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.627

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	75	785	1046	60	34	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	89	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	812	1135	60	34	126
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	228	319	17	10	35
Total Analysis Volume [veh/h]	84	912	1275	67	38	142
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	16	104	88	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	25	18	18	6	6
g / C, Green / Cycle	0.11	0.67	0.48	0.48	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.27	0.37	0.38	0.02	0.09
s, saturation flow rate [veh/h]	1619	3427	1800	1769	1619	1530
c, Capacity [veh/h]	179	2311	866	851	262	247
d1, Uniform Delay [s]	15.23	2.64	7.83	7.92	13.15	14.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	0.11	1.52	1.67	0.25	2.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.39	0.77	0.79	0.15	0.57
d, Delay for Lane Group [s/veh]	17.12	2.75	9.36	9.59	13.40	16.25
Lane Group LOS	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.64	0.29	2.90	2.96	0.24	1.02
50th-Percentile Queue Length [ft/ln]	15.91	7.36	72.54	73.95	5.91	25.53
95th-Percentile Queue Length [veh/ln]	1.15	0.53	5.22	5.32	0.43	1.84
95th-Percentile Queue Length [ft/ln]	28.64	13.26	130.57	133.11	10.64	45.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.12	2.75	9.47	9.59	13.40	16.25
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.96		9.47		15.65	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.73					
Intersection LOS	A					
Intersection V/C	0.627					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	117	584	43	53	849	145	130	147	90	74	238	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	89	27	12	0	0	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	584	43	53	849	234	157	159	90	74	275	59
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	170	12	15	247	68	46	46	26	21	80	17
Total Analysis Volume [veh/h]	136	678	50	62	986	272	182	185	105	86	319	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	27	43	0	16	28	0	16	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	48	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	10	24	24	4	18	18	11	0	0	11	0	0
g / C, Green / Cycle	0.20	0.50	0.50	0.08	0.38	0.38	0.23	0.00	0.00	0.23	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.15	0.20	0.20	0.07	0.29	0.18	0.17	0.10	0.07	0.07	0.18	0.05
s, saturation flow rate [veh/h]	909	1800	1757	909	3427	1530	1077	1800	1530	1218	1800	1530
c, Capacity [veh/h]	295	895	874	189	1301	581	357	0	0	384	0	0
d1, Uniform Delay [s]	20.00	7.68	7.68	23.48	13.07	11.32	18.94	0.00	0.00	16.94	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	0.30	0.31	1.00	0.93	0.59	1.13	0.00	0.00	0.29	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

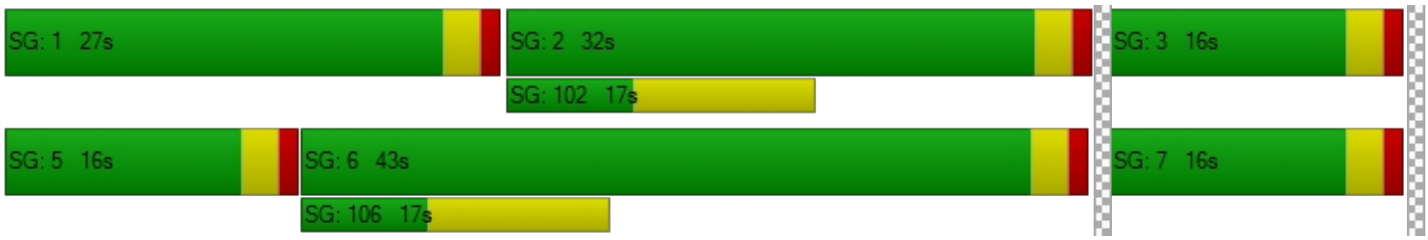
X, volume / capacity	0.46	0.41	0.41	0.33	0.76	0.47	0.51	0.00	0.00	0.22	0.00	0.00
d, Delay for Lane Group [s/veh]	21.12	7.98	7.99	24.48	13.99	11.91	20.07	0.00	0.00	17.23	0.00	0.00
Lane Group LOS	C	A	A	C	B	B	C	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.43	1.87	1.83	0.72	3.97	1.91	1.85	0.00	0.00	0.77	0.00	0.00
50th-Percentile Queue Length [ft/ln]	35.84	46.84	45.78	17.93	99.25	47.81	46.36	0.00	0.00	19.19	0.00	0.00
95th-Percentile Queue Length [veh/ln]	2.58	3.37	3.30	1.29	7.15	3.44	3.34	0.00	0.00	1.38	0.00	0.00
95th-Percentile Queue Length [ft/ln]	64.52	84.32	82.41	32.27	178.64	86.05	83.44	0.00	0.00	34.53	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.12	7.99	7.99	24.48	13.99	11.91	20.07	0.00	0.00	17.23	0.00	0.00
Movement LOS	C	A	A	C	B	B	C	A	A	B	A	A
d_A, Approach Delay [s/veh]	10.05			14.06			7.74			3.13		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	10.34											
Intersection LOS	B											
Intersection V/C	0.726											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	297	11	48	731	316	152	33	33	3	38	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	0	0	0	21	7	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	297	11	48	731	337	159	33	38	3	38	31
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	79	3	13	194	89	42	9	10	1	10	8
Total Analysis Volume [veh/h]	74	315	12	51	776	358	169	35	40	3	40	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	50	0	60	92	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	17	17	3	16	16	8	8
g / C, Green / Cycle	0.10	0.46	0.46	0.08	0.43	0.43	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.09	0.09	0.03	0.33	0.33	0.17	0.04
s, saturation flow rate [veh/h]	1619	1800	1777	1619	1800	1610	1418	1712
c, Capacity [veh/h]	167	824	814	128	781	699	473	471
d1, Uniform Delay [s]	15.28	5.86	5.86	15.88	8.70	8.72	13.50	11.71
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.84	0.12	0.12	2.00	1.59	1.81	0.87	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

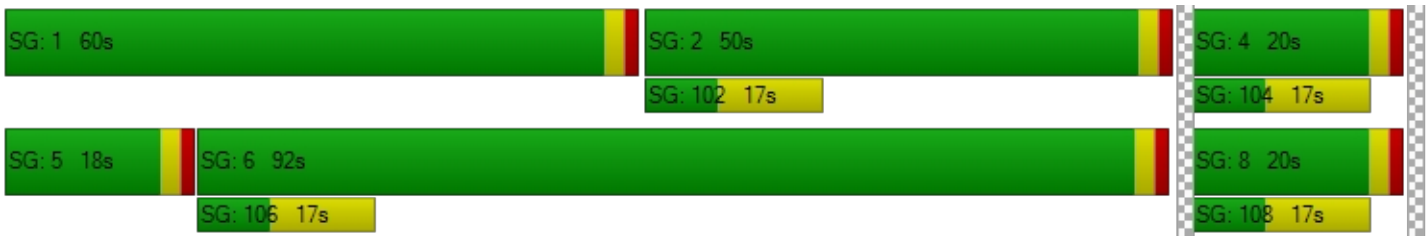
X, volume / capacity	0.44	0.20	0.20	0.40	0.76	0.77	0.52	0.16
d, Delay for Lane Group [s/veh]	17.12	5.98	5.98	17.87	10.29	10.53	14.37	11.87
Lane Group LOS	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.56	0.49	0.49	0.41	2.85	2.61	1.59	0.42
50th-Percentile Queue Length [ft/ln]	14.00	12.26	12.17	10.15	71.36	65.35	39.69	10.45
95th-Percentile Queue Length [veh/ln]	1.01	0.88	0.88	0.73	5.14	4.70	2.86	0.75
95th-Percentile Queue Length [ft/ln]	25.20	22.07	21.91	18.27	128.44	117.62	71.45	18.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.12	5.98	5.98	17.87	10.34	10.53	14.37	14.37	14.37	11.87	11.87	11.87
Movement LOS	B	A	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	8.04			10.73			14.37			11.87		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.67											
Intersection LOS	B											
Intersection V/C	0.661											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 2 Existing Plus Project Evening Peak Hour - Alternative 1

Report File: C:\...\PMEP1.pdf

10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.973	40.4	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.837	37.2	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.666	18.1	B
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.668	12.2	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Right	1.588	42.0	D
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.779	22.8	C
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.049	14.7	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.720	9.1	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	252.3	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.941	58.4	E
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Left	0.458	177.2	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	73.1	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	4.332	42.5	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.779	28.4	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.578	24.7	C
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.940	40.4	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.699	10.5	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.049	10.2	B
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.068	16.0	C
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.358	8.6	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.015	10.0	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.440	24.2	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.016	10.3	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	1.210	210.2	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.479	23.6	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.269	15.3	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.615	15.3	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.773	3.5	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	310.672	228.0	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.469	97.6	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.621	22.3	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.834	19.1	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.009	44.3	D
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.658	12.6	B
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.800	21.6	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.775	20.8	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.642	9.4	A
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.591	7.0	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.771	12.9	B
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.809	19.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.973

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	300	1396	0	0	1014	625	0	0	0	283	4	527
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	26	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	366	1422	0	0	1021	625	0	0	0	283	4	527
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	368	0	0	265	162	0	0	0	73	1	137
Total Analysis Volume [veh/h]	379	1474	0	0	1058	648	0	0	0	293	4	546
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	31	90	0	0	59	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	28	87	56	56		37	37
g / C, Green / Cycle	0.22	0.67	0.43	0.43		0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.23	0.43	0.22	0.42		0.26	0.27
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1654	1530
c, Capacity [veh/h]	349	2298	2117	661		469	434
d1, Uniform Delay [s]	51.08	12.40	26.81	36.47		45.19	45.84
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	49.35	1.39	0.85	30.61		7.61	11.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.09	0.64	0.50	0.98		0.92	0.95
d, Delay for Lane Group [s/veh]	100.43	13.79	27.66	67.09		52.80	57.62
Lane Group LOS	F	B	C	E		D	E
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	16.13	12.09	8.10	25.44		14.36	14.47
50th-Percentile Queue Length [ft/ln]	403.26	302.35	202.40	636.02		358.98	361.73
95th-Percentile Queue Length [veh/ln]	23.75	17.80	12.76	33.71		20.57	20.71
95th-Percentile Queue Length [ft/ln]	593.64	444.93	319.06	842.82		514.35	517.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	100.43	13.79	0.00	0.00	27.66	67.09	0.00	0.00	0.00	52.80	52.80	56.49
Movement LOS	F	B			C	E				D	D	E
d_A, Approach Delay [s/veh]	31.51			42.63			0.00			55.16		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	40.35											
Intersection LOS	D											
Intersection V/C	0.973											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.837

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1059	377	390	911	0	664	2	171	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	92	3	0	7	0	0	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1151	380	390	918	0	664	2	196	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	302	100	102	241	0	174	1	51	0	0	0
Total Analysis Volume [veh/h]	0	1209	399	410	964	0	697	2	206	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	20	0	44	64	0	0	66	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	46	46	35	84	40	40	
g / C, Green / Cycle	0.35	0.35	0.27	0.64	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.26	0.25	0.28	0.27	0.28	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1627	
c, Capacity [veh/h]	1728	539	436	2209	501	503	
d1, Uniform Delay [s]	36.21	36.91	46.55	11.44	42.72	43.35	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.38	8.83	10.28	0.63	5.37	7.25	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

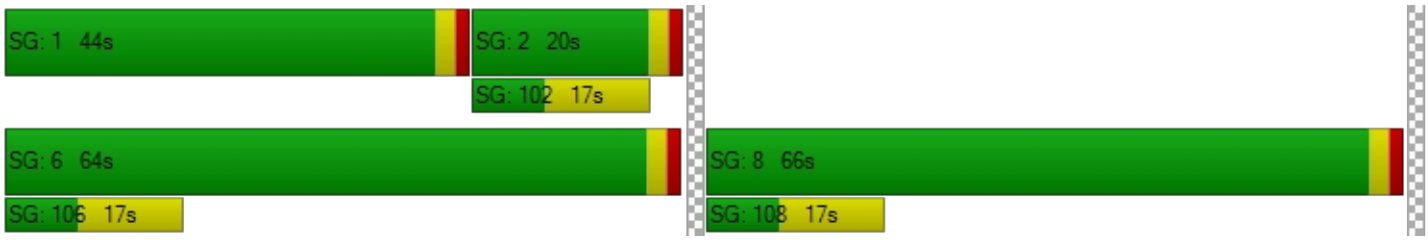
X, volume / capacity	0.70	0.74	0.94	0.44	0.88	0.92	
d, Delay for Lane Group [s/veh]	38.60	45.74	56.82	12.07	48.10	50.60	
Lane Group LOS	D	D	E	B	D	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.34	12.38	14.17	6.86	14.21	15.27	
50th-Percentile Queue Length [ft/ln]	283.51	309.54	354.14	171.57	355.17	381.72	
95th-Percentile Queue Length [veh/ln]	16.86	18.15	20.34	11.16	20.39	21.68	
95th-Percentile Queue Length [ft/ln]	421.58	453.81	508.45	278.98	509.71	541.93	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	38.60	45.74	56.82	12.07	0.00	49.00	50.60	50.60	0.00	0.00	0.00
Movement LOS		D	D	E	B		D	D	D			
d_A, Approach Delay [s/veh]	40.37			25.42			49.38			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	37.18											
Intersection LOS	D											
Intersection V/C	0.837											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	63	885	39	95	728	84	226	361	114	21	116	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	95	0	0	32	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	980	39	95	760	84	226	361	117	21	116	92
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	252	10	24	195	22	58	93	30	5	30	24
Total Analysis Volume [veh/h]	75	1007	40	98	781	86	232	371	120	22	119	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	60	0	16	59	0	34	44	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	52	52	52	52	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	19	19	5	19	19	9	14	14	2	7	7
g / C, Green / Cycle	0.09	0.36	0.36	0.10	0.37	0.37	0.18	0.27	0.27	0.04	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.29	0.06	0.25	0.25	0.14	0.11	0.08	0.01	0.06	0.07
s, saturation flow rate [veh/h]	1619	1800	1776	1619	1800	1738	1619	3427	1530	1619	1800	1549
c, Capacity [veh/h]	145	646	637	166	669	646	294	933	417	60	231	199
d1, Uniform Delay [s]	22.73	15.20	15.20	22.43	13.68	13.68	20.46	15.53	15.02	24.58	21.18	21.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.84	2.59	2.63	3.34	1.12	1.16	4.75	0.27	0.38	3.70	1.54	2.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.82	0.82	0.59	0.66	0.66	0.79	0.40	0.29	0.37	0.48	0.52
d, Delay for Lane Group [s/veh]	25.57	17.79	17.83	25.77	14.80	14.84	25.21	15.80	15.40	28.28	22.72	23.41
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.92	5.24	5.18	1.21	3.84	3.72	2.82	1.63	1.04	0.31	1.25	1.20
50th-Percentile Queue Length [ft/ln]	23.11	131.00	129.47	30.23	96.11	92.98	70.48	40.70	26.01	7.71	31.16	29.89
95th-Percentile Queue Length [veh/ln]	1.66	8.99	8.91	2.18	6.92	6.69	5.07	2.93	1.87	0.56	2.24	2.15
95th-Percentile Queue Length [ft/ln]	41.61	224.85	222.77	54.41	173.00	167.36	126.87	73.26	46.82	13.88	56.08	53.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.57	17.81	17.83	25.77	14.82	14.84	25.21	15.80	15.40	28.28	22.77	23.41
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	18.33			15.93			18.75			23.54		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.07											
Intersection LOS	B											
Intersection V/C	0.666											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	97	875	55	58	708	52	61	146	102	35	101	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	105	0	0	35	0	0	0	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	980	55	58	743	52	61	146	110	35	101	33
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	265	15	16	201	14	17	40	30	9	27	9
Total Analysis Volume [veh/h]	131	1062	60	63	805	56	66	158	119	38	109	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	78	0	13	71	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	15	15	3	13	13	10	10
g / C, Green / Cycle	0.14	0.41	0.41	0.09	0.36	0.36	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.31	0.31	0.04	0.24	0.24	0.21	0.12
s, saturation flow rate [veh/h]	1619	1800	1766	1619	1800	1759	1655	1577
c, Capacity [veh/h]	227	736	723	147	648	633	545	526
d1, Uniform Delay [s]	15.10	9.56	9.56	16.14	10.14	10.14	12.86	11.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.31	1.72	1.77	1.96	1.22	1.25	1.20	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.77	0.77	0.43	0.67	0.67	0.63	0.35
d, Delay for Lane Group [s/veh]	17.42	11.28	11.33	18.09	11.36	11.39	14.07	11.88
Lane Group LOS	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.01	3.04	3.00	0.51	2.38	2.33	2.24	1.04
50th-Percentile Queue Length [ft/ln]	25.17	75.94	74.89	12.74	59.56	58.33	56.00	25.99
95th-Percentile Queue Length [veh/ln]	1.81	5.47	5.39	0.92	4.29	4.20	4.03	1.87
95th-Percentile Queue Length [ft/ln]	45.31	136.69	134.80	22.94	107.20	105.00	100.79	46.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.42	11.30	11.33	18.09	11.37	11.39	14.07	14.07	14.07	11.88	11.88	11.88
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.94			11.83			14.07			11.88		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.17											
Intersection LOS	B											
Intersection V/C	0.668											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	42.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.588

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	933	64	109	745	40	56	185	48	67	61	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	129	0	0	43	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1062	64	109	788	40	56	185	51	67	61	51
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	272	16	28	202	10	14	47	13	17	16	13
Total Analysis Volume [veh/h]	68	1087	66	112	807	41	57	189	52	69	62	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	21	0	10	21	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	19	19	6	20	20	26	26	26	26
g / C, Green / Cycle	0.08	0.32	0.32	0.10	0.34	0.34	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.32	0.07	0.24	0.24	0.55	0.03	1.04	0.03
s, saturation flow rate [veh/h]	1619	1800	1764	1619	1800	1770	446	1530	126	1530
c, Capacity [veh/h]	131	571	560	162	606	596	267	662	146	662
d1, Uniform Delay [s]	26.53	20.53	20.53	26.17	17.36	17.36	15.28	10.02	19.76	10.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.16	42.35	43.09	5.18	6.77	6.88	12.67	0.05	16.96	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

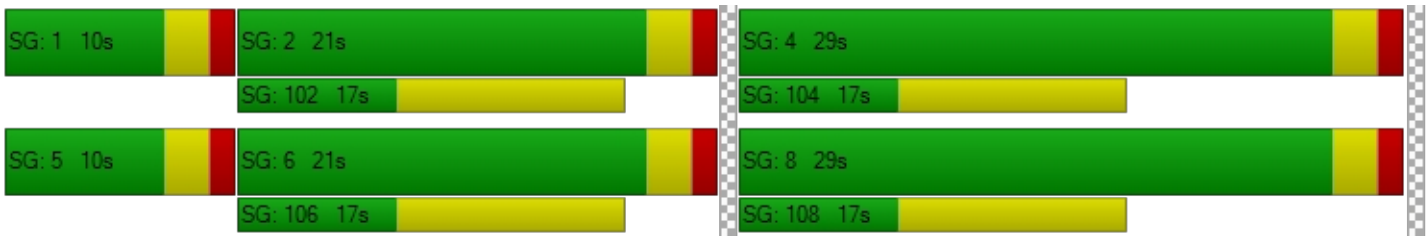
X, volume / capacity	0.52	1.02	1.02	0.69	0.71	0.71	0.92	0.08	0.90	0.08
d, Delay for Lane Group [s/veh]	29.69	62.88	63.62	31.35	24.13	24.24	27.95	10.07	36.72	10.07
Lane Group LOS	C	F	F	C	C	C	C	B	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.00	13.84	13.68	1.69	5.73	5.65	2.94	0.36	2.50	0.36
50th-Percentile Queue Length [ft/ln]	25.00	346.03	341.99	42.37	143.19	141.23	73.42	9.08	62.41	9.08
95th-Percentile Queue Length [veh/ln]	1.80	20.17	19.99	3.05	9.65	9.55	5.29	0.65	4.49	0.65
95th-Percentile Queue Length [ft/ln]	45.01	504.34	499.75	76.26	241.32	238.68	132.15	16.35	112.34	16.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.69	63.22	63.62	31.35	24.18	24.24	27.95	27.95	10.07	36.72	36.72	10.07
Movement LOS	C	E	E	C	C	C	C	C	B	D	D	B
d_A, Approach Delay [s/veh]	61.38			25.02			24.83			29.15		
Approach LOS	E			C			C			C		
d_I, Intersection Delay [s/veh]	41.96											
Intersection LOS	D											
Intersection V/C	1.588											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1142	77	308	947	15	19	8	19	62	14	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	4	25	24	0	0	0	0	2	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	1232	81	333	971	15	19	8	19	64	14	209
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	319	21	86	251	4	5	2	5	17	4	54
Total Analysis Volume [veh/h]	12	1274	84	344	1004	16	20	8	20	66	14	216
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	51	51	21	71	71	15	15	15
g / C, Green / Cycle	0.02	0.51	0.51	0.21	0.71	0.71	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.36	0.36	0.19	0.27	0.27	0.05	0.07	0.13
s, saturation flow rate [veh/h]	1810	1900	1859	1810	1900	1890	995	1169	1615
c, Capacity [veh/h]	37	974	953	387	1342	1334	204	245	248
d1, Uniform Delay [s]	48.35	18.59	18.63	38.19	5.91	5.92	37.07	38.81	41.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.87	4.24	4.39	7.01	0.82	0.83	0.59	0.77	9.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

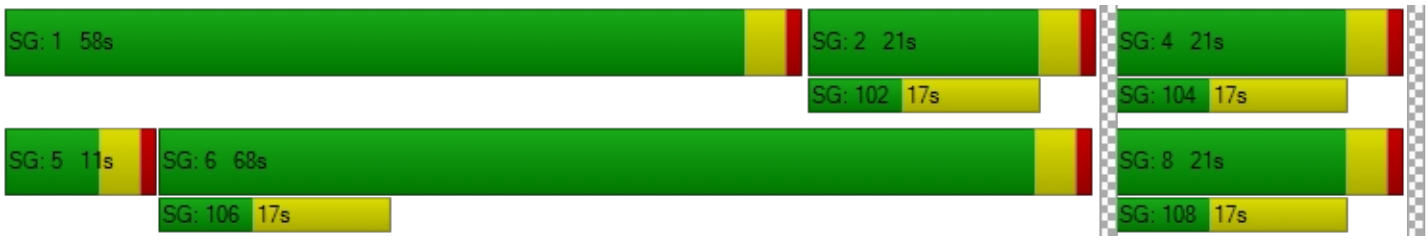
X, volume / capacity	0.32	0.70	0.71	0.89	0.38	0.38	0.24	0.33	0.87
d, Delay for Lane Group [s/veh]	53.22	22.83	23.01	45.20	6.74	6.74	37.66	39.57	50.64
Lane Group LOS	D	C	C	D	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.34	12.55	12.38	8.81	3.99	3.97	1.05	1.85	5.79
50th-Percentile Queue Length [ft/ln]	8.62	313.67	309.41	220.37	99.70	99.32	26.31	46.16	144.64
95th-Percentile Queue Length [veh/ln]	0.62	18.36	18.15	13.68	7.18	7.15	1.89	3.32	9.73
95th-Percentile Queue Length [ft/ln]	15.51	458.90	453.65	342.09	179.46	178.77	47.37	83.08	243.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.22	22.92	23.01	45.20	6.74	6.74	37.66	37.66	37.66	39.57	39.57	50.64
Movement LOS	D	C	C	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.19			16.44			37.66			47.65		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	22.78											
Intersection LOS	C											
Intersection V/C	0.779											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	78	3	0	26	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1309	3	0	1054	0	16
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	344	1	0	277	0	5
Total Analysis Volume [veh/h]	1378	4	0	1109	0	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.66
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.15
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	3.81
d_A, Approach Delay [s/veh]	0.00		0.00		14.66	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	95	24	2	262	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1237	95	24	1030	262	75
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	326	25	6	271	69	20
Total Analysis Volume [veh/h]	1302	100	25	1084	276	79
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	61	0	11	72	28	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	2	27	9	9
g / C, Green / Cycle	0.48	0.48	0.04	0.61	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.36	0.06	0.01	0.30	0.15	0.05
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1749	781	77	2225	373	333
d1, Uniform Delay [s]	9.34	6.37	20.83	4.74	16.64	14.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	0.07	2.44	0.17	2.88	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.13	0.33	0.49	0.74	0.24
d, Delay for Lane Group [s/veh]	9.98	6.45	23.27	4.91	19.52	15.19
Lane Group LOS	A	A	C	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.74	0.39	0.28	1.52	2.57	0.61
50th-Percentile Queue Length [ft/ln]	93.62	9.80	7.00	37.92	64.17	15.30
95th-Percentile Queue Length [veh/ln]	6.74	0.71	0.50	2.73	4.62	1.10
95th-Percentile Queue Length [ft/ln]	168.52	17.64	12.60	68.26	115.50	27.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.98	6.45	23.27	4.91	19.52	15.19
Movement LOS	A	A	C	A	B	B
d_A, Approach Delay [s/veh]	9.73		5.32		18.56	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	9.12					
Intersection LOS	A					
Intersection V/C	0.720					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	252.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	99	0	0	264	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1300	0	0	1293	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	331	0	0	329	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1324	0	0	1317	15	22	0	35	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.65	0.00	0.09	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	12.11	0.00	0.00	11.81	0.00	0.00	191.40	252.26	93.20	121.91	176.24	15.25
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.00	0.00	3.54	3.54	3.54	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	2.66	0.00	0.00	0.00	0.00	0.00	88.48	88.48	88.48	3.05	3.05	3.05
d_A, Approach Delay [s/veh]	0.16			0.00			131.10			41.91		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	2.87											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	58.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.941

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	46	5	142	123	0	0	0	0	15	0	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	421	457	600	581	22	29	58	3	302	39	514
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	4	109	118	155	150	6	7	15	1	78	10	0
Total Analysis Volume [veh/h]	16	435	473	620	601	23	30	60	3	312	40	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	30	0	28	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	191	191	191	191	191	191	191	191	191	191
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	59	59	68	123	123	8	8	39	39
g / C, Green / Cycle	0.02	0.31	0.31	0.36	0.65	0.65	0.04	0.04	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.29	0.34	0.17	0.01	0.02	0.03	0.19	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	1819	1615
c, Capacity [veh/h]	38	1122	501	644	2334	1042	80	84	375	333
d1, Uniform Delay [s]	92.63	51.83	64.49	60.42	14.47	12.24	88.95	90.51	74.87	0.00
k, delay calibration	0.11	0.11	0.11	0.14	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.25	0.22	9.58	11.64	0.06	0.01	2.86	12.79	11.33	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

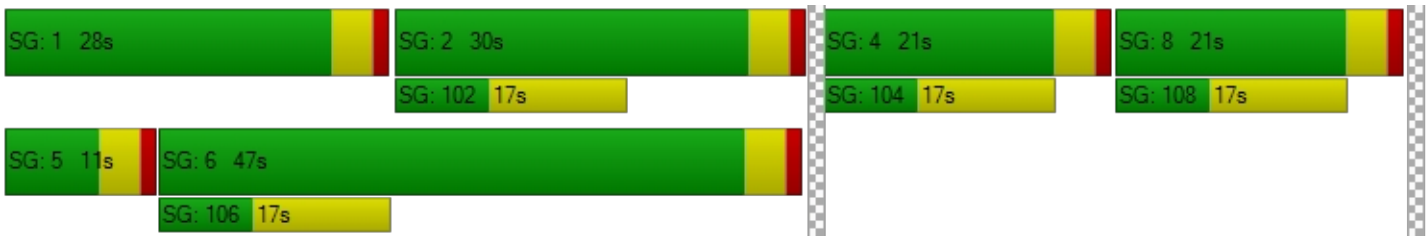
X, volume / capacity	0.42	0.39	0.94	0.96	0.26	0.02	0.37	0.75	0.94	0.00
d, Delay for Lane Group [s/veh]	99.88	52.05	74.06	72.06	14.52	12.25	91.82	103.29	86.20	0.00
Lane Group LOS	F	D	E	E	B	B	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	8.39	23.93	31.64	5.78	0.38	1.53	3.42	18.34	0.00
50th-Percentile Queue Length [ft/ln]	21.74	209.66	598.24	790.95	144.42	9.38	38.13	85.47	458.39	0.00
95th-Percentile Queue Length [veh/ln]	1.57	13.14	31.95	40.86	9.72	0.68	2.75	6.15	25.36	0.00
95th-Percentile Queue Length [ft/ln]	39.14	328.39	798.81	1021.56	242.97	16.89	68.63	153.85	633.96	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	99.88	52.05	74.06	72.06	14.52	12.25	91.82	103.29	103.29	86.20	86.20	0.00
Movement LOS	F	D	E	E	B	B	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	64.15			43.15			99.59			86.20		
Approach LOS	E			D			F			F		
d_I, Intersection Delay [s/veh]	58.39											
Intersection LOS	E											
Intersection V/C	0.941											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	177.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.458

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	867	73	108	692	4	4	15	15	18	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	918	73	108	830	4	4	15	15	18	10	26
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	236	19	28	213	1	1	4	4	5	3	7
Total Analysis Volume [veh/h]	14	943	75	111	853	4	4	15	15	18	10	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.16	0.01	0.00	0.08	0.38	0.03	0.46	0.23	0.05
d_M, Delay for Movement [s/veh]	9.63	0.00	0.00	11.22	0.00	0.00	122.10	139.92	53.90	177.23	168.66	92.30
Movement LOS	A	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.05	0.03	0.00	0.55	0.28	0.00	2.00	2.00	2.00	3.48	3.48	3.48
95th-Percentile Queue Length [ft/ln]	1.35	0.67	0.00	13.83	6.91	0.00	50.00	50.00	50.00	87.03	87.03	87.03
d_A, Approach Delay [s/veh]	0.13			1.29			99.88			133.98		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	5.81											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	73.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	948	25	17	721	2	0	0	9	12	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	999	25	17	859	2	0	0	9	12	0	14
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	262	7	4	225	1	0	0	2	3	0	4
Total Analysis Volume [veh/h]	4	1048	26	18	901	2	0	0	9	13	0	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.02	0.17	0.00	0.03
d_M, Delay for Movement [s/veh]	9.75	0.00	0.00	10.64	0.00	0.00	47.57	69.03	11.53	58.79	73.05	18.54
Movement LOS	A	A	A	B	A	A	E	F	B	F	F	C
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.08	0.04	0.00	0.05	0.05	0.05	0.72	0.72	0.72
95th-Percentile Queue Length [ft/ln]	0.40	0.20	0.00	1.99	1.00	0.00	1.22	1.22	1.22	17.94	17.94	17.94
d_A, Approach Delay [s/veh]	0.04			0.21			11.53			37.23		
Approach LOS	A			A			B			E		
d_I, Intersection Delay [s/veh]	0.68											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	42.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.332

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	816	42	15	635	15	30	17	20	54	16	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	867	42	15	773	15	30	17	20	54	16	9
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	236	11	4	211	4	8	5	5	15	4	2
Total Analysis Volume [veh/h]	49	944	46	16	842	16	33	19	22	59	17	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	28	0	11	28	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	34	34	3	31	31	51	51	51	51
g / C, Green / Cycle	0.05	0.34	0.34	0.03	0.31	0.31	0.51	0.51	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.26	0.01	0.23	0.23	1.22	0.01	3.54	0.01
s, saturation flow rate [veh/h]	1810	1900	1869	1810	1900	1888	43	1615	21	1615
c, Capacity [veh/h]	94	650	639	45	599	595	81	828	75	828
d1, Uniform Delay [s]	46.18	29.35	29.35	47.94	30.32	30.32	28.67	12.03	42.55	11.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	8.47	8.60	4.58	7.27	7.31	33.16	0.01	107.86	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

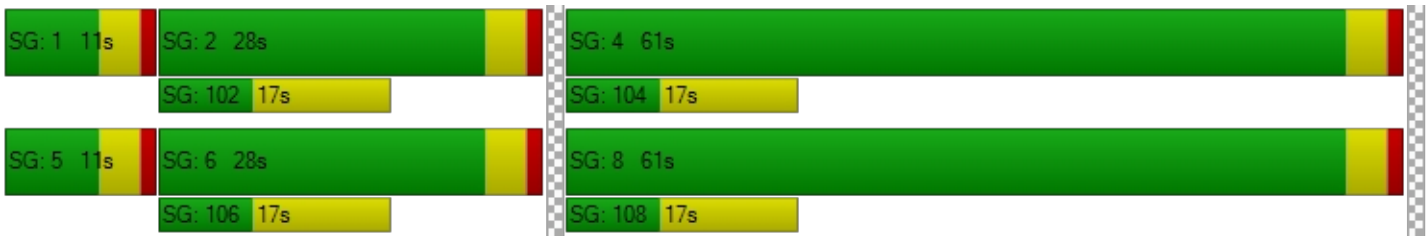
X, volume / capacity	0.52	0.77	0.77	0.35	0.72	0.72	0.64	0.03	1.01	0.01
d, Delay for Lane Group [s/veh]	50.57	37.82	37.95	52.52	37.58	37.63	61.82	12.05	150.41	11.95
Lane Group LOS	D	D	D	D	D	D	E	B	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.30	11.96	11.79	0.45	10.20	10.14	1.47	0.24	4.11	0.11
50th-Percentile Queue Length [ft/ln]	32.39	299.08	294.83	11.21	255.08	253.62	36.74	6.00	102.79	2.71
95th-Percentile Queue Length [veh/ln]	2.33	17.64	17.43	0.81	15.44	15.37	2.64	0.43	7.40	0.19
95th-Percentile Queue Length [ft/ln]	58.31	440.89	435.63	20.18	386.05	384.21	66.12	10.80	185.02	4.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.57	37.88	37.95	52.52	37.61	37.63	61.82	61.82	12.05	150.41	150.41	11.95
Movement LOS	D	D	D	D	D	D	E	E	B	F	F	B
d_A, Approach Delay [s/veh]	38.49			37.88			47.02			134.31		
Approach LOS	D			D			D			F		
d_I, Intersection Delay [s/veh]	42.51											
Intersection LOS	D											
Intersection V/C	4.332											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	67	868	0	0	806	25	29	0	134	456	96	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	0	0	138	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	916	0	0	944	25	29	0	134	456	96	56
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	244	0	0	251	7	8	0	36	121	26	15
Total Analysis Volume [veh/h]	71	976	0	0	1005	27	31	0	143	486	102	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	23	0	21	0	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	99	99	99	99	99	99	99	99
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42	42	42	42	11	11	35	35
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.11	0.11	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.13	0.27	0.27	0.27	0.02	0.09	0.32	0.04
s, saturation flow rate [veh/h]	555	3618	1900	1883	1810	1615	1825	1615
c, Capacity [veh/h]	173	1519	798	791	200	179	637	564
d1, Uniform Delay [s]	38.31	22.95	23.01	23.09	40.07	43.21	31.15	21.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.56	0.46	0.89	0.92	0.36	7.99	6.25	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

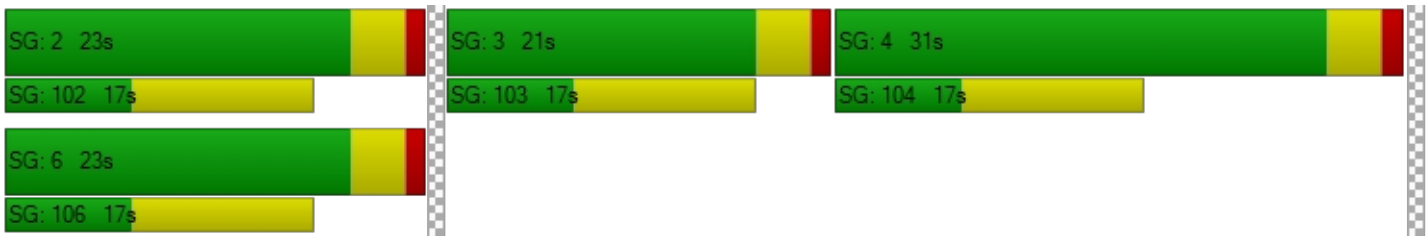
X, volume / capacity	0.41	0.64	0.65	0.65	0.15	0.80	0.92	0.11
d, Delay for Lane Group [s/veh]	39.87	23.41	23.89	24.00	40.43	51.20	37.40	22.01
Lane Group LOS	D	C	C	C	D	D	D	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.68	8.87	9.50	9.54	0.70	3.80	14.20	0.95
50th-Percentile Queue Length [ft/ln]	42.06	221.86	237.51	238.45	17.58	94.92	355.06	23.84
95th-Percentile Queue Length [veh/ln]	3.03	13.76	14.56	14.60	1.27	6.83	20.38	1.72
95th-Percentile Queue Length [ft/ln]	75.71	344.00	363.89	365.07	31.65	170.85	509.57	42.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.87	23.41	0.00	0.00	23.95	24.00	40.43	0.00	51.20	37.40	37.40	22.01
Movement LOS	D	C			C	C	D		D	D	D	C
d_A, Approach Delay [s/veh]	24.52			23.95			49.28			35.97		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.36											
Intersection LOS	C											
Intersection V/C	0.779											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	24.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	971	916	446	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	35	103	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1019	951	549	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	269	251	145	0	0
Total Analysis Volume [veh/h]	243	1077	1005	580	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.58	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	24.67	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	A	A	A		
95th-Percentile Queue Length [veh/ln]	3.55	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	88.68	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	4.54		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.06					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.940

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	593	292	83	826	0	608	35	374	13	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	6	29	0	38	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	603	292	89	855	0	646	35	374	13	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	161	78	24	228	0	172	9	100	3	0	1
Total Analysis Volume [veh/h]	0	642	311	95	911	0	688	37	398	14	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	22	0	11	33	0	0	21	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	6	29	31	31	2	2
g / C, Green / Cycle	0.26	0.26	0.08	0.39	0.42	0.42	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.25	0.28	0.05	0.25	0.40	0.25	0.01	0.00
s, saturation flow rate [veh/h]	1900	1704	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	492	441	146	1421	758	675	53	47
d1, Uniform Delay [s]	27.49	27.79	33.47	18.48	21.17	16.86	35.62	35.43
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	33.47	66.04	4.85	2.23	7.98	0.82	2.61	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

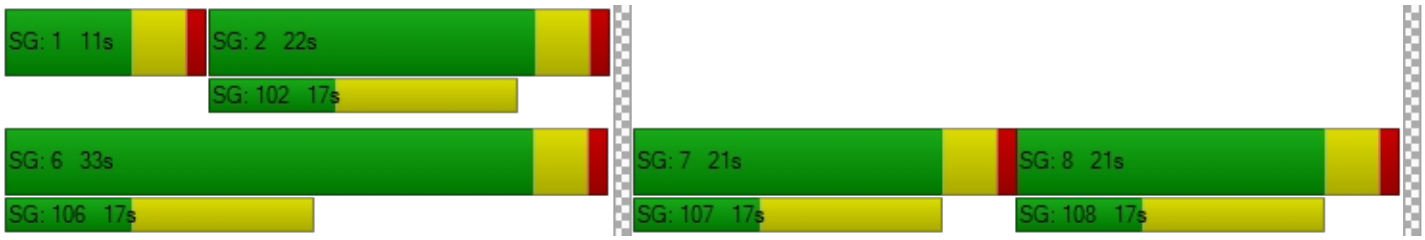
X, volume / capacity	0.97	1.08	0.65	0.64	0.96	0.59	0.26	0.08
d, Delay for Lane Group [s/veh]	60.96	93.84	38.32	20.72	29.15	17.69	38.23	36.19
Lane Group LOS	E	F	D	C	C	B	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.56	15.57	1.83	6.39	12.83	5.03	0.28	0.08
50th-Percentile Queue Length [ft/ln]	314.11	389.35	45.70	159.81	320.80	125.78	7.08	1.99
95th-Percentile Queue Length [veh/ln]	18.38	23.04	3.29	10.54	18.71	8.71	0.51	0.14
95th-Percentile Queue Length [ft/ln]	459.45	576.05	82.26	263.47	467.67	217.74	12.74	3.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	69.43	93.84	38.32	20.72	0.00	29.15	29.15	17.69	38.23	0.00	36.19
Movement LOS		E	F	D	C		C	C	B	D		D
d_A, Approach Delay [s/veh]	77.40			22.38			25.09			37.78		
Approach LOS	E			C			C			D		
d_I, Intersection Delay [s/veh]	40.36											
Intersection LOS	D											
Intersection V/C	0.940											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	560	61	174	924	153	102	55	12	12	34	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	0	29	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	570	61	174	953	153	102	55	12	12	34	70
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	149	16	46	249	40	27	14	3	3	9	18
Total Analysis Volume [veh/h]	32	596	64	182	997	160	107	58	13	13	36	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	10	6	14	14	7	7	7
g / C, Green / Cycle	0.05	0.28	0.28	0.17	0.40	0.40	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.04	0.10	0.28	0.10	0.16	0.03	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1115	1830	1615
c, Capacity [veh/h]	101	1033	461	310	1451	648	382	484	309
d1, Uniform Delay [s]	15.48	10.42	9.07	13.02	8.44	6.79	13.88	11.45	11.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	0.51	0.14	1.77	0.59	0.20	0.88	0.09	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

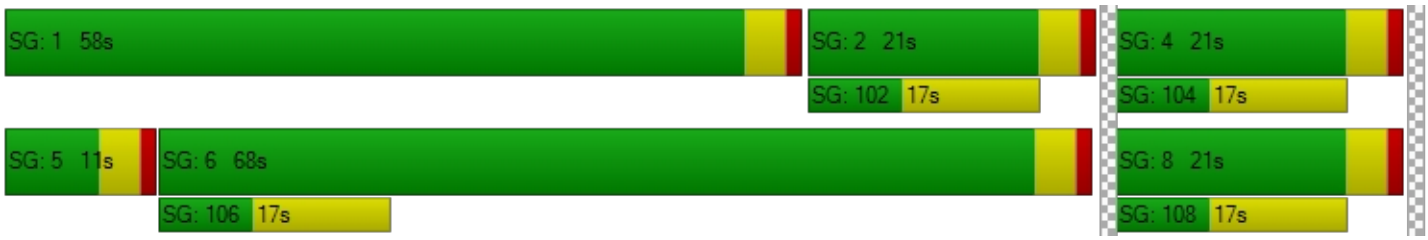
X, volume / capacity	0.32	0.58	0.14	0.59	0.69	0.25	0.47	0.10	0.24
d, Delay for Lane Group [s/veh]	17.27	10.94	9.20	14.79	9.03	6.98	14.77	11.54	12.07
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.25	1.46	0.28	1.16	2.04	0.53	1.15	0.25	0.40
50th-Percentile Queue Length [ft/ln]	6.19	36.54	6.92	28.92	51.09	13.31	28.74	6.27	9.90
95th-Percentile Queue Length [veh/ln]	0.45	2.63	0.50	2.08	3.68	0.96	2.07	0.45	0.71
95th-Percentile Queue Length [ft/ln]	11.13	65.77	12.45	52.06	91.95	23.95	51.74	11.29	17.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.27	10.94	9.20	14.79	9.03	6.98	14.77	14.77	14.77	11.54	11.54	12.07
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.07			9.56			14.77			11.85		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.53											
Intersection LOS	B											
Intersection V/C	0.699											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	28	1	4	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	34	512	1	4	332
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	135	0	1	87
Total Analysis Volume [veh/h]	0	36	539	1	4	349
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.15	0.00	0.00	8.48	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.15	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.86	0.00	0.00	0.29	0.00
d_A, Approach Delay [s/veh]	10.15		0.00		0.10	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	27	53	9	8	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	27	537	9	8	313
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	141	2	2	82
Total Analysis Volume [veh/h]	24	28	565	9	8	329
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.04	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	16.01	10.20	0.00	0.00	8.60	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.12	0.00	0.00	0.02	0.00
95th-Percentile Queue Length [ft/ln]	5.48	3.03	0.00	0.00	0.60	0.00
d_A, Approach Delay [s/veh]	12.88		0.00		0.20	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.77					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	0	65	104	380	0	0	211	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	6	53	0	3	0	4	64	12	23	19	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	6	53	31	3	65	108	444	12	23	230	62
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	14	8	1	17	29	118	3	6	61	16
Total Analysis Volume [veh/h]	28	6	56	33	3	69	115	472	13	26	244	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	53	63	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	26	26	26	26	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	4	9	9	1	6	6
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.15	0.35	0.35	0.05	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.02	0.04	0.06	0.13	0.01	0.01	0.08	0.09
s, saturation flow rate [veh/h]	1349	1639	1362	1625	1810	3618	1615	1810	1900	1765
c, Capacity [veh/h]	327	242	336	240	282	1261	563	88	458	426
d1, Uniform Delay [s]	12.40	9.95	12.28	10.02	10.02	6.43	5.64	12.10	8.27	8.29
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.56	0.13	0.70	0.95	0.18	0.02	1.85	0.45	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

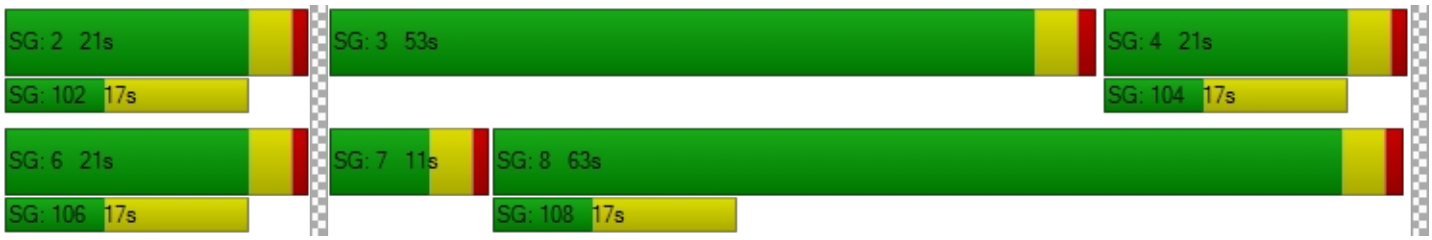
X, volume / capacity	0.09	0.26	0.10	0.30	0.41	0.37	0.02	0.30	0.35	0.36
d, Delay for Lane Group [s/veh]	12.51	10.51	12.41	10.71	10.97	6.61	5.65	13.95	8.72	8.80
Lane Group LOS	B	B	B	B	B	A	A	B	A	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.13	0.25	0.15	0.30	0.48	0.54	0.03	0.15	0.51	0.50
50th-Percentile Queue Length [ft/ln]	3.19	6.29	3.73	7.42	11.88	13.40	0.67	3.79	12.79	12.41
95th-Percentile Queue Length [veh/ln]	0.23	0.45	0.27	0.53	0.86	0.96	0.05	0.27	0.92	0.89
95th-Percentile Queue Length [ft/ln]	5.75	11.32	6.72	13.36	21.38	24.12	1.21	6.83	23.02	22.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.51	10.51	10.51	12.41	10.71	10.71	10.97	6.61	5.65	13.95	8.75	8.80
Movement LOS	B	B	B	B	B	B	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	11.13			11.25			7.43			9.16		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.59											
Intersection LOS	A											
Intersection V/C	0.358											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	411	0	0	271
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	115	2	2	44
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	526	2	2	315
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	138	1	1	83
Total Analysis Volume [veh/h]	0	11	554	2	2	332
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.03	0.00	0.00	8.52	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.15	0.00	0.00	0.15	0.00
d_A, Approach Delay [s/veh]	10.03		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	24.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	1	1	3	4	5	7	314	89	0	160	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	0	2	0	0	0	0	65	60	2	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	1	3	3	4	5	7	379	149	2	177	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	0	1	1	1	1	2	105	41	1	49	3
Total Analysis Volume [veh/h]	147	1	3	3	4	6	8	419	165	2	196	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.44	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	24.18	23.76	19.68	15.89	16.69	9.50	7.64	0.00	0.00	8.61	0.00	0.00
Movement LOS	C	C	C	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.22	2.22	2.22	0.09	0.09	0.09	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	55.62	55.62	55.62	2.21	2.21	2.21	0.38	0.38	0.38	0.15	0.15	0.15
d_A, Approach Delay [s/veh]	24.09			13.19			0.10			0.08		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.02											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	107	93	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	20	58	4	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	127	151	4	10	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	33	40	1	3	13
Total Analysis Volume [veh/h]	6	134	159	4	11	52
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	0.00	10.32	9.29
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.05	0.19
95th-Percentile Queue Length [ft/ln]	0.32	0.00	0.00	0.00	1.22	4.64
d_A, Approach Delay [s/veh]	0.32		0.00		9.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.75					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	210.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.210

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	824	408	78	89	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	76	27	19	67	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	900	435	97	156	30
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	231	112	25	40	0
Total Analysis Volume [veh/h]	36	925	447	100	160	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	1.21	0.00
d_M, Delay for Movement [s/veh]	8.61	0.00	0.00	0.00	210.22	11.24
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	9.68	0.00
95th-Percentile Queue Length [ft/ln]	2.71	0.00	0.00	0.00	241.91	0.00
d_A, Approach Delay [s/veh]	0.32		0.00		210.22	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	20.35					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	23.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	723	21	44	359	60	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	0	0	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	799	21	44	386	60	167
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	209	5	11	101	16	44
Total Analysis Volume [veh/h]	835	22	46	403	63	175
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.00	0.15	0.48
d_M, Delay for Movement [s/veh]	0.00	0.00	9.83	0.00	15.47	23.60
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.18	0.00	0.54	2.50
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.62	0.00	13.58	62.43
d_A, Approach Delay [s/veh]	0.00		1.01		21.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.60					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.269

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	496	389	23	39	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	11	6	21	65	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	507	395	44	104	122
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	156	122	14	32	38
Total Analysis Volume [veh/h]	104	626	488	54	128	151
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.00	0.27	0.20
d_M, Delay for Movement [s/veh]	8.86	0.00	0.00	0.00	15.32	10.88
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.33	0.00	0.00	0.00	1.08	0.73
95th-Percentile Queue Length [ft/ln]	8.34	0.00	0.00	0.00	26.91	18.34
d_A, Approach Delay [s/veh]	1.26		0.00		12.92	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.92					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	348	160	75	390	9	9	6	17	80	5	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	5	0	0	43	6	11	0	30	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	353	160	75	433	15	20	6	47	80	5	224
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	110	50	23	135	5	6	2	15	25	2	70
Total Analysis Volume [veh/h]	40	440	200	94	540	19	25	7	59	100	6	279
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	31	0	16	35	0	11	36	0	17	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	8	8	5	10	10	2	6	6	5	9	9
g / C, Green / Cycle	0.06	0.20	0.20	0.12	0.26	0.26	0.04	0.15	0.15	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.12	0.05	0.15	0.01	0.01	0.00	0.04	0.06	0.00	0.17
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	116	741	331	210	929	415	79	284	242	217	430	366
d1, Uniform Delay [s]	17.50	14.07	14.11	16.11	12.70	10.93	18.14	14.19	14.67	16.02	11.74	14.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.74	0.76	1.78	1.49	0.58	0.05	2.28	0.03	0.52	1.51	0.01	3.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.59	0.60	0.45	0.58	0.05	0.32	0.02	0.24	0.46	0.01	0.76
d, Delay for Lane Group [s/veh]	19.24	14.83	15.88	17.60	13.28	10.98	20.42	14.22	15.19	17.54	11.75	17.48
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.35	1.51	1.47	0.75	1.71	0.10	0.24	0.05	0.42	0.79	0.03	2.19
50th-Percentile Queue Length [ft/ln]	8.81	37.77	36.72	18.73	42.80	2.61	5.98	1.18	10.55	19.84	0.86	54.76
95th-Percentile Queue Length [veh/ln]	0.63	2.72	2.64	1.35	3.08	0.19	0.43	0.08	0.76	1.43	0.06	3.94
95th-Percentile Queue Length [ft/ln]	15.86	67.99	66.09	33.71	77.04	4.70	10.76	2.12	18.99	35.72	1.56	98.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.24	14.83	15.88	17.60	13.28	10.98	20.42	14.22	15.19	17.54	11.75	17.48
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.40			13.83			16.55			17.40		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.32											
Intersection LOS	B											
Intersection V/C	0.615											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	580	70	94	371	56	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	73	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	605	70	94	444	56	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	163	19	25	120	15	9
Total Analysis Volume [veh/h]	653	76	102	479	60	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	60	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.39	0.39	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.18	0.05	0.13	0.25	0.06	0.02
s, saturation flow rate [veh/h]	3618	1615	792	1900	930	1615
c, Capacity [veh/h]	1407	628	408	0	462	255
d1, Uniform Delay [s]	4.02	3.46	8.83	0.00	8.37	6.41
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.09	1.47	0.00	0.13	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.12	0.25	0.00	0.13	0.15
d, Delay for Lane Group [s/veh]	4.26	3.55	10.30	0.00	8.49	6.68
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.02	0.40	0.00	0.13	0.07
50th-Percentile Queue Length [ft/ln]	2.13	0.57	10.00	0.00	3.17	1.68
95th-Percentile Queue Length [veh/ln]	0.15	0.04	0.72	0.00	0.23	0.12
95th-Percentile Queue Length [ft/ln]	3.84	1.02	17.99	0.00	5.71	3.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.26	3.55	10.30	0.00	8.49	6.68
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.19		1.81		7.79	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.46					
Intersection LOS	A					
Intersection V/C	0.773					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	228.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	310.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	58	0	15	5	142	0	0	53	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	203	1	327	498	583	4	1	504	181
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	54	0	87	133	156	1	0	134	48
Total Analysis Volume [veh/h]	3	1	1	217	1	349	531	622	4	1	538	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	61	0	0	61	0	18	28	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	57	57	14	31	31	0	17	17
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.14	0.31	0.31	0.00	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.18	0.00	272.95	0.22	0.29	0.17	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	22	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	76	920	72	920	257	1115	498	3	609	272
d1, Uniform Delay [s]	25.13	9.26	49.86	11.80	42.91	28.89	23.98	49.84	40.62	39.28
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.00	942.89	0.26	483.84	2.02	0.03	40.09	16.93	14.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

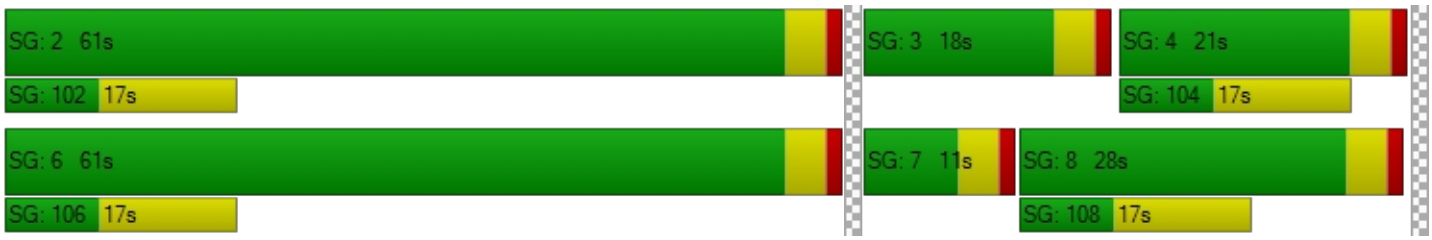
X, volume / capacity	0.05	0.00	3.02	0.38	2.07	0.56	0.01	0.29	0.88	0.71
d, Delay for Lane Group [s/veh]	25.42	9.26	992.75	12.06	526.75	30.91	24.01	89.92	57.56	53.85
Lane Group LOS	C	A	F	B	F	C	C	F	E	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.01	20.73	4.10	40.77	6.45	0.07	0.06	7.81	5.53
50th-Percentile Queue Length [ft/ln]	1.72	0.23	518.33	102.52	1019.30	161.16	1.74	1.59	195.36	138.19
95th-Percentile Queue Length [veh/ln]	0.12	0.02	37.32	7.38	63.97	10.61	0.13	0.11	12.40	9.38
95th-Percentile Queue Length [ft/ln]	3.09	0.41	932.99	184.54	1599.35	265.26	3.13	2.86	309.97	234.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.42	25.42	9.26	992.75	992.75	12.06	526.75	30.91	24.01	89.92	57.56	53.85
Movement LOS	C	C	A	F	F	B	F	C	C	F	E	D
d_A, Approach Delay [s/veh]	22.18			389.12			258.45			56.62		
Approach LOS	C			F			F			E		
d_I, Intersection Delay [s/veh]	228.04											
Intersection LOS	F											
Intersection V/C	310.672											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	97.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	658	840	54	30	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	200	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	732	1040	54	30	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	195	277	14	8	2
Total Analysis Volume [veh/h]	21	780	1108	58	32	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.47	0.04
d_M, Delay for Movement [s/veh]	11.15	0.00	0.00	0.00	97.60	20.13
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	1.87	0.13
95th-Percentile Queue Length [ft/ln]	2.69	0.00	0.00	0.00	46.82	3.14
d_A, Approach Delay [s/veh]	0.29		0.00		79.16	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	1.77					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.621

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	637	283	81	857	0	3	20	138	322	5	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	0	0	200	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	711	283	81	1057	0	3	20	138	322	5	54
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	193	77	22	288	0	1	5	38	88	1	15
Total Analysis Volume [veh/h]	51	774	308	88	1150	0	3	22	150	350	5	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	11	21	0	0	47	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	54	70	6	55	55	11	11	13	13	13
g / C, Green / Cycle	0.05	0.54	0.70	0.06	0.55	0.55	0.11	0.11	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.19	0.05	0.30	0.30	0.01	0.09	0.10	0.10	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1889	1615	1810	1812	1615
c, Capacity [veh/h]	96	1937	1133	116	1038	1038	216	185	228	229	204
d1, Uniform Delay [s]	46.14	13.72	5.50	46.05	14.75	14.75	39.75	43.24	42.34	42.34	39.64
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	0.62	0.59	9.76	0.46	0.46	0.24	8.29	5.63	5.62	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

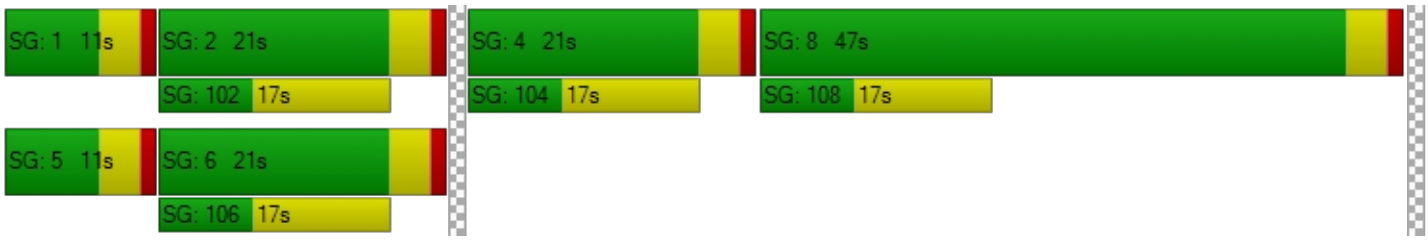
X, volume / capacity	0.53	0.40	0.27	0.76	0.55	0.55	0.12	0.81	0.78	0.78	0.29
d, Delay for Lane Group [s/veh]	50.62	14.34	6.09	55.81	15.22	15.22	39.99	51.53	47.97	47.96	40.41
Lane Group LOS	D	B	A	E	B	B	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.35	5.10	2.24	2.45	8.14	8.14	0.56	4.02	4.56	4.57	1.35
50th-Percentile Queue Length [ft/ln]	33.72	127.41	56.05	61.31	203.54	203.54	14.11	100.43	114.10	114.24	33.85
95th-Percentile Queue Length [veh/ln]	2.43	8.80	4.04	4.41	12.82	12.82	1.02	7.23	8.07	8.08	2.44
95th-Percentile Queue Length [ft/ln]	60.70	219.97	100.89	110.35	320.53	320.53	25.40	180.77	201.70	201.89	60.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.62	14.34	6.09	55.81	15.22	15.22	39.99	39.99	51.53	47.96	47.96	40.41
Movement LOS	D	B	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.73			18.10			49.88			46.89		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.33											
Intersection LOS	C											
Intersection V/C	0.621											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	476	360	0	0	1107	185	0	0	0	88	0	586
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	200	0	0	0	0	0	0	63
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	476	371	0	0	1307	185	0	0	0	88	0	649
Peak Hour Factor	0.9550	0.9550	0.8760	0.8760	0.9550	0.9550	0.8760	0.8760	0.8760	0.9550	0.8760	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	125	97	0	0	342	48	0	0	0	23	0	0
Total Analysis Volume [veh/h]	498	388	0	0	1369	194	0	0	0	92	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	42	79	0	0	37	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	77	77	77	77		77	77
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	24	63	35	35		6	6
g / C, Green / Cycle	0.31	0.82	0.46	0.46		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.28	0.11	0.38	0.12		0.05	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	555	2961	1664	743		141	126
d1, Uniform Delay [s]	25.62	1.43	18.14	12.81		34.60	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	5.47	0.02	1.07	0.19		4.97	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

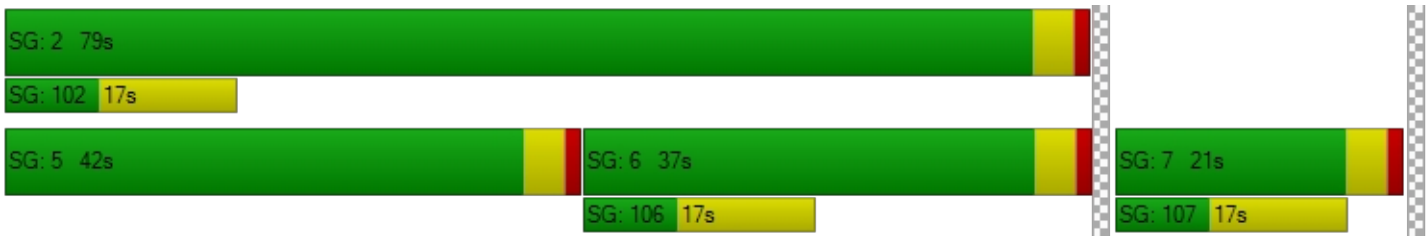
X, volume / capacity	0.90	0.13	0.82	0.26		0.65	0.00
d, Delay for Lane Group [s/veh]	31.09	1.45	19.21	13.00		39.58	0.00
Lane Group LOS	C	A	B	B		D	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	9.08	0.23	9.83	1.96		1.83	0.00
50th-Percentile Queue Length [ft/ln]	226.96	5.71	245.73	48.91		45.80	0.00
95th-Percentile Queue Length [veh/ln]	14.02	0.41	14.97	3.52		3.30	0.00
95th-Percentile Queue Length [ft/ln]	350.50	10.28	374.27	88.04		82.44	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.09	1.45	0.00	0.00	19.21	13.00	0.00	0.00	0.00	39.58	0.00	0.00
Movement LOS	C	A			B	B				D		A
d_A, Approach Delay [s/veh]	18.11			18.44			0.00			39.58		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	19.09											
Intersection LOS	B											
Intersection V/C	0.834											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.009

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	696	89	495	709	0	146	0	800	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	165	35	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	706	89	660	744	0	146	0	800	0	0	1
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	187	24	174	197	0	39	0	211	0	0	0
Total Analysis Volume [veh/h]	0	746	94	698	786	0	154	0	846	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	25	0	42	67	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	21	21	38	63	29	29	
g / C, Green / Cycle	0.21	0.21	0.38	0.63	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.39	0.22	0.09	0.30	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	763	340	687	2280	525	830	
d1, Uniform Delay [s]	39.44	33.24	31.19	8.78	27.68	35.68	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	27.69	2.00	20.15	0.09	0.31	19.76	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

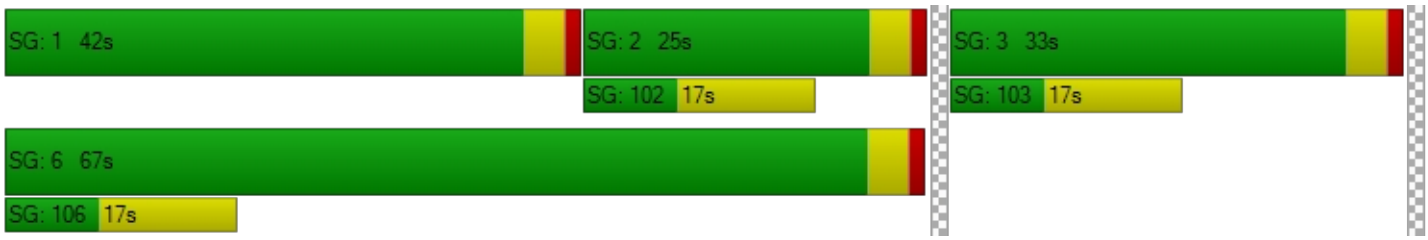
X, volume / capacity	0.98	0.28	1.02	0.34	0.29	1.02	
d, Delay for Lane Group [s/veh]	67.13	35.25	51.33	8.87	27.98	55.43	
Lane Group LOS	E	D	F	A	C	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.91	2.10	19.77	3.75	2.89	12.15	
50th-Percentile Queue Length [ft/ln]	297.80	52.42	494.36	93.83	72.18	303.65	
95th-Percentile Queue Length [veh/ln]	17.57	3.77	27.38	6.76	5.20	18.07	
95th-Percentile Queue Length [ft/ln]	439.31	94.35	684.42	168.89	129.93	451.81	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	67.13	35.25	51.33	8.87	0.00	27.98	0.00	55.43	0.00	0.00	0.00
Movement LOS		E	D	F	A		C		F			
d_A, Approach Delay [s/veh]	63.57			28.84			51.20			0.00		
Approach LOS	E			C			D			A		
d_I, Intersection Delay [s/veh]	44.34											
Intersection LOS	D											
Intersection V/C	1.009											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	328	1373	0	0	1013	367	0	0	0	356	8	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	24	0	0	7	0	0	0	0	23	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	334	1397	0	0	1020	367	0	0	0	379	8	566
Peak Hour Factor	0.9740	0.9740	0.8170	0.8170	0.9740	0.9740	0.8170	0.8170	0.8170	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	359	0	0	262	94	0	0	0	97	2	145
Total Analysis Volume [veh/h]	343	1434	0	0	1047	377	0	0	0	389	8	581
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	28	83	0	0	55	0	0	0	0	0	47	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	50	50	50	50		50	50	50
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	8	29	18	18		15	15	15
g / C, Green / Cycle	0.17	0.59	0.36	0.36		0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.29	0.16	0.25		0.19	0.21	0.22
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1574	1530
c, Capacity [veh/h]	500	2880	2346	549		475	462	449
d1, Uniform Delay [s]	19.67	6.06	12.33	13.74		15.59	15.93	16.05
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	0.13	0.13	1.54		1.57	2.12	2.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.50	0.45	0.69		0.66	0.72	0.74
d, Delay for Lane Group [s/veh]	21.35	6.20	12.46	15.28		17.16	18.05	18.46
Lane Group LOS	C	A	B	B		B	B	B
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.81	1.98	1.91	3.27		2.92	3.21	3.26
50th-Percentile Queue Length [ft/ln]	45.15	49.43	47.77	81.66		73.01	80.18	81.47
95th-Percentile Queue Length [veh/ln]	3.25	3.56	3.44	5.88		5.26	5.77	5.87
95th-Percentile Queue Length [ft/ln]	81.28	88.97	85.98	146.98		131.42	144.32	146.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.35	6.20	0.00	0.00	12.46	15.28	0.00	0.00	0.00	17.31	18.05	18.28
Movement LOS	C	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	9.12			13.21			0.00			17.90		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	12.57											
Intersection LOS	B											
Intersection V/C	0.658											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.800

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1129	498	412	951	0	627	2	319	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	62	0	30	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1159	560	412	981	0	627	2	321	0	0	0
Peak Hour Factor	0.8530	0.9720	0.9720	0.9720	0.9720	0.8530	0.9720	0.9720	0.9720	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	298	144	106	252	0	161	1	83	0	0	0
Total Analysis Volume [veh/h]	0	1192	576	424	1009	0	645	2	330	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	64	0	27	91	0	0	39	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	84	84	84	84	84	84	84	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	38	38	15	56	22	22	22	
g / C, Green / Cycle	0.46	0.46	0.18	0.67	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.34	0.38	0.14	0.29	0.19	0.19	0.22	
s, saturation flow rate [veh/h]	3427	1535	2959	3427	1619	1715	1530	
c, Capacity [veh/h]	1561	699	525	2291	421	446	398	
d1, Uniform Delay [s]	18.97	20.20	33.17	6.54	28.51	28.55	29.32	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.76	2.86	3.02	0.13	2.63	2.54	4.50	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.84	0.81	0.44	0.74	0.75	0.83	
d, Delay for Lane Group [s/veh]	19.73	23.07	36.19	6.67	31.14	31.09	33.81	
Lane Group LOS	B	C	D	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.97	9.93	4.25	3.50	5.89	6.26	6.54	
50th-Percentile Queue Length [ft/ln]	224.17	248.22	106.20	87.52	147.13	156.49	163.40	
95th-Percentile Queue Length [veh/ln]	13.88	15.10	7.63	6.30	9.86	10.36	10.73	
95th-Percentile Queue Length [ft/ln]	346.95	377.41	190.71	157.53	246.60	259.07	268.22	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.77	23.07	36.19	6.67	0.00	31.11	31.09	33.78	0.00	0.00	0.00
Movement LOS		B	C	D	A		C	C	C			
d_A, Approach Delay [s/veh]	20.84			15.40			32.03			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	21.59											
Intersection LOS	C											
Intersection V/C	0.800											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	46	1199	23	32	1001	224	377	72	146	40	17	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	92	0	0	32	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	1291	23	32	1033	224	377	72	146	40	17	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	343	6	9	274	60	100	19	39	11	5	8
Total Analysis Volume [veh/h]	53	1372	24	34	1098	238	401	77	155	43	18	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	50	0	43	83	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	32	32	3	31	31	26	26	26	26	26	26
g / C, Green / Cycle	0.06	0.45	0.45	0.05	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.39	0.39	0.02	0.38	0.38	0.29	0.04	0.10	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1789	1619	1800	1691	1376	1800	1530	1167	1800	1530
c, Capacity [veh/h]	105	819	814	79	790	742	552	662	562	414	662	562
d1, Uniform Delay [s]	31.68	17.03	17.04	32.38	17.81	17.92	22.45	14.64	15.59	19.55	14.16	14.31
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.70	2.67	2.71	3.64	3.06	3.49	1.85	0.08	0.26	0.11	0.02	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

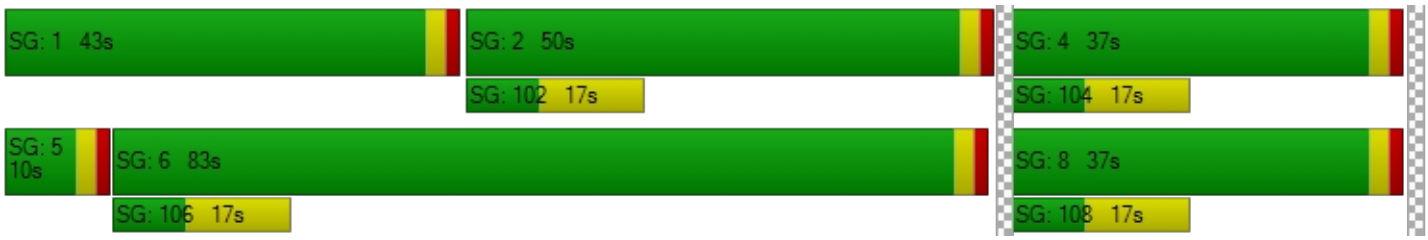
X, volume / capacity	0.50	0.85	0.86	0.43	0.87	0.88	0.73	0.12	0.28	0.10	0.03	0.06
d, Delay for Lane Group [s/veh]	35.39	19.70	19.76	36.02	20.87	21.41	24.30	14.72	15.86	19.66	14.17	14.35
Lane Group LOS	D	B	B	D	C	C	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.95	9.47	9.45	0.62	9.59	9.24	6.06	0.77	1.66	0.52	0.17	0.31
50th-Percentile Queue Length [ft/ln]	23.69	236.83	236.15	15.58	239.81	230.95	151.44	19.25	41.55	12.99	4.35	7.84
95th-Percentile Queue Length [veh/ln]	1.71	14.52	14.49	1.12	14.67	14.22	10.09	1.39	2.99	0.94	0.31	0.56
95th-Percentile Queue Length [ft/ln]	42.65	363.02	362.16	28.04	366.79	355.56	252.35	34.66	74.78	23.38	7.82	14.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.39	19.73	19.76	36.02	21.08	21.41	24.30	14.72	15.86	19.66	14.17	14.35
Movement LOS	D	B	B	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.30			21.51			21.07			16.77		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.81											
Intersection LOS	C											
Intersection V/C	0.775											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	1166	28	25	1083	90	98	2	64	33	10	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	96	0	0	32	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	1262	28	25	1115	90	98	2	64	33	10	57
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	337	7	7	297	24	26	1	17	9	3	15
Total Analysis Volume [veh/h]	94	1347	30	27	1190	96	105	2	68	35	11	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	61	49	0	61	49	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	19	19	2	17	17	6	6	6	6	6
g / C, Green / Cycle	0.12	0.54	0.54	0.05	0.46	0.46	0.17	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.38	0.02	0.36	0.36	0.12	0.04	0.02	0.01	0.04
s, saturation flow rate [veh/h]	1619	1800	1786	1619	1800	1753	930	1530	1437	1800	1530
c, Capacity [veh/h]	194	967	960	76	836	815	352	256	201	301	256
d1, Uniform Delay [s]	14.90	6.29	6.29	16.73	8.13	8.14	15.51	13.14	18.11	12.64	13.08
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.88	0.99	1.01	2.80	1.60	1.67	0.48	0.55	0.41	0.05	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

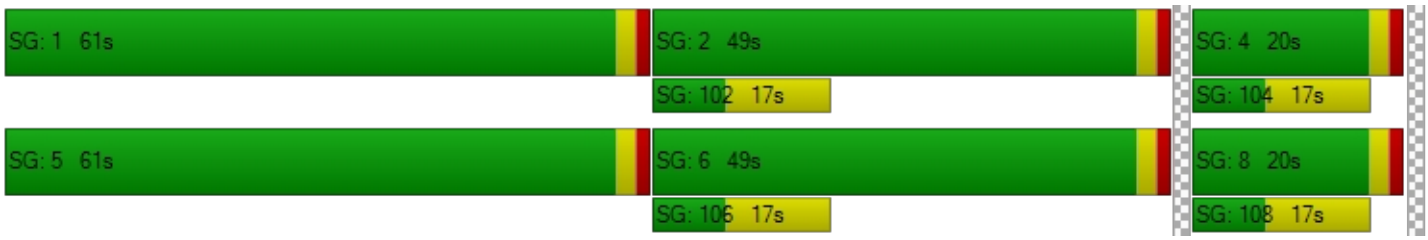
X, volume / capacity	0.49	0.71	0.72	0.36	0.78	0.78	0.30	0.27	0.17	0.04	0.24
d, Delay for Lane Group [s/veh]	16.77	7.28	7.30	19.53	9.73	9.81	15.99	13.69	18.52	12.69	13.56
Lane Group LOS	B	A	A	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.70	2.26	2.25	0.24	2.92	2.87	0.75	0.43	0.28	0.06	0.38
50th-Percentile Queue Length [ft/ln]	17.40	56.41	56.23	6.07	73.09	71.87	18.69	10.70	6.97	1.62	9.53
95th-Percentile Queue Length [veh/ln]	1.25	4.06	4.05	0.44	5.26	5.17	1.35	0.77	0.50	0.12	0.69
95th-Percentile Queue Length [ft/ln]	31.33	101.53	101.22	10.93	131.57	129.37	33.64	19.27	12.55	2.91	17.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.77	7.29	7.30	19.53	9.77	9.81	15.99	15.99	13.69	18.52	12.69	13.56
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.90			9.97			15.10			15.09		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.45											
Intersection LOS	A											
Intersection V/C	0.642											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	87	1166	1062	85	37	124
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	32	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1266	1094	85	37	124
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	327	283	22	10	32
Total Analysis Volume [veh/h]	90	1309	1131	88	38	128
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	17	105	88	0	25	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	22	15	15	6	6
g / C, Green / Cycle	0.12	0.66	0.45	0.45	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.34	0.35	0.02	0.08
s, saturation flow rate [veh/h]	1619	3427	1800	1755	1619	1530
c, Capacity [veh/h]	193	2262	815	795	265	251
d1, Uniform Delay [s]	14.00	3.19	7.71	7.81	12.20	13.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	0.24	1.40	1.58	0.24	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.58	0.75	0.77	0.14	0.51
d, Delay for Lane Group [s/veh]	15.75	3.42	9.11	9.40	12.44	14.60
Lane Group LOS	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	0.42	2.42	2.48	0.21	0.81
50th-Percentile Queue Length [ft/ln]	15.29	10.54	60.49	62.03	5.32	20.28
95th-Percentile Queue Length [veh/ln]	1.10	0.76	4.36	4.47	0.38	1.46
95th-Percentile Queue Length [ft/ln]	27.51	18.98	108.88	111.65	9.58	36.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.75	3.42	9.24	9.40	12.44	14.60
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	4.22		9.25		14.11	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.01					
Intersection LOS	A					
Intersection V/C	0.591					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.771

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	122	800	94	67	878	140	172	454	135	32	197	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	32	100	42	0	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	800	94	67	878	172	272	496	135	32	211	72
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	205	24	17	225	44	70	127	35	8	54	18
Total Analysis Volume [veh/h]	125	821	97	69	901	177	279	509	139	33	217	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	45	0	19	47	0	66	133	0	66	60	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	13	27	27	6	20	20	18	0	0	18	0	0
g / C, Green / Cycle	0.22	0.45	0.45	0.09	0.33	0.33	0.30	0.00	0.00	0.30	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.17	0.26	0.26	0.09	0.26	0.12	0.24	0.28	0.09	0.04	0.12	0.05
s, saturation flow rate [veh/h]	740	1800	1734	740	3427	1530	1183	1800	1530	905	1800	1530
c, Capacity [veh/h]	256	812	782	166	1120	500	441	0	0	365	0	0
d1, Uniform Delay [s]	23.93	12.13	12.13	28.63	18.32	15.27	20.76	0.00	0.00	16.47	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.44	0.65	0.67	1.67	1.40	0.43	1.51	0.00	0.00	0.11	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

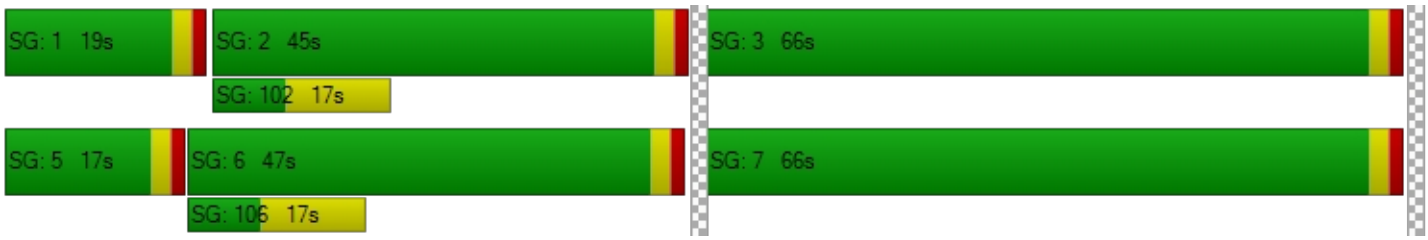
X, volume / capacity	0.49	0.58	0.58	0.42	0.80	0.35	0.63	0.00	0.00	0.09	0.00	0.00
d, Delay for Lane Group [s/veh]	25.36	12.77	12.80	30.29	19.72	15.70	22.28	0.00	0.00	16.57	0.00	0.00
Lane Group LOS	C	B	B	C	B	B	C	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.70	4.06	3.92	1.04	5.27	1.71	3.55	0.00	0.00	0.33	0.00	0.00
50th-Percentile Queue Length [ft/ln]	42.62	101.50	97.94	26.07	131.83	42.86	88.70	0.00	0.00	8.15	0.00	0.00
95th-Percentile Queue Length [veh/ln]	3.07	7.31	7.05	1.88	9.04	3.09	6.39	0.00	0.00	0.59	0.00	0.00
95th-Percentile Queue Length [ft/ln]	76.71	182.70	176.30	46.93	225.98	77.15	159.66	0.00	0.00	14.68	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.36	12.78	12.80	30.29	19.72	15.70	22.28	0.00	0.00	16.57	0.00	0.00
Movement LOS	C	B	B	C	B	B	C	A	A	B	A	A
d_A, Approach Delay [s/veh]	14.29			19.74			6.70			1.69		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	12.88											
Intersection LOS	B											
Intersection V/C	0.771											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.809

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	353	1	2	620	141	441	68	102	1	20	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	8	25	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	353	1	2	620	149	466	68	119	1	20	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	93	0	1	163	39	123	18	31	0	5	2
Total Analysis Volume [veh/h]	46	372	1	2	653	157	491	72	125	1	21	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	33	0	37	60	0	0	60	0	0	60	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	21	21	0	17	17	30	30
g / C, Green / Cycle	0.06	0.34	0.34	0.00	0.29	0.29	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.00	0.23	0.23	0.47	0.02
s, saturation flow rate [veh/h]	1619	1800	1798	1619	1800	1681	1473	1740
c, Capacity [veh/h]	102	621	621	6	515	481	841	934
d1, Uniform Delay [s]	27.19	14.39	14.39	29.88	19.97	19.98	13.91	7.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.11	0.27	0.27	26.80	3.16	3.40	2.03	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

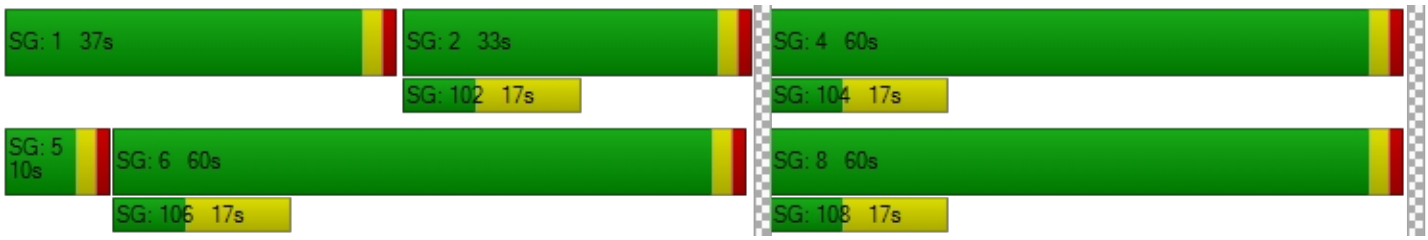
X, volume / capacity	0.45	0.30	0.30	0.32	0.81	0.81	0.82	0.03
d, Delay for Lane Group [s/veh]	30.30	14.66	14.66	56.68	23.13	23.38	15.93	7.61
Lane Group LOS	C	B	B	E	C	C	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.69	1.72	1.72	0.07	5.38	5.06	7.44	0.16
50th-Percentile Queue Length [ft/ln]	17.29	43.04	43.02	1.85	134.40	126.61	185.95	3.94
95th-Percentile Queue Length [veh/ln]	1.24	3.10	3.10	0.13	9.18	8.75	11.91	0.28
95th-Percentile Queue Length [ft/ln]	31.12	77.47	77.43	3.33	229.46	218.87	297.77	7.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.30	14.66	14.66	56.68	23.22	23.38	15.93	15.93	15.93	7.61	7.61	7.61
Movement LOS	C	B	B	E	C	C	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	16.38			23.33			15.93			7.61		
Approach LOS	B			C			B			A		
d_I, Intersection Delay [s/veh]	19.00											
Intersection LOS	B											
Intersection V/C	0.809											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 3 Existing Plus Project Morning Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\AMEP1-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.040	44.6	D
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	EB Right	0.556	3.1	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.755	20.3	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.688	12.7	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	WB Left	0.286	1.6	A
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.827	8.0	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.667	7.5	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.637	18.3	B
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.029	16.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.040

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	306	1234	0	0	1068	751	0	0	0	456	0	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	8	0	0	24	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	322	1242	0	0	1092	751	0	0	0	458	0	522
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	321	0	0	282	194	0	0	0	118	0	135
Total Analysis Volume [veh/h]	333	1284	0	0	1129	777	0	0	0	474	0	540
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	27	89	0	0	62	0	0	0	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	125	125	125	125		125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	24	86	59	59		33	33
g / C, Green / Cycle	0.19	0.69	0.47	0.47		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.21	0.37	0.23	0.51		0.28	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	2708
c, Capacity [veh/h]	312	2358	2312	721		453	715
d1, Uniform Delay [s]	50.58	9.76	22.72	33.10		46.09	42.36
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	44.50	0.91	0.74	56.17		33.16	1.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.07	0.54	0.49	1.08		1.05	0.75
d, Delay for Lane Group [s/veh]	95.09	10.66	23.46	89.27		79.25	44.01
Lane Group LOS	F	B	C	F		F	D
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	13.57	8.47	7.73	32.39		18.14	7.82
50th-Percentile Queue Length [ft/ln]	339.25	211.80	193.13	809.64		453.53	195.44
95th-Percentile Queue Length [veh/ln]	20.30	13.25	12.28	44.16		25.83	12.40
95th-Percentile Queue Length [ft/ln]	507.41	331.14	307.09	1103.88		645.72	310.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	95.09	10.66	0.00	0.00	23.46	89.27	0.00	0.00	0.00	79.25	79.25	44.01
Movement LOS	F	B			C	F				F	E	D
d_A, Approach Delay [s/veh]	28.05			50.29			0.00			60.48		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	44.64											
Intersection LOS	D											
Intersection V/C	1.040											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	261	1	1	68	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	938	1	1	1078	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	271	0	0	312	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	1086	1	1	1248	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	79	0	0	79	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	13	13	1	1	1	1
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.59	0.59	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.30	0.00	0.00	0.34	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	452	3618	1615	528	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	460	2129	951	506	2129	951	334	86	333	101
d1, Uniform Delay [s]	5.67	2.70	1.89	4.75	2.88	1.90	11.03	10.13	11.01	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.19	0.00	0.00	0.26	0.01	0.02	1.29	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.51	0.00	0.00	0.59	0.01	0.02	0.22	0.00	0.00
d, Delay for Lane Group [s/veh]	5.71	2.89	1.89	4.76	3.14	1.91	11.05	11.42	11.02	0.00
Lane Group LOS	A	A	A	A	A	A	B	B	B	A
Critical Lane Group	No	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	0.06	0.00	0.00	0.08	0.00	0.02	0.09	0.00	0.00
50th-Percentile Queue Length [ft/ln]	1.10	1.40	0.00	0.04	1.91	0.03	0.54	2.21	0.09	0.00
95th-Percentile Queue Length [veh/ln]	0.08	0.10	0.00	0.00	0.14	0.00	0.04	0.16	0.01	0.00
95th-Percentile Queue Length [ft/ln]	1.98	2.53	0.01	0.08	3.44	0.06	0.98	3.98	0.16	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.71	2.89	1.89	4.76	3.14	1.91	11.05	11.42	11.42	11.02	0.00	0.00
Movement LOS	A	A	A	A	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	2.94			3.13			11.33			11.02		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.13											
Intersection LOS	A											
Intersection V/C	0.556											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.755

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	115	9	39	30	0	0	0	0	4	0	147
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	336	271	555	564	17	14	29	11	266	36	470
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	90	73	149	151	5	4	8	3	71	10	0
Total Analysis Volume [veh/h]	14	360	290	594	604	18	15	31	12	285	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	39	21	21	41	23	0	11	21	0	17	27	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	26	24	33	33	2	4	12	15	15
g / C, Green / Cycle	0.02	0.15	0.40	0.37	0.49	0.49	0.03	0.06	0.19	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.18	0.33	0.17	0.01	0.01	0.02	0.08	0.02	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	3514	1900	1615
c, Capacity [veh/h]	44	538	640	662	1775	792	46	105	659	417	355
d1, Uniform Delay [s]	32.01	26.84	14.82	19.95	10.39	8.75	31.92	30.32	23.96	20.73	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.14	1.45	0.50	4.64	0.11	0.01	3.95	2.55	0.45	0.10	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

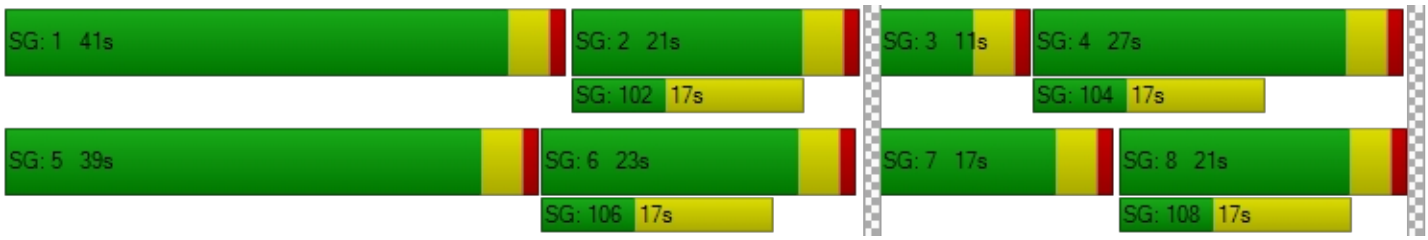
X, volume / capacity	0.32	0.67	0.45	0.90	0.34	0.02	0.32	0.41	0.43	0.09	0.00
d, Delay for Lane Group [s/veh]	36.15	28.28	15.32	24.60	10.50	8.76	35.88	32.87	24.41	20.83	0.00
Lane Group LOS	D	C	B	C	B	A	D	C	C	C	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.26	2.68	3.02	8.67	2.40	0.12	0.28	0.71	1.92	0.47	0.00
50th-Percentile Queue Length [ft/ln]	6.60	66.95	75.43	216.84	59.97	3.04	7.00	17.86	48.11	11.77	0.00
95th-Percentile Queue Length [veh/ln]	0.48	4.82	5.43	13.50	4.32	0.22	0.50	1.29	3.46	0.85	0.00
95th-Percentile Queue Length [ft/ln]	11.89	120.51	135.77	337.59	107.94	5.47	12.59	32.15	86.59	21.19	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.15	28.28	15.32	24.60	10.50	8.76	35.88	32.87	32.87	24.41	20.83	0.00
Movement LOS	D	C	B	C	B	A	D	C	C	C	C	A
d_A, Approach Delay [s/veh]	22.79			17.36			33.65			23.98		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	20.32											
Intersection LOS	C											
Intersection V/C	0.755											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	489	25	84	760	1	1	2	16	7	3	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	613	25	84	794	1	1	2	16	7	3	15
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	163	7	22	210	0	0	1	4	2	1	4
Total Analysis Volume [veh/h]	23	650	27	89	842	1	1	2	17	7	3	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	34	0	0	45	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	13	13	2	2
g / C, Green / Cycle	0.27	0.27	0.27	0.35	0.35	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.19	0.19	0.02	0.26	0.26	0.01	0.01
s, saturation flow rate [veh/h]	1894	1729	1615	1883	1728	1900	1899
c, Capacity [veh/h]	513	468	437	660	606	191	213
d1, Uniform Delay [s]	11.77	11.77	9.75	10.25	10.25	16.60	16.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	1.79	0.06	1.62	1.76	0.24	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.69	0.06	0.74	0.74	0.10	0.12
d, Delay for Lane Group [s/veh]	13.41	13.56	9.81	11.86	12.01	16.84	16.90
Lane Group LOS	B	B	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.13	1.96	0.13	2.65	2.46	0.15	0.19
50th-Percentile Queue Length [ft/ln]	53.24	49.09	3.19	66.28	61.44	3.67	4.74
95th-Percentile Queue Length [veh/ln]	3.83	3.53	0.23	4.77	4.42	0.26	0.34
95th-Percentile Queue Length [ft/ln]	95.84	88.37	5.74	119.30	110.59	6.60	8.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.41	13.48	9.81	11.86	11.94	12.01	16.84	16.84	16.84	16.90	16.90	16.90
Movement LOS	B	B	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.34			11.93			16.84			16.90		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.65											
Intersection LOS	B											
Intersection V/C	0.688											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	1.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.286

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	534	8	6	787	0	0	0	3	11	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	658	8	6	821	0	0	0	3	11	1	3
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	175	2	2	218	0	0	0	1	3	0	1
Total Analysis Volume [veh/h]	9	700	9	6	873	0	0	0	3	12	1	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	79	0	0	79	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	89	89	89	89	89	3	3
g / C, Green / Cycle	0.89	0.89	0.89	0.89	0.89	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.01	0.24	0.24	0.01	0.01
s, saturation flow rate [veh/h]	1865	1729	1615	1890	1729	589	1767
c, Capacity [veh/h]	1704	1545	1443	1726	1545	52	110
d1, Uniform Delay [s]	0.70	0.71	0.57	0.75	0.75	47.54	47.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.33	0.01	0.38	0.43	0.47	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.22	0.01	0.27	0.27	0.06	0.15
d, Delay for Lane Group [s/veh]	0.99	1.03	0.58	1.12	1.18	48.01	48.46
Lane Group LOS	A	A	A	A	A	D	D
Critical Lane Group	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.16	0.16	0.00	0.21	0.22	0.08	0.41
50th-Percentile Queue Length [ft/ln]	4.08	4.12	0.09	5.37	5.43	1.98	10.22
95th-Percentile Queue Length [veh/ln]	0.29	0.30	0.01	0.39	0.39	0.14	0.74
95th-Percentile Queue Length [ft/ln]	7.34	7.42	0.16	9.66	9.77	3.57	18.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.99	1.01	0.58	1.12	1.15	1.18	48.01	48.01	48.01	48.46	48.46	48.46
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	1.01			1.15			48.01			48.46		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	1.64											
Intersection LOS	A											
Intersection V/C	0.286											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	8.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	337	584	775	536	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	119	7	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	703	782	563	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	201	224	161	0	0
Total Analysis Volume [veh/h]	386	805	896	645	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	33	100	67	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	45	45	45	45	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	12	41	25	25	
g / C, Green / Cycle	0.26	0.91	0.56	0.56	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.22	0.41	0.47	
s, saturation flow rate [veh/h]	1810	3618	1900	1655	
c, Capacity [veh/h]	479	3294	1056	920	
d1, Uniform Delay [s]	15.34	0.23	7.40	8.23	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.24	0.04	0.98	2.11	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

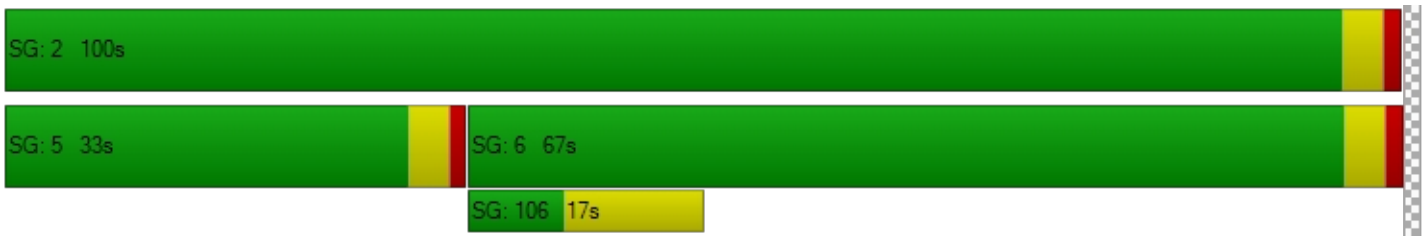
X, volume / capacity	0.81	0.24	0.73	0.84	
d, Delay for Lane Group [s/veh]	18.58	0.27	8.39	10.35	
Lane Group LOS	B	A	A	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.48	0.02	3.68	4.31	
50th-Percentile Queue Length [ft/ln]	87.05	0.44	91.92	107.69	
95th-Percentile Queue Length [veh/ln]	6.27	0.03	6.62	7.71	
95th-Percentile Queue Length [ft/ln]	156.70	0.79	165.46	192.78	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.58	0.27	8.66	10.35	0.00	0.00
Movement LOS	B	A	A	B		
d_A, Approach Delay [s/veh]	6.20		9.37		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.99					
Intersection LOS	A					
Intersection V/C	0.827					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	357	450	71	61	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	66	60	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	381	516	131	77	23
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	121	164	42	24	7
Total Analysis Volume [veh/h]	23	484	655	166	98	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	46	110	64	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	33	33	33	33	33
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	1	23	18	5	5
g / C, Green / Cycle	0.04	0.68	0.54	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.27	0.47	0.06	0.02
s, saturation flow rate [veh/h]	1619	1800	1738	1619	1530
c, Capacity [veh/h]	66	1216	948	236	223
d1, Uniform Delay [s]	15.68	2.42	6.58	13.05	12.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.10	0.21	2.55	1.16	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.40	0.87	0.42	0.13
d, Delay for Lane Group [s/veh]	18.78	2.63	9.12	14.21	12.75
Lane Group LOS	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.20	0.16	2.77	0.60	0.17
50th-Percentile Queue Length [ft/ln]	4.95	4.07	69.26	15.12	4.15
95th-Percentile Queue Length [veh/ln]	0.36	0.29	4.99	1.09	0.30
95th-Percentile Queue Length [ft/ln]	8.91	7.32	124.67	27.21	7.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.78	2.63	9.12	9.12	14.21	12.75
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.36		9.12		13.88	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.53					
Intersection LOS	A					
Intersection V/C	0.667					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	4	9	39	0	0	147	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	132	4	285	314	559	13	3	471	192
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	34	1	74	81	144	3	1	122	50
Total Analysis Volume [veh/h]	10	3	2	136	4	294	324	577	13	3	486	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	38	0	41	51	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	12	22	22	0	10	10
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.22	0.40	0.40	0.01	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.00	0.09	0.18	0.18	0.16	0.01	0.00	0.13	0.12
s, saturation flow rate [veh/h]	682	1615	1436	1618	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	370	600	343	601	395	1460	652	10	691	309
d1, Uniform Delay [s]	11.68	10.83	21.98	13.25	20.39	11.59	9.82	27.12	20.70	20.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.00	0.74	0.63	4.28	0.17	0.01	15.05	1.32	2.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

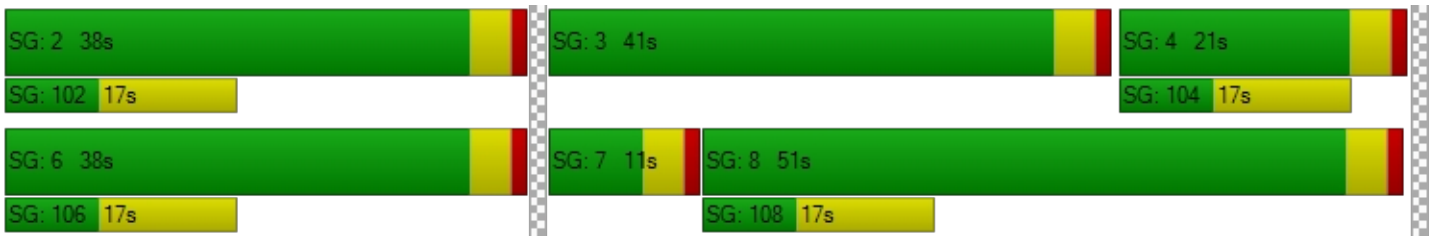
X, volume / capacity	0.04	0.00	0.40	0.50	0.82	0.40	0.02	0.29	0.70	0.64
d, Delay for Lane Group [s/veh]	11.72	10.83	22.72	13.89	24.66	11.76	9.83	42.17	22.02	22.65
Lane Group LOS	B	B	C	B	C	B	A	D	C	C
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.01	1.59	2.55	4.02	2.16	0.08	0.08	2.77	2.32
50th-Percentile Queue Length [ft/ln]	2.29	0.34	39.71	63.79	100.58	53.88	2.08	1.99	69.29	57.92
95th-Percentile Queue Length [veh/ln]	0.16	0.02	2.86	4.59	7.24	3.88	0.15	0.14	4.99	4.17
95th-Percentile Queue Length [ft/ln]	4.12	0.62	71.49	114.83	181.05	96.99	3.74	3.58	124.71	104.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.72	11.72	10.83	22.72	13.89	13.89	24.66	11.76	9.83	42.17	22.02	22.65
Movement LOS	B	B	B	C	B	B	C	B	A	D	C	C
d_A, Approach Delay [s/veh]	11.60			16.66			16.31			22.29		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.35											
Intersection LOS	B											
Intersection V/C	0.637											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	554	638	21	8	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	743	692	21	8	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	201	187	6	2	4
Total Analysis Volume [veh/h]	22	805	750	23	9	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.03	0.03
d_M, Delay for Movement [s/veh]	9.34	0.00	0.00	0.00	16.91	14.13
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.09	0.11
95th-Percentile Queue Length [ft/ln]	1.99	0.00	0.00	0.00	2.23	2.66
d_A, Approach Delay [s/veh]	0.25		0.00		15.22	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.34					
Intersection LOS	C					

Viridian

Vistro File: C:\...\PME.vistro

Scenario 3 Existing Plus Project Evening Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\PMEP1-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.901	32.1	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	WB Left	0.541	3.6	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.972	47.2	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.751	16.8	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.863	15.7	B
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.785	5.1	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.775	6.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.745	33.5	C
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.131	22.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.901

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	300	1396	0	0	1014	625	0	0	0	283	4	527
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	26	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	366	1422	0	0	1021	625	0	0	0	283	4	527
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	368	0	0	265	162	0	0	0	73	1	137
Total Analysis Volume [veh/h]	379	1474	0	0	1058	648	0	0	0	293	4	546
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	77	97	0	0	20	0	0	0	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	33	96	60	60		28	28
g / C, Green / Cycle	0.25	0.74	0.46	0.46		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.23	0.43	0.22	0.42		0.17	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1715	2708
c, Capacity [veh/h]	408	2518	2254	703		376	593
d1, Uniform Delay [s]	47.51	8.03	24.23	32.96		47.99	49.70
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	9.53	1.00	0.70	19.39		3.75	6.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

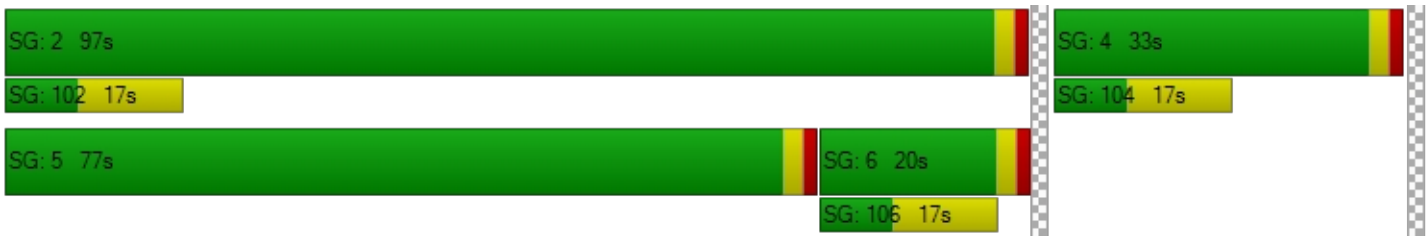
X, volume / capacity	0.93	0.59	0.47	0.92		0.79	0.92
d, Delay for Lane Group [s/veh]	57.04	9.03	24.93	52.35		51.75	56.14
Lane Group LOS	E	A	C	D		D	E
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	13.03	9.00	7.62	22.46		9.49	9.20
50th-Percentile Queue Length [ft/ln]	325.74	224.89	190.48	561.62		237.37	229.89
95th-Percentile Queue Length [veh/ln]	18.95	13.91	12.15	30.24		14.55	14.17
95th-Percentile Queue Length [ft/ln]	473.73	347.86	303.65	755.95		363.70	354.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.04	9.03	0.00	0.00	24.93	52.35	0.00	0.00	0.00	51.75	51.75	56.14
Movement LOS	E	A			C	D				D	D	E
d_A, Approach Delay [s/veh]	18.85			35.34			0.00			54.59		
Approach LOS	B			D			A			D		
d_I, Intersection Delay [s/veh]	32.09											
Intersection LOS	C											
Intersection V/C	0.901											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	99	0	0	264	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1300	0	0	1293	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	331	0	0	329	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1324	0	0	1317	15	22	0	35	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	73	0	0	73	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	3	3	3	3
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.09	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.04	0.37	0.00	0.00	0.36	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	424	3618	1615	421	3618	1615	1436	1615	1395	1615
c, Capacity [veh/h]	398	2265	1011	396	2265	1011	283	145	259	145
d1, Uniform Delay [s]	6.48	3.10	0.00	0.00	3.09	1.99	13.74	11.92	14.02	11.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.24	0.00	0.00	0.24	0.01	0.12	0.86	0.01	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.58	0.00	0.00	0.58	0.01	0.08	0.24	0.00	0.02
d, Delay for Lane Group [s/veh]	6.53	3.34	0.00	0.00	3.33	1.99	13.86	12.77	14.03	11.74
Lane Group LOS	A	A	A	A	A	A	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	0.12	0.00	0.00	0.11	0.00	0.12	0.19	0.01	0.02
50th-Percentile Queue Length [ft/ln]	1.21	2.88	0.00	0.00	2.84	0.05	2.91	4.66	0.13	0.38
95th-Percentile Queue Length [veh/ln]	0.09	0.21	0.00	0.00	0.20	0.00	0.21	0.34	0.01	0.03
95th-Percentile Queue Length [ft/ln]	2.18	5.18	0.00	0.00	5.12	0.10	5.23	8.39	0.24	0.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.53	3.34	0.00	0.00	3.33	1.99	13.86	12.77	12.77	14.03	11.74	11.74
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	3.39			3.32			13.19			12.31		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.57											
Intersection LOS	A											
Intersection V/C	0.541											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	47.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.972

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	46	5	142	123	0	0	0	0	15	0	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	421	457	600	581	22	29	58	3	302	39	514
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	109	118	155	150	6	7	15	1	78	10	133
Total Analysis Volume [veh/h]	16	435	473	620	601	23	30	60	3	312	40	532
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	38	48	0	11	29	0	12	30	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	144	144	144	144	144	144	144	144	144	144	144
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	21	53	52	70	70	5	27	28	50	50
g / C, Green / Cycle	0.02	0.15	0.37	0.36	0.48	0.48	0.03	0.19	0.19	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.29	0.34	0.17	0.01	0.02	0.03	0.09	0.02	0.33
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	3514	1900	1615
c, Capacity [veh/h]	42	534	595	652	1754	783	61	356	677	660	561
d1, Uniform Delay [s]	69.60	59.67	40.80	45.01	23.00	19.46	68.58	49.22	51.69	31.43	45.89
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.71	3.07	2.48	8.43	0.12	0.02	5.89	0.24	0.49	0.04	9.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

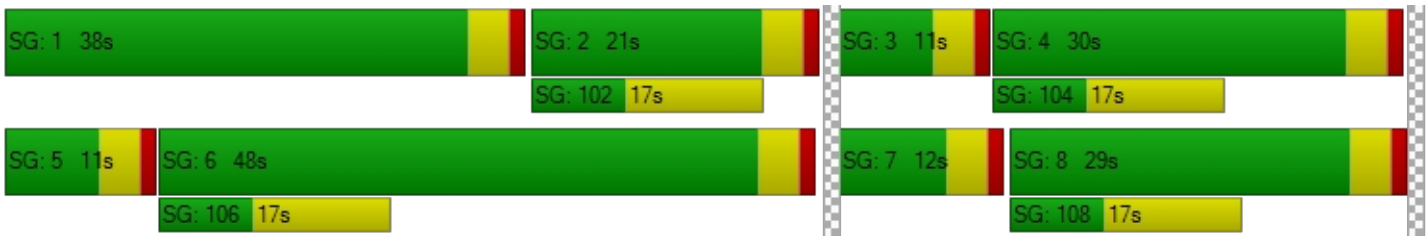
X, volume / capacity	0.38	0.81	0.80	0.95	0.34	0.03	0.49	0.18	0.46	0.06	0.95
d, Delay for Lane Group [s/veh]	75.31	62.74	43.28	53.45	23.11	19.47	74.47	49.45	52.18	31.47	54.99
Lane Group LOS	E	E	D	D	C	B	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.65	7.97	15.43	23.01	6.44	0.42	1.19	1.96	5.10	0.96	19.89
50th-Percentile Queue Length [ft/ln]	16.30	199.13	385.77	575.30	160.88	10.45	29.86	48.90	127.38	23.96	497.34
95th-Percentile Queue Length [veh/ln]	1.17	12.59	21.87	30.88	10.60	0.75	2.15	3.52	8.80	1.73	27.21
95th-Percentile Queue Length [ft/ln]	29.34	314.85	546.83	771.98	264.88	18.81	53.75	88.02	219.93	43.13	680.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	75.31	62.74	43.28	53.45	23.11	19.47	74.47	49.45	49.45	52.18	31.47	54.99
Movement LOS	E	E	D	D	C	B	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	53.00			38.16			57.52			52.93		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	47.25											
Intersection LOS	D											
Intersection V/C	0.972											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	867	73	108	692	4	4	15	15	18	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	918	73	108	830	4	4	15	15	18	10	26
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	236	19	28	213	1	1	4	4	5	3	7
Total Analysis Volume [veh/h]	14	943	75	111	853	4	4	15	15	18	10	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	58	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	16	16	16	16	4	4
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.26	0.26	0.05	0.27	0.27	0.02	0.03
s, saturation flow rate [veh/h]	1897	1729	1615	1879	1726	1829	1760
c, Capacity [veh/h]	639	583	544	636	584	223	233
d1, Uniform Delay [s]	14.45	14.45	11.15	14.47	14.47	21.03	21.28
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.15	2.36	0.11	2.29	2.49	0.31	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

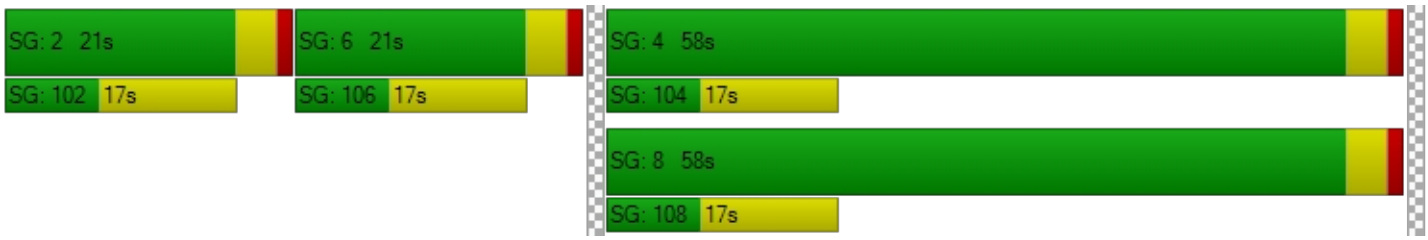
X, volume / capacity	0.78	0.78	0.14	0.79	0.79	0.15	0.24
d, Delay for Lane Group [s/veh]	16.60	16.80	11.27	16.76	16.96	21.34	21.80
Lane Group LOS	B	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.46	4.10	0.49	4.52	4.19	0.35	0.57
50th-Percentile Queue Length [ft/ln]	111.47	102.40	12.22	113.11	104.70	8.70	14.27
95th-Percentile Queue Length [veh/ln]	7.92	7.37	0.88	8.01	7.54	0.63	1.03
95th-Percentile Queue Length [ft/ln]	198.04	184.33	21.99	200.32	188.47	15.65	25.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.60	16.69	11.27	16.76	16.87	16.96	21.34	21.34	21.34	21.80	21.80	21.80
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.30			16.85			21.34			21.80		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.78											
Intersection LOS	B											
Intersection V/C	0.751											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.863

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	948	25	17	721	2	0	0	9	12	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	999	25	17	859	2	0	0	9	12	0	14
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	262	7	4	225	1	0	0	2	3	0	4
Total Analysis Volume [veh/h]	4	1048	26	18	901	2	0	0	9	13	0	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	37	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17	15	15	2	2
g / C, Green / Cycle	0.37	0.37	0.37	0.33	0.33	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.29	0.29	0.02	0.25	0.25	0.09	0.01
s, saturation flow rate [veh/h]	1899	1729	1615	1896	1728	97	1899
c, Capacity [veh/h]	696	633	592	618	563	83	203
d1, Uniform Delay [s]	12.98	12.98	9.36	13.98	13.98	20.97	21.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	2.28	0.03	2.18	2.39	0.57	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

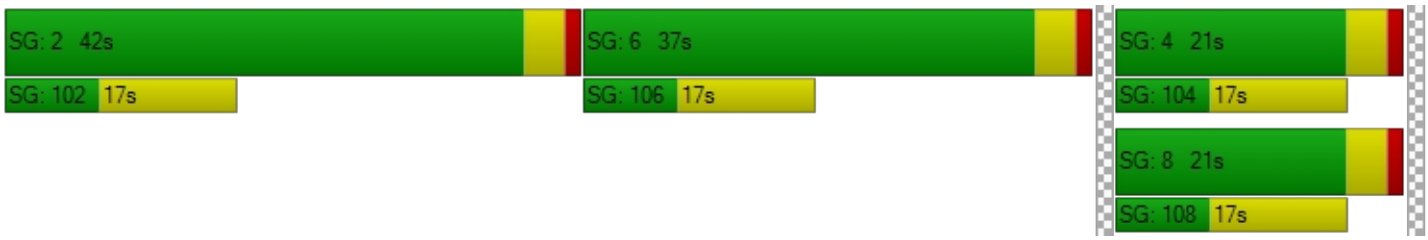
X, volume / capacity	0.79	0.79	0.04	0.78	0.78	0.11	0.14
d, Delay for Lane Group [s/veh]	15.05	15.25	9.39	16.16	16.37	21.54	21.48
Lane Group LOS	B	B	A	B	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.41	4.05	0.14	4.05	3.72	0.10	0.28
50th-Percentile Queue Length [ft/ln]	110.28	101.27	3.54	101.18	92.99	2.42	6.99
95th-Percentile Queue Length [veh/ln]	7.86	7.29	0.25	7.29	6.70	0.17	0.50
95th-Percentile Queue Length [ft/ln]	196.39	182.29	6.37	182.13	167.38	4.35	12.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.05	15.15	9.39	16.16	16.26	16.37	21.54	21.54	21.54	21.48	21.48	21.48
Movement LOS	B	B	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	15.01			16.26			21.54			21.48		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.69											
Intersection LOS	B											
Intersection V/C	0.863											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.785

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	971	916	446	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	35	103	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1019	951	549	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	269	251	145	0	0
Total Analysis Volume [veh/h]	243	1077	1005	580	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	25	100	75	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	35	35	35	35	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	6	31	21	21	
g / C, Green / Cycle	0.18	0.89	0.59	0.59	
(v / s)_i Volume / Saturation Flow Rate	0.13	0.30	0.42	0.47	
s, saturation flow rate [veh/h]	1810	3618	1900	1683	
c, Capacity [veh/h]	331	3204	1118	990	
d1, Uniform Delay [s]	13.48	0.33	5.08	5.60	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.17	0.06	0.84	1.55	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

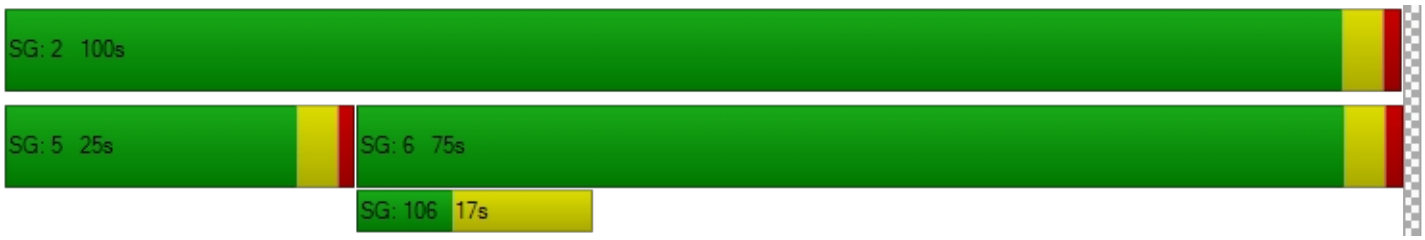
X, volume / capacity	0.73	0.34	0.71	0.80	
d, Delay for Lane Group [s/veh]	16.64	0.39	5.93	7.15	
Lane Group LOS	B	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	1.70	0.03	1.77	2.08	
50th-Percentile Queue Length [ft/ln]	42.60	0.68	44.15	52.10	
95th-Percentile Queue Length [veh/ln]	3.07	0.05	3.18	3.75	
95th-Percentile Queue Length [ft/ln]	76.69	1.23	79.47	93.78	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.64	0.39	6.18	7.15	0.00	0.00
Movement LOS	B	A	A	A		
d_A, Approach Delay [s/veh]	3.38		6.54		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.10					
Intersection LOS	A					
Intersection V/C	0.785					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	824	408	78	89	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	76	27	19	67	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	900	435	97	156	30
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	231	112	25	40	8
Total Analysis Volume [veh/h]	36	925	447	100	160	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	130	130	0	130	0
Amber [s]	0.0	2.0	2.0	0.0	2.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	70	70	0	60	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	29	29	29	29
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	17	17	6	6
g / C, Green / Cycle	0.60	0.60	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.51	0.31	0.10	0.02
s, saturation flow rate [veh/h]	1800	1744	1619	1530
c, Capacity [veh/h]	1079	1045	311	294
d1, Uniform Delay [s]	4.76	3.37	10.42	9.58
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.10	0.41	1.31	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

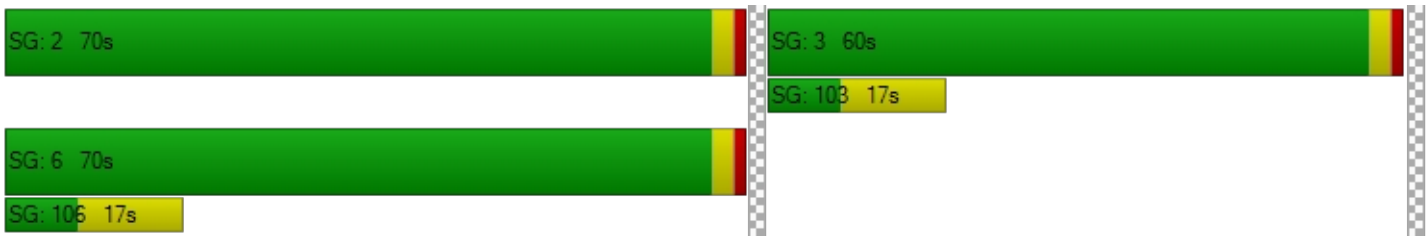
X, volume / capacity	0.86	0.52	0.51	0.11
d, Delay for Lane Group [s/veh]	6.86	3.78	11.73	9.74
Lane Group LOS	A	A	B	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.22	0.37	0.74	0.12
50th-Percentile Queue Length [ft/ln]	30.60	9.18	18.59	3.12
95th-Percentile Queue Length [veh/ln]	2.20	0.66	1.34	0.22
95th-Percentile Queue Length [ft/ln]	55.08	16.53	33.46	5.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.86	3.78	3.78	11.73	9.74
Movement LOS		A	A	A	B	A
d_A, Approach Delay [s/veh]	6.86		3.78		11.41	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.37					
Intersection LOS	A					
Intersection V/C	0.775					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.745

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	58	0	15	5	142	0	0	53	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	203	1	327	498	583	4	1	504	181
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	54	0	87	133	156	1	0	134	48
Total Analysis Volume [veh/h]	3	1	1	217	1	349	531	622	4	1	538	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	55	53	0	26	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	104	104	104	104	104	104	104	104	104	104
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	33	52	52	0	19	19
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.32	0.50	0.50	0.00	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.15	0.22	0.29	0.17	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	637	1615	1439	1616	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	307	626	328	626	574	1793	800	3	652	291
d1, Uniform Delay [s]	21.34	19.58	41.31	24.98	34.39	16.02	13.30	51.97	41.16	39.80
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	2.29	0.79	6.91	0.12	0.00	39.96	2.72	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

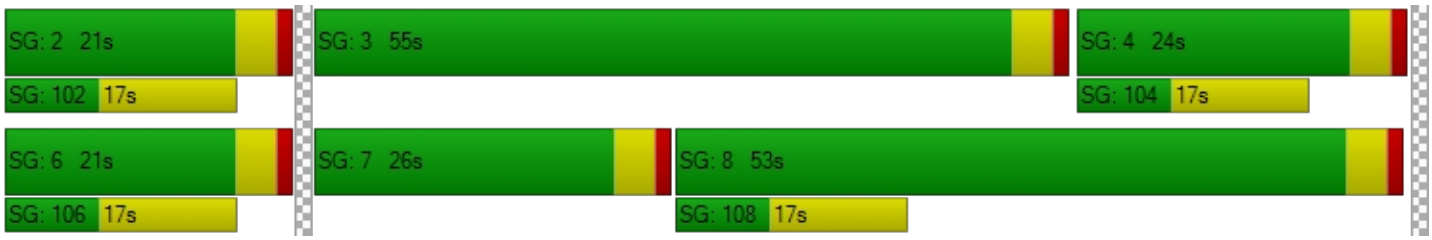
X, volume / capacity	0.01	0.00	0.66	0.56	0.92	0.35	0.00	0.29	0.83	0.66
d, Delay for Lane Group [s/veh]	21.36	19.58	43.60	25.77	41.31	16.13	13.30	91.93	43.88	42.38
Lane Group LOS	C	B	D	C	D	B	B	F	D	D
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.06	0.02	5.54	6.77	13.78	4.43	0.05	0.06	6.83	4.78
50th-Percentile Queue Length [ft/ln]	1.52	0.38	138.41	169.13	344.62	110.75	1.19	1.62	170.78	119.42
95th-Percentile Queue Length [veh/ln]	0.11	0.03	9.40	11.03	19.87	7.88	0.09	0.12	11.12	8.36
95th-Percentile Queue Length [ft/ln]	2.74	0.68	234.88	275.77	496.84	197.05	2.14	2.91	277.94	209.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.36	21.36	19.58	43.60	25.77	25.77	41.31	16.13	13.30	91.93	43.88	42.38
Movement LOS	C	C	B	D	C	C	D	B	B	F	D	D
d_A, Approach Delay [s/veh]	21.01			32.59			27.68			43.55		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	33.52											
Intersection LOS	C											
Intersection V/C	0.745											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	22.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.131

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	658	840	54	30	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	200	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	732	1040	54	30	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	195	277	14	8	2
Total Analysis Volume [veh/h]	21	780	1108	58	32	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.13	0.04
d_M, Delay for Movement [s/veh]	11.15	0.00	0.00	0.00	22.01	20.13
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.45	0.13
95th-Percentile Queue Length [ft/ln]	2.69	0.00	0.00	0.00	11.16	3.14
d_A, Approach Delay [s/veh]	0.29		0.00		21.56	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.57					
Intersection LOS	C					

EXISTING PLUS PROJECT – ALTERNATIVE 2

Viridian

Vistro File: C:\...\AME.vistro

Report File: C:\...\AMEP2.pdf

Scenario 4 Existing Plus Project Morning Peak Hour - Alternative 2

10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.097	56.4	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.977	45.8	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.690	18.0	B
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.641	11.1	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	1.199	26.4	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.493	13.1	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.018	10.6	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.605	6.0	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	107.9	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.857	30.4	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	EB Thru	0.026	53.1	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.009	40.7	E
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	4.286	48.5	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.773	20.7	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.885	50.3	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.913	35.1	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.694	10.5	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.014	8.8	A
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.010	10.4	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.231	9.4	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.003	8.8	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.004	12.7	B
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.005	9.5	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.539	44.3	E
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.027	14.1	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.077	12.7	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.475	11.2	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.260	7.5	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	75.429	141.8	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.075	37.6	E
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	EB Right	0.511	19.1	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.706	10.9	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.834	21.3	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.822	23.2	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.785	19.2	B
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.813	22.4	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.672	10.3	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.622	7.7	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.726	10.3	B
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.659	10.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	56.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.097

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	306	1234	0	0	1068	751	0	0	0	456	0	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	8	0	0	19	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	321	1242	0	0	1087	751	0	0	0	458	0	522
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	321	0	0	281	194	0	0	0	118	0	135
Total Analysis Volume [veh/h]	332	1284	0	0	1124	777	0	0	0	474	0	540
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	26	85	0	0	59	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	125	125	125	125		125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	23	82	56	56		37	37
g / C, Green / Cycle	0.18	0.66	0.45	0.45		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.21	0.37	0.23	0.51		0.30	0.33
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1701	1530
c, Capacity [veh/h]	299	2248	2195	685		504	453
d1, Uniform Delay [s]	51.08	11.85	24.80	34.60		44.09	44.09
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	60.99	1.06	0.86	77.79		20.26	60.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.11	0.57	0.51	1.13		1.01	1.12
d, Delay for Lane Group [s/veh]	112.07	12.91	25.65	112.39		64.35	104.82
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	14.39	9.65	8.10	35.02		18.28	21.53
50th-Percentile Queue Length [ft/ln]	359.64	241.14	202.56	875.51		456.97	538.37
95th-Percentile Queue Length [veh/ln]	21.72	14.74	12.77	49.01		25.40	31.21
95th-Percentile Queue Length [ft/ln]	543.00	368.47	319.26	1225.19		635.00	780.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	112.07	12.91	0.00	0.00	25.65	112.39	0.00	0.00	0.00	64.35	64.35	102.35
Movement LOS	F	B			C	F				E	E	F
d_A, Approach Delay [s/veh]	33.28			61.11			0.00			84.59		
Approach LOS	C			E			A			F		
d_I, Intersection Delay [s/veh]	56.44											
Intersection LOS	E											
Intersection V/C	1.097											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	45.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.977

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	978	414	478	1033	0	555	0	362	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	1	0	21	0	0	0	48	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1001	415	478	1054	0	555	0	410	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	263	109	126	277	0	146	0	108	0	0	0
Total Analysis Volume [veh/h]	0	1053	436	503	1108	0	584	0	431	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	42	80	0	0	45	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	125	125	125	125	125	125	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	35	35	39	77	42	42	
g / C, Green / Cycle	0.28	0.28	0.31	0.62	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.28	0.31	0.32	0.30	0.33	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1559	
c, Capacity [veh/h]	1374	429	505	2112	544	524	
d1, Uniform Delay [s]	41.41	45.17	43.09	13.66	39.80	41.61	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.13	47.74	17.58	0.94	6.06	17.49	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.77	1.02	1.00	0.52	0.91	1.00	
d, Delay for Lane Group [s/veh]	45.54	92.92	60.67	14.59	45.85	59.10	
Lane Group LOS	D	F	E	B	D	E	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.43	18.89	17.83	8.85	15.25	18.41	
50th-Percentile Queue Length [ft/ln]	260.82	472.34	445.77	221.22	381.22	460.33	
95th-Percentile Queue Length [veh/ln]	15.73	26.30	24.76	13.73	21.65	25.45	
95th-Percentile Queue Length [ft/ln]	393.25	657.44	618.90	343.18	541.33	636.26	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	45.54	92.92	60.67	14.59	0.00	47.68	59.10	59.10	0.00	0.00	0.00
Movement LOS		D	F	E	B		D	E	E			
d_A, Approach Delay [s/veh]	59.41			28.98			52.67			0.00		
Approach LOS	E			C			D			A		
d_I, Intersection Delay [s/veh]	45.83											
Intersection LOS	D											
Intersection V/C	0.977											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	130	813	16	83	864	93	168	116	67	16	196	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	24	0	0	69	0	0	0	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	134	837	16	83	933	93	168	116	75	16	196	117
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	213	4	21	238	24	43	30	19	4	50	30
Total Analysis Volume [veh/h]	136	852	16	85	950	95	171	118	76	16	200	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	50	0	33	63	0	24	37	0	10	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	51	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	19	19	5	18	18	7	13	13	1	7	7
g / C, Green / Cycle	0.12	0.38	0.38	0.10	0.36	0.36	0.14	0.25	0.25	0.03	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.08	0.24	0.24	0.05	0.29	0.30	0.11	0.03	0.05	0.01	0.09	0.10
s, saturation flow rate [veh/h]	1619	1800	1788	1619	1800	1743	1619	3427	1530	1619	1800	1583
c, Capacity [veh/h]	191	692	687	157	654	633	223	874	390	46	262	231
d1, Uniform Delay [s]	21.63	12.74	12.74	21.93	14.65	14.65	21.19	14.64	14.88	24.29	20.47	20.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.85	0.95	0.96	2.89	2.49	2.58	5.50	0.07	0.24	4.51	2.50	3.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.63	0.63	0.54	0.81	0.81	0.77	0.14	0.19	0.35	0.63	0.67
d, Delay for Lane Group [s/veh]	26.48	13.68	13.69	24.82	17.13	17.23	26.69	14.71	15.12	28.80	22.97	23.86
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.68	3.51	3.49	1.01	5.04	4.90	2.11	0.47	0.64	0.23	1.85	1.77
50th-Percentile Queue Length [ft/ln]	41.88	87.83	87.29	25.24	126.04	122.58	52.87	11.86	15.90	5.80	46.29	44.19
95th-Percentile Queue Length [veh/ln]	3.02	6.32	6.29	1.82	8.72	8.53	3.81	0.85	1.14	0.42	3.33	3.18
95th-Percentile Queue Length [ft/ln]	75.38	158.10	157.13	45.42	218.10	213.37	95.16	21.35	28.62	10.44	83.32	79.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.48	13.69	13.69	24.82	17.18	17.23	26.69	14.71	15.12	28.80	23.12	23.86
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.42			17.76			20.41			23.66		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.97											
Intersection LOS	B											
Intersection V/C	0.690											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	86	842	36	62	801	60	62	94	75	72	109	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	28	0	0	77	0	0	0	18	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	870	36	62	878	60	62	94	93	72	109	45
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	237	10	17	239	16	17	26	25	20	30	12
Total Analysis Volume [veh/h]	101	949	39	68	957	65	68	103	101	79	119	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	63	0	21	67	0	0	31	0	0	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	14	14	3	13	13	8	8
g / C, Green / Cycle	0.13	0.41	0.41	0.10	0.39	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.06	0.28	0.28	0.04	0.29	0.29	0.18	0.18
s, saturation flow rate [veh/h]	1619	1800	1775	1619	1800	1760	1507	1390
c, Capacity [veh/h]	206	746	736	160	695	679	474	455
d1, Uniform Delay [s]	14.19	8.27	8.27	14.81	9.24	9.24	12.51	12.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.81	1.04	1.05	1.80	1.60	1.64	1.10	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.67	0.67	0.43	0.74	0.74	0.57	0.54
d, Delay for Lane Group [s/veh]	16.00	9.31	9.33	16.60	10.84	10.88	13.61	13.36
Lane Group LOS	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.70	2.12	2.09	0.49	2.52	2.47	1.64	1.47
50th-Percentile Queue Length [ft/ln]	17.50	52.96	52.32	12.31	62.92	61.72	40.96	36.64
95th-Percentile Queue Length [veh/ln]	1.26	3.81	3.77	0.89	4.53	4.44	2.95	2.64
95th-Percentile Queue Length [ft/ln]	31.50	95.34	94.18	22.15	113.25	111.10	73.72	65.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.00	9.32	9.33	16.60	10.86	10.88	13.61	13.61	13.61	13.36	13.36	13.36
Movement LOS	B	A	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	9.94			11.22			13.61			13.36		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	11.14											
Intersection LOS	B											
Intersection V/C	0.641											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.199

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	35	759	38	72	867	35	46	75	29	55	75	151
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	35	0	0	95	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	794	38	72	962	35	46	75	34	55	75	151
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	224	11	20	271	10	13	21	10	15	21	43
Total Analysis Volume [veh/h]	42	894	43	81	1083	39	52	84	38	62	84	170
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	22	0	10	22	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	21	21	5	22	22	25	25	25	25
g / C, Green / Cycle	0.06	0.35	0.35	0.09	0.37	0.37	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.26	0.05	0.31	0.31	0.58	0.02	0.74	0.11
s, saturation flow rate [veh/h]	1619	1800	1771	1619	1800	1778	234	1530	197	1530
c, Capacity [veh/h]	98	623	613	143	673	664	180	637	167	637
d1, Uniform Delay [s]	27.26	17.44	17.44	26.33	17.19	17.20	15.05	10.51	16.94	11.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.94	8.41	8.54	3.52	11.97	12.14	6.28	0.04	12.94	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.76	0.76	0.57	0.84	0.84	0.75	0.06	0.87	0.27
d, Delay for Lane Group [s/veh]	30.20	25.85	25.98	29.85	29.16	29.34	21.32	10.55	29.88	11.76
Lane Group LOS	C	C	C	C	C	C	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	6.59	6.51	1.19	8.45	8.39	1.32	0.27	1.69	1.35
50th-Percentile Queue Length [ft/ln]	15.81	164.81	162.71	29.81	211.30	209.65	33.07	6.85	42.27	33.76
95th-Percentile Queue Length [veh/ln]	1.14	10.80	10.69	2.15	13.22	13.14	2.38	0.49	3.04	2.43
95th-Percentile Queue Length [ft/ln]	28.46	270.08	267.31	53.65	330.49	328.38	59.52	12.33	76.08	60.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.20	25.91	25.98	29.85	29.25	29.34	21.32	21.32	10.55	29.88	29.88	11.76
Movement LOS	C	C	C	C	C	C	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	26.10			29.29			18.97			20.13		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	26.36											
Intersection LOS	C											
Intersection V/C	1.199											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.493

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	566	50	71	911	7	20	8	19	64	4	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	52	56	0	0	0	0	2	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	592	50	123	967	7	20	8	19	66	4	77
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	174	15	36	284	2	6	2	6	19	1	23
Total Analysis Volume [veh/h]	9	696	59	145	1136	8	24	9	22	78	5	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	67	67	10	75	75	11	11	11
g / C, Green / Cycle	0.02	0.67	0.67	0.10	0.75	0.75	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.20	0.20	0.08	0.30	0.30	0.13	0.09	0.06
s, saturation flow rate [veh/h]	1810	1900	1848	1810	1900	1895	431	918	1615
c, Capacity [veh/h]	29	1273	1239	182	1434	1430	99	170	177
d1, Uniform Delay [s]	48.70	6.82	6.82	44.02	4.31	4.31	42.27	43.56	42.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.07	0.61	0.62	7.82	0.83	0.83	4.81	2.15	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

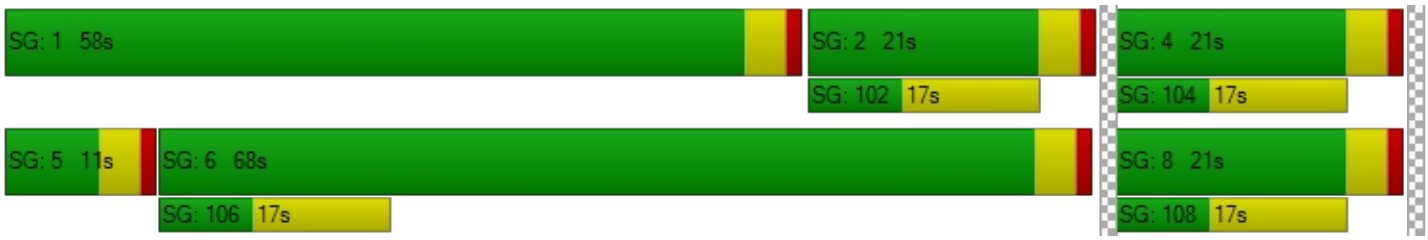
X, volume / capacity	0.31	0.30	0.30	0.80	0.40	0.40	0.56	0.49	0.51
d, Delay for Lane Group [s/veh]	54.77	7.42	7.44	51.85	5.14	5.15	47.08	45.71	44.26
Lane Group LOS	D	A	A	D	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	3.23	3.15	3.88	3.57	3.56	1.50	2.10	2.19
50th-Percentile Queue Length [ft/ln]	6.74	80.68	78.75	97.04	89.14	88.98	37.54	52.38	54.81
95th-Percentile Queue Length [veh/ln]	0.49	5.81	5.67	6.99	6.42	6.41	2.70	3.77	3.95
95th-Percentile Queue Length [ft/ln]	12.14	145.22	141.76	174.66	160.46	160.16	67.58	94.28	98.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.77	7.43	7.44	51.85	5.15	5.15	47.08	47.08	47.08	45.71	45.71	44.26
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.99			10.40			47.08			44.95		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	13.10											
Intersection LOS	B											
Intersection V/C	0.493											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	15	0	58	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	640	15	0	1052	0	10
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	168	5	0	277	0	3
Total Analysis Volume [veh/h]	674	18	0	1107	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	10.59
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.06
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.40
d_A, Approach Delay [s/veh]	0.00		0.00		10.59	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.605

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	189	57	1	67	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	639	189	57	995	67	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	168	50	15	262	18	4
Total Analysis Volume [veh/h]	673	199	60	1047	71	17
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	53	0	26	79	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	3	15	3	3
g / C, Green / Cycle	0.32	0.32	0.10	0.57	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.19	0.12	0.03	0.29	0.04	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1158	517	174	2056	232	207
d1, Uniform Delay [s]	7.49	6.95	11.14	3.46	10.43	10.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.47	1.17	0.20	0.74	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.38	0.34	0.51	0.31	0.08
d, Delay for Lane Group [s/veh]	7.95	7.42	12.30	3.65	11.16	10.29
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.93	0.54	0.29	0.26	0.30	0.07
50th-Percentile Queue Length [ft/ln]	23.36	13.49	7.17	6.38	7.62	1.74
95th-Percentile Queue Length [veh/ln]	1.68	0.97	0.52	0.46	0.55	0.13
95th-Percentile Queue Length [ft/ln]	42.05	24.28	12.91	11.48	13.71	3.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.95	7.42	12.30	3.65	11.16	10.29
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.83		4.12		10.99	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.98					
Intersection LOS	A					
Intersection V/C	0.605					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	107.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	204	1	1	67	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	881	1	1	1077	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	255	0	0	312	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	1020	1	1	1247	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.12	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	11.69	0.00	0.00	10.24	0.00	0.00	83.07	107.91	18.11	68.57	105.08	13.11
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	2.92	0.00	0.00	0.11	0.05	0.00	14.45	14.45	14.45	1.31	1.31	1.31
d_A, Approach Delay [s/veh]	0.24			0.01			33.70			68.57		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	0.50											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.857

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	92	9	37	31	0	0	0	0	6	0	113
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	313	271	553	565	17	14	29	11	268	36	436
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	84	73	148	151	5	4	8	3	72	10	0
Total Analysis Volume [veh/h]	14	335	290	592	605	18	15	31	12	287	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	37	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	93	93	93	93	93	93	93	93	93	93
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	20	20	33	50	50	5	5	19	19
g / C, Green / Cycle	0.02	0.21	0.21	0.35	0.54	0.54	0.06	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.09	0.18	0.33	0.17	0.01	0.01	0.02	0.18	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	1820	1615
c, Capacity [veh/h]	41	764	341	641	1962	876	106	106	372	330
d1, Uniform Delay [s]	44.78	31.91	35.29	28.86	11.70	9.85	41.60	42.26	35.91	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	0.40	5.93	6.24	0.09	0.01	0.61	2.48	6.66	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

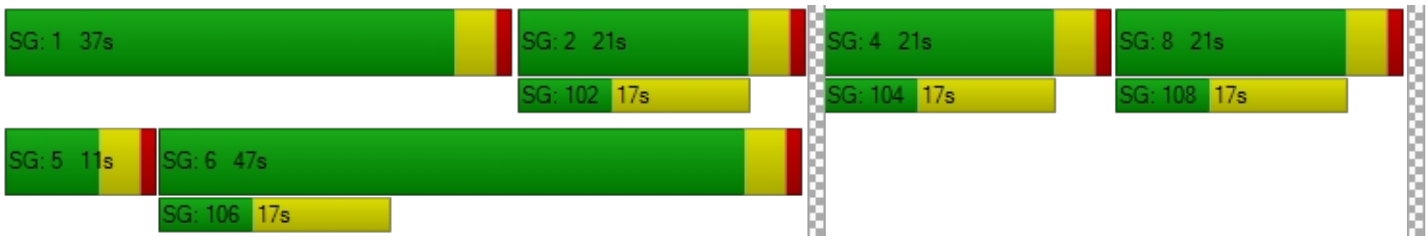
X, volume / capacity	0.34	0.44	0.85	0.92	0.31	0.02	0.14	0.41	0.88	0.00
d, Delay for Lane Group [s/veh]	49.49	32.30	41.22	35.11	11.79	9.86	42.21	44.74	42.57	0.00
Lane Group LOS	D	C	D	D	B	A	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.37	3.27	6.74	13.25	3.27	0.16	0.34	1.02	7.70	0.00
50th-Percentile Queue Length [ft/ln]	9.24	81.74	168.55	331.30	81.75	4.12	8.55	25.42	192.62	0.00
95th-Percentile Queue Length [veh/ln]	0.67	5.89	11.00	19.22	5.89	0.30	0.62	1.83	12.26	0.00
95th-Percentile Queue Length [ft/ln]	16.63	147.13	275.01	480.56	147.15	7.42	15.39	45.76	306.42	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.49	32.30	41.22	35.11	11.79	9.86	42.21	44.74	44.74	42.57	42.57	0.00
Movement LOS	D	C	D	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	36.73			23.12			44.09			42.57		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	30.38											
Intersection LOS	C											
Intersection V/C	0.857											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	53.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	489	25	84	760	1	1	2	16	7	3	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	590	25	84	797	1	1	2	16	7	3	15
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	156	7	22	211	0	0	1	4	2	1	4
Total Analysis Volume [veh/h]	23	626	27	89	845	1	1	2	17	7	3	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.09	0.01	0.00	0.01	0.03	0.03	0.07	0.04	0.02
d_M, Delay for Movement [s/veh]	9.64	0.00	0.00	9.21	0.00	0.00	46.93	53.07	12.01	41.49	53.03	12.77
Movement LOS	A	A	A	A	A	A	E	F	B	E	F	B
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	0.29	0.15	0.00	0.21	0.21	0.21	0.43	0.43	0.43
95th-Percentile Queue Length [ft/ln]	2.12	1.06	0.00	7.31	3.66	0.00	5.33	5.33	5.33	10.72	10.72	10.72
d_A, Approach Delay [s/veh]	0.33			0.88			17.86			25.15		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	1.24											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	40.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	534	8	6	787	0	0	0	3	11	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	635	8	6	824	0	0	0	3	11	1	3
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	169	2	2	219	0	0	0	1	3	0	1
Total Analysis Volume [veh/h]	9	676	9	6	877	0	0	0	3	12	1	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.08	0.01	0.00
d_M, Delay for Movement [s/veh]	9.68	0.00	0.00	8.95	0.00	0.00	33.02	39.04	11.33	30.53	40.66	12.51
Movement LOS	A	A	A	A	A	A	D	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.02	0.01	0.00	0.02	0.02	0.02	0.30	0.30	0.30
95th-Percentile Queue Length [ft/ln]	0.78	0.39	0.00	0.49	0.25	0.00	0.40	0.40	0.40	7.49	7.49	7.49
d_A, Approach Delay [s/veh]	0.13			0.06			11.33			27.79		
Approach LOS	A			A			B			D		
d_I, Intersection Delay [s/veh]	0.39											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	48.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.286

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	427	12	5	802	20	12	13	19	60	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	0	0	36	1	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	527	12	5	838	21	13	13	19	60	22	9
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	143	3	1	227	6	4	4	5	16	6	2
Total Analysis Volume [veh/h]	20	572	13	5	910	23	14	14	21	65	24	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	25	0	11	25	0	0	64	0	0	64	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	31	31	1	29	29	56	56	56	56
g / C, Green / Cycle	0.03	0.31	0.31	0.01	0.29	0.29	0.56	0.56	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.01	0.15	0.15	0.00	0.25	0.25	0.41	0.01	3.51	0.01
s, saturation flow rate [veh/h]	1810	1900	1885	1810	1900	1884	68	1615	25	1615
c, Capacity [veh/h]	54	596	591	16	556	551	92	900	76	900
d1, Uniform Delay [s]	47.59	27.87	27.87	49.23	33.20	33.20	24.38	9.92	39.83	9.85
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.18	2.90	2.93	10.04	14.38	14.49	1.83	0.01	154.22	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

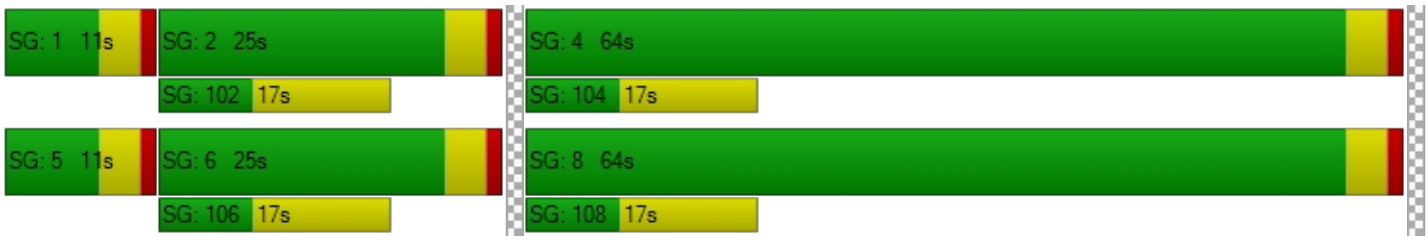
X, volume / capacity	0.37	0.49	0.49	0.30	0.84	0.84	0.30	0.02	1.16	0.01
d, Delay for Lane Group [s/veh]	51.76	30.77	30.80	59.27	47.58	47.68	26.22	9.93	194.05	9.86
Lane Group LOS	D	C	C	E	D	D	C	A	F	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	6.11	6.07	0.17	12.66	12.57	0.47	0.20	5.18	0.10
50th-Percentile Queue Length [ft/ln]	13.73	152.67	151.78	4.23	316.55	314.23	11.64	5.06	129.38	2.39
95th-Percentile Queue Length [veh/ln]	0.99	10.16	10.11	0.30	18.50	18.38	0.84	0.36	9.32	0.17
95th-Percentile Queue Length [ft/ln]	24.72	253.99	252.80	7.62	462.45	459.59	20.96	9.10	232.89	4.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.76	30.78	30.80	59.27	47.63	47.68	26.22	26.22	9.93	194.05	194.05	9.86
Movement LOS	D	C	C	E	D	D	C	C	A	F	F	A
d_A, Approach Delay [s/veh]	31.48			47.69			19.24			175.44		
Approach LOS	C			D			B			F		
d_I, Intersection Delay [s/veh]	48.55											
Intersection LOS	D											
Intersection V/C	4.286											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	531	0	0	790	22	10	0	156	347	88	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	96	0	0	36	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	627	0	0	826	22	10	0	156	347	88	70
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	177	0	0	233	6	3	0	44	98	25	20
Total Analysis Volume [veh/h]	37	708	0	0	932	25	11	0	176	392	99	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	21	0	0	0	49	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	66	66	66	66	66	66	66	66
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	9	9	20	20
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.14	0.14	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.25	0.25	0.01	0.11	0.27	0.05
s, saturation flow rate [veh/h]	596	3618	1900	1883	1810	1615	1827	1615
c, Capacity [veh/h]	183	1334	700	694	253	226	565	499
d1, Uniform Delay [s]	26.96	16.30	17.52	17.58	24.49	27.32	21.47	16.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.54	0.33	1.19	1.23	0.07	5.76	4.27	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

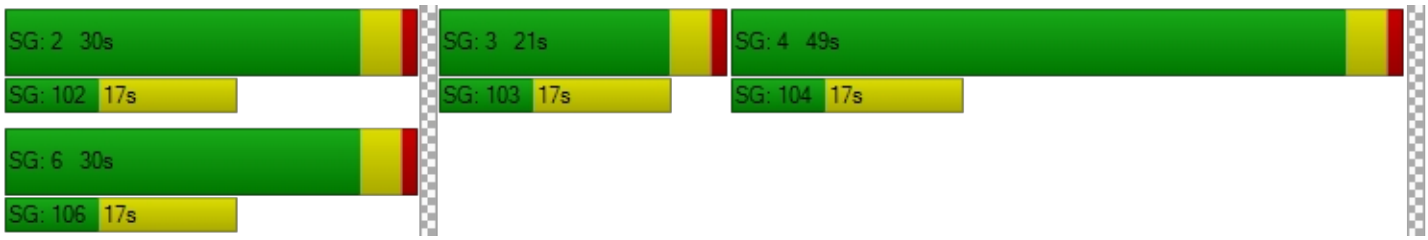
X, volume / capacity	0.20	0.53	0.68	0.69	0.04	0.78	0.87	0.16
d, Delay for Lane Group [s/veh]	27.50	16.63	18.71	18.81	24.56	33.08	25.74	16.66
Lane Group LOS	C	B	B	B	C	C	C	B
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	3.86	5.74	5.77	0.15	2.89	7.19	0.83
50th-Percentile Queue Length [ft/ln]	13.61	96.38	143.61	144.20	3.66	72.19	179.70	20.67
95th-Percentile Queue Length [veh/ln]	0.98	6.94	9.67	9.71	0.26	5.20	11.58	1.49
95th-Percentile Queue Length [ft/ln]	24.50	173.48	241.87	242.67	6.59	129.94	289.62	37.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.50	16.63	0.00	0.00	18.76	18.81	24.56	0.00	33.08	25.74	25.74	16.66
Movement LOS	C	B			B	B	C		C	C	C	B
d_A, Approach Delay [s/veh]	17.17			18.76			32.57			24.48		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.66											
Intersection LOS	C											
Intersection V/C	0.773											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	50.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.885

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	337	584	775	536	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	96	9	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	680	784	563	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	195	225	161	0	0
Total Analysis Volume [veh/h]	386	779	898	645	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.89	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	50.35	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	9.31	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	232.65	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.68		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	7.18					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.913

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	544	523	144	617	0	351	26	242	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	1	8	0	76	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	564	523	145	625	0	427	26	242	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	161	149	41	179	0	122	7	69	3	0	1
Total Analysis Volume [veh/h]	0	645	598	166	714	0	488	30	277	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	42	0	14	56	0	0	23	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	41	41	10	55	31	31	3	3
g / C, Green / Cycle	0.41	0.41	0.10	0.55	0.31	0.31	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.33	0.38	0.09	0.20	0.29	0.17	0.01	0.00
s, saturation flow rate [veh/h]	1900	1624	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	777	664	181	1985	555	494	46	41
d1, Uniform Delay [s]	25.99	28.32	44.60	12.69	33.71	29.07	47.86	47.61
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.49	22.38	16.47	0.51	7.74	1.00	3.35	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

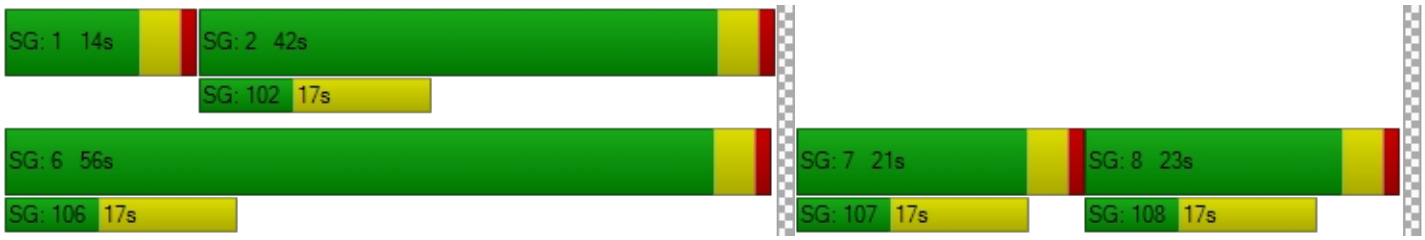
X, volume / capacity	0.80	0.94	0.92	0.36	0.93	0.56	0.28	0.07
d, Delay for Lane Group [s/veh]	34.48	50.70	61.07	13.20	41.44	30.07	51.22	48.36
Lane Group LOS	C	D	E	B	D	C	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	14.35	17.77	4.87	4.44	13.07	5.61	0.36	0.08
50th-Percentile Queue Length [ft/ln]	358.76	444.28	121.76	110.97	326.73	140.35	8.98	2.03
95th-Percentile Queue Length [veh/ln]	20.56	24.68	8.49	7.89	19.00	9.50	0.65	0.15
95th-Percentile Queue Length [ft/ln]	514.07	617.11	212.25	197.35	474.95	237.50	16.17	3.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	35.07	50.70	61.07	13.20	0.00	41.44	41.44	30.07	51.22	0.00	48.36
Movement LOS		D	D	E	B		D	D	C	D		D
d_A, Approach Delay [s/veh]	42.59			22.23			37.48			50.68		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	35.14											
Intersection LOS	D											
Intersection V/C	0.913											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	27	750	47	49	648	74	155	33	19	10	20	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	0	8	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	770	47	49	656	74	155	33	19	10	20	100
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	208	13	13	177	20	42	9	5	3	5	27
Total Analysis Volume [veh/h]	29	831	51	53	708	80	167	36	20	11	22	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	68	0	11	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	11	11	3	12	12	8	8	8
g / C, Green / Cycle	0.05	0.33	0.33	0.08	0.36	0.36	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.23	0.03	0.03	0.20	0.05	0.19	0.02	0.07
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1160	1799	1615
c, Capacity [veh/h]	91	1196	534	148	1311	585	459	568	384
d1, Uniform Delay [s]	15.74	9.98	7.94	14.90	8.67	7.34	13.14	10.15	10.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	0.74	0.08	1.45	0.35	0.11	0.80	0.04	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.69	0.10	0.36	0.54	0.14	0.49	0.06	0.28
d, Delay for Lane Group [s/veh]	17.75	10.72	8.02	16.35	9.02	7.44	13.93	10.19	11.08
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	2.02	0.20	0.38	1.47	0.29	1.38	0.15	0.55
50th-Percentile Queue Length [ft/ln]	5.82	50.39	4.91	9.52	36.87	7.18	34.50	3.84	13.71
95th-Percentile Queue Length [veh/ln]	0.42	3.63	0.35	0.69	2.65	0.52	2.48	0.28	0.99
95th-Percentile Queue Length [ft/ln]	10.47	90.71	8.83	17.14	66.37	12.92	62.10	6.91	24.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.75	10.72	8.02	16.35	9.02	7.44	13.93	13.93	13.93	10.19	10.19	11.08
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.79			9.33			13.93			10.87		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.55											
Intersection LOS	B											
Intersection V/C	0.694											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	46	6	12	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	175	6	12	148
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	46	2	3	39
Total Analysis Volume [veh/h]	0	13	184	6	13	156
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	8.83	0.00	0.00	7.60	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.04	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.04	0.00	0.00	0.70	0.00
d_A, Approach Delay [s/veh]	8.83		0.00		0.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.57					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	10	41	17	14	23
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	10	170	17	14	153
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	45	4	4	40
Total Analysis Volume [veh/h]	7	11	179	18	15	161
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.38	8.80	0.00	0.00	7.62	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.78	0.87	0.00	0.00	0.82	0.00
d_A, Approach Delay [s/veh]	9.42		0.00		0.65	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.73					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.231

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	48	0	39	57	80	0	0	79	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	15	0	6	3	2	29	20	47	28	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	15	48	6	42	59	109	20	47	107	54
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	4	13	2	12	17	31	6	13	30	15
Total Analysis Volume [veh/h]	7	3	17	54	7	47	66	122	22	53	120	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	26	0	0	31	73	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	1	2	3	12	12	5	5
g / C, Green / Cycle	0.05	0.05	0.09	0.10	0.44	0.44	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.03	0.04	0.03	0.01	0.05	0.05
s, saturation flow rate [veh/h]	1810	1652	1810	1810	3618	1615	1900	1698
c, Capacity [veh/h]	89	81	160	186	1578	705	363	325
d1, Uniform Delay [s]	12.77	12.88	12.06	11.75	4.63	4.53	9.66	9.72
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	1.57	1.24	1.14	0.02	0.02	0.36	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

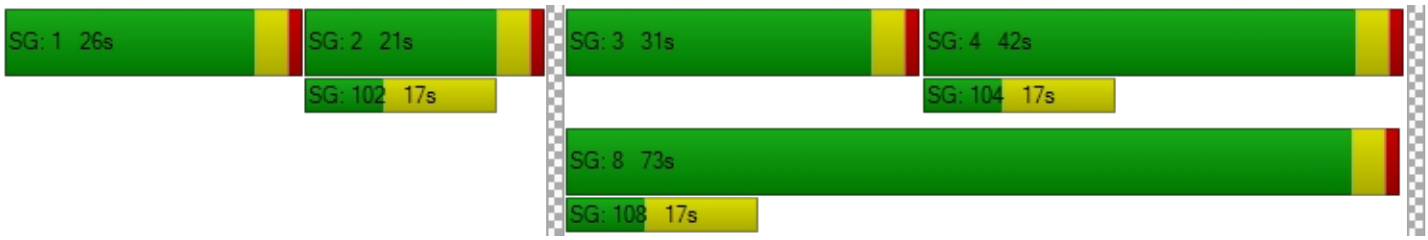
X, volume / capacity	0.08	0.25	0.34	0.35	0.08	0.03	0.25	0.28
d, Delay for Lane Group [s/veh]	13.15	14.44	13.30	12.89	4.65	4.55	10.02	10.18
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	0.13	0.29	0.34	0.10	0.04	0.36	0.37
50th-Percentile Queue Length [ft/ln]	1.02	3.17	7.24	8.49	2.49	0.93	9.00	9.19
95th-Percentile Queue Length [veh/ln]	0.07	0.23	0.52	0.61	0.18	0.07	0.65	0.66
95th-Percentile Queue Length [ft/ln]	1.84	5.70	13.03	15.29	4.48	1.67	16.19	16.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.15	14.44	14.44	13.30	0.00	0.00	12.89	4.65	4.55	0.00	10.06	10.18
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	14.11			13.30			7.23			10.10		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	9.42											
Intersection LOS	A											
Intersection V/C	0.231											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	128	0	0	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	40	4	5	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	168	4	5	224
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	44	1	1	59
Total Analysis Volume [veh/h]	0	3	177	4	5	236
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.77	0.00	0.00	7.57	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.24	0.00	0.00	0.27	0.00
d_A, Approach Delay [s/veh]	8.77		0.00		0.16	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	2	2	9	6	11	2	88	38	1	101	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	39	0	1	0	0	0	0	18	25	4	41	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	2	3	9	6	11	2	106	63	5	142	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	1	1	3	2	3	1	33	19	2	44	2
Total Analysis Volume [veh/h]	94	2	4	11	7	14	2	131	78	6	176	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.56	12.70	10.38	11.41	12.00	9.41	7.57	0.00	0.00	7.63	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.62	0.62	0.62	0.15	0.15	0.15	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	15.42	15.42	15.42	3.77	3.77	3.77	0.11	0.11	0.11	0.27	0.27	0.27
d_A, Approach Delay [s/veh]	12.48			10.66			0.07			0.24		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.11											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	45	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	36	20	9	4	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	77	65	9	4	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	17	2	1	3
Total Analysis Volume [veh/h]	15	81	68	9	4	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.37	0.00	0.00	0.00	9.48	8.65
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.01	0.04
95th-Percentile Queue Length [ft/ln]	0.74	0.00	0.00	0.00	0.37	1.06
d_A, Approach Delay [s/veh]	1.15		0.00		8.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.41					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	44.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	357	450	71	61	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	55	45	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	380	505	116	80	23
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	6	121	160	37	25	0
Total Analysis Volume [veh/h]	23	482	641	147	102	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.01	0.00	0.54	0.00
d_M, Delay for Movement [s/veh]	9.40	0.00	0.00	0.00	44.27	13.29
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	2.79	0.00
95th-Percentile Queue Length [ft/ln]	2.11	0.00	0.00	0.00	69.79	0.00
d_A, Approach Delay [s/veh]	0.43		0.00		44.27	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	3.39					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	329	60	105	443	10	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	55	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	352	60	105	498	10	42
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	16	28	134	3	11
Total Analysis Volume [veh/h]	380	65	113	537	11	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.10	0.01	0.03	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	8.55	0.00	14.08	11.01
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.33	0.00	0.08	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	8.35	0.00	2.08	5.62
d_A, Approach Delay [s/veh]	0.00		1.49		11.61	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.40					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.077

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	408	543	22	18	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	4	14	41	19	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	412	557	63	37	57
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	108	146	17	10	15
Total Analysis Volume [veh/h]	49	433	586	66	39	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.01	0.00	0.08	0.08
d_M, Delay for Movement [s/veh]	9.02	0.00	0.00	0.00	12.70	10.54
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.25	0.28
95th-Percentile Queue Length [ft/ln]	4.10	0.00	0.00	0.00	6.23	6.91
d_A, Approach Delay [s/veh]	0.92		0.00		11.39	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.27					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	407	15	105	500	4	0	3	11	28	0	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	8	0	0	14	14	4	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	415	15	105	514	18	4	3	20	28	0	59
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	111	4	28	137	5	1	1	5	7	0	16
Total Analysis Volume [veh/h]	59	444	16	112	550	19	4	3	21	30	0	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	31	0	37	57	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	30	30	30	30	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	7	7	4	8	8	0	2	2	2	3	3
g / C, Green / Cycle	0.09	0.23	0.23	0.14	0.28	0.28	0.01	0.05	0.05	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.01	0.06	0.15	0.01	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	170	819	366	262	1002	447	15	101	86	98	188	160
d1, Uniform Delay [s]	13.01	10.46	9.27	11.96	9.45	8.11	15.11	13.77	13.93	13.95	0.00	12.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	0.56	0.05	1.11	0.47	0.04	8.58	0.12	1.46	1.73	0.00	1.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

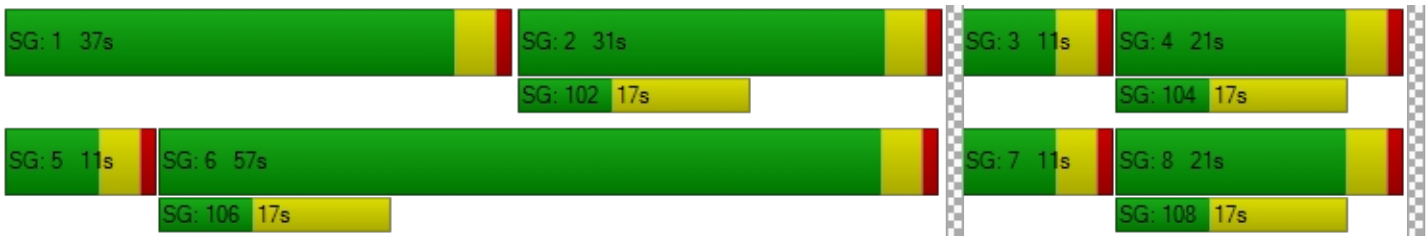
X, volume / capacity	0.35	0.54	0.04	0.43	0.55	0.04	0.26	0.03	0.24	0.31	0.00	0.39
d, Delay for Lane Group [s/veh]	14.22	11.03	9.32	13.07	9.92	8.15	23.69	13.89	15.40	15.68	0.00	14.54
Lane Group LOS	B	B	A	B	A	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.35	0.99	0.06	0.60	1.12	0.07	0.06	0.02	0.14	0.20	0.00	0.38
50th-Percentile Queue Length [ft/ln]	8.75	24.80	1.61	15.06	27.90	1.68	1.47	0.47	3.61	5.10	0.00	9.55
95th-Percentile Queue Length [veh/ln]	0.63	1.79	0.12	1.08	2.01	0.12	0.11	0.03	0.26	0.37	0.00	0.69
95th-Percentile Queue Length [ft/ln]	15.75	44.64	2.89	27.10	50.21	3.02	2.65	0.84	6.49	9.18	0.00	17.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.22	11.03	9.32	13.07	9.92	8.15	23.69	13.89	15.40	15.68	0.00	14.54
Movement LOS	B	B	A	B	A	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.34			10.39			16.42			14.91		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.21											
Intersection LOS	B											
Intersection V/C	0.475											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.260

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	441	78	41	533	53	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	0	0	23	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	492	78	41	556	53	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	140	22	12	158	15	14
Total Analysis Volume [veh/h]	558	89	47	631	60	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	84	70	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	81	81	0	0	11	11
g / C, Green / Cycle	0.81	0.81	0.00	0.00	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.15	0.06	0.05	0.33	0.07	0.03
s, saturation flow rate [veh/h]	3618	1615	865	1900	808	1615
c, Capacity [veh/h]	2916	1302	72	0	147	184
d1, Uniform Delay [s]	2.23	1.99	50.00	0.00	44.50	40.66
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.10	37.85	0.00	1.83	0.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

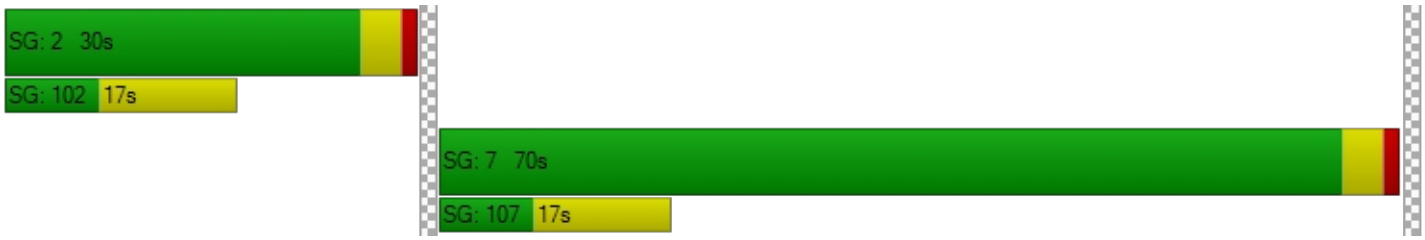
X, volume / capacity	0.19	0.07	0.65	0.00	0.41	0.30
d, Delay for Lane Group [s/veh]	2.37	2.09	87.85	0.00	46.33	41.58
Lane Group LOS	A	A	F	A	D	D
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.89	0.27	1.99	0.00	1.52	1.31
50th-Percentile Queue Length [ft/ln]	22.22	6.84	49.85	0.00	38.03	32.67
95th-Percentile Queue Length [veh/ln]	1.60	0.49	3.59	0.00	2.74	2.35
95th-Percentile Queue Length [ft/ln]	40.00	12.31	89.74	0.00	68.45	58.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.37	2.09	87.85	0.00	46.33	41.58
Movement LOS	A	A	F	A	D	D
d_A, Approach Delay [s/veh]	2.33		6.09		44.04	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.46					
Intersection LOS	A					
Intersection V/C	0.260					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	141.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	75.429

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	17	0	6	9	37	0	0	113	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	134	4	287	314	557	13	3	437	192
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	35	1	74	81	144	3	1	113	50
Total Analysis Volume [veh/h]	10	3	2	138	4	296	324	575	13	3	451	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	66	0	0	66	0	13	23	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62	62	62	62	9	25	25	1	17	17
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.09	0.25	0.25	0.01	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.70	0.00	66.07	0.18	0.18	0.16	0.01	0.00	0.12	0.12
s, saturation flow rate [veh/h]	19	1615	2	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	75	1001	72	1001	167	921	411	10	608	272
d1, Uniform Delay [s]	26.11	7.24	49.06	8.85	45.40	33.03	28.01	49.52	39.52	39.43
k, delay calibration	0.17	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.66	0.00	479.47	0.16	430.41	3.19	0.14	15.41	7.93	15.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.00	1.96	0.30	1.95	0.62	0.03	0.30	0.74	0.73
d, Delay for Lane Group [s/veh]	27.78	7.24	528.52	9.01	475.81	36.22	28.15	64.94	47.45	55.21
Lane Group LOS	C	A	F	A	F	D	C	E	D	E
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.26	0.02	11.43	2.83	24.01	6.50	0.25	0.12	5.87	5.75
50th-Percentile Queue Length [ft/ln]	6.41	0.39	285.80	70.67	600.19	162.51	6.25	2.94	146.85	143.72
95th-Percentile Queue Length [veh/ln]	0.46	0.03	20.58	5.09	38.29	10.68	0.45	0.21	9.85	9.68
95th-Percentile Queue Length [ft/ln]	11.54	0.70	514.44	127.20	957.28	267.05	11.25	5.30	246.22	242.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.78	27.78	7.24	528.52	528.52	9.01	475.81	36.22	28.15	64.94	47.45	55.21
Movement LOS	C	C	A	F	F	A	F	D	C	E	D	E
d_A, Approach Delay [s/veh]	25.04			177.44			192.27			49.89		
Approach LOS	C			F			F			D		
d_I, Intersection Delay [s/veh]	141.78											
Intersection LOS	F											
Intersection V/C	75.429											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	37.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	554	638	21	8	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	155	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	709	692	21	8	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	192	187	6	2	4
Total Analysis Volume [veh/h]	22	768	750	23	9	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.08	0.03
d_M, Delay for Movement [s/veh]	9.34	0.00	0.00	0.00	37.62	14.13
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.24	0.11
95th-Percentile Queue Length [ft/ln]	1.99	0.00	0.00	0.00	6.01	2.66
d_A, Approach Delay [s/veh]	0.26		0.00		23.32	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	63	802	179	55	744	0	2	3	79	188	4	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	154	0	0	54	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	956	179	55	798	0	2	3	79	188	4	60
Peak Hour Factor	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	267	50	15	223	0	1	1	22	53	1	17
Total Analysis Volume [veh/h]	70	1068	200	61	892	0	2	3	88	210	4	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	59	59	11	58	0	0	29	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	80	94	6	80	80	8	8	10	10	10
g / C, Green / Cycle	0.05	0.67	0.78	0.05	0.66	0.66	0.07	0.07	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.04	0.30	0.12	0.03	0.23	0.23	0.00	0.05	0.06	0.06	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1863	1615	1810	1813	1615
c, Capacity [veh/h]	96	2407	1260	92	1260	1260	128	111	148	148	132
d1, Uniform Delay [s]	56.01	9.54	3.31	55.96	8.89	8.89	52.18	55.03	53.80	53.80	52.81
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.23	0.60	0.27	7.90	0.17	0.17	0.12	11.74	6.54	6.52	3.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.44	0.16	0.66	0.35	0.35	0.04	0.79	0.72	0.72	0.51
d, Delay for Lane Group [s/veh]	66.25	10.14	3.58	63.86	9.06	9.06	52.30	66.77	60.33	60.31	55.81
Lane Group LOS	E	B	A	E	A	A	D	E	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.36	6.46	1.11	2.02	4.92	4.92	0.15	2.98	3.42	3.42	2.05
50th-Percentile Queue Length [ft/ln]	59.04	161.58	27.67	50.44	122.90	122.90	3.64	74.60	85.50	85.61	51.22
95th-Percentile Queue Length [veh/ln]	4.25	10.63	1.99	3.63	8.55	8.55	0.26	5.37	6.16	6.16	3.69
95th-Percentile Queue Length [ft/ln]	106.26	265.81	49.81	90.79	213.81	213.81	6.55	134.28	153.91	154.10	92.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.25	10.14	3.58	63.86	9.06	9.06	52.30	52.30	66.77	60.32	60.31	55.81
Movement LOS	E	B	A	E	A	A	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	12.09			12.57			65.99			59.25		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	19.12											
Intersection LOS	B											
Intersection V/C	0.511											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	217	319	0	0	886	151	0	0	0	113	0	724
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	54	0	0	0	0	0	0	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	217	348	0	0	940	151	0	0	0	113	0	849
Peak Hour Factor	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	62	99	0	0	268	43	0	0	0	32	0	0
Total Analysis Volume [veh/h]	248	397	0	0	1073	172	0	0	0	129	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	59	99	0	0	40	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	42	42	42	42		42	42
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	8	29	17	17		5	5
g / C, Green / Cycle	0.18	0.68	0.40	0.40		0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.30	0.11		0.07	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	330	2463	1461	652		235	210
d1, Uniform Delay [s]	16.38	2.42	10.68	8.40		17.23	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.46	0.03	0.73	0.21		1.99	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

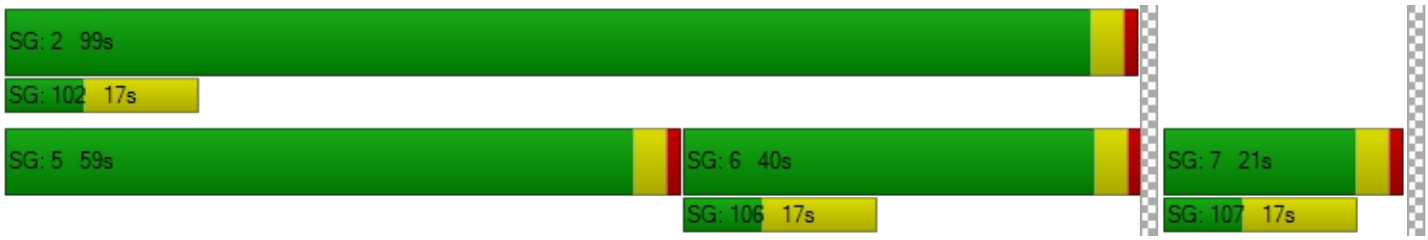
X, volume / capacity	0.75	0.16	0.73	0.26		0.55	0.00
d, Delay for Lane Group [s/veh]	19.84	2.45	11.41	8.62		19.22	0.00
Lane Group LOS	B	A	B	A		B	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	2.24	0.20	3.28	0.83		1.15	0.00
50th-Percentile Queue Length [ft/ln]	56.06	5.05	81.91	20.70		28.63	0.00
95th-Percentile Queue Length [veh/ln]	4.04	0.36	5.90	1.49		2.06	0.00
95th-Percentile Queue Length [ft/ln]	100.90	9.09	147.43	37.26		51.54	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.84	2.45	0.00	0.00	11.41	8.62	0.00	0.00	0.00	19.22	0.00	0.00
Movement LOS	B	A			B	A				B		A
d_A, Approach Delay [s/veh]	9.14			11.02			0.00			19.22		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	10.94											
Intersection LOS	B											
Intersection V/C	0.706											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	368	157	448	573	0	174	0	731	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	43	11	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	394	157	491	584	0	174	0	731	0	0	3
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	107	42	133	158	0	47	0	198	0	0	1
Total Analysis Volume [veh/h]	0	426	170	531	632	0	188	0	791	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	23	0	50	73	0	47	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	69	69	69	69	69	69	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	11	11	23	38	23	23	
g / C, Green / Cycle	0.16	0.16	0.33	0.55	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.29	0.17	0.10	0.28	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	586	262	596	1989	604	954	
d1, Uniform Delay [s]	27.34	26.96	21.86	8.44	17.02	21.08	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.74	2.71	4.83	0.09	0.29	1.93	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

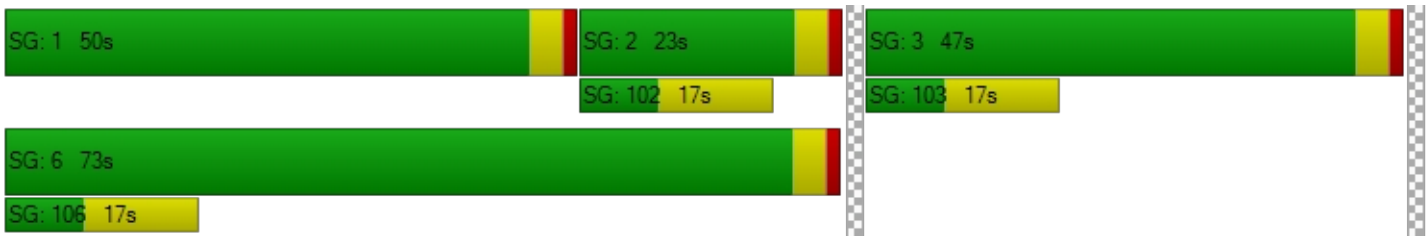
X, volume / capacity	0.73	0.65	0.89	0.32	0.31	0.83	
d, Delay for Lane Group [s/veh]	29.08	29.67	26.69	8.53	17.31	23.01	
Lane Group LOS	C	C	C	A	B	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.30	2.68	8.23	2.21	2.11	5.62	
50th-Percentile Queue Length [ft/ln]	82.49	67.05	205.83	55.14	52.67	140.49	
95th-Percentile Queue Length [veh/ln]	5.94	4.83	12.94	3.97	3.79	9.51	
95th-Percentile Queue Length [ft/ln]	148.48	120.70	323.48	99.24	94.81	237.69	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	29.08	29.67	26.69	8.53	0.00	17.31	0.00	23.01	0.00	0.00	0.00
Movement LOS		C	C	C	A		B		C			
d_A, Approach Delay [s/veh]	29.25			16.82			21.92			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	21.35											
Intersection LOS	C											
Intersection V/C	0.834											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.822

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	769	0	0	1098	534	0	0	0	404	0	363
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	7	0	0	17	0	0	0	0	45	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	303	776	0	0	1115	534	0	0	0	449	0	363
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	237	0	0	341	163	0	0	0	137	0	111
Total Analysis Volume [veh/h]	371	950	0	0	1365	654	0	0	0	550	0	444
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	65	0	0	48	0	0	0	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	102	102	102	102		102	102	102
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	16	70	51	51		26	26	26
g / C, Green / Cycle	0.15	0.68	0.50	0.50		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.19	0.21	0.43		0.20	0.20	0.22
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1652	1530
c, Capacity [veh/h]	451	3352	3282	768		417	426	394
d1, Uniform Delay [s]	42.03	6.35	16.04	22.16		35.11	35.44	36.17
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.82	0.05	0.08	2.79		2.94	3.38	5.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.28	0.42	0.85		0.76	0.79	0.86
d, Delay for Lane Group [s/veh]	45.85	6.40	16.12	24.95		38.05	38.82	41.60
Lane Group LOS	D	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.73	2.41	4.87	13.45		7.56	8.12	8.47
50th-Percentile Queue Length [ft/ln]	118.28	60.21	121.82	336.21		189.05	202.94	211.81
95th-Percentile Queue Length [veh/ln]	8.30	4.34	8.49	19.46		12.07	12.79	13.25
95th-Percentile Queue Length [ft/ln]	207.46	108.38	212.32	486.57		301.79	319.76	331.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.85	6.40	0.00	0.00	16.12	24.95	0.00	0.00	0.00	38.36	38.82	40.89
Movement LOS	D	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	17.48			18.98			0.00			39.51		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	23.23											
Intersection LOS	C											
Intersection V/C	0.822											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.785

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	717	394	489	1031	0	358	3	445	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	18	0	62	0	0	0	4	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	727	412	489	1093	0	358	3	449	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	213	121	143	320	0	105	1	132	0	0	0
Total Analysis Volume [veh/h]	0	852	483	573	1281	0	420	4	526	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	41	0	26	67	0	0	28	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	72	72	72	72	72	72	72	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	27	27	17	47	19	19	19	
g / C, Green / Cycle	0.38	0.38	0.24	0.65	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.32	0.19	0.37	0.19	0.20	0.21	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1593	1530	
c, Capacity [veh/h]	1289	575	701	2243	424	417	401	
d1, Uniform Delay [s]	18.64	20.47	25.98	6.85	24.17	24.56	24.79	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.59	3.38	2.41	0.23	2.35	3.07	3.74	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

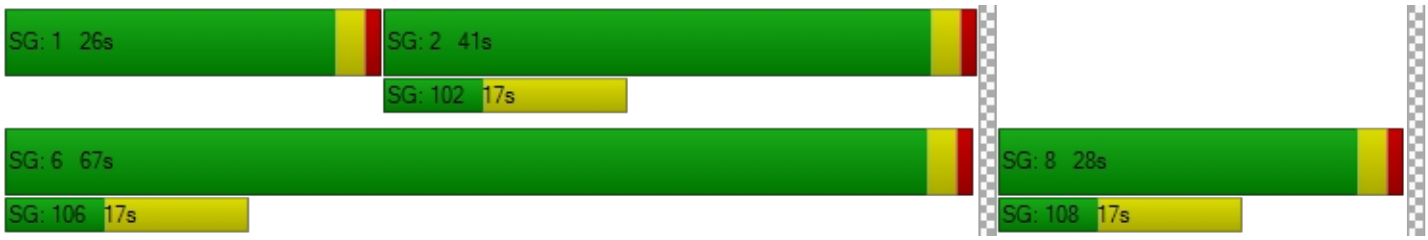
X, volume / capacity	0.66	0.84	0.82	0.57	0.72	0.77	0.80	
d, Delay for Lane Group [s/veh]	19.23	23.85	28.40	7.09	26.52	27.63	28.53	
Lane Group LOS	B	C	C	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.53	7.29	4.62	4.17	4.76	5.14	5.23	
50th-Percentile Queue Length [ft/ln]	138.24	182.33	115.52	104.32	118.92	128.52	130.66	
95th-Percentile Queue Length [veh/ln]	9.39	11.72	8.15	7.51	8.33	8.86	8.98	
95th-Percentile Queue Length [ft/ln]	234.65	293.06	203.65	187.78	208.33	221.48	224.40	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.23	23.85	28.40	7.09	0.00	26.80	27.63	28.17	0.00	0.00	0.00
Movement LOS		B	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	20.90			13.67			27.57			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	19.19											
Intersection LOS	B											
Intersection V/C	0.785											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.813

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	820	12	35	1185	250	238	17	53	38	17	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	66	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	848	12	35	1251	250	238	17	55	38	17	66
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	247	3	10	364	73	69	5	16	11	5	19
Total Analysis Volume [veh/h]	70	987	14	41	1456	291	277	20	64	44	20	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	47	0	47	84	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	55	55	5	53	53	28	28	28	28	28	28
g / C, Green / Cycle	0.06	0.57	0.57	0.05	0.55	0.55	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.04	0.28	0.28	0.03	0.49	0.51	0.21	0.01	0.04	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1619	1800	1791	1619	1800	1699	1319	1800	1530	1335	1800	1530
c, Capacity [veh/h]	100	1019	1014	78	996	940	384	526	447	396	526	447
d1, Uniform Delay [s]	44.46	12.61	12.61	44.86	18.90	19.67	35.83	24.46	25.25	28.76	24.46	25.47
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.68	0.37	0.37	5.29	2.85	4.32	2.57	0.03	0.15	0.12	0.03	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

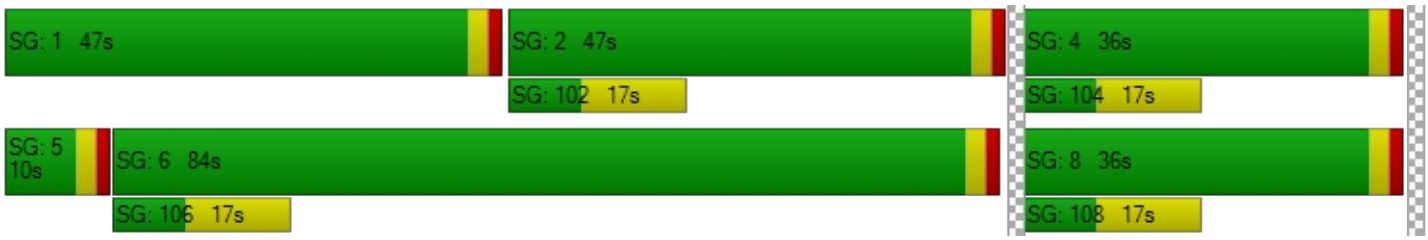
X, volume / capacity	0.70	0.49	0.49	0.52	0.89	0.92	0.72	0.04	0.14	0.11	0.04	0.17
d, Delay for Lane Group [s/veh]	53.14	12.98	12.98	50.15	21.75	23.99	38.40	24.49	25.39	28.88	24.49	25.65
Lane Group LOS	D	B	B	D	C	C	D	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.87	6.19	6.16	1.07	16.49	17.19	6.46	0.33	1.09	0.81	0.33	1.33
50th-Percentile Queue Length [ft/ln]	46.73	154.76	154.02	26.67	412.36	429.75	161.43	8.24	27.31	20.19	8.24	33.16
95th-Percentile Queue Length [veh/ln]	3.36	10.27	10.23	1.92	23.16	23.99	10.62	0.59	1.97	1.45	0.59	2.39
95th-Percentile Queue Length [ft/ln]	84.12	256.77	255.79	48.00	578.88	599.74	265.62	14.83	49.15	36.35	14.83	59.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.14	12.98	12.98	50.15	22.63	23.99	38.40	24.49	25.39	28.88	24.49	25.65
Movement LOS	D	B	B	D	C	C	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	15.60			23.48			35.32			26.50		
Approach LOS	B			C			D			C		
d_I, Intersection Delay [s/veh]	22.37											
Intersection LOS	C											
Intersection V/C	0.813											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	766	10	57	1079	95	108	7	68	20	4	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	68	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	794	10	57	1147	95	108	7	70	20	4	48
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	226	3	16	327	27	31	2	20	6	1	14
Total Analysis Volume [veh/h]	76	904	11	65	1306	108	123	8	80	23	5	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	52	38	0	72	58	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	40	40	40	40	40	40	40	40	40	40	40
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	20	20	4	20	20	7	7	7	7	7
g / C, Green / Cycle	0.10	0.50	0.50	0.09	0.49	0.49	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.25	0.25	0.04	0.40	0.40	0.12	0.05	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1792	1619	1800	1752	1050	1530	1430	1800	1530
c, Capacity [veh/h]	164	909	905	148	891	868	362	274	183	322	274
d1, Uniform Delay [s]	16.97	6.59	6.59	17.22	8.46	8.50	16.60	14.25	20.02	13.54	14.01
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.03	0.43	0.44	2.03	1.72	1.83	0.61	0.59	0.30	0.02	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

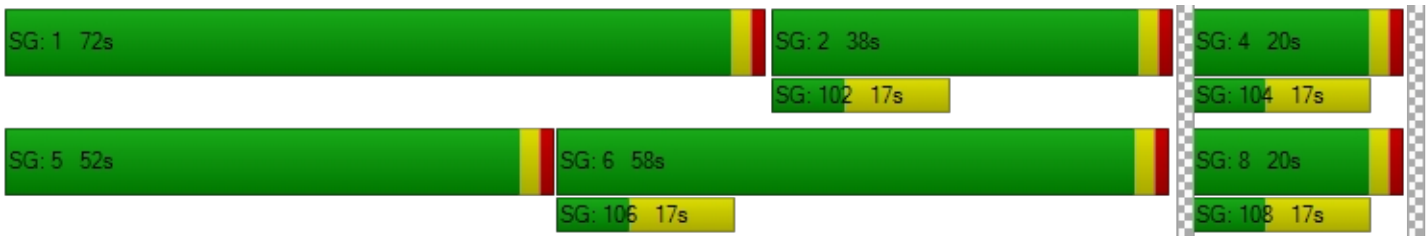
X, volume / capacity	0.46	0.50	0.50	0.44	0.80	0.81	0.36	0.29	0.13	0.02	0.20
d, Delay for Lane Group [s/veh]	19.00	7.02	7.02	19.25	10.19	10.34	17.21	14.84	20.33	13.56	14.37
Lane Group LOS	B	A	A	B	B	B	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.66	1.74	1.73	0.57	3.68	3.65	1.04	0.57	0.21	0.03	0.38
50th-Percentile Queue Length [ft/ln]	16.52	43.40	43.23	14.34	92.09	91.27	25.93	14.26	5.17	0.82	9.56
95th-Percentile Queue Length [veh/ln]	1.19	3.12	3.11	1.03	6.63	6.57	1.87	1.03	0.37	0.06	0.69
95th-Percentile Queue Length [ft/ln]	29.73	78.12	77.81	25.81	165.77	164.28	46.67	25.66	9.31	1.48	17.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.00	7.02	7.02	19.25	10.25	10.34	17.21	17.21	14.84	20.33	13.56	14.37
Movement LOS	B	A	A	B	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	7.94			10.66			16.31			15.97		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.27											
Intersection LOS	B											
Intersection V/C	0.672											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	75	785	1046	60	34	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	70	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	813	1116	60	34	126
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	228	313	17	10	35
Total Analysis Volume [veh/h]	84	913	1254	67	38	142
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	15	105	90	0	25	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	24	17	17	6	6
g / C, Green / Cycle	0.11	0.67	0.48	0.48	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.27	0.37	0.37	0.02	0.09
s, saturation flow rate [veh/h]	1619	3427	1800	1768	1619	1530
c, Capacity [veh/h]	181	2300	858	843	264	249
d1, Uniform Delay [s]	15.05	2.67	7.82	7.91	12.97	13.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	0.11	1.50	1.65	0.25	2.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.40	0.77	0.78	0.14	0.57
d, Delay for Lane Group [s/veh]	16.90	2.78	9.32	9.55	13.22	16.01
Lane Group LOS	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.63	0.29	2.82	2.87	0.23	1.00
50th-Percentile Queue Length [ft/ln]	15.64	7.32	70.51	71.87	5.80	25.04
95th-Percentile Queue Length [veh/ln]	1.13	0.53	5.08	5.17	0.42	1.80
95th-Percentile Queue Length [ft/ln]	28.16	13.18	126.91	129.36	10.44	45.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.90	2.78	9.43	9.55	13.22	16.01
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.97		9.44		15.42	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.68					
Intersection LOS	A					
Intersection V/C	0.622					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	117	584	43	53	849	145	130	147	90	74	238	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	70	28	13	0	0	30	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	584	43	53	849	215	158	160	90	74	268	59
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	170	12	15	247	62	46	46	26	21	78	17
Total Analysis Volume [veh/h]	136	678	50	62	986	250	184	186	105	86	311	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	32	0	17	31	0	26	74	0	26	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	48	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	10	24	24	4	18	18	11	0	0	11	0	0
g / C, Green / Cycle	0.20	0.50	0.50	0.08	0.38	0.38	0.24	0.00	0.00	0.24	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.15	0.20	0.20	0.07	0.29	0.16	0.17	0.10	0.07	0.07	0.17	0.05
s, saturation flow rate [veh/h]	915	1800	1757	915	3427	1530	1085	1800	1530	1217	1800	1530
c, Capacity [veh/h]	296	892	871	190	1299	580	360	0	0	386	0	0
d1, Uniform Delay [s]	19.95	7.71	7.71	23.38	13.04	11.10	18.83	0.00	0.00	16.83	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.31	0.31	0.99	0.94	0.51	1.12	0.00	0.00	0.29	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

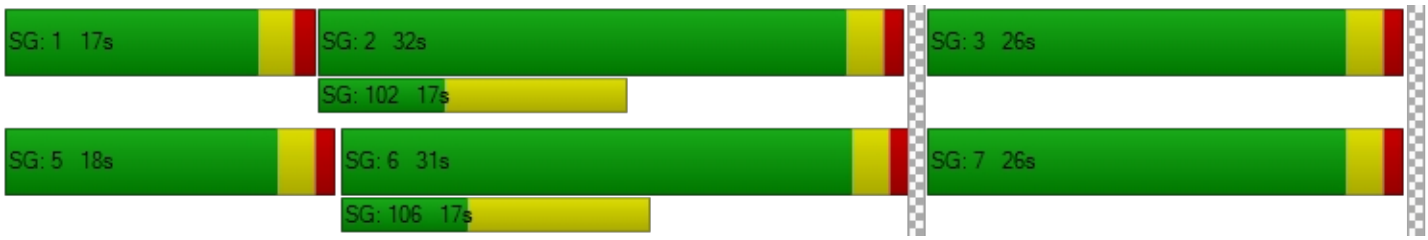
X, volume / capacity	0.46	0.41	0.41	0.33	0.76	0.43	0.51	0.00	0.00	0.22	0.00	0.00
d, Delay for Lane Group [s/veh]	21.06	8.01	8.02	24.37	13.98	11.61	19.95	0.00	0.00	17.12	0.00	0.00
Lane Group LOS	C	A	A	C	B	B	B	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.43	1.87	1.83	0.71	3.95	1.72	1.86	0.00	0.00	0.76	0.00	0.00
50th-Percentile Queue Length [ft/ln]	35.66	46.83	45.77	17.82	98.85	42.90	46.54	0.00	0.00	19.04	0.00	0.00
95th-Percentile Queue Length [veh/ln]	2.57	3.37	3.30	1.28	7.12	3.09	3.35	0.00	0.00	1.37	0.00	0.00
95th-Percentile Queue Length [ft/ln]	64.18	84.29	82.39	32.07	177.93	77.22	83.78	0.00	0.00	34.28	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.06	8.02	8.02	24.37	13.98	11.61	19.95	0.00	0.00	17.12	0.00	0.00
Movement LOS	C	A	A	C	B	B	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	10.07			14.02			7.73			3.16		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	10.33											
Intersection LOS	B											
Intersection V/C	0.726											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.659

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	297	11	48	731	316	152	33	33	3	38	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	17	7	0	6	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	297	11	48	731	333	159	33	39	3	38	31
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	79	3	13	194	88	42	9	10	1	10	8
Total Analysis Volume [veh/h]	71	315	12	51	776	354	169	35	41	3	40	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	23	48	0	62	87	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	16	16	3	15	15	8	8
g / C, Green / Cycle	0.10	0.45	0.45	0.08	0.43	0.43	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.03	0.33	0.33	0.17	0.04
s, saturation flow rate [veh/h]	1619	1800	1777	1619	1800	1612	1421	1712
c, Capacity [veh/h]	163	819	808	128	780	699	475	473
d1, Uniform Delay [s]	15.19	5.87	5.88	15.72	8.61	8.63	13.35	11.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.83	0.12	0.12	1.98	1.58	1.79	0.87	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

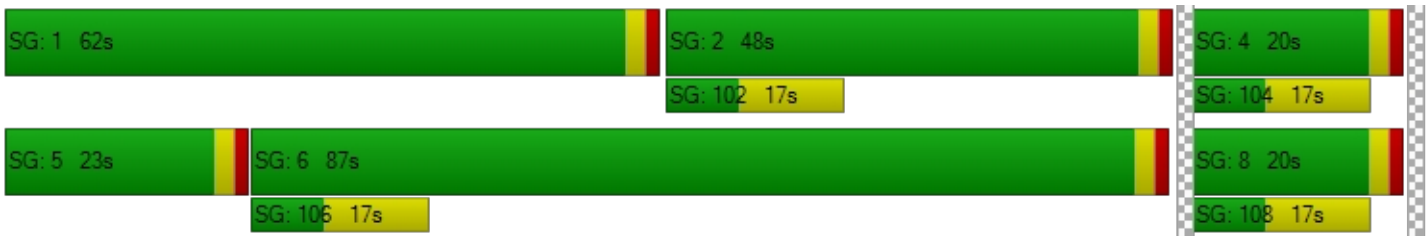
X, volume / capacity	0.44	0.20	0.20	0.40	0.76	0.77	0.52	0.16
d, Delay for Lane Group [s/veh]	17.02	5.99	6.00	17.70	10.19	10.42	14.22	11.74
Lane Group LOS	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.53	0.49	0.48	0.40	2.79	2.56	1.57	0.41
50th-Percentile Queue Length [ft/ln]	13.32	12.17	12.09	10.02	69.79	63.94	39.23	10.29
95th-Percentile Queue Length [veh/ln]	0.96	0.88	0.87	0.72	5.02	4.60	2.82	0.74
95th-Percentile Queue Length [ft/ln]	23.97	21.91	21.75	18.04	125.62	115.09	70.61	18.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.02	6.00	6.00	17.70	10.24	10.42	14.22	14.22	14.22	11.74	11.74	11.74
Movement LOS	B	A	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.96			10.62			14.22			11.74		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.57											
Intersection LOS	B											
Intersection V/C	0.659											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Report File: C:\...\PMEP2.pdf

Scenario 4 Existing Plus Project Evening Peak Hour - Alternative 2

10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.967	39.2	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.837	37.1	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.663	18.0	B
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.668	12.3	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Right	1.521	30.5	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.791	23.4	C
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.088	15.2	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.701	8.1	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	231.7	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.935	54.4	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Left	0.463	179.8	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	73.2	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	3.978	36.5	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.778	28.0	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.571	24.1	C
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.943	41.0	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.699	10.5	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.057	10.2	B
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.070	16.2	C
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.367	8.7	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.015	10.0	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.443	24.5	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.016	10.4	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	1.154	189.9	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.472	23.1	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.244	15.0	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.619	15.3	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.777	3.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	327.381	317.1	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.475	96.8	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.612	22.4	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.830	18.6	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.997	42.5	D
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.658	12.6	B
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.798	21.3	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.776	20.7	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.643	9.4	A
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.592	7.0	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.764	12.3	B
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.808	19.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	39.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.967

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	1396	0	0	1014	625	0	0	0	283	4	527
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	57	23	0	0	9	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	357	1419	0	0	1023	625	0	0	0	283	4	527
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	368	0	0	265	162	0	0	0	73	1	137
Total Analysis Volume [veh/h]	370	1470	0	0	1060	648	0	0	0	293	4	546
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	33	92	0	0	59	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	30	89	56	56		35	35
g / C, Green / Cycle	0.23	0.68	0.43	0.43		0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.23	0.43	0.22	0.42		0.26	0.27
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1654	1530
c, Capacity [veh/h]	375	2346	2109	658		446	412
d1, Uniform Delay [s]	49.98	11.38	27.04	36.76		47.04	47.67
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	18.93	1.28	0.86	31.52		12.93	21.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.99	0.63	0.50	0.98		0.96	1.00
d, Delay for Lane Group [s/veh]	68.91	12.66	27.90	68.29		59.98	68.83
Lane Group LOS	E	B	C	E		E	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	13.93	11.40	8.16	25.69		15.27	15.72
50th-Percentile Queue Length [ft/ln]	348.26	284.89	203.94	642.16		381.75	393.09
95th-Percentile Queue Length [veh/ln]	20.05	16.93	12.84	34.00		21.68	22.26
95th-Percentile Queue Length [ft/ln]	501.28	423.29	321.04	849.96		541.96	556.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.91	12.66	0.00	0.00	27.90	68.29	0.00	0.00	0.00	59.98	59.98	66.75
Movement LOS	E	B			C	E				E	E	E
d_A, Approach Delay [s/veh]	23.97			43.22			0.00			64.32		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	39.20											
Intersection LOS	D											
Intersection V/C	0.967											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.837

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1059	377	390	911	0	664	2	171	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	3	0	9	0	0	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1139	380	390	920	0	664	2	196	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	299	100	102	242	0	174	1	51	0	0	0
Total Analysis Volume [veh/h]	0	1196	399	410	966	0	697	2	206	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	43	81	0	0	49	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	46	46	35	84	40	40	
g / C, Green / Cycle	0.36	0.36	0.27	0.65	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.26	0.25	0.28	0.27	0.28	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1627	
c, Capacity [veh/h]	1748	545	435	2222	495	497	
d1, Uniform Delay [s]	35.64	36.46	46.59	11.21	43.18	43.81	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.20	8.41	10.42	0.62	5.94	8.17	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.73	0.94	0.43	0.89	0.93	
d, Delay for Lane Group [s/veh]	37.84	44.87	57.01	11.83	49.11	51.98	
Lane Group LOS	D	D	E	B	D	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.08	12.26	14.19	6.79	14.36	15.47	
50th-Percentile Queue Length [ft/ln]	277.07	306.38	354.71	169.81	358.88	386.71	
95th-Percentile Queue Length [veh/ln]	16.54	18.00	20.37	11.07	20.57	21.92	
95th-Percentile Queue Length [ft/ln]	413.56	449.92	509.15	276.67	514.22	547.96	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	37.84	44.87	57.01	11.83	0.00	50.15	51.98	51.98	0.00	0.00	0.00
Movement LOS		D	D	E	B		D	D	D			
d_A, Approach Delay [s/veh]	39.60			25.30			50.58			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	37.08											
Intersection LOS	D											
Intersection V/C	0.837											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.663

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	63	885	39	95	728	84	226	361	114	21	116	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	83	0	0	34	0	0	0	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	968	39	95	762	84	226	361	121	21	116	92
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	249	10	24	196	22	58	93	31	5	30	24
Total Analysis Volume [veh/h]	76	995	40	98	783	86	232	371	124	22	119	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	62	0	16	55	0	32	42	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	52	52	52	52	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	18	18	5	19	19	9	14	14	2	7	7
g / C, Green / Cycle	0.09	0.36	0.36	0.10	0.37	0.37	0.18	0.27	0.27	0.04	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.29	0.06	0.25	0.25	0.14	0.11	0.08	0.01	0.06	0.07
s, saturation flow rate [veh/h]	1619	1800	1776	1619	1800	1738	1619	3427	1530	1619	1800	1549
c, Capacity [veh/h]	147	640	631	166	662	639	294	937	418	60	232	200
d1, Uniform Delay [s]	22.52	15.16	15.17	22.24	13.75	13.75	20.30	15.37	14.91	24.39	20.98	21.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.82	2.58	2.61	3.30	1.17	1.21	4.73	0.27	0.39	3.69	1.51	2.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

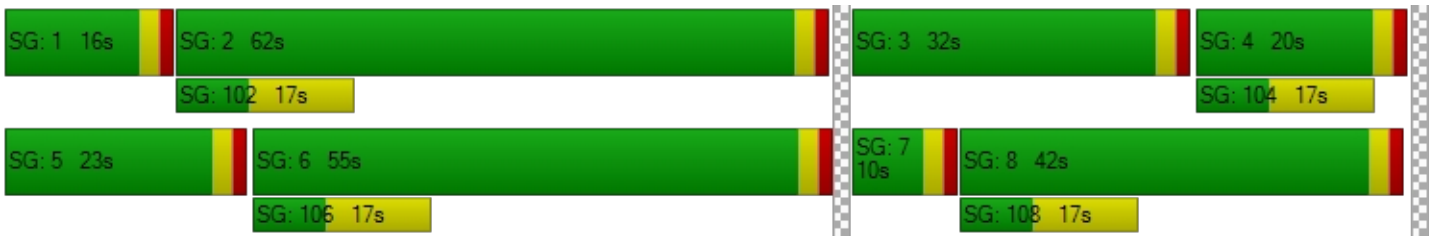
X, volume / capacity	0.52	0.81	0.81	0.59	0.67	0.67	0.79	0.40	0.30	0.37	0.48	0.52
d, Delay for Lane Group [s/veh]	25.35	17.74	17.78	25.54	14.92	14.96	25.03	15.64	15.30	28.08	22.49	23.17
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.93	5.14	5.08	1.20	3.85	3.73	2.79	1.61	1.07	0.31	1.23	1.18
50th-Percentile Queue Length [ft/ln]	23.19	128.48	126.95	29.92	96.34	93.22	69.83	40.21	26.65	7.65	30.81	29.56
95th-Percentile Queue Length [veh/ln]	1.67	8.86	8.77	2.15	6.94	6.71	5.03	2.90	1.92	0.55	2.22	2.13
95th-Percentile Queue Length [ft/ln]	41.74	221.42	219.34	53.86	173.41	167.79	125.70	72.38	47.97	13.77	55.46	53.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.35	17.76	17.78	25.54	14.94	14.96	25.03	15.64	15.30	28.08	22.54	23.17
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	18.28			16.01			18.58			23.31		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.02											
Intersection LOS	B											
Intersection V/C	0.663											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	97	875	55	58	708	52	61	146	102	35	101	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	94	1	0	41	0	0	0	12	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	969	56	58	749	52	61	146	114	36	101	33
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	262	15	16	203	14	17	40	31	10	27	9
Total Analysis Volume [veh/h]	131	1050	61	63	811	56	66	158	124	39	109	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	21	80	0	12	71	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	15	15	3	13	13	10	10
g / C, Green / Cycle	0.14	0.41	0.41	0.09	0.36	0.36	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.31	0.31	0.04	0.24	0.24	0.21	0.12
s, saturation flow rate [veh/h]	1619	1800	1765	1619	1800	1759	1655	1570
c, Capacity [veh/h]	227	730	716	147	642	628	550	530
d1, Uniform Delay [s]	15.11	9.63	9.64	16.15	10.28	10.28	12.80	11.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.32	1.73	1.77	1.96	1.29	1.32	1.21	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.77	0.77	0.43	0.68	0.68	0.63	0.35
d, Delay for Lane Group [s/veh]	17.43	11.36	11.41	18.11	11.57	11.60	14.01	11.78
Lane Group LOS	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.01	3.03	2.99	0.51	2.44	2.39	2.27	1.04
50th-Percentile Queue Length [ft/ln]	25.20	75.74	74.65	12.75	60.88	59.64	56.65	25.97
95th-Percentile Queue Length [veh/ln]	1.81	5.45	5.37	0.92	4.38	4.29	4.08	1.87
95th-Percentile Queue Length [ft/ln]	45.36	136.33	134.37	22.95	109.59	107.35	101.97	46.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.43	11.38	11.41	18.11	11.58	11.60	14.01	14.01	14.01	11.78	11.78	11.78
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.02			12.02			14.01			11.78		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.26											
Intersection LOS	B											
Intersection V/C	0.668											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.521

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	933	64	109	745	40	56	185	48	67	61	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	119	1	0	54	0	0	0	8	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	69	1052	65	109	799	40	56	185	56	68	61	51
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	269	17	28	204	10	14	47	14	17	16	13
Total Analysis Volume [veh/h]	71	1077	67	112	818	41	57	189	57	70	62	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	23	0	10	23	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	21	21	6	22	22	24	24	24	24
g / C, Green / Cycle	0.08	0.35	0.35	0.10	0.37	0.37	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.32	0.07	0.24	0.24	0.51	0.04	0.98	0.03
s, saturation flow rate [veh/h]	1619	1800	1763	1619	1800	1770	478	1530	135	1530
c, Capacity [veh/h]	134	631	618	162	663	651	265	611	145	611
d1, Uniform Delay [s]	26.48	18.68	18.69	26.17	15.82	15.82	15.16	11.26	20.79	11.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.23	20.11	20.58	5.18	4.97	5.05	13.50	0.07	18.22	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.91	0.92	0.69	0.65	0.65	0.93	0.09	0.91	0.09
d, Delay for Lane Group [s/veh]	29.71	38.79	39.26	31.35	20.79	20.87	28.66	11.33	39.00	11.28
Lane Group LOS	C	D	D	C	C	C	C	B	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.04	10.29	10.17	1.69	5.28	5.21	3.03	0.43	2.56	0.39
50th-Percentile Queue Length [ft/ln]	26.10	257.13	254.18	42.37	132.02	130.18	75.63	10.83	63.96	9.85
95th-Percentile Queue Length [veh/ln]	1.88	15.54	15.40	3.05	9.05	8.95	5.45	0.78	4.61	0.71
95th-Percentile Queue Length [ft/ln]	46.98	388.62	384.92	76.26	226.24	223.75	136.13	19.50	115.13	17.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.71	39.01	39.26	31.35	20.83	20.87	28.66	28.66	11.33	39.00	39.00	11.28
Movement LOS	C	D	D	C	C	C	C	C	B	D	D	B
d_A, Approach Delay [s/veh]	38.48			22.04			25.40			31.17		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	30.52											
Intersection LOS	C											
Intersection V/C	1.521											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.791

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1142	77	308	947	15	19	8	19	62	14	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	86	4	44	27	0	0	0	0	2	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	1228	81	352	974	15	19	8	19	64	14	209
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	317	21	91	252	4	5	2	5	17	4	54
Total Analysis Volume [veh/h]	13	1270	84	364	1007	16	20	8	20	66	14	216
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	50	50	22	71	71	15	15	15
g / C, Green / Cycle	0.02	0.50	0.50	0.22	0.71	0.71	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.36	0.36	0.20	0.27	0.27	0.05	0.07	0.13
s, saturation flow rate [veh/h]	1810	1900	1859	1810	1900	1890	995	1169	1615
c, Capacity [veh/h]	40	953	932	407	1339	1332	204	245	248
d1, Uniform Delay [s]	48.24	19.42	19.46	37.63	5.98	5.98	37.07	38.81	41.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.67	4.61	4.77	6.98	0.83	0.84	0.59	0.77	9.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

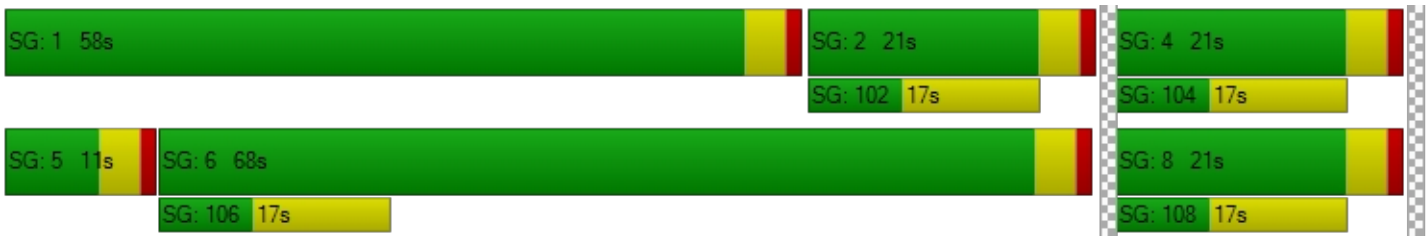
X, volume / capacity	0.33	0.72	0.72	0.89	0.38	0.38	0.24	0.33	0.87
d, Delay for Lane Group [s/veh]	52.91	24.03	24.23	44.61	6.81	6.82	37.66	39.57	50.64
Lane Group LOS	D	C	C	D	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.37	12.90	12.72	9.30	4.03	4.02	1.05	1.85	5.79
50th-Percentile Queue Length [ft/ln]	9.25	322.50	318.11	232.39	100.80	100.42	26.31	46.16	144.64
95th-Percentile Queue Length [veh/ln]	0.67	18.79	18.57	14.30	7.26	7.23	1.89	3.32	9.73
95th-Percentile Queue Length [ft/ln]	16.65	469.75	464.37	357.39	181.43	180.76	47.37	83.08	243.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.91	24.12	24.23	44.61	6.81	6.82	37.66	37.66	37.66	39.57	39.57	50.64
Movement LOS	D	C	C	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	24.40			16.73			37.66			47.65		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	23.39											
Intersection LOS	C											
Intersection V/C	0.791											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.088

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	63	26	0	29	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1294	26	0	1057	0	28
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	341	8	0	278	0	8
Total Analysis Volume [veh/h]	1362	31	0	1113	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.09
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.16
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	7.15
d_A, Approach Delay [s/veh]	0.00		0.00		15.16	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	96	27	2	210	60
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1260	96	27	1030	210	60
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	332	25	7	271	55	16
Total Analysis Volume [veh/h]	1326	101	28	1084	221	63
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	65	0	11	76	24	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	2	27	7	7
g / C, Green / Cycle	0.50	0.50	0.05	0.64	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.37	0.06	0.02	0.30	0.12	0.04
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1807	807	85	2314	313	280
d1, Uniform Delay [s]	8.46	5.72	19.74	3.96	16.66	15.22
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.07	2.25	0.15	2.90	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.13	0.33	0.47	0.70	0.23
d, Delay for Lane Group [s/veh]	9.05	5.79	21.99	4.11	19.56	15.62
Lane Group LOS	A	A	C	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.34	0.34	0.29	1.12	1.99	0.49
50th-Percentile Queue Length [ft/ln]	83.58	8.61	7.31	28.04	49.87	12.13
95th-Percentile Queue Length [veh/ln]	6.02	0.62	0.53	2.02	3.59	0.87
95th-Percentile Queue Length [ft/ln]	150.44	15.50	13.15	50.47	89.77	21.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.05	5.79	21.99	4.11	19.56	15.62
Movement LOS	A	A	C	A	B	B
d_A, Approach Delay [s/veh]	8.82		4.56		18.68	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	8.14					
Intersection LOS	A					
Intersection V/C	0.701					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	231.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	123	0	0	212	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1324	0	0	1241	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	337	0	0	316	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1348	0	0	1264	15	22	0	35	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.61	0.00	0.08	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	11.77	0.00	0.00	11.96	0.00	0.00	170.69	231.68	79.65	120.83	168.78	15.40
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.00	0.00	3.30	3.30	3.30	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	2.54	0.00	0.00	0.00	0.00	0.00	82.43	82.43	82.43	3.03	3.03	3.03
d_A, Approach Delay [s/veh]	0.16			0.00			114.79			41.76		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	2.56											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	54.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.935

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	5	111	102	0	0	0	0	25	0	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	431	457	569	560	22	29	58	3	312	39	528
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	4	111	118	147	145	6	7	15	1	81	10	0
Total Analysis Volume [veh/h]	16	446	473	588	579	23	30	60	3	323	40	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	36	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	177	177	177	177	177	177	177	177	177	177
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	55	55	60	111	111	8	8	38	38
g / C, Green / Cycle	0.02	0.31	0.31	0.34	0.63	0.63	0.05	0.05	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.29	0.32	0.16	0.01	0.02	0.03	0.20	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	1819	1615
c, Capacity [veh/h]	39	1128	503	614	2278	1017	82	85	388	344
d1, Uniform Delay [s]	85.56	47.87	59.35	57.24	14.46	12.32	82.13	83.56	68.50	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.73	0.23	9.02	9.45	0.06	0.01	2.74	11.86	10.65	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

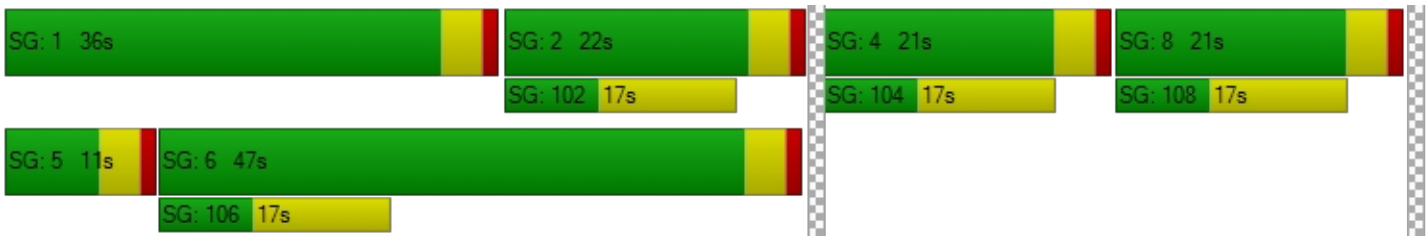
X, volume / capacity	0.41	0.40	0.94	0.96	0.25	0.02	0.37	0.74	0.94	0.00
d, Delay for Lane Group [s/veh]	92.29	48.09	68.37	66.69	14.52	12.33	84.87	95.42	79.15	0.00
Lane Group LOS	F	D	E	E	B	B	F	F	E	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.80	7.90	21.95	27.36	5.30	0.36	1.41	3.15	17.37	0.00
50th-Percentile Queue Length [ft/ln]	20.06	197.57	548.80	684.11	132.42	9.00	35.13	78.74	434.20	0.00
95th-Percentile Queue Length [veh/ln]	1.44	12.51	29.64	35.94	9.07	0.65	2.53	5.67	24.20	0.00
95th-Percentile Queue Length [ft/ln]	36.11	312.83	740.90	898.58	226.78	16.19	63.23	141.73	605.07	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	92.29	48.09	68.37	66.69	14.52	12.33	84.87	95.42	95.42	79.15	79.15	0.00
Movement LOS	F	D	E	E	B	B	F	F	F	E	E	A
d_A, Approach Delay [s/veh]	59.11			40.26			92.02			79.15		
Approach LOS	E			D			F			E		
d_I, Intersection Delay [s/veh]	54.42											
Intersection LOS	D											
Intersection V/C	0.935											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	179.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	867	73	108	692	4	4	15	15	18	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	928	73	108	819	4	4	15	15	18	10	26
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	238	19	28	210	1	1	4	4	5	3	7
Total Analysis Volume [veh/h]	14	954	75	111	842	4	4	15	15	18	10	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.16	0.01	0.00	0.08	0.38	0.03	0.46	0.23	0.05
d_M, Delay for Movement [s/veh]	9.58	0.00	0.00	11.29	0.00	0.00	121.46	139.98	53.78	179.84	170.40	93.98
Movement LOS	A	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.05	0.03	0.00	0.56	0.28	0.00	2.00	2.00	2.00	3.51	3.51	3.51
95th-Percentile Queue Length [ft/ln]	1.34	0.67	0.00	13.98	6.99	0.00	49.97	49.97	49.97	87.69	87.69	87.69
d_A, Approach Delay [s/veh]	0.13			1.31			99.77			135.98		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	5.87											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	73.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	948	25	17	721	2	0	0	9	12	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	1009	25	17	848	2	0	0	9	12	0	14
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	265	7	4	222	1	0	0	2	3	0	4
Total Analysis Volume [veh/h]	4	1059	26	18	890	2	0	0	9	13	0	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.02	0.17	0.00	0.03
d_M, Delay for Movement [s/veh]	9.71	0.00	0.00	10.69	0.00	0.00	47.19	69.04	11.47	59.37	73.20	18.73
Movement LOS	A	A	A	B	A	A	E	F	B	F	F	C
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.08	0.04	0.00	0.05	0.05	0.05	0.73	0.73	0.73
95th-Percentile Queue Length [ft/ln]	0.39	0.20	0.00	2.01	1.01	0.00	1.21	1.21	1.21	18.13	18.13	18.13
d_A, Approach Delay [s/veh]	0.04			0.21			11.47			37.60		
Approach LOS	A			A			B			E		
d_I, Intersection Delay [s/veh]	0.68											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	36.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.978

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	816	42	15	635	15	30	17	20	54	16	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	58	0	0	124	3	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	874	42	15	759	18	33	17	20	54	16	9
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	238	11	4	207	5	9	5	5	15	4	2
Total Analysis Volume [veh/h]	49	952	46	16	827	20	36	19	22	59	17	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	33	0	11	33	0	0	56	0	0	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	39	3	36	36	47	47	47	47
g / C, Green / Cycle	0.05	0.39	0.39	0.03	0.36	0.36	0.47	0.47	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.26	0.01	0.22	0.22	1.28	0.01	3.23	0.01
s, saturation flow rate [veh/h]	1810	1900	1869	1810	1900	1884	43	1615	24	1615
c, Capacity [veh/h]	94	737	725	45	686	680	80	754	75	754
d1, Uniform Delay [s]	46.18	25.47	25.47	47.94	26.30	26.30	33.17	14.41	43.22	14.30
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	5.07	5.15	4.58	4.18	4.21	39.29	0.02	107.91	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

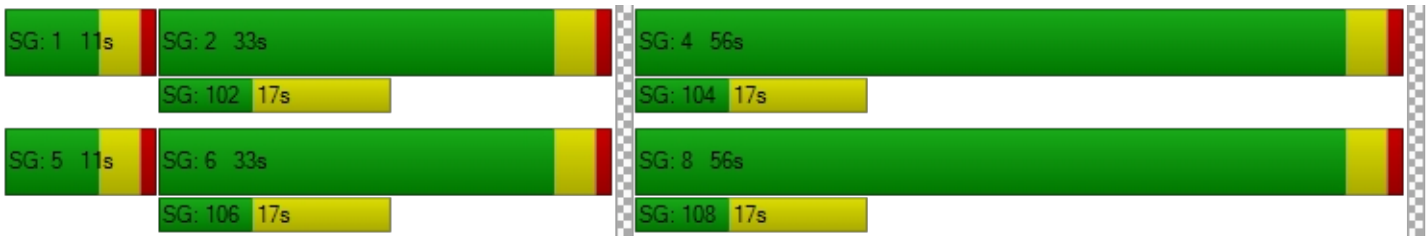
X, volume / capacity	0.52	0.68	0.68	0.35	0.62	0.62	0.69	0.03	1.01	0.01
d, Delay for Lane Group [s/veh]	50.57	30.54	30.62	52.52	30.48	30.51	72.46	14.42	151.13	14.31
Lane Group LOS	D	C	C	D	C	C	E	B	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.30	10.71	10.56	0.45	8.95	8.89	2.24	0.27	4.11	0.12
50th-Percentile Queue Length [ft/ln]	32.39	267.83	263.95	11.21	223.85	222.19	55.97	6.72	102.80	3.03
95th-Percentile Queue Length [veh/ln]	2.33	16.08	15.89	0.81	13.86	13.78	4.03	0.48	7.40	0.22
95th-Percentile Queue Length [ft/ln]	58.31	402.03	397.18	20.18	346.53	344.41	100.74	12.09	185.04	5.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.57	30.58	30.62	52.52	30.49	30.51	72.46	72.46	14.42	151.13	151.13	14.31
Movement LOS	D	C	C	D	C	C	E	E	B	F	F	B
d_A, Approach Delay [s/veh]	31.51			30.90			55.88			135.22		
Approach LOS	C			C			E			F		
d_I, Intersection Delay [s/veh]	36.47											
Intersection LOS	D											
Intersection V/C	3.978											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	28.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	868	0	0	806	25	29	0	134	456	96	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	0	124	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	922	0	0	930	25	29	0	134	456	96	57
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	245	0	0	248	7	8	0	36	121	26	15
Total Analysis Volume [veh/h]	71	982	0	0	990	27	31	0	143	486	102	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	0	25	0	21	0	0	0	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	97	97	97	97	97	97	97	97
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	41	41	41	41	11	11	34	34
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.11	0.11	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.13	0.27	0.27	0.27	0.02	0.09	0.32	0.04
s, saturation flow rate [veh/h]	563	3618	1900	1882	1810	1615	1825	1615
c, Capacity [veh/h]	175	1507	792	784	201	179	638	564
d1, Uniform Delay [s]	37.53	22.81	22.69	22.77	39.26	42.34	30.50	21.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.50	0.48	0.88	0.91	0.35	7.86	6.16	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

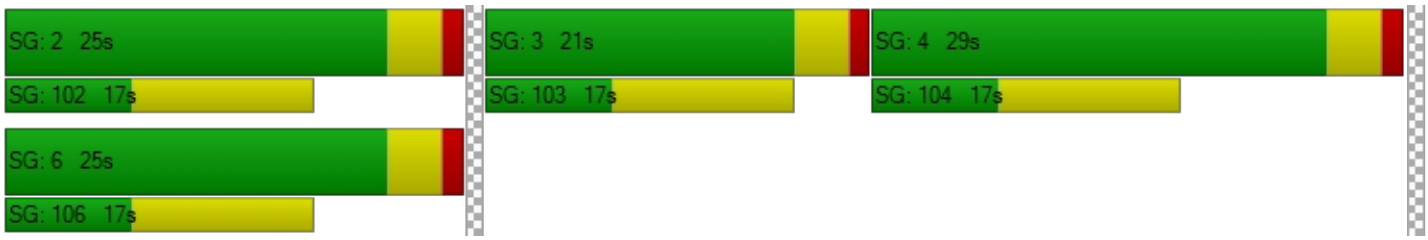
X, volume / capacity	0.40	0.65	0.64	0.65	0.15	0.80	0.92	0.11
d, Delay for Lane Group [s/veh]	39.03	23.29	23.56	23.67	39.61	50.20	36.65	21.56
Lane Group LOS	D	C	C	C	D	D	D	C
Critical Lane Group	No	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.64	8.80	9.16	9.19	0.69	3.72	13.87	0.95
50th-Percentile Queue Length [ft/ln]	41.07	220.04	228.93	229.83	17.20	92.88	346.83	23.68
95th-Percentile Queue Length [veh/ln]	2.96	13.67	14.12	14.17	1.24	6.69	19.98	1.70
95th-Percentile Queue Length [ft/ln]	73.92	341.68	353.00	354.14	30.95	167.18	499.54	42.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.03	23.29	0.00	0.00	23.62	23.67	39.61	0.00	50.20	36.65	36.65	21.56
Movement LOS	D	C			C	C	D		D	D	D	C
d_A, Approach Delay [s/veh]	24.35			23.62			48.31			35.23		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.98											
Intersection LOS	C											
Intersection V/C	0.778											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	24.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	971	916	446	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	32	92	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1025	948	538	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	271	251	142	0	0
Total Analysis Volume [veh/h]	243	1084	1002	569	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.57	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	24.15	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	A	A	A		
95th-Percentile Queue Length [veh/ln]	3.47	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	86.74	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	4.42		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.02					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	41.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.943

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	593	292	83	826	0	608	35	374	13	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	5	27	0	41	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	606	292	88	853	0	649	35	374	13	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	161	78	23	227	0	173	9	100	3	0	1
Total Analysis Volume [veh/h]	0	645	311	94	908	0	691	37	398	14	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	22	0	11	33	0	0	21	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	6	29	31	31	2	2
g / C, Green / Cycle	0.26	0.26	0.08	0.39	0.42	0.42	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.25	0.28	0.05	0.25	0.40	0.25	0.01	0.00
s, saturation flow rate [veh/h]	1900	1704	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	491	440	145	1417	760	677	53	47
d1, Uniform Delay [s]	27.57	27.82	33.47	18.52	21.15	16.81	35.62	35.43
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.71	68.07	4.77	2.23	8.16	0.82	2.61	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

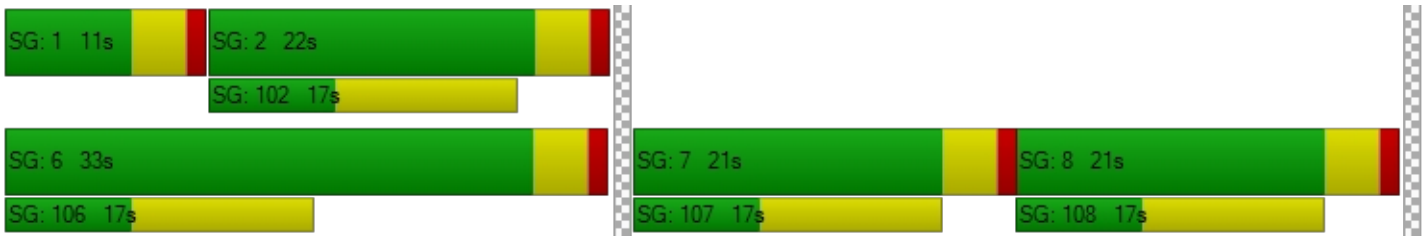
X, volume / capacity	0.97	1.09	0.65	0.64	0.96	0.59	0.26	0.08
d, Delay for Lane Group [s/veh]	62.28	95.89	38.24	20.75	29.31	17.62	38.23	36.19
Lane Group LOS	E	F	D	C	C	B	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.77	15.79	1.81	6.38	12.92	5.02	0.28	0.08
50th-Percentile Queue Length [ft/ln]	319.13	394.67	45.17	159.46	323.10	125.47	7.08	1.99
95th-Percentile Queue Length [veh/ln]	18.62	23.38	3.25	10.52	18.82	8.69	0.51	0.14
95th-Percentile Queue Length [ft/ln]	465.62	584.52	81.30	263.01	470.49	217.32	12.74	3.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	70.98	95.89	38.24	20.75	0.00	29.31	29.31	17.62	38.23	0.00	36.19
Movement LOS		E	F	D	C		C	C	B	D		D
d_A, Approach Delay [s/veh]	79.08			22.39			25.18			37.78		
Approach LOS	E			C			C			D		
d_I, Intersection Delay [s/veh]	40.97											
Intersection LOS	D											
Intersection V/C	0.943											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	560	61	174	924	153	102	55	12	12	34	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	27	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	573	61	174	951	153	102	55	12	12	34	70
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	150	16	46	249	40	27	14	3	3	9	18
Total Analysis Volume [veh/h]	32	599	64	182	995	160	107	58	13	13	36	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	10	6	14	14	7	7	7
g / C, Green / Cycle	0.05	0.28	0.28	0.17	0.40	0.40	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.04	0.10	0.28	0.10	0.16	0.03	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1114	1830	1615
c, Capacity [veh/h]	101	1030	460	310	1449	647	382	484	309
d1, Uniform Delay [s]	15.46	10.44	9.07	13.00	8.44	6.79	13.86	11.43	11.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	0.52	0.14	1.76	0.59	0.20	0.88	0.09	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

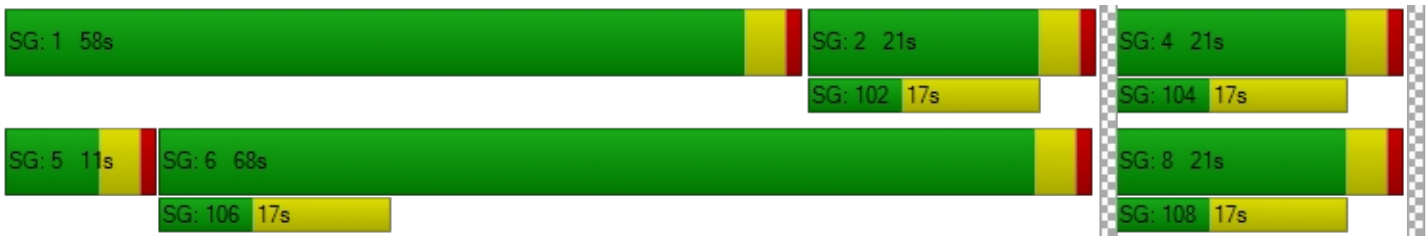
X, volume / capacity	0.32	0.58	0.14	0.59	0.69	0.25	0.47	0.10	0.24
d, Delay for Lane Group [s/veh]	17.25	10.96	9.21	14.76	9.02	6.99	14.75	11.52	12.05
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.25	1.47	0.28	1.15	2.04	0.53	1.15	0.25	0.40
50th-Percentile Queue Length [ft/ln]	6.17	36.75	6.91	28.85	50.90	13.30	28.68	6.26	9.88
95th-Percentile Queue Length [veh/ln]	0.44	2.65	0.50	2.08	3.66	0.96	2.07	0.45	0.71
95th-Percentile Queue Length [ft/ln]	11.11	66.16	12.44	51.93	91.62	23.93	51.63	11.26	17.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.25	10.96	9.21	14.76	9.02	6.99	14.75	14.75	14.75	11.52	11.52	12.05
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.09			9.56			14.75			11.84		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.53											
Intersection LOS	B											
Intersection V/C	0.699											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	28	20	16	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	40	512	20	16	332
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	11	135	5	4	87
Total Analysis Volume [veh/h]	0	42	539	21	17	349
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	10.20	0.00	0.00	8.59	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.18	0.00	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.54	0.00	0.00	1.27	0.00
d_A, Approach Delay [s/veh]	10.20		0.00		0.40	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.59					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.070

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	27	59	9	8	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	27	543	9	8	325
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	143	2	2	86
Total Analysis Volume [veh/h]	24	28	572	9	8	342
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.04	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	16.25	10.23	0.00	0.00	8.62	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.12	0.00	0.00	0.02	0.00
95th-Percentile Queue Length [ft/ln]	5.59	3.04	0.00	0.00	0.60	0.00
d_A, Approach Delay [s/veh]	13.01		0.00		0.20	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.367

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	0	65	104	380	0	0	211	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	6	53	0	3	5	7	67	12	23	26	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	6	53	31	3	70	111	447	12	23	237	62
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	14	8	1	19	29	119	3	6	63	16
Total Analysis Volume [veh/h]	28	6	56	33	3	74	118	475	13	26	252	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	53	63	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	26	26	26	26	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	4	9	9	1	6	6
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.16	0.35	0.35	0.05	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.02	0.05	0.07	0.13	0.01	0.01	0.09	0.09
s, saturation flow rate [veh/h]	1343	1639	1362	1624	1810	3618	1615	1810	1900	1768
c, Capacity [veh/h]	326	248	339	246	285	1265	565	88	457	426
d1, Uniform Delay [s]	12.49	9.97	12.30	10.07	10.11	6.48	5.67	12.23	8.39	8.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.52	0.12	0.72	0.96	0.18	0.02	1.86	0.47	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

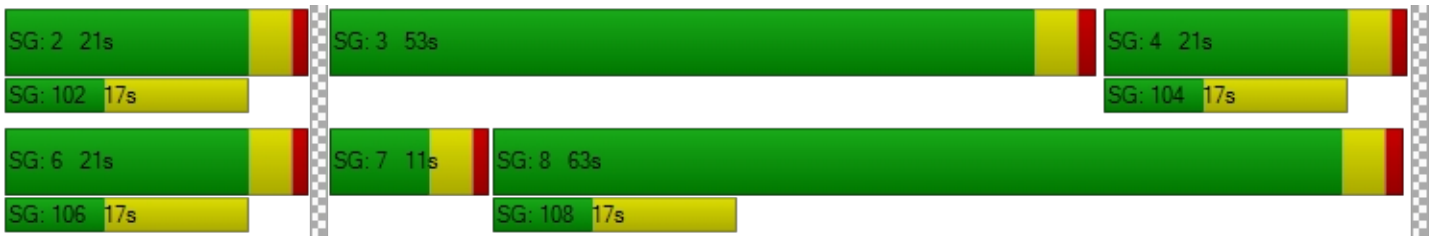
X, volume / capacity	0.09	0.25	0.10	0.31	0.41	0.38	0.02	0.30	0.36	0.37
d, Delay for Lane Group [s/veh]	12.60	10.49	12.42	10.79	11.07	6.66	5.69	14.09	8.86	8.94
Lane Group LOS	B	B	B	B	B	A	A	B	A	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.13	0.25	0.15	0.32	0.50	0.55	0.03	0.15	0.54	0.52
50th-Percentile Queue Length [ft/ln]	3.24	6.33	3.77	8.04	12.38	13.79	0.69	3.85	13.46	13.06
95th-Percentile Queue Length [veh/ln]	0.23	0.46	0.27	0.58	0.89	0.99	0.05	0.28	0.97	0.94
95th-Percentile Queue Length [ft/ln]	5.83	11.39	6.78	14.47	22.28	24.82	1.23	6.93	24.23	23.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.60	10.49	10.49	12.42	10.79	10.79	11.07	6.66	5.69	14.09	8.89	8.94
Movement LOS	B	B	B	B	B	B	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	11.15			11.28			7.50			9.29		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.68											
Intersection LOS	A											
Intersection V/C	0.367											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	411	0	0	271
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	118	2	2	51
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	529	2	2	322
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	139	1	1	85
Total Analysis Volume [veh/h]	0	11	557	2	2	339
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.04	0.00	0.00	8.53	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.16	0.00	0.00	0.15	0.00
d_A, Approach Delay [s/veh]	10.04		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	24.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.443

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	1	1	3	4	5	7	314	89	0	160	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	0	2	0	0	0	0	59	69	2	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	1	3	3	4	5	7	373	158	2	185	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	0	1	1	1	1	2	103	44	1	51	3
Total Analysis Volume [veh/h]	146	1	3	3	4	6	8	413	175	2	205	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.44	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	24.51	24.06	19.86	16.03	16.90	9.56	7.66	0.00	0.00	8.62	0.00	0.00
Movement LOS	C	C	C	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.24	2.24	2.24	0.09	0.09	0.09	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	56.08	56.08	56.08	2.25	2.25	2.25	0.39	0.39	0.39	0.15	0.15	0.15
d_A, Approach Delay [s/veh]	24.41			13.31			0.10			0.08		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.00											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	107	93	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	19	67	4	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	126	160	4	10	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	33	42	1	3	13
Total Analysis Volume [veh/h]	6	133	168	4	11	52
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	0.00	10.37	9.34
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.05	0.19
95th-Percentile Queue Length [ft/ln]	0.32	0.00	0.00	0.00	1.23	4.69
d_A, Approach Delay [s/veh]	0.33		0.00		9.52	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	189.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.154

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	824	408	78	89	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	26	27	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	890	434	105	150	30
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	229	112	27	39	0
Total Analysis Volume [veh/h]	36	915	446	108	154	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	1.15	0.00
d_M, Delay for Movement [s/veh]	8.63	0.00	0.00	0.00	189.87	11.26
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	8.99	0.00
95th-Percentile Queue Length [ft/ln]	2.72	0.00	0.00	0.00	224.75	0.00
d_A, Approach Delay [s/veh]	0.33		0.00		189.87	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	17.81					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	723	21	44	359	60	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	0	0	26	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	789	21	44	385	60	167
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	206	5	11	101	16	44
Total Analysis Volume [veh/h]	824	22	46	402	63	175
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.00	0.15	0.47
d_M, Delay for Movement [s/veh]	0.00	0.00	9.78	0.00	15.33	23.11
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.18	0.00	0.54	2.44
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.57	0.00	13.41	61.01
d_A, Approach Delay [s/veh]	0.00		1.00		21.05	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.56					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.244

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	496	389	23	39	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	11	6	20	55	62
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	507	395	43	94	141
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	156	122	13	29	44
Total Analysis Volume [veh/h]	104	626	488	53	116	174
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.00	0.24	0.23
d_M, Delay for Movement [s/veh]	8.85	0.00	0.00	0.00	14.98	11.11
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.33	0.00	0.00	0.00	0.95	0.88
95th-Percentile Queue Length [ft/ln]	8.33	0.00	0.00	0.00	23.66	21.91
d_A, Approach Delay [s/veh]	1.26		0.00		12.66	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.94					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.619

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	348	160	75	390	9	9	6	17	80	5	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	5	0	0	62	6	11	0	30	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	353	160	75	452	15	20	6	47	80	5	224
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	110	50	23	141	5	6	2	15	25	2	70
Total Analysis Volume [veh/h]	40	440	200	94	564	19	25	7	59	100	6	279
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	15	37	0	11	36	0	16	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	8	8	5	10	10	2	6	6	5	9	9
g / C, Green / Cycle	0.06	0.20	0.20	0.12	0.26	0.26	0.04	0.15	0.15	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.12	0.05	0.16	0.01	0.01	0.00	0.04	0.06	0.00	0.17
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	116	741	331	210	929	415	79	284	242	217	430	366
d1, Uniform Delay [s]	17.51	14.07	14.11	16.12	12.80	10.93	18.14	14.19	14.67	16.03	11.74	14.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.74	0.76	1.78	1.49	0.65	0.05	2.28	0.03	0.52	1.51	0.01	3.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.59	0.60	0.45	0.61	0.05	0.32	0.02	0.24	0.46	0.01	0.76
d, Delay for Lane Group [s/veh]	19.25	14.84	15.89	17.61	13.45	10.98	20.42	14.23	15.19	17.54	11.75	17.47
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.35	1.51	1.47	0.75	1.81	0.10	0.24	0.05	0.42	0.79	0.03	2.19
50th-Percentile Queue Length [ft/ln]	8.81	37.78	36.72	18.73	45.17	2.61	5.98	1.18	10.55	19.85	0.86	54.76
95th-Percentile Queue Length [veh/ln]	0.63	2.72	2.64	1.35	3.25	0.19	0.43	0.08	0.76	1.43	0.06	3.94
95th-Percentile Queue Length [ft/ln]	15.86	68.00	66.10	33.72	81.31	4.70	10.76	2.12	18.99	35.72	1.56	98.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.25	14.84	15.89	17.61	13.45	10.98	20.42	14.23	15.19	17.54	11.75	17.47
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.40			13.95			16.56			17.40		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.35											
Intersection LOS	B											
Intersection V/C	0.619											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	580	70	94	371	56	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	92	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	605	70	94	463	56	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	163	19	25	125	15	9
Total Analysis Volume [veh/h]	653	76	102	500	60	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	58	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.39	0.39	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.18	0.05	0.13	0.26	0.07	0.02
s, saturation flow rate [veh/h]	3618	1615	792	1900	912	1615
c, Capacity [veh/h]	1407	628	408	0	461	256
d1, Uniform Delay [s]	4.02	3.46	8.83	0.00	8.37	6.41
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.09	1.47	0.00	0.13	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.12	0.25	0.00	0.13	0.15
d, Delay for Lane Group [s/veh]	4.26	3.55	10.30	0.00	8.50	6.68
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.02	0.40	0.00	0.13	0.07
50th-Percentile Queue Length [ft/ln]	2.14	0.57	10.00	0.00	3.18	1.68
95th-Percentile Queue Length [veh/ln]	0.15	0.04	0.72	0.00	0.23	0.12
95th-Percentile Queue Length [ft/ln]	3.85	1.02	18.00	0.00	5.72	3.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.26	3.55	10.30	0.00	8.50	6.68
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.19		1.75		7.79	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.41					
Intersection LOS	A					
Intersection V/C	0.777					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	317.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	327.381

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	67	0	25	5	111	0	0	67	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	212	1	337	498	552	4	1	518	181
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	57	0	90	133	147	1	0	138	48
Total Analysis Volume [veh/h]	3	1	1	226	1	360	531	589	4	1	553	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	65	0	0	65	0	14	24	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	61	61	61	61	10	27	27	0	17	17
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.10	0.27	0.27	0.00	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.19	0.00	287.65	0.22	0.29	0.16	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	21	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	76	985	72	985	184	970	433	3	609	272
d1, Uniform Delay [s]	25.82	7.62	49.86	9.80	44.91	31.98	26.84	49.84	40.83	39.28
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.00	997.66	0.23	849.48	2.82	0.04	40.19	19.78	14.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.00	3.14	0.37	2.88	0.61	0.01	0.29	0.91	0.71
d, Delay for Lane Group [s/veh]	26.10	7.62	1047.52	10.02	894.39	34.80	26.88	90.03	60.60	53.86
Lane Group LOS	C	A	F	B	F	C	C	F	E	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.01	21.84	3.75	48.03	6.52	0.07	0.06	8.26	5.53
50th-Percentile Queue Length [ft/ln]	1.83	0.20	546.07	93.65	1200.77	162.91	1.87	1.59	206.62	138.21
95th-Percentile Queue Length [veh/ln]	0.13	0.01	39.32	6.74	74.27	10.70	0.13	0.11	12.98	9.38
95th-Percentile Queue Length [ft/ln]	3.29	0.36	982.93	168.57	1856.82	267.57	3.36	2.86	324.49	234.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.10	26.10	7.62	1047.52	1047.52	10.02	894.39	34.80	26.88	90.03	60.60	53.86
Movement LOS	C	C	A	F	F	B	F	C	C	F	E	D
d_A, Approach Delay [s/veh]	22.41			411.24			440.86			58.90		
Approach LOS	C			F			F			E		
d_I, Intersection Delay [s/veh]	317.11											
Intersection LOS	F											
Intersection V/C	327.381											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	96.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	658	840	54	30	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	176	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	745	1016	56	31	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	198	271	15	8	2
Total Analysis Volume [veh/h]	21	793	1082	60	33	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.47	0.04
d_M, Delay for Movement [s/veh]	11.02	0.00	0.00	0.00	96.82	19.61
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	1.91	0.12
95th-Percentile Queue Length [ft/ln]	2.63	0.00	0.00	0.00	47.78	3.03
d_A, Approach Delay [s/veh]	0.28		0.00		78.87	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	1.81					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	637	283	81	857	0	3	20	138	322	5	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	0	3	173	0	0	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	722	283	84	1030	0	3	20	138	322	5	56
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	196	77	23	280	0	1	5	38	88	1	15
Total Analysis Volume [veh/h]	51	786	308	91	1121	0	3	22	150	350	5	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	11	21	0	0	47	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	54	70	6	55	55	11	11	13	13	13
g / C, Green / Cycle	0.05	0.54	0.70	0.06	0.55	0.55	0.11	0.11	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.19	0.05	0.30	0.30	0.01	0.09	0.10	0.10	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1889	1615	1810	1812	1615
c, Capacity [veh/h]	96	1935	1132	117	1038	1038	216	185	228	229	204
d1, Uniform Delay [s]	46.14	13.83	5.52	46.09	14.61	14.61	39.75	43.24	42.33	42.33	39.68
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.47	0.64	0.59	10.62	0.44	0.44	0.24	8.25	5.60	5.59	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

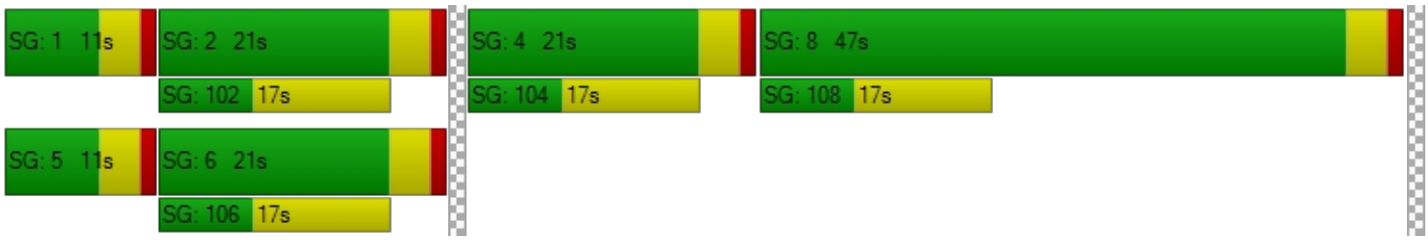
X, volume / capacity	0.53	0.41	0.27	0.78	0.54	0.54	0.12	0.81	0.78	0.78	0.30
d, Delay for Lane Group [s/veh]	50.61	14.46	6.12	56.71	15.05	15.05	39.98	51.49	47.94	47.93	40.50
Lane Group LOS	D	B	A	E	B	B	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.35	5.21	2.25	2.56	7.85	7.85	0.56	4.02	4.56	4.57	1.40
50th-Percentile Queue Length [ft/ln]	33.71	130.21	56.21	63.96	196.31	196.31	14.11	100.39	114.07	114.20	35.06
95th-Percentile Queue Length [veh/ln]	2.43	8.95	4.05	4.61	12.45	12.45	1.02	7.23	8.07	8.07	2.52
95th-Percentile Queue Length [ft/ln]	60.69	223.78	101.17	115.13	311.19	311.19	25.40	180.70	201.64	201.83	63.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.61	14.46	6.12	56.71	15.05	15.05	39.98	39.98	51.49	47.93	47.93	40.50
Movement LOS	D	B	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.83			18.18			49.85			46.84		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.41											
Intersection LOS	C											
Intersection V/C	0.612											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.830

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	476	360	0	0	1107	185	0	0	0	88	0	586
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	0	0	173	0	0	0	0	0	0	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	476	378	0	0	1280	185	0	0	0	88	0	653
Peak Hour Factor	0.9550	0.9550	0.8760	0.8760	0.9550	0.9550	0.8760	0.8760	0.8760	0.9550	0.8760	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	125	99	0	0	335	48	0	0	0	23	0	0
Total Analysis Volume [veh/h]	498	396	0	0	1340	194	0	0	0	92	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	38	79	0	0	41	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	75	75	75	75		75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	23	61	34	34		6	6
g / C, Green / Cycle	0.31	0.81	0.45	0.45		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.28	0.11	0.37	0.12		0.05	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	557	2941	1634	729		145	129
d1, Uniform Delay [s]	24.69	1.47	17.85	12.78		33.33	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	5.28	0.02	1.07	0.19		4.57	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

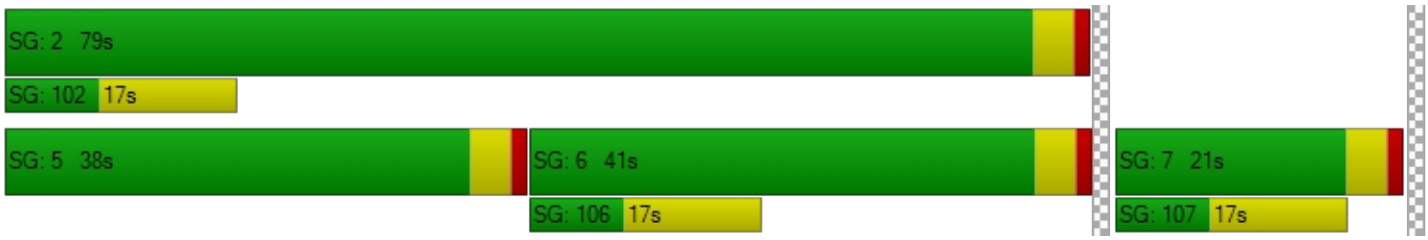
X, volume / capacity	0.89	0.13	0.82	0.27		0.64	0.00
d, Delay for Lane Group [s/veh]	29.97	1.49	18.93	12.97		37.90	0.00
Lane Group LOS	C	A	B	B		D	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	8.70	0.23	9.28	1.91		1.75	0.00
50th-Percentile Queue Length [ft/ln]	217.41	5.75	231.94	47.77		43.83	0.00
95th-Percentile Queue Length [veh/ln]	13.53	0.41	14.27	3.44		3.16	0.00
95th-Percentile Queue Length [ft/ln]	338.32	10.34	356.82	85.99		78.89	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.97	1.49	0.00	0.00	18.93	12.97	0.00	0.00	0.00	37.90	0.00	0.00
Movement LOS	C	A			B	B				D		A
d_A, Approach Delay [s/veh]	17.36			18.17			0.00			37.90		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	18.60											
Intersection LOS	B											
Intersection V/C	0.830											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	42.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.997

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	696	89	495	709	0	146	0	800	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	144	29	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	713	89	639	738	0	146	0	800	0	0	1
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	188	24	169	195	0	39	0	211	0	0	0
Total Analysis Volume [veh/h]	0	754	94	675	780	0	154	0	846	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	25	0	41	66	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	21	21	37	62	30	30	
g / C, Green / Cycle	0.21	0.21	0.37	0.62	0.30	0.30	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.37	0.22	0.09	0.30	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	763	340	669	2244	543	858	
d1, Uniform Delay [s]	39.55	33.24	31.68	9.24	26.91	34.97	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	29.96	2.00	18.43	0.09	0.28	11.37	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

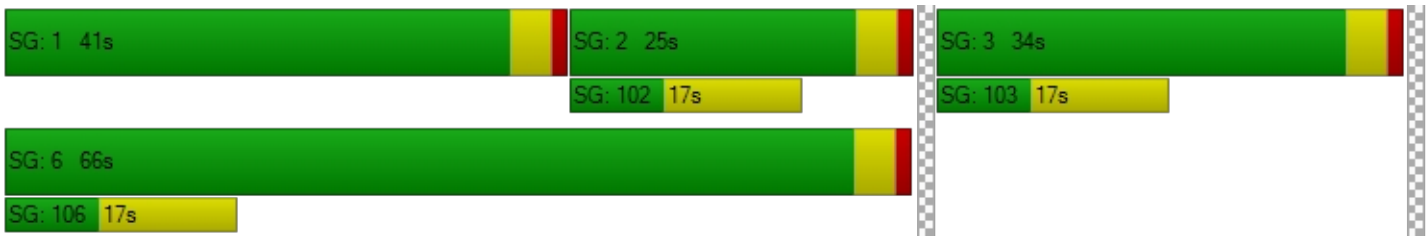
X, volume / capacity	0.99	0.28	1.01	0.35	0.28	0.99	
d, Delay for Lane Group [s/veh]	69.51	35.25	50.11	9.33	27.19	46.34	
Lane Group LOS	E	D	F	A	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	12.27	2.10	18.99	3.86	2.84	11.33	
50th-Percentile Queue Length [ft/ln]	306.83	52.42	474.71	96.38	70.96	283.36	
95th-Percentile Queue Length [veh/ln]	18.02	3.77	26.30	6.94	5.11	16.86	
95th-Percentile Queue Length [ft/ln]	450.46	94.35	657.54	173.48	127.73	421.40	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	69.51	35.25	50.11	9.33	0.00	27.19	0.00	46.34	0.00	0.00	0.00
Movement LOS		E	D	F	A		C		D			
d_A, Approach Delay [s/veh]	65.71			28.25			43.39			0.00		
Approach LOS	E			C			D			A		
d_I, Intersection Delay [s/veh]	42.45											
Intersection LOS	D											
Intersection V/C	0.997											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	328	1373	0	0	1013	367	0	0	0	356	8	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	21	0	0	9	0	0	0	0	25	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	334	1394	0	0	1022	367	0	0	0	381	8	566
Peak Hour Factor	0.9740	0.9740	0.8170	0.8170	0.9740	0.9740	0.8170	0.8170	0.8170	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	358	0	0	262	94	0	0	0	98	2	145
Total Analysis Volume [veh/h]	343	1431	0	0	1049	377	0	0	0	391	8	581
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	27	79	0	0	52	0	0	0	0	0	51	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	50	50	50	50		50	50	50
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	8	30	18	18		15	15	15
g / C, Green / Cycle	0.17	0.59	0.36	0.36		0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.29	0.16	0.25		0.19	0.21	0.22
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1575	1530
c, Capacity [veh/h]	500	2879	2346	549		476	463	450
d1, Uniform Delay [s]	19.71	6.07	12.35	13.76		15.61	15.95	16.08
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	0.13	0.13	1.54		1.57	2.12	2.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

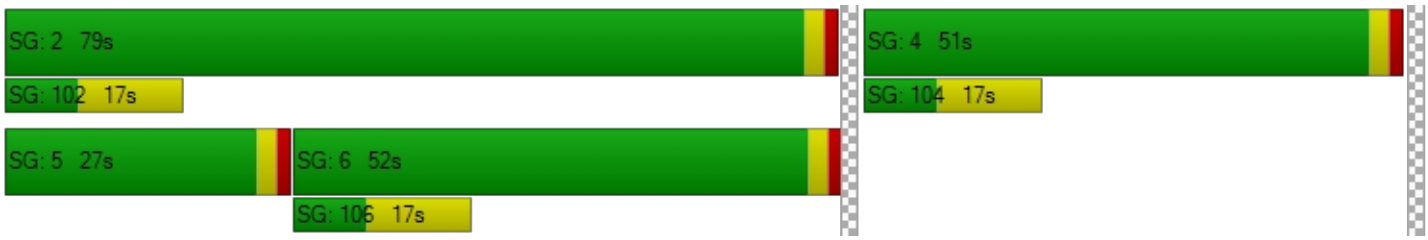
X, volume / capacity	0.69	0.50	0.45	0.69		0.66	0.72	0.74
d, Delay for Lane Group [s/veh]	21.40	6.21	12.49	15.30		17.18	18.07	18.49
Lane Group LOS	C	A	B	B		B	B	B
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.81	1.98	1.92	3.27		2.93	3.22	3.27
50th-Percentile Queue Length [ft/ln]	45.27	49.49	48.00	81.85		73.32	80.50	81.81
95th-Percentile Queue Length [veh/ln]	3.26	3.56	3.46	5.89		5.28	5.80	5.89
95th-Percentile Queue Length [ft/ln]	81.48	89.08	86.40	147.33		131.97	144.90	147.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.40	6.21	0.00	0.00	12.49	15.30	0.00	0.00	0.00	17.34	18.07	18.30
Movement LOS	C	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	9.14			13.23			0.00			17.93		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	12.60											
Intersection LOS	B											
Intersection V/C	0.658											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1129	498	412	951	0	627	2	319	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	54	0	34	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1156	552	412	985	0	627	2	321	0	0	0
Peak Hour Factor	0.8530	0.9720	0.9720	0.9720	0.9720	0.8530	0.9720	0.9720	0.9720	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	297	142	106	253	0	161	1	83	0	0	0
Total Analysis Volume [veh/h]	0	1189	568	424	1013	0	645	2	330	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	65	0	27	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	83	83	83	83	83	83	83	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	37	37	15	55	22	22	22	
g / C, Green / Cycle	0.45	0.45	0.18	0.67	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.34	0.38	0.14	0.30	0.19	0.19	0.22	
s, saturation flow rate [veh/h]	3427	1537	2959	3427	1619	1715	1530	
c, Capacity [veh/h]	1553	696	526	2286	422	447	399	
d1, Uniform Delay [s]	18.83	20.02	32.69	6.52	28.09	28.12	28.88	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.76	2.84	2.97	0.14	2.60	2.51	4.43	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.84	0.81	0.44	0.74	0.75	0.83	
d, Delay for Lane Group [s/veh]	19.59	22.86	35.66	6.66	30.69	30.63	33.31	
Lane Group LOS	B	C	D	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.78	9.71	4.18	3.47	5.79	6.16	6.43	
50th-Percentile Queue Length [ft/ln]	219.57	242.87	104.49	86.80	144.70	153.89	160.69	
95th-Percentile Queue Length [veh/ln]	13.64	14.83	7.52	6.25	9.73	10.22	10.59	
95th-Percentile Queue Length [ft/ln]	341.07	370.66	188.08	156.24	243.33	255.62	264.63	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.64	22.86	35.66	6.66	0.00	30.66	30.63	33.28	0.00	0.00	0.00
Movement LOS		B	C	D	A		C	C	C			
d_A, Approach Delay [s/veh]	20.68			15.22			31.56			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	21.35											
Intersection LOS	C											
Intersection V/C	0.798											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	46	1199	23	32	1001	224	377	72	146	40	17	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	81	0	0	36	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	1280	23	32	1037	224	377	72	146	40	17	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	340	6	9	276	60	100	19	39	11	5	8
Total Analysis Volume [veh/h]	52	1360	24	34	1102	238	401	77	155	43	18	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	53	0	42	82	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	32	32	3	31	31	26	26	26	26	26	26
g / C, Green / Cycle	0.06	0.45	0.45	0.05	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.39	0.39	0.02	0.38	0.39	0.29	0.04	0.10	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1789	1619	1800	1691	1376	1800	1530	1167	1800	1530
c, Capacity [veh/h]	104	820	815	79	792	745	551	661	562	414	661	562
d1, Uniform Delay [s]	31.78	16.94	16.96	32.45	17.80	17.92	22.50	14.68	15.64	19.60	14.19	14.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.69	2.52	2.55	3.64	3.06	3.49	1.85	0.08	0.26	0.11	0.02	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.85	0.85	0.43	0.87	0.88	0.73	0.12	0.28	0.10	0.03	0.06
d, Delay for Lane Group [s/veh]	35.47	19.46	19.51	36.09	20.86	21.40	24.36	14.76	15.90	19.70	14.21	14.39
Lane Group LOS	D	B	B	D	C	C	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.93	9.33	9.30	0.62	9.63	9.28	6.07	0.77	1.67	0.52	0.17	0.31
50th-Percentile Queue Length [ft/ln]	23.31	233.21	232.49	15.61	240.80	232.03	151.83	19.31	41.67	13.02	4.36	7.86
95th-Percentile Queue Length [veh/ln]	1.68	14.34	14.30	1.12	14.72	14.28	10.11	1.39	3.00	0.94	0.31	0.57
95th-Percentile Queue Length [ft/ln]	41.96	358.44	357.51	28.09	368.04	356.93	252.87	34.76	75.00	23.44	7.85	14.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.47	19.48	19.51	36.09	21.06	21.40	24.36	14.76	15.90	19.70	14.21	14.39
Movement LOS	D	B	B	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.06			21.49			21.12			16.81		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.72											
Intersection LOS	C											
Intersection V/C	0.776											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.643

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	1166	28	25	1083	90	98	2	64	33	10	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	84	0	0	36	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1250	28	25	1119	90	98	2	64	33	10	57
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	334	7	7	299	24	26	1	17	9	3	15
Total Analysis Volume [veh/h]	93	1334	30	27	1194	96	105	2	68	35	11	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	59	53	0	57	51	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	19	19	2	17	17	6	6	6	6	6
g / C, Green / Cycle	0.12	0.54	0.54	0.05	0.46	0.46	0.17	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.38	0.02	0.36	0.36	0.12	0.04	0.02	0.01	0.04
s, saturation flow rate [veh/h]	1619	1800	1786	1619	1800	1753	930	1530	1437	1800	1530
c, Capacity [veh/h]	192	968	960	76	838	817	352	256	200	301	256
d1, Uniform Delay [s]	14.93	6.25	6.25	16.75	8.12	8.13	15.53	13.16	18.13	12.65	13.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.87	0.96	0.97	2.81	1.60	1.67	0.48	0.55	0.41	0.05	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

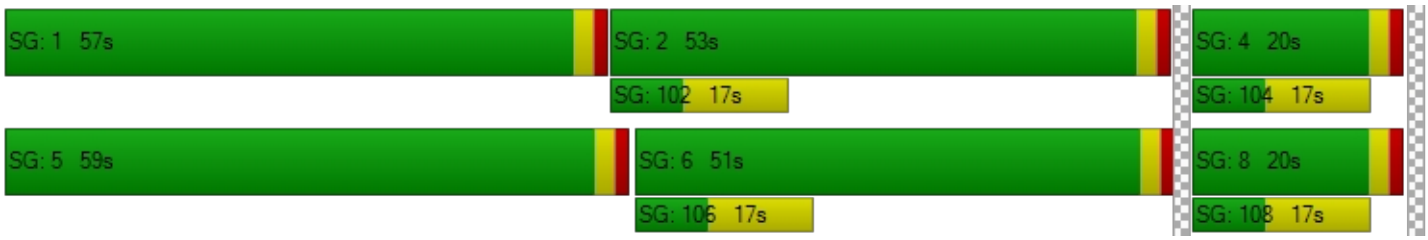
X, volume / capacity	0.48	0.71	0.71	0.36	0.78	0.78	0.30	0.27	0.17	0.04	0.24
d, Delay for Lane Group [s/veh]	16.81	7.21	7.23	19.55	9.72	9.80	16.01	13.71	18.54	12.70	13.57
Lane Group LOS	B	A	A	B	A	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.69	2.22	2.21	0.24	2.93	2.88	0.75	0.43	0.28	0.06	0.38
50th-Percentile Queue Length [ft/ln]	17.26	55.48	55.30	6.08	73.28	72.07	18.72	10.72	6.98	1.62	9.55
95th-Percentile Queue Length [veh/ln]	1.24	3.99	3.98	0.44	5.28	5.19	1.35	0.77	0.50	0.12	0.69
95th-Percentile Queue Length [ft/ln]	31.07	99.87	99.53	10.94	131.91	129.73	33.69	19.30	12.57	2.91	17.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.81	7.22	7.23	19.55	9.75	9.80	16.01	16.01	13.71	18.54	12.70	13.57
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.83			9.96			15.12			15.11		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.42											
Intersection LOS	A											
Intersection V/C	0.643											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	87	1166	1062	85	37	124
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	36	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1253	1098	85	37	124
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	324	284	22	10	32
Total Analysis Volume [veh/h]	90	1296	1135	88	38	128
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	17	106	89	0	24	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	22	15	15	6	6
g / C, Green / Cycle	0.12	0.66	0.45	0.45	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.34	0.35	0.02	0.08
s, saturation flow rate [veh/h]	1619	3427	1800	1755	1619	1530
c, Capacity [veh/h]	193	2264	817	797	265	250
d1, Uniform Delay [s]	14.04	3.16	7.71	7.82	12.23	13.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	0.23	1.40	1.59	0.25	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.57	0.75	0.77	0.14	0.51
d, Delay for Lane Group [s/veh]	15.79	3.39	9.11	9.40	12.48	14.65
Lane Group LOS	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	0.42	2.43	2.50	0.21	0.81
50th-Percentile Queue Length [ft/ln]	15.34	10.40	60.86	62.41	5.34	20.36
95th-Percentile Queue Length [veh/ln]	1.10	0.75	4.38	4.49	0.38	1.47
95th-Percentile Queue Length [ft/ln]	27.61	18.71	109.55	112.33	9.62	36.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.79	3.39	9.25	9.40	12.48	14.65
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	4.20		9.26		14.15	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.02					
Intersection LOS	A					
Intersection V/C	0.592					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	122	800	94	67	878	140	172	454	135	32	197	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	36	87	39	0	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	800	94	67	878	176	259	493	135	32	214	72
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	205	24	17	225	45	66	127	35	8	55	18
Total Analysis Volume [veh/h]	125	821	97	69	901	181	266	506	139	33	220	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	77	0	11	78	0	42	46	0	42	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	58	58	58	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	13	26	26	5	19	19	17	0	0	17	0	0
g / C, Green / Cycle	0.22	0.46	0.46	0.09	0.33	0.33	0.30	0.00	0.00	0.30	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.17	0.26	0.26	0.09	0.26	0.12	0.23	0.28	0.09	0.04	0.12	0.05
s, saturation flow rate [veh/h]	740	1800	1734	740	3427	1530	1179	1800	1530	907	1800	1530
c, Capacity [veh/h]	260	822	792	167	1129	504	432	0	0	362	0	0
d1, Uniform Delay [s]	23.11	11.45	11.45	27.72	17.52	14.64	20.29	0.00	0.00	16.30	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.62	0.65	1.62	1.34	0.43	1.43	0.00	0.00	0.11	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.57	0.57	0.41	0.80	0.36	0.62	0.00	0.00	0.09	0.00	0.00
d, Delay for Lane Group [s/veh]	24.48	12.08	12.10	29.34	18.86	15.08	21.71	0.00	0.00	16.41	0.00	0.00
Lane Group LOS	C	B	B	C	B	B	C	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.63	3.79	3.66	1.00	4.99	1.67	3.24	0.00	0.00	0.32	0.00	0.00
50th-Percentile Queue Length [ft/ln]	40.74	94.82	91.50	25.07	124.77	41.66	80.96	0.00	0.00	7.92	0.00	0.00
95th-Percentile Queue Length [veh/ln]	2.93	6.83	6.59	1.81	8.65	3.00	5.83	0.00	0.00	0.57	0.00	0.00
95th-Percentile Queue Length [ft/ln]	73.33	170.67	164.70	45.13	216.37	74.98	145.73	0.00	0.00	14.25	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.48	12.09	12.10	29.34	18.86	15.08	21.71	0.00	0.00	16.41	0.00	0.00
Movement LOS	C	B	B	C	B	B	C	A	A	B	A	A
d_A, Approach Delay [s/veh]	13.57			18.89			6.34			1.66		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	12.30											
Intersection LOS	B											
Intersection V/C	0.764											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	353	1	2	620	141	441	68	102	1	20	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	0	0	9	24	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	353	1	2	620	150	465	68	117	1	20	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	93	0	1	163	39	122	18	31	0	5	2
Total Analysis Volume [veh/h]	48	372	1	2	653	158	489	72	123	1	21	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	56	0	10	46	0	0	64	0	0	64	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	21	21	0	17	17	30	30
g / C, Green / Cycle	0.06	0.35	0.35	0.00	0.29	0.29	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.00	0.23	0.23	0.46	0.02
s, saturation flow rate [veh/h]	1619	1800	1798	1619	1800	1680	1473	1740
c, Capacity [veh/h]	105	625	625	6	516	482	837	930
d1, Uniform Delay [s]	27.05	14.26	14.26	29.82	19.91	19.92	13.95	7.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.10	0.26	0.26	26.81	3.15	3.40	2.02	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

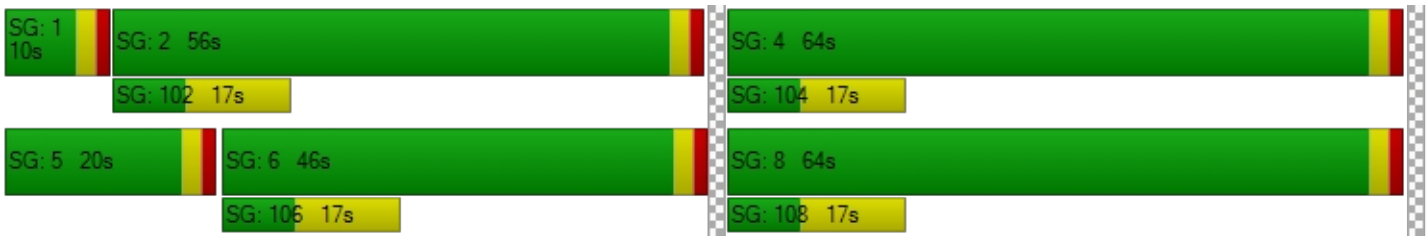
X, volume / capacity	0.46	0.30	0.30	0.32	0.81	0.81	0.82	0.03
d, Delay for Lane Group [s/veh]	30.15	14.52	14.52	56.62	23.06	23.32	15.97	7.68
Lane Group LOS	C	B	B	E	C	C	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.72	1.71	1.71	0.07	5.37	5.05	7.39	0.16
50th-Percentile Queue Length [ft/ln]	17.94	42.71	42.68	1.85	134.16	126.34	184.80	3.96
95th-Percentile Queue Length [veh/ln]	1.29	3.08	3.07	0.13	9.17	8.74	11.85	0.29
95th-Percentile Queue Length [ft/ln]	32.29	76.88	76.83	3.33	229.14	218.51	296.27	7.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.15	14.52	14.52	56.62	23.15	23.32	15.97	15.97	15.97	7.68	7.68	7.68
Movement LOS	C	B	B	E	C	C	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	16.31			23.27			15.97			7.68		
Approach LOS	B			C			B			A		
d_I, Intersection Delay [s/veh]	18.97											
Intersection LOS	B											
Intersection V/C	0.808											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 5 Existing Plus Project Morning Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\AMEP2-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.039	44.6	D
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	EB Right	0.563	3.1	A
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.683	12.5	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	WB Left	0.287	1.6	A
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.828	8.1	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.651	7.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.630	18.1	B
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.028	16.6	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.039

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	306	1234	0	0	1068	751	0	0	0	456	0	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	8	0	0	19	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	321	1242	0	0	1087	751	0	0	0	458	0	522
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	321	0	0	281	194	0	0	0	118	0	135
Total Analysis Volume [veh/h]	332	1284	0	0	1124	777	0	0	0	474	0	540
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	27	89	0	0	62	0	0	0	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	125	125	125	125		125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	24	86	59	59		33	33
g / C, Green / Cycle	0.19	0.69	0.47	0.47		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.21	0.37	0.23	0.51		0.28	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	2708
c, Capacity [veh/h]	312	2358	2312	721		453	715
d1, Uniform Delay [s]	50.58	9.76	22.69	33.10		46.09	42.36
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	43.37	0.91	0.73	56.17		33.16	1.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.07	0.54	0.49	1.08		1.05	0.75
d, Delay for Lane Group [s/veh]	93.95	10.66	23.43	89.27		79.25	44.01
Lane Group LOS	F	B	C	F		F	D
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	13.47	8.47	7.68	32.39		18.14	7.82
50th-Percentile Queue Length [ft/ln]	336.80	211.80	192.01	809.64		453.53	195.44
95th-Percentile Queue Length [veh/ln]	20.14	13.25	12.23	44.16		25.83	12.40
95th-Percentile Queue Length [ft/ln]	503.55	331.14	305.63	1103.88		645.72	310.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	93.95	10.66	0.00	0.00	23.43	89.27	0.00	0.00	0.00	79.25	79.25	44.01
Movement LOS	F	B			C	F				F	E	D
d_A, Approach Delay [s/veh]	27.78			50.34			0.00			60.48		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	44.56											
Intersection LOS	D											
Intersection V/C	1.039											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.563

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	204	1	1	67	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	881	1	1	1077	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	255	0	0	312	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	1020	1	1	1247	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	79	0	0	79	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	13	13	1	1	1	1
g / C, Green / Cycle	0.58	0.58	0.58	0.58	0.58	0.58	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.28	0.00	0.00	0.34	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	453	3618	1615	562	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	462	2110	942	529	2110	942	339	87	337	102
d1, Uniform Delay [s]	5.68	2.66	1.91	4.52	2.92	1.93	10.88	9.98	10.86	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.17	0.00	0.00	0.27	0.01	0.02	1.26	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.48	0.00	0.00	0.59	0.01	0.02	0.22	0.00	0.00
d, Delay for Lane Group [s/veh]	5.72	2.84	1.92	4.52	3.19	1.93	10.90	11.24	10.86	0.00
Lane Group LOS	A	A	A	A	A	A	B	B	B	A
Critical Lane Group	No	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	0.05	0.00	0.00	0.08	0.00	0.02	0.09	0.00	0.00
50th-Percentile Queue Length [ft/ln]	1.09	1.26	0.00	0.04	1.95	0.03	0.52	2.14	0.09	0.00
95th-Percentile Queue Length [veh/ln]	0.08	0.09	0.00	0.00	0.14	0.00	0.04	0.15	0.01	0.00
95th-Percentile Queue Length [ft/ln]	1.96	2.27	0.01	0.07	3.51	0.06	0.94	3.85	0.16	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.72	2.84	1.92	4.52	3.19	1.93	10.90	11.24	11.24	10.86	0.00	0.00
Movement LOS	A	A	A	A	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	2.89			3.18			11.16			10.86		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.14											
Intersection LOS	A											
Intersection V/C	0.563											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	489	25	84	760	1	1	2	16	7	3	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	590	25	84	797	1	1	2	16	7	3	15
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	156	7	22	211	0	0	1	4	2	1	4
Total Analysis Volume [veh/h]	23	626	27	89	845	1	1	2	17	7	3	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	33	0	0	46	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	9	12	12	2	2
g / C, Green / Cycle	0.26	0.26	0.26	0.35	0.35	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.02	0.26	0.26	0.01	0.01
s, saturation flow rate [veh/h]	1894	1729	1615	1883	1728	1900	1899
c, Capacity [veh/h]	501	457	427	664	610	193	215
d1, Uniform Delay [s]	11.73	11.73	9.79	10.06	10.06	16.38	16.43
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	1.77	0.06	1.59	1.74	0.23	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

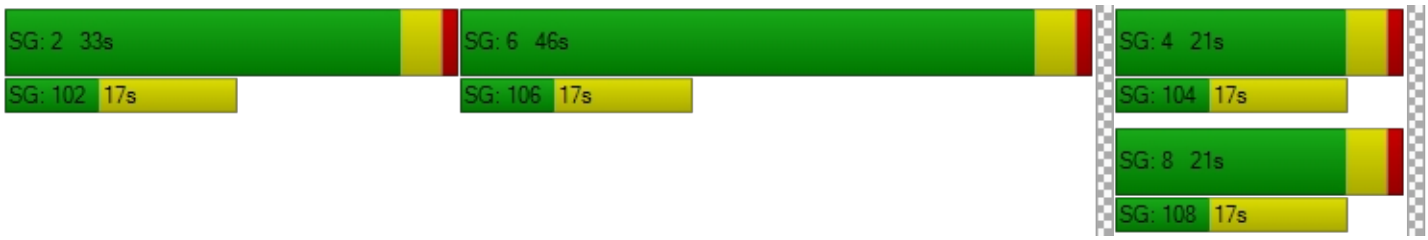
X, volume / capacity	0.68	0.68	0.06	0.73	0.73	0.10	0.12
d, Delay for Lane Group [s/veh]	13.35	13.50	9.85	11.65	11.79	16.61	16.68
Lane Group LOS	B	B	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.03	1.87	0.13	2.59	2.40	0.14	0.19
50th-Percentile Queue Length [ft/ln]	50.65	46.71	3.17	64.75	60.03	3.60	4.66
95th-Percentile Queue Length [veh/ln]	3.65	3.36	0.23	4.66	4.32	0.26	0.34
95th-Percentile Queue Length [ft/ln]	91.18	84.08	5.71	116.55	108.05	6.48	8.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.35	13.42	9.85	11.65	11.73	11.79	16.61	16.61	16.61	16.68	16.68	16.68
Movement LOS	B	B	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.28			11.72			16.61			16.68		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.49											
Intersection LOS	B											
Intersection V/C	0.683											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	1.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.287

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	534	8	6	787	0	0	0	3	11	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	635	8	6	824	0	0	0	3	11	1	3
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	169	2	2	219	0	0	0	1	3	0	1
Total Analysis Volume [veh/h]	9	676	9	6	877	0	0	0	3	12	1	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	79	0	0	79	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	89	89	89	89	89	3	3
g / C, Green / Cycle	0.89	0.89	0.89	0.89	0.89	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.19	0.19	0.01	0.24	0.24	0.01	0.01
s, saturation flow rate [veh/h]	1863	1729	1615	1891	1729	589	1767
c, Capacity [veh/h]	1702	1545	1443	1726	1545	52	110
d1, Uniform Delay [s]	0.70	0.70	0.57	0.75	0.75	47.54	47.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.32	0.01	0.38	0.44	0.47	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.21	0.01	0.27	0.27	0.06	0.15
d, Delay for Lane Group [s/veh]	0.98	1.02	0.58	1.13	1.19	48.01	48.46
Lane Group LOS	A	A	A	A	A	D	D
Critical Lane Group	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.16	0.16	0.00	0.22	0.22	0.08	0.41
50th-Percentile Queue Length [ft/ln]	3.91	3.95	0.09	5.40	5.46	1.98	10.22
95th-Percentile Queue Length [veh/ln]	0.28	0.28	0.01	0.39	0.39	0.14	0.74
95th-Percentile Queue Length [ft/ln]	7.03	7.11	0.16	9.72	9.83	3.57	18.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.98	1.00	0.58	1.13	1.16	1.19	48.01	48.01	48.01	48.46	48.46	48.46
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	0.99			1.16			48.01			48.46		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	1.65											
Intersection LOS	A											
Intersection V/C	0.287											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	337	584	775	536	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	96	9	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	337	680	784	563	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	195	225	161	0	0
Total Analysis Volume [veh/h]	386	779	898	645	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	33	100	67	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	45	45	45	45	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	12	41	25	25	
g / C, Green / Cycle	0.26	0.91	0.56	0.56	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.22	0.41	0.47	
s, saturation flow rate [veh/h]	1810	3618	1900	1656	
c, Capacity [veh/h]	479	3294	1057	921	
d1, Uniform Delay [s]	15.37	0.23	7.41	8.24	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.24	0.04	0.99	2.11	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

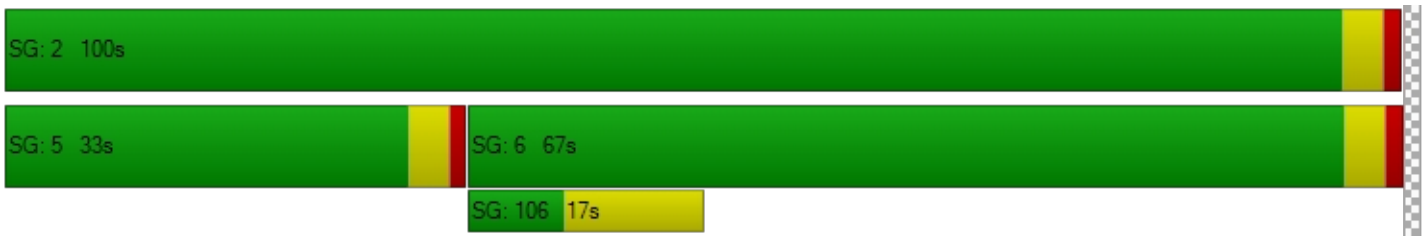
X, volume / capacity	0.81	0.24	0.73	0.84	
d, Delay for Lane Group [s/veh]	18.61	0.26	8.40	10.36	
Lane Group LOS	B	A	A	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.49	0.02	3.69	4.32	
50th-Percentile Queue Length [ft/ln]	87.29	0.42	92.29	108.12	
95th-Percentile Queue Length [veh/ln]	6.28	0.03	6.64	7.74	
95th-Percentile Queue Length [ft/ln]	157.12	0.75	166.12	193.38	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.61	0.26	8.67	10.36	0.00	0.00
Movement LOS	B	A	A	B		
d_A, Approach Delay [s/veh]	6.34		9.38		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.07					
Intersection LOS	A					
Intersection V/C	0.828					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	357	450	71	61	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	55	45	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	380	505	116	80	23
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	121	160	37	25	7
Total Analysis Volume [veh/h]	23	482	641	147	102	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	48	110	62	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	32	32	32	32	32
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	1	21	17	5	5
g / C, Green / Cycle	0.04	0.66	0.53	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.27	0.45	0.06	0.02
s, saturation flow rate [veh/h]	1619	1800	1743	1619	1530
c, Capacity [veh/h]	66	1192	920	245	231
d1, Uniform Delay [s]	15.02	2.51	6.54	12.38	11.82
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.07	0.22	2.42	1.13	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.40	0.86	0.42	0.13
d, Delay for Lane Group [s/veh]	18.09	2.73	8.96	13.51	12.06
Lane Group LOS	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.19	0.16	2.53	0.59	0.15
50th-Percentile Queue Length [ft/ln]	4.72	3.97	63.22	14.67	3.85
95th-Percentile Queue Length [veh/ln]	0.34	0.29	4.55	1.06	0.28
95th-Percentile Queue Length [ft/ln]	8.50	7.14	113.79	26.41	6.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.09	2.73	8.96	8.96	13.51	12.06
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.43		8.96		13.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.39					
Intersection LOS	A					
Intersection V/C	0.651					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	17	0	6	9	37	0	0	113	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	134	4	287	314	557	13	3	437	192
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	35	1	74	81	144	3	1	113	50
Total Analysis Volume [veh/h]	10	3	2	138	4	296	324	575	13	3	451	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	39	0	0	39	0	40	50	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	54	54	54	54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	12	21	21	0	10	10
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.22	0.40	0.40	0.01	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.02	0.00	0.10	0.19	0.18	0.16	0.01	0.00	0.12	0.12
s, saturation flow rate [veh/h]	685	1615	1436	1618	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	376	607	350	608	396	1428	638	10	657	293
d1, Uniform Delay [s]	11.31	10.46	21.45	12.83	19.95	11.69	9.91	26.58	20.54	20.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.00	0.72	0.62	4.20	0.18	0.01	15.05	1.28	2.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.00	0.39	0.49	0.82	0.40	0.02	0.29	0.69	0.68
d, Delay for Lane Group [s/veh]	11.35	10.47	22.18	13.45	24.15	11.87	9.92	41.64	21.82	23.20
Lane Group LOS	B	B	C	B	C	B	A	D	C	C
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.01	1.57	2.48	3.92	2.13	0.08	0.08	2.52	2.32
50th-Percentile Queue Length [ft/ln]	2.20	0.33	39.21	61.92	98.01	53.30	2.06	1.97	62.96	58.10
95th-Percentile Queue Length [veh/ln]	0.16	0.02	2.82	4.46	7.06	3.84	0.15	0.14	4.53	4.18
95th-Percentile Queue Length [ft/ln]	3.97	0.60	70.57	111.45	176.42	95.93	3.72	3.54	113.33	104.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.35	11.35	10.47	22.18	13.45	13.45	24.15	11.87	9.92	41.64	21.82	23.20
Movement LOS	B	B	B	C	B	B	C	B	A	D	C	C
d_A, Approach Delay [s/veh]	11.23			16.20			16.21			22.33		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.15											
Intersection LOS	B											
Intersection V/C	0.630											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	554	638	21	8	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	155	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	709	692	21	8	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	192	187	6	2	4
Total Analysis Volume [veh/h]	22	768	750	23	9	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.03	0.03
d_M, Delay for Movement [s/veh]	9.34	0.00	0.00	0.00	16.59	14.13
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.09	0.11
95th-Percentile Queue Length [ft/ln]	1.99	0.00	0.00	0.00	2.17	2.66
d_A, Approach Delay [s/veh]	0.26		0.00		15.09	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.35					
Intersection LOS	C					

Viridian

Vistro File: C:\...\PME.vistro

Scenario 5 Existing Plus Project Evening Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\PMEP2-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.895	31.6	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	WB Left	0.551	3.6	A
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.751	16.8	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.863	15.7	B
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.782	5.1	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.767	6.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.750	36.1	D
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.134	21.8	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.895

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	1396	0	0	1014	625	0	0	0	283	4	527
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	57	23	0	0	9	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	357	1419	0	0	1023	625	0	0	0	283	4	527
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	368	0	0	265	162	0	0	0	73	1	137
Total Analysis Volume [veh/h]	370	1470	0	0	1060	648	0	0	0	293	4	546
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	77	97	0	0	20	0	0	0	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	32	96	61	61		28	28
g / C, Green / Cycle	0.25	0.74	0.47	0.47		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.23	0.43	0.22	0.42		0.17	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1715	2708
c, Capacity [veh/h]	399	2518	2281	712		376	593
d1, Uniform Delay [s]	47.87	8.01	23.74	32.28		47.99	49.70
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	9.56	1.00	0.68	17.82		3.75	6.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

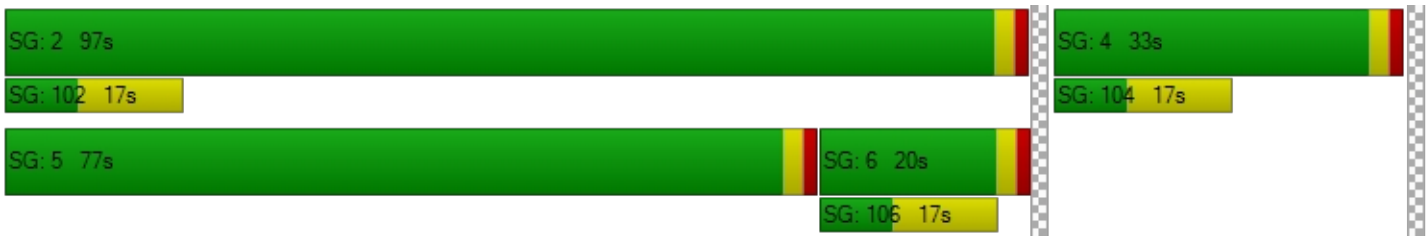
X, volume / capacity	0.93	0.58	0.46	0.91		0.79	0.92
d, Delay for Lane Group [s/veh]	57.43	9.01	24.42	50.10		51.75	56.14
Lane Group LOS	E	A	C	D		D	E
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	12.74	8.95	7.54	21.97		9.49	9.20
50th-Percentile Queue Length [ft/ln]	318.46	223.81	188.58	549.34		237.37	229.89
95th-Percentile Queue Length [veh/ln]	18.59	13.86	12.05	29.66		14.55	14.17
95th-Percentile Queue Length [ft/ln]	464.79	346.48	301.19	741.53		363.70	354.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.43	9.01	0.00	0.00	24.42	50.10	0.00	0.00	0.00	51.75	51.75	56.14
Movement LOS	E	A			C	D				D	D	E
d_A, Approach Delay [s/veh]	18.74			34.16			0.00			54.59		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	31.62											
Intersection LOS	C											
Intersection V/C	0.895											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.551

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	123	0	0	212	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1324	0	0	1241	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	337	0	0	316	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1348	0	0	1264	15	22	0	35	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	73	0	0	73	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	3	3	3	3
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.09	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.04	0.37	0.00	0.00	0.35	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	446	3618	1615	411	3618	1615	1436	1615	1395	1615
c, Capacity [veh/h]	412	2263	1010	391	2263	1010	284	145	259	145
d1, Uniform Delay [s]	6.21	3.14	0.00	0.00	3.03	1.99	13.72	11.89	14.00	11.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.25	0.00	0.00	0.22	0.01	0.12	0.86	0.01	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.60	0.00	0.00	0.56	0.01	0.08	0.24	0.00	0.02
d, Delay for Lane Group [s/veh]	6.26	3.39	0.00	0.00	3.24	1.99	13.84	12.75	14.01	11.71
Lane Group LOS	A	A	A	A	A	A	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	0.12	0.00	0.00	0.10	0.00	0.12	0.19	0.01	0.02
50th-Percentile Queue Length [ft/ln]	1.15	2.96	0.00	0.00	2.59	0.05	2.90	4.64	0.13	0.38
95th-Percentile Queue Length [veh/ln]	0.08	0.21	0.00	0.00	0.19	0.00	0.21	0.33	0.01	0.03
95th-Percentile Queue Length [ft/ln]	2.08	5.33	0.00	0.00	4.66	0.10	5.22	8.36	0.24	0.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.26	3.39	0.00	0.00	3.24	1.99	13.84	12.75	12.75	14.01	11.71	11.71
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	3.43			3.23			13.17			12.29		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.55											
Intersection LOS	A											
Intersection V/C	0.551											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	867	73	108	692	4	4	15	15	18	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	928	73	108	819	4	4	15	15	18	10	26
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	238	19	28	210	1	1	4	4	5	3	7
Total Analysis Volume [veh/h]	14	954	75	111	842	4	4	15	15	18	10	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	31	0	0	48	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	16	16	16	16	4	4
g / C, Green / Cycle	0.34	0.34	0.34	0.33	0.33	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.05	0.27	0.27	0.02	0.03
s, saturation flow rate [veh/h]	1897	1729	1615	1879	1726	1829	1760
c, Capacity [veh/h]	646	588	550	630	579	223	233
d1, Uniform Delay [s]	14.37	14.37	11.04	14.56	14.56	21.04	21.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	2.35	0.11	2.29	2.49	0.31	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

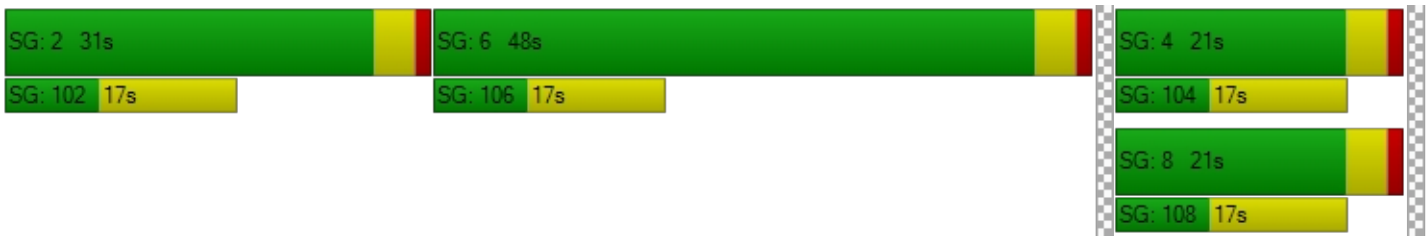
X, volume / capacity	0.78	0.78	0.14	0.79	0.79	0.15	0.24
d, Delay for Lane Group [s/veh]	16.51	16.71	11.16	16.85	17.05	21.35	21.81
Lane Group LOS	B	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.50	4.13	0.49	4.49	4.16	0.35	0.57
50th-Percentile Queue Length [ft/ln]	112.42	103.28	12.13	112.23	103.90	8.70	14.28
95th-Percentile Queue Length [veh/ln]	7.97	7.44	0.87	7.96	7.48	0.63	1.03
95th-Percentile Queue Length [ft/ln]	199.36	185.90	21.83	199.10	187.02	15.66	25.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.51	16.61	11.16	16.85	16.96	17.05	21.35	21.35	21.35	21.81	21.81	21.81
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.21			16.95			21.35			21.81		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.78											
Intersection LOS	B											
Intersection V/C	0.751											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.863

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	948	25	17	721	2	0	0	9	12	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	1009	25	17	848	2	0	0	9	12	0	14
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	265	7	4	222	1	0	0	2	3	0	4
Total Analysis Volume [veh/h]	4	1059	26	18	890	2	0	0	9	13	0	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	37	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17	15	15	2	2
g / C, Green / Cycle	0.37	0.37	0.37	0.32	0.32	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.29	0.29	0.02	0.25	0.25	0.09	0.01
s, saturation flow rate [veh/h]	1899	1729	1615	1896	1728	97	1899
c, Capacity [veh/h]	702	639	597	612	557	83	203
d1, Uniform Delay [s]	12.89	12.89	9.27	14.06	14.06	20.97	21.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	2.27	0.03	2.19	2.40	0.57	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

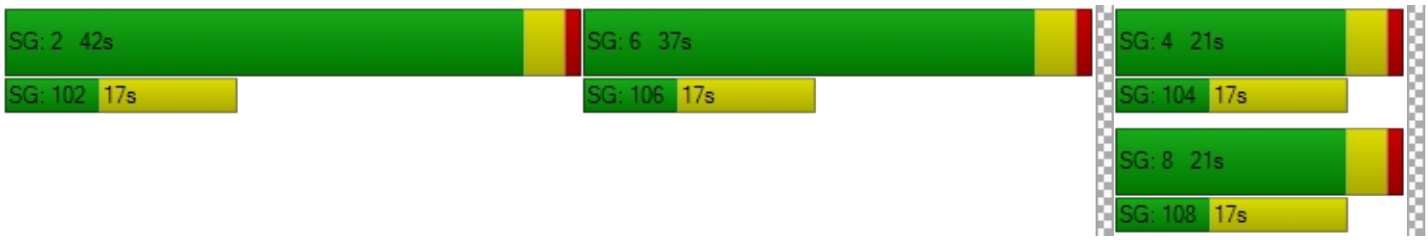
X, volume / capacity	0.79	0.79	0.04	0.78	0.78	0.11	0.14
d, Delay for Lane Group [s/veh]	14.97	15.17	9.30	16.25	16.46	21.54	21.48
Lane Group LOS	B	B	A	B	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.44	4.08	0.14	4.01	3.69	0.10	0.28
50th-Percentile Queue Length [ft/ln]	111.00	101.93	3.51	100.31	92.19	2.42	6.99
95th-Percentile Queue Length [veh/ln]	7.90	7.34	0.25	7.22	6.64	0.17	0.50
95th-Percentile Queue Length [ft/ln]	197.39	183.47	6.32	180.56	165.94	4.35	12.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.97	15.06	9.30	16.25	16.35	16.46	21.54	21.54	21.54	21.48	21.48	21.48
Movement LOS	B	B	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.92			16.35			21.54			21.48		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.68											
Intersection LOS	B											
Intersection V/C	0.863											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.782

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	971	916	446	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	32	92	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1025	948	538	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	271	251	142	0	0
Total Analysis Volume [veh/h]	243	1084	1002	569	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	25	100	75	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	35	35	35	35	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	6	31	20	20	
g / C, Green / Cycle	0.18	0.88	0.58	0.58	
(v / s)_i Volume / Saturation Flow Rate	0.13	0.30	0.41	0.47	
s, saturation flow rate [veh/h]	1810	3618	1900	1685	
c, Capacity [veh/h]	333	3199	1111	985	
d1, Uniform Delay [s]	13.30	0.33	5.08	5.59	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.08	0.06	0.84	1.53	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

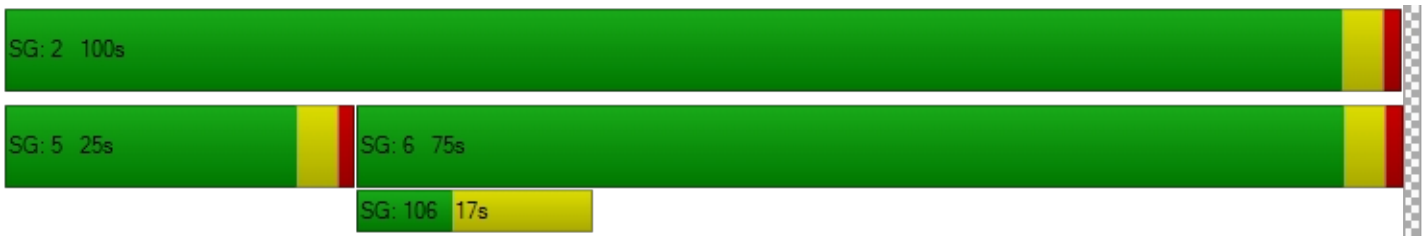
X, volume / capacity	0.73	0.34	0.71	0.80	
d, Delay for Lane Group [s/veh]	16.38	0.39	5.92	7.12	
Lane Group LOS	B	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	1.67	0.03	1.73	2.04	
50th-Percentile Queue Length [ft/ln]	41.77	0.69	43.30	50.92	
95th-Percentile Queue Length [veh/ln]	3.01	0.05	3.12	3.67	
95th-Percentile Queue Length [ft/ln]	75.18	1.25	77.94	91.66	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.38	0.39	6.18	7.12	0.00	0.00
Movement LOS	B	A	A	A		
d_A, Approach Delay [s/veh]	3.32		6.52		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.06					
Intersection LOS	A					
Intersection V/C	0.782					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	824	408	78	89	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	26	27	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	890	434	105	150	30
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	229	112	27	39	8
Total Analysis Volume [veh/h]	36	915	446	108	154	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	130	130	0	130	0
Amber [s]	0.0	2.0	2.0	0.0	2.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	69	69	0	61	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	28	28	28	28
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	17	17	5	5
g / C, Green / Cycle	0.59	0.59	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.51	0.32	0.10	0.02
s, saturation flow rate [veh/h]	1800	1740	1619	1530
c, Capacity [veh/h]	1072	1036	311	294
d1, Uniform Delay [s]	4.70	3.39	10.18	9.40
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	0.43	1.22	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

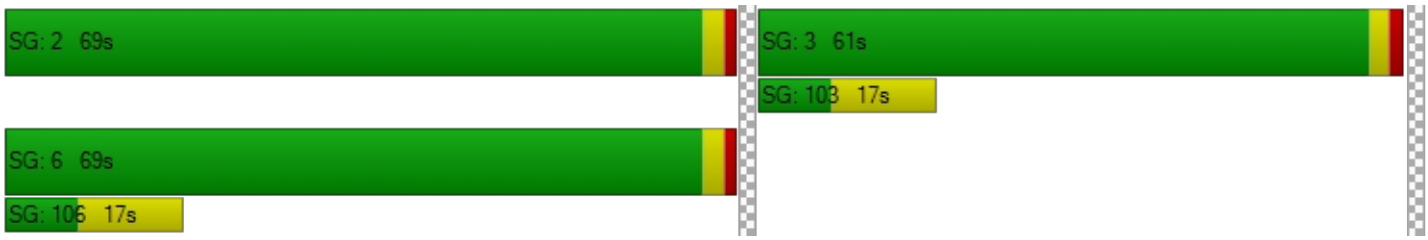
X, volume / capacity	0.85	0.53	0.50	0.11
d, Delay for Lane Group [s/veh]	6.75	3.82	11.40	9.55
Lane Group LOS	A	A	B	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.13	0.35	0.69	0.12
50th-Percentile Queue Length [ft/ln]	28.24	8.75	17.20	3.03
95th-Percentile Queue Length [veh/ln]	2.03	0.63	1.24	0.22
95th-Percentile Queue Length [ft/ln]	50.84	15.75	30.96	5.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.75	3.82	3.82	11.40	9.55
Movement LOS		A	A	A	B	A
d_A, Approach Delay [s/veh]	6.75		3.82		11.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.25					
Intersection LOS	A					
Intersection V/C	0.767					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	67	0	25	5	111	0	0	67	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	212	1	337	498	552	4	1	518	181
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	57	0	90	133	147	1	0	138	48
Total Analysis Volume [veh/h]	3	1	1	226	1	360	531	589	4	1	553	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	38	0	0	38	0	40	51	0	11	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	44	44	35	55	55	0	20	20
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.32	0.50	0.50	0.00	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.16	0.22	0.29	0.16	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	629	1615	1439	1616	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	305	637	330	637	571	1795	801	3	660	295
d1, Uniform Delay [s]	22.47	20.50	44.10	26.38	37.04	16.95	14.22	55.70	44.09	42.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	2.52	0.79	7.31	0.11	0.00	40.12	2.93	2.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

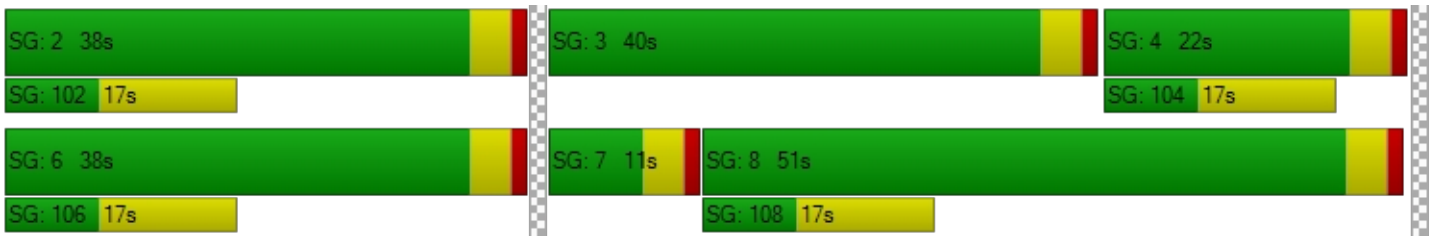
X, volume / capacity	0.01	0.00	0.69	0.57	0.93	0.33	0.00	0.29	0.84	0.66
d, Delay for Lane Group [s/veh]	22.49	20.50	46.62	27.17	44.35	17.05	14.22	95.81	47.02	44.89
Lane Group LOS	C	C	D	C	D	B	B	F	D	D
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.02	6.24	7.53	14.95	4.51	0.05	0.07	7.60	5.13
50th-Percentile Queue Length [ft/ln]	1.63	0.40	156.00	188.16	373.67	112.78	1.29	1.67	190.09	128.20
95th-Percentile Queue Length [veh/ln]	0.12	0.03	10.34	12.03	21.29	7.99	0.09	0.12	12.13	8.84
95th-Percentile Queue Length [ft/ln]	2.93	0.72	258.42	300.65	532.18	199.86	2.32	3.01	303.15	221.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.49	22.49	20.50	46.62	27.17	27.17	44.35	17.05	14.22	95.81	47.02	44.89
Movement LOS	C	C	C	D	C	C	D	B	B	F	D	D
d_A, Approach Delay [s/veh]	22.09			34.66			29.94			46.54		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	36.08											
Intersection LOS	D											
Intersection V/C	0.750											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	21.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	658	840	54	30	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	176	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	745	1016	56	31	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	198	271	15	8	2
Total Analysis Volume [veh/h]	21	793	1082	60	33	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.13	0.04
d_M, Delay for Movement [s/veh]	11.02	0.00	0.00	0.00	21.81	19.61
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.46	0.12
95th-Percentile Queue Length [ft/ln]	2.63	0.00	0.00	0.00	11.38	3.03
d_A, Approach Delay [s/veh]	0.28		0.00		21.30	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.57					
Intersection LOS	C					

OPENING YEAR (2020) WITHOUT PROJECT

Viridian

Vistro File: C:\...\AME.vistro

Scenario 6 Opening Year (2020) Without Project Morning Peak Hour

Report File: C:\...\AMOYWO.pdf

10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Right	1.192	83.1	F
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.091	62.5	E
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.788	25.2	C
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.725	14.1	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Right	1.546	61.1	E
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.652	14.0	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	135.4	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.948	70.8	E
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	EB Thru	0.085	85.4	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.026	59.7	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	2.074	25.1	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.823	30.1	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	1.117	117.0	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	1.005	48.0	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.708	11.5	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.402	11.7	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.004	13.0	B

24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.580	53.6	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.028	14.5	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.045	13.5	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	NB Left	0.546	10.5	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.341	4.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	140.436	274.6	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.114	51.2	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	EB Right	0.624	17.1	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.758	12.3	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.880	28.6	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.848	29.3	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.831	24.2	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.898	47.2	D
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.738	12.1	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Right	0.706	8.8	A
39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.801	16.6	B
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.712	12.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	83.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.192

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	315	1261	0	0	1081	765	0	0	0	461	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	78	50	0	0	106	14	0	0	2	129	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	1311	0	0	1187	779	0	0	2	590	0	532
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	339	0	0	307	201	0	0	1	153	0	138
Total Analysis Volume [veh/h]	406	1356	0	0	1228	806	0	0	2	610	0	550
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	30	89	0	0	59	0	0	0	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	27	86	56	56		38	38
g / C, Green / Cycle	0.21	0.66	0.43	0.43		0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.25	0.40	0.25	0.53		0.36	0.36
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1530
c, Capacity [veh/h]	337	2267	2111	659		501	447
d1, Uniform Delay [s]	51.58	12.35	28.19	37.10		46.09	46.09
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	98.74	1.17	1.18	113.93		101.78	107.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.21	0.60	0.58	1.22		1.22	1.23
d, Delay for Lane Group [s/veh]	150.32	13.52	29.37	151.02		147.87	153.77
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	20.19	10.86	9.90	41.31		30.25	27.73
50th-Percentile Queue Length [ft/ln]	504.77	271.50	247.38	1032.68		756.25	693.29
95th-Percentile Queue Length [veh/ln]	30.30	16.26	15.05	59.47		44.06	40.96
95th-Percentile Queue Length [ft/ln]	757.40	406.61	376.36	1486.86		1101.60	1024.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	150.32	13.52	0.00	0.00	29.37	151.02	0.00	0.00	0.00	147.87	147.87	153.77
Movement LOS	F	B			C	F				F	F	F
d_A, Approach Delay [s/veh]	45.04			77.57			0.00			150.67		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	83.12											
Intersection LOS	F											
Intersection V/C	1.192											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	62.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.091

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1006	424	484	1054	0	564	0	376	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	122	58	8	229	0	6	0	163	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1128	482	492	1283	0	570	0	539	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	297	127	129	337	0	150	0	142	0	0	0
Total Analysis Volume [veh/h]	0	1186	507	517	1349	0	599	0	567	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	42	0	40	82	0	0	48	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	39	39	37	79	45	45	
g / C, Green / Cycle	0.30	0.30	0.28	0.61	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.33	0.32	0.39	0.35	0.39	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1539	
c, Capacity [veh/h]	1472	459	461	2084	560	533	
d1, Uniform Delay [s]	42.16	45.67	46.67	16.54	42.68	42.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.81	73.35	61.37	1.57	20.39	62.62	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

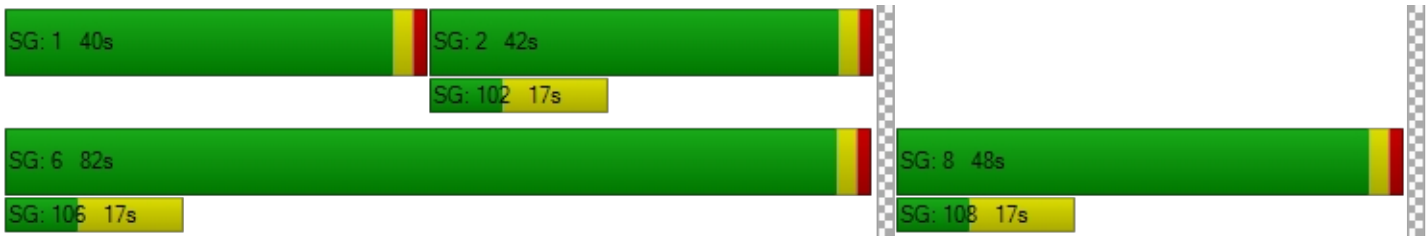
X, volume / capacity	0.81	1.10	1.12	0.65	1.01	1.13	
d, Delay for Lane Group [s/veh]	46.98	119.02	108.04	18.11	63.07	105.30	
Lane Group LOS	D	F	F	B	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	12.36	24.08	22.69	13.03	20.97	26.18	
50th-Percentile Queue Length [ft/ln]	308.96	602.08	567.34	325.75	524.30	654.55	
95th-Percentile Queue Length [veh/ln]	18.12	34.19	32.68	18.95	28.70	37.35	
95th-Percentile Queue Length [ft/ln]	453.09	854.64	817.07	473.75	717.44	933.76	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	46.98	119.02	108.04	18.11	0.00	64.26	105.30	105.30	0.00	0.00	0.00
Movement LOS		D	F	F	B		E	F	F			
d_A, Approach Delay [s/veh]	68.55			43.03			84.79			0.00		
Approach LOS	E			D			F			A		
d_I, Intersection Delay [s/veh]	62.48											
Intersection LOS	E											
Intersection V/C	1.091											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	825	16	97	874	102	182	127	68	16	198	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	132	9	43	226	88	27	4	11	5	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	957	25	140	1100	190	209	131	79	21	199	141
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	244	6	36	280	48	53	33	20	5	51	36
Total Analysis Volume [veh/h]	145	975	25	143	1120	193	213	133	80	21	203	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	45	0	32	60	0	23	31	0	12	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	32	32	8	32	32	12	20	20	2	11	11
g / C, Green / Cycle	0.11	0.43	0.43	0.11	0.43	0.43	0.16	0.27	0.27	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.09	0.28	0.28	0.09	0.37	0.38	0.13	0.04	0.05	0.01	0.10	0.11
s, saturation flow rate [veh/h]	1619	1800	1784	1619	1800	1710	1619	3427	1530	1619	1800	1561
c, Capacity [veh/h]	184	771	764	181	768	730	259	915	409	54	253	219
d1, Uniform Delay [s]	32.48	17.05	17.06	32.54	19.67	19.82	30.58	21.03	21.33	35.62	30.90	31.09
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.39	0.94	0.95	7.45	3.24	3.73	6.49	0.07	0.23	4.54	3.77	5.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.65	0.65	0.79	0.87	0.88	0.82	0.15	0.20	0.39	0.72	0.76
d, Delay for Lane Group [s/veh]	39.88	17.99	18.00	39.99	22.92	23.55	37.07	21.10	21.56	40.15	34.67	36.31
Lane Group LOS	D	B	B	D	C	C	D	C	C	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.86	6.49	6.44	2.83	10.35	10.11	4.05	0.87	1.07	0.44	3.30	3.10
50th-Percentile Queue Length [ft/ln]	71.53	162.33	161.01	70.65	258.80	252.86	101.36	21.67	26.82	10.88	82.38	77.62
95th-Percentile Queue Length [veh/ln]	5.15	10.67	10.60	5.09	15.63	15.33	7.30	1.56	1.93	0.78	5.93	5.59
95th-Percentile Queue Length [ft/ln]	128.75	266.80	265.06	127.17	390.71	383.25	182.45	39.00	48.27	19.58	148.29	139.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.88	18.00	18.00	39.99	23.17	23.55	37.07	21.10	21.56	40.15	34.85	36.31
Movement LOS	D	B	B	D	C	C	D	C	C	D	C	D
d_A, Approach Delay [s/veh]	20.77			24.87			29.17			35.73		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	25.20											
Intersection LOS	C											
Intersection V/C	0.788											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	89	852	37	68	811	66	68	105	77	73	115	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	134	6	0	216	26	18	4	13	4	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	101	986	43	68	1027	92	86	109	90	77	117	46
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	269	12	19	280	25	23	30	25	21	32	13
Total Analysis Volume [veh/h]	110	1075	47	74	1120	100	94	119	98	84	128	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	35	0	10	35	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	21	21	4	20	20	12	12
g / C, Green / Cycle	0.12	0.44	0.44	0.09	0.42	0.42	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.07	0.31	0.31	0.05	0.34	0.34	0.22	0.20
s, saturation flow rate [veh/h]	1619	1800	1774	1619	1800	1749	1422	1340
c, Capacity [veh/h]	187	801	790	152	762	741	481	460
d1, Uniform Delay [s]	19.46	10.39	10.40	19.94	11.72	11.74	15.73	14.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.94	1.15	1.17	2.41	2.13	2.22	1.47	1.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.70	0.71	0.49	0.81	0.81	0.65	0.57
d, Delay for Lane Group [s/veh]	22.40	11.54	11.57	22.35	13.85	13.96	17.20	16.10
Lane Group LOS	C	B	B	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.15	3.74	3.69	0.78	4.69	4.60	2.77	2.20
50th-Percentile Queue Length [ft/ln]	28.76	93.48	92.35	19.47	117.31	114.95	69.26	55.06
95th-Percentile Queue Length [veh/ln]	2.07	6.73	6.65	1.40	8.25	8.11	4.99	3.96
95th-Percentile Queue Length [ft/ln]	51.77	168.26	166.23	35.05	206.13	202.87	124.66	99.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.40	11.56	11.57	22.35	13.90	13.96	17.20	17.20	17.20	16.10	16.10	16.10
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.52			14.39			17.20			16.10		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.07											
Intersection LOS	B											
Intersection V/C	0.725											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	61.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.546

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	768	38	73	882	37	53	83	33	56	77	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	119	18	44	137	21	15	6	13	7	16	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	887	56	117	1019	58	68	89	46	63	93	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	250	16	33	287	16	19	25	13	18	26	47
Total Analysis Volume [veh/h]	66	999	63	132	1148	65	77	100	52	71	105	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	18	18	6	19	19	27	27	27	27
g / C, Green / Cycle	0.08	0.30	0.30	0.10	0.32	0.32	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.04	0.30	0.30	0.08	0.34	0.34	1.01	0.03	0.88	0.12
s, saturation flow rate [veh/h]	1619	1800	1763	1619	1800	1766	175	1530	199	1530
c, Capacity [veh/h]	129	532	521	170	578	568	165	688	173	688
d1, Uniform Delay [s]	26.57	21.18	21.18	26.23	20.42	20.42	17.93	9.44	17.05	10.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.12	40.87	41.42	7.34	53.36	54.62	54.81	0.05	35.51	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	1.01	1.01	0.78	1.06	1.06	1.08	0.08	1.01	0.27
d, Delay for Lane Group [s/veh]	29.69	62.06	62.61	33.57	73.77	75.03	72.75	9.49	52.56	10.62
Lane Group LOS	C	F	F	C	F	F	F	A	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.97	12.75	12.56	2.08	15.76	15.67	3.65	0.35	2.92	1.40
50th-Percentile Queue Length [ft/ln]	24.28	318.70	314.08	52.02	394.12	391.71	91.18	8.70	72.99	34.98
95th-Percentile Queue Length [veh/ln]	1.75	18.69	18.47	3.75	23.07	22.98	6.56	0.63	5.26	2.52
95th-Percentile Queue Length [ft/ln]	43.71	467.23	461.66	93.64	576.63	574.53	164.12	15.66	131.38	62.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.69	62.31	62.61	33.57	74.36	75.03	72.75	72.75	9.49	52.56	52.56	10.62
Movement LOS	C	E	E	C	F	E	E	E	A	D	D	B
d_A, Approach Delay [s/veh]	60.42			70.39			58.38			30.84		
Approach LOS	E			E			E			C		
d_I, Intersection Delay [s/veh]	61.12											
Intersection LOS	E											
Intersection V/C	1.546											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	137	87	96	90	0	0	2	8	29	1	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	712	138	169	1028	8	22	10	28	94	5	93
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	209	41	50	302	2	6	3	8	28	1	27
Total Analysis Volume [veh/h]	18	837	162	199	1208	9	26	12	33	110	6	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	18	28	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	29	29	8	36	36	11	11	11
g / C, Green / Cycle	0.03	0.49	0.49	0.14	0.59	0.59	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.01	0.27	0.27	0.11	0.32	0.32	0.12	0.14	0.07
s, saturation flow rate [veh/h]	1810	1900	1794	1810	1900	1895	617	821	1615
c, Capacity [veh/h]	57	923	871	253	1128	1125	190	260	282
d1, Uniform Delay [s]	28.48	10.91	10.91	24.99	7.30	7.30	21.74	23.83	21.96
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.06	2.42	2.56	5.33	1.85	1.86	1.22	1.20	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

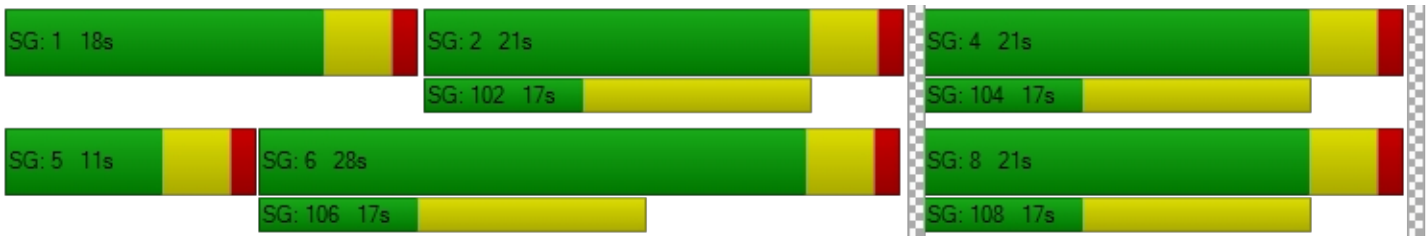
X, volume / capacity	0.31	0.56	0.56	0.79	0.54	0.54	0.37	0.45	0.39
d, Delay for Lane Group [s/veh]	31.54	13.33	13.47	30.33	9.16	9.16	22.96	25.02	22.82
Lane Group LOS	C	B	B	C	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.29	4.63	4.40	2.94	4.06	4.06	0.87	1.56	1.34
50th-Percentile Queue Length [ft/ln]	7.26	115.64	110.08	73.57	101.60	101.46	21.75	38.98	33.50
95th-Percentile Queue Length [veh/ln]	0.52	8.15	7.84	5.30	7.32	7.31	1.57	2.81	2.41
95th-Percentile Queue Length [ft/ln]	13.07	203.82	196.11	132.42	182.88	182.63	39.14	70.16	60.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.54	13.38	13.47	30.33	9.16	9.16	22.96	22.96	22.96	25.02	25.02	22.82
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.72			12.14			22.96			23.96		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.98											
Intersection LOS	B											
Intersection V/C	0.652											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	135.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	231	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	917	0	0	1171	10	5	0	16	0	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	265	0	0	339	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1061	0	0	1355	12	6	0	19	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.00	0.01	0.00	0.15	0.00	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.41	0.00	0.00	10.42	0.00	0.00	104.63	135.35	21.30	79.42	129.23	12.22
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.72	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.54	0.00	0.00	0.00	0.00	0.00	17.94	17.94	17.94	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.26			0.00			41.30			73.63		
Approach LOS	A			A			E			F		
d_I, Intersection Delay [s/veh]	0.53											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	70.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.948

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	93	72	71	38	18	43	30	37	31	8	95
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	318	353	602	592	38	61	68	52	313	52	422
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	85	94	161	158	10	16	18	14	84	14	0
Total Analysis Volume [veh/h]	34	340	378	645	634	41	65	73	56	335	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	27	0	47	63	0	0	21	0	0	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	217	217	217	217	217	217	217	217	217	217
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	54	54	80	128	128	18	18	49	49
g / C, Green / Cycle	0.03	0.25	0.25	0.37	0.59	0.59	0.08	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.23	0.36	0.18	0.03	0.04	0.07	0.21	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1765	1822	1615
c, Capacity [veh/h]	51	898	401	667	2129	950	152	148	412	365
d1, Uniform Delay [s]	104.48	67.71	80.09	67.27	22.28	18.86	94.50	98.29	82.82	0.00
k, delay calibration	0.11	0.11	0.11	0.21	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.06	0.26	11.18	16.23	0.08	0.02	1.91	14.38	11.80	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

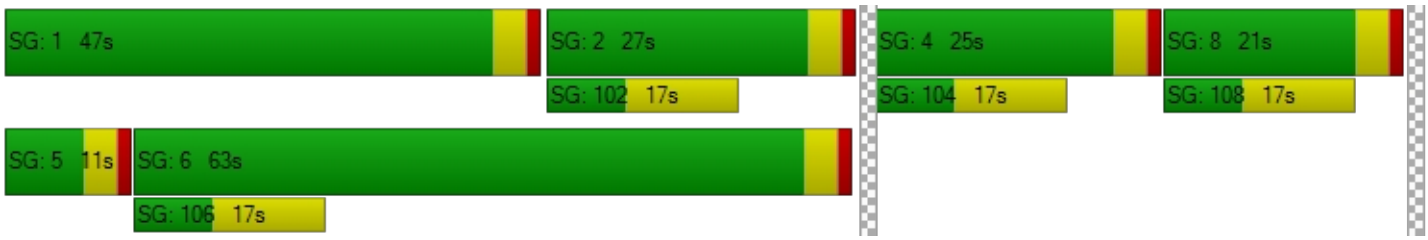
X, volume / capacity	0.67	0.38	0.94	0.97	0.30	0.04	0.43	0.87	0.95	0.00
d, Delay for Lane Group [s/veh]	118.54	67.97	91.27	83.50	22.36	18.87	96.41	112.67	94.62	0.00
Lane Group LOS	F	E	F	F	C	B	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.13	7.99	22.16	38.23	8.44	0.93	3.61	7.87	23.12	0.00
50th-Percentile Queue Length [ft/ln]	53.16	199.65	554.06	955.79	210.99	23.15	90.14	196.68	577.99	0.00
95th-Percentile Queue Length [veh/ln]	3.83	12.62	29.88	48.37	13.20	1.67	6.49	12.47	31.01	0.00
95th-Percentile Queue Length [ft/ln]	95.69	315.51	747.08	1209.31	330.10	41.67	162.25	311.68	775.13	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	118.54	67.97	91.27	83.50	22.36	18.87	96.41	112.67	112.67	94.62	94.62	0.00
Movement LOS	F	E	F	F	C	B	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	81.97			52.13			107.23			94.62		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	70.85											
Intersection LOS	E											
Intersection V/C	0.948											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	85.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.085

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	511	34	112	777	1	2	4	24	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	181	0	0	106	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	692	34	112	883	1	2	4	24	8	3	18
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	183	9	30	234	0	1	1	6	2	1	5
Total Analysis Volume [veh/h]	27	734	36	119	936	1	2	4	25	8	3	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.14	0.01	0.00	0.04	0.09	0.05	0.13	0.06	0.03
d_M, Delay for Movement [s/veh]	10.05	0.00	0.00	9.90	0.00	0.00	73.48	85.39	15.42	68.32	84.72	17.64
Movement LOS	B	A	A	A	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.05	0.00	0.45	0.23	0.00	0.58	0.58	0.58	0.78	0.78	0.78
95th-Percentile Queue Length [ft/ln]	2.62	1.31	0.00	11.27	5.64	0.00	14.57	14.57	14.57	19.51	19.51	19.51
d_A, Approach Delay [s/veh]	0.34			1.12			28.19			37.86		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	1.81											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	59.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	564	18	12	798	0	0	0	3	22	2	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	181	0	0	106	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	745	18	12	904	0	0	0	3	22	2	6
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	198	5	3	240	0	0	0	1	6	1	2
Total Analysis Volume [veh/h]	9	793	19	13	962	0	0	0	3	23	2	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.20	0.03	0.01
d_M, Delay for Movement [s/veh]	10.04	0.00	0.00	9.44	0.00	0.00	42.72	52.56	11.75	45.30	59.74	19.40
Movement LOS	B	A	A	A	A	A	E	F	B	E	F	C
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.04	0.02	0.00	0.02	0.02	0.02	0.88	0.88	0.88
95th-Percentile Queue Length [ft/ln]	0.84	0.42	0.00	1.11	0.55	0.00	0.42	0.42	0.42	21.97	21.97	21.97
d_A, Approach Delay [s/veh]	0.11			0.13			11.75			41.22		
Approach LOS	A			A			B			E		
d_I, Intersection Delay [s/veh]	0.83											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.074

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	28	567	19	6	826	24	15	25	30	65	28	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	162	5	0	80	25	43	16	35	4	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	729	24	6	906	49	58	41	65	69	33	9
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	198	7	2	246	13	16	11	18	19	9	2
Total Analysis Volume [veh/h]	43	792	26	7	984	53	63	45	71	75	36	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	23	23	1	20	20	24	24	24	24
g / C, Green / Cycle	0.06	0.39	0.39	0.01	0.34	0.34	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.22	0.00	0.28	0.28	0.91	0.04	1.36	0.01
s, saturation flow rate [veh/h]	1810	1900	1879	1810	1900	1866	118	1615	82	1615
c, Capacity [veh/h]	114	734	726	28	644	632	142	645	133	645
d1, Uniform Delay [s]	27.13	14.48	14.48	29.35	18.19	18.19	20.41	11.38	23.72	10.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.24	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	3.07	3.11	4.73	10.74	10.92	8.14	0.07	25.29	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.56	0.56	0.25	0.81	0.81	0.76	0.11	0.84	0.02
d, Delay for Lane Group [s/veh]	29.19	17.56	17.59	34.08	28.93	29.11	28.56	11.46	49.01	10.96
Lane Group LOS	C	B	B	C	C	C	C	B	D	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	4.49	4.45	0.13	7.81	7.70	1.81	0.54	2.47	0.07
50th-Percentile Queue Length [ft/ln]	15.72	112.27	111.21	3.29	195.18	192.50	45.35	13.60	61.65	1.84
95th-Percentile Queue Length [veh/ln]	1.13	7.97	7.91	0.24	12.39	12.25	3.27	0.98	4.44	0.13
95th-Percentile Queue Length [ft/ln]	28.30	199.15	197.69	5.93	309.73	306.27	81.63	24.49	110.97	3.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.19	17.57	17.59	34.08	29.02	29.11	28.56	28.56	11.46	49.01	49.01	10.96
Movement LOS	C	B	B	C	C	C	C	C	B	D	D	B
d_A, Approach Delay [s/veh]	18.15			29.05			21.78			45.87		
Approach LOS	B			C			C			D		
d_I, Intersection Delay [s/veh]	25.13											
Intersection LOS	C											
Intersection V/C	2.074											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.823

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	33	576	0	0	823	23	13	0	158	351	89	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	121	0	0	117	2	8	0	47	20	10	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	697	0	0	940	25	21	0	205	371	99	131
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	197	0	0	265	7	6	0	58	105	28	37
Total Analysis Volume [veh/h]	43	787	0	0	1061	28	24	0	231	419	112	148
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	43	0	0	43	0	24	0	0	0	43	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	99	99	99	99	99	99	99	99
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39	39	16	16	32	32
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.17	0.17	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.29	0.29	0.01	0.14	0.29	0.09
s, saturation flow rate [veh/h]	526	3618	1900	1883	1810	1615	1828	1615
c, Capacity [veh/h]	139	1422	747	740	302	270	583	515
d1, Uniform Delay [s]	41.21	23.31	25.57	25.66	34.82	40.10	32.38	25.29
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	0.34	1.39	1.45	0.11	7.71	5.95	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

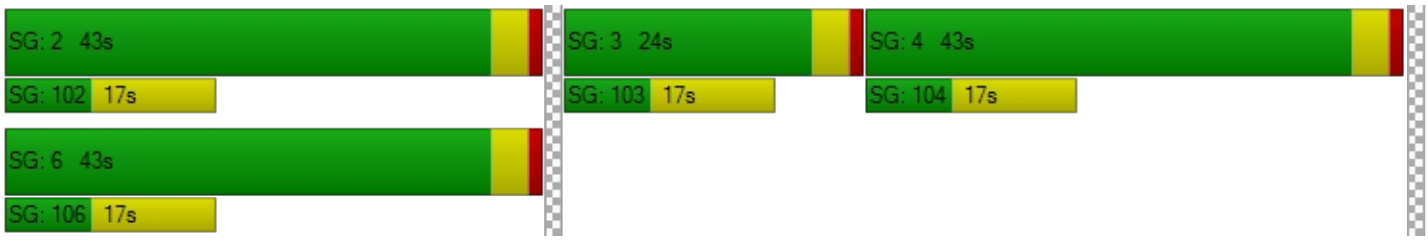
X, volume / capacity	0.31	0.55	0.73	0.74	0.08	0.86	0.91	0.29
d, Delay for Lane Group [s/veh]	42.46	23.65	26.96	27.11	34.94	47.81	38.32	25.59
Lane Group LOS	D	C	C	C	C	D	D	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.04	7.00	10.81	10.85	0.50	5.96	12.80	2.62
50th-Percentile Queue Length [ft/ln]	25.94	174.93	270.13	271.33	12.39	149.11	319.99	65.51
95th-Percentile Queue Length [veh/ln]	1.87	11.34	16.20	16.26	0.89	9.97	18.67	4.72
95th-Percentile Queue Length [ft/ln]	46.70	283.38	404.90	406.40	22.29	249.25	466.67	117.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.46	23.65	0.00	0.00	27.03	27.11	34.94	0.00	47.81	38.32	38.32	25.59
Movement LOS	D	C			C	C	C		D	D	D	C
d_A, Approach Delay [s/veh]	24.63			27.03			46.60			35.55		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	30.11											
Intersection LOS	C											
Intersection V/C	0.823											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	117.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.117

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	341	610	784	569	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	126	132	52	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	736	916	621	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	211	262	178	0	0
Total Analysis Volume [veh/h]	402	843	1049	711	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.12	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	116.96	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	15.19	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	379.71	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	37.77		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	15.65					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	48.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.005

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	553	546	146	624	0	364	28	258	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	46	36	61	71	0	90	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	599	582	207	695	0	454	28	269	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	171	166	59	199	0	130	8	77	3	0	1
Total Analysis Volume [veh/h]	0	685	665	237	794	0	519	32	307	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	49	0	18	67	0	0	22	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	45	45	14	63	32	32	3	3
g / C, Green / Cycle	0.41	0.41	0.13	0.57	0.29	0.29	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.36	0.42	0.13	0.22	0.30	0.19	0.01	0.00
s, saturation flow rate [veh/h]	1900	1619	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	779	664	230	2075	531	473	45	40
d1, Uniform Delay [s]	29.69	32.45	48.00	12.81	38.91	33.99	52.70	52.42
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.41	39.26	35.25	0.54	28.88	1.51	3.56	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

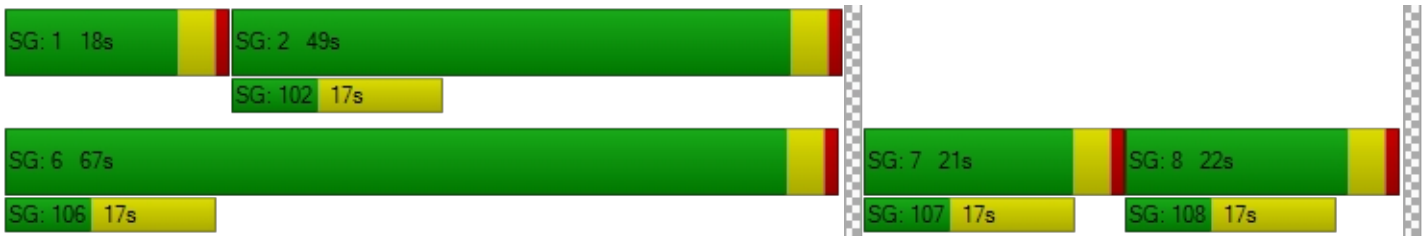
X, volume / capacity	0.87	1.02	1.03	0.38	1.04	0.65	0.29	0.08
d, Delay for Lane Group [s/veh]	42.10	71.70	83.25	13.34	67.79	35.50	56.26	53.22
Lane Group LOS	D	F	F	B	F	D	E	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	18.55	24.29	8.53	5.32	18.31	7.29	0.40	0.09
50th-Percentile Queue Length [ft/ln]	463.86	607.25	213.29	133.01	457.64	182.33	9.91	2.24
95th-Percentile Queue Length [veh/ln]	25.62	32.78	13.49	9.10	25.92	11.72	0.71	0.16
95th-Percentile Queue Length [ft/ln]	640.47	819.52	337.16	227.58	648.09	293.05	17.84	4.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	42.54	71.70	83.25	13.34	0.00	67.79	67.79	35.50	56.26	0.00	53.22
Movement LOS		D	F	F	B		E	E	D	E		D
d_A, Approach Delay [s/veh]	56.90			29.41			56.23			55.69		
Approach LOS	E			C			E			E		
d_I, Intersection Delay [s/veh]	48.01											
Intersection LOS	D											
Intersection V/C	1.005											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	27	771	50	55	656	75	159	35	19	10	20	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	64	2	18	61	3	4	0	1	2	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	835	52	73	717	78	163	35	20	12	20	124
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	225	14	20	193	21	44	9	5	3	5	33
Total Analysis Volume [veh/h]	29	901	56	79	773	84	176	38	22	13	22	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	48	0	11	48	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	13	13	4	15	15	10	10	10
g / C, Green / Cycle	0.05	0.34	0.34	0.10	0.40	0.40	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.03	0.04	0.21	0.05	0.20	0.02	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1197	1761	1615
c, Capacity [veh/h]	89	1241	554	189	1441	643	453	556	393
d1, Uniform Delay [s]	17.85	11.16	8.68	16.29	8.94	7.42	14.69	11.32	12.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.10	0.82	0.08	1.47	0.31	0.09	0.93	0.05	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.73	0.10	0.42	0.54	0.13	0.52	0.06	0.34
d, Delay for Lane Group [s/veh]	19.94	11.99	8.76	17.76	9.25	7.51	15.62	11.37	12.63
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	2.67	0.26	0.64	1.84	0.34	1.74	0.20	0.83
50th-Percentile Queue Length [ft/ln]	6.74	66.83	6.42	15.96	46.10	8.43	43.47	4.88	20.63
95th-Percentile Queue Length [veh/ln]	0.49	4.81	0.46	1.15	3.32	0.61	3.13	0.35	1.49
95th-Percentile Queue Length [ft/ln]	12.13	120.30	11.56	28.73	82.98	15.18	78.24	8.78	37.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.94	11.99	8.76	17.76	9.25	7.51	15.62	15.62	15.62	11.37	11.37	12.63
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.04			9.81			15.62			12.37		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	11.53											
Intersection LOS	B											
Intersection V/C	0.708											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	67	0	43	58	83	0	0	80	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	16	0	49	153	32	0	0	8	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	83	0	92	211	115	0	0	88	101
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	0	26	59	32	0	0	25	28
Total Analysis Volume [veh/h]	0	0	0	93	0	103	237	129	0	0	99	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	23	0	0	18	76	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	32	32	32	32	32	32	32	32
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	0	4	6	16	16	6	6
g / C, Green / Cycle	0.00	0.00	0.12	0.19	0.50	0.50	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.05	0.13	0.04	0.00	0.05	0.07
s, saturation flow rate [veh/h]	1810	1900	1810	1810	3618	1615	1900	1615
c, Capacity [veh/h]	0	0	226	350	1820	813	354	301
d1, Uniform Delay [s]	0.00	0.00	13.03	12.10	4.13	0.00	11.28	11.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00	1.20	2.31	0.02	0.00	0.43	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

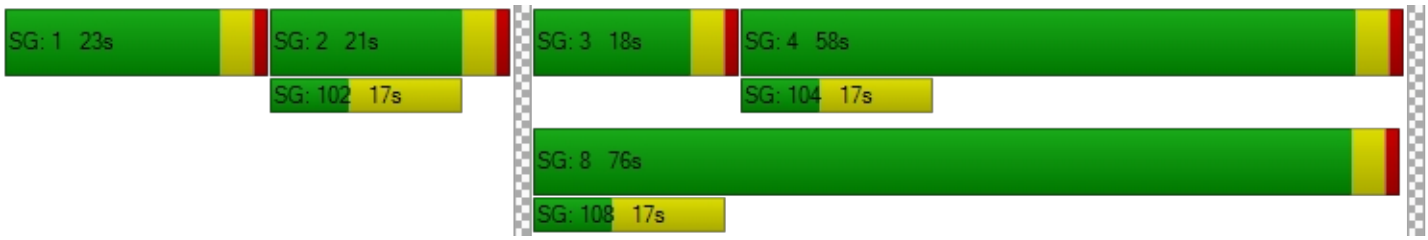
X, volume / capacity	0.00	0.00	0.41	0.68	0.07	0.00	0.28	0.38
d, Delay for Lane Group [s/veh]	0.00	0.00	14.23	14.40	4.15	0.00	11.71	12.28
Lane Group LOS	A	A	B	B	A	A	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	0.00	0.56	1.41	0.11	0.00	0.50	0.60
50th-Percentile Queue Length [ft/ln]	0.00	0.00	14.00	35.15	2.71	0.00	12.52	14.97
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.01	2.53	0.20	0.00	0.90	1.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	25.20	63.27	4.88	0.00	22.54	26.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.23	0.00	0.00	14.40	4.15	0.00	0.00	11.71	12.28
Movement LOS	A	A	A	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	0.00			14.23			10.79			12.01		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	11.65											
Intersection LOS	B											
Intersection V/C	0.402											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	2	0	0	0	0	29	19	10	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	2	4	10	8	12	2	127	70	11	122	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	1	1	3	2	4	1	39	22	3	38	2
Total Analysis Volume [veh/h]	88	2	5	12	10	15	2	157	87	14	151	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.00	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	12.89	12.97	10.58	11.72	12.34	9.35	7.51	0.00	0.00	7.73	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.61	0.61	0.61	0.18	0.18	0.18	0.00	0.00	0.00	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	15.22	15.22	15.22	4.56	4.56	4.56	0.10	0.10	0.10	0.62	0.62	0.62
d_A, Approach Delay [s/veh]	12.77			10.93			0.06			0.63		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.17											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	53.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	380	471	72	62	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	71	40	23	13	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	451	511	95	75	30
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	143	162	30	24	0
Total Analysis Volume [veh/h]	30	572	648	121	95	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.58	0.00
d_M, Delay for Movement [s/veh]	9.37	0.00	0.00	0.00	53.56	13.22
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	3.06	0.00
95th-Percentile Queue Length [ft/ln]	2.73	0.00	0.00	0.00	76.38	0.00
d_A, Approach Delay [s/veh]	0.47		0.00		53.56	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	3.66					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	359	61	109	471	10	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	73	0	0	41	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	432	61	109	512	10	43
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	117	16	29	138	3	12
Total Analysis Volume [veh/h]	466	66	118	552	11	46
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.11	0.01	0.03	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	8.88	0.00	14.52	11.80
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.38	0.00	0.09	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	9.51	0.00	2.18	6.49
d_A, Approach Delay [s/veh]	0.00		1.56		12.32	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	47	441	579	23	19	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	52	73	32	9	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	514	611	32	19	67
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	135	161	8	5	18
Total Analysis Volume [veh/h]	104	540	642	34	20	70
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.01	0.01	0.00	0.04	0.10
d_M, Delay for Movement [s/veh]	9.38	0.00	0.00	0.00	13.47	10.89
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.38	0.00	0.00	0.00	0.14	0.34
95th-Percentile Queue Length [ft/ln]	9.47	0.00	0.00	0.00	3.52	8.56
d_A, Approach Delay [s/veh]	1.52		0.00		11.47	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.42					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.546

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	446	15	106	546	4	0	3	11	28	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	125	0	0	48	0	0	0	1	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	571	15	106	594	4	0	3	12	28	0	64
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	153	4	28	159	1	0	1	3	7	0	17
Total Analysis Volume [veh/h]	18	611	16	113	635	4	0	3	13	30	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	62	0	26	77	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	32	32	32	32	32	32	32	32	32	32	32	32
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	8	8	4	12	12	0	2	2	2	3	3
g / C, Green / Cycle	0.03	0.26	0.26	0.14	0.37	0.37	0.00	0.05	0.05	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.01	0.06	0.18	0.00	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	60	945	422	254	1333	595	0	92	79	95	192	163
d1, Uniform Delay [s]	15.19	10.56	8.87	12.68	7.78	6.43	0.00	14.58	14.68	14.69	0.00	13.57
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	0.75	0.04	1.22	0.27	0.00	0.00	0.14	0.98	1.89	0.00	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.65	0.04	0.45	0.48	0.01	0.00	0.03	0.17	0.32	0.00	0.42
d, Delay for Lane Group [s/veh]	17.93	11.31	8.90	13.90	8.05	6.44	0.00	14.72	15.65	16.57	0.00	15.27
Lane Group LOS	B	B	A	B	A	A	A	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.15	1.46	0.06	0.66	1.11	0.01	0.00	0.02	0.09	0.22	0.00	0.44
50th-Percentile Queue Length [ft/ln]	3.75	36.45	1.60	16.54	27.68	0.29	0.00	0.51	2.36	5.48	0.00	11.02
95th-Percentile Queue Length [veh/ln]	0.27	2.62	0.12	1.19	1.99	0.02	0.00	0.04	0.17	0.39	0.00	0.79
95th-Percentile Queue Length [ft/ln]	6.75	65.62	2.88	29.78	49.82	0.53	0.00	0.92	4.26	9.87	0.00	19.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.93	11.31	8.90	13.90	8.05	6.44	0.00	14.72	15.65	16.57	0.00	15.27
Movement LOS	B	B	A	B	A	A	A	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.44			8.92			15.48			15.67		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.50											
Intersection LOS	B											
Intersection V/C	0.546											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	4.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.341

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	483	80	41	576	54	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	128	0	0	49	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	611	80	41	625	54	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	173	23	12	177	15	14
Total Analysis Volume [veh/h]	694	91	47	709	61	57
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	46	39	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	0	0	8	8
g / C, Green / Cycle	0.73	0.73	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.19	0.06	0.06	0.37	0.08	0.04
s, saturation flow rate [veh/h]	3618	1615	762	1900	752	1615
c, Capacity [veh/h]	2650	1183	120	0	194	217
d1, Uniform Delay [s]	2.66	2.28	30.01	0.00	26.54	23.32
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.13	9.34	0.00	0.92	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

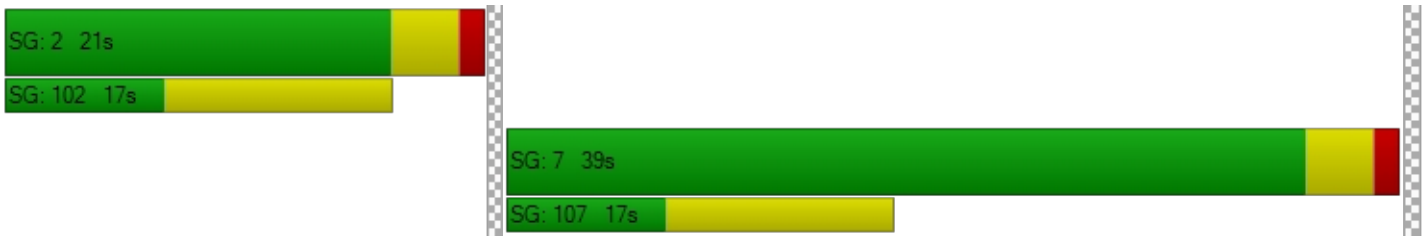
X, volume / capacity	0.26	0.08	0.39	0.00	0.31	0.26
d, Delay for Lane Group [s/veh]	2.90	2.40	39.35	0.00	27.46	23.95
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	0.19	1.00	0.00	0.85	0.72
50th-Percentile Queue Length [ft/ln]	19.27	4.87	25.05	0.00	21.37	18.00
95th-Percentile Queue Length [veh/ln]	1.39	0.35	1.80	0.00	1.54	1.30
95th-Percentile Queue Length [ft/ln]	34.68	8.77	45.08	0.00	38.46	32.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.90	2.40	39.35	0.00	27.46	23.95
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	2.84		2.45		25.77	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.29					
Intersection LOS	A					
Intersection V/C	0.341					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	274.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	140.436

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	38	0	11	52	121	0	0	123	76
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	168	4	316	382	658	13	3	455	241
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	43	1	82	99	170	3	1	117	62
Total Analysis Volume [veh/h]	10	4	3	173	4	326	394	679	13	3	470	249
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	86	0	0	86	0	13	23	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	82	82	82	82	9	25	25	1	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.08	0.21	0.21	0.01	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.75	0.00	126.02	0.20	0.22	0.19	0.01	0.00	0.13	0.15
s, saturation flow rate [veh/h]	19	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	64	1103	60	1103	138	764	341	10	508	227
d1, Uniform Delay [s]	33.53	6.03	59.00	7.54	55.42	45.95	37.63	59.43	50.96	51.58
k, delay calibration	0.29	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.55	0.00	914.44	0.15	836.52	14.55	0.21	15.71	25.15	88.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.00	2.94	0.30	2.85	0.89	0.04	0.30	0.93	1.10
d, Delay for Lane Group [s/veh]	38.08	6.03	973.45	7.69	891.94	60.50	37.84	75.14	76.10	140.11
Lane Group LOS	D	A	F	A	F	E	D	E	E	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.40	0.02	17.15	3.18	36.31	11.33	0.33	0.13	8.73	12.37
50th-Percentile Queue Length [ft/ln]	9.92	0.58	428.69	79.49	907.79	283.20	8.16	3.37	218.22	309.18
95th-Percentile Queue Length [veh/ln]	0.71	0.04	30.87	5.72	56.41	16.85	0.59	0.24	13.57	18.92
95th-Percentile Queue Length [ft/ln]	17.86	1.05	771.65	143.08	1410.16	421.20	14.70	6.06	339.35	472.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.08	38.08	6.03	973.45	973.45	7.69	891.94	60.50	37.84	75.14	76.10	140.11
Movement LOS	D	D	A	F	F	A	F	E	D	E	E	F
d_A, Approach Delay [s/veh]	32.42			347.53			361.87			98.17		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	274.59											
Intersection LOS	F											
Intersection V/C	140.436											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	51.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.114

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	571	669	23	9	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	199	159	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	770	828	23	9	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	209	224	6	2	4
Total Analysis Volume [veh/h]	22	834	897	25	10	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.11	0.04
d_M, Delay for Movement [s/veh]	9.95	0.00	0.00	0.00	51.24	16.19
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.00	0.37	0.13
95th-Percentile Queue Length [ft/ln]	2.27	0.00	0.00	0.00	9.29	3.25
d_A, Approach Delay [s/veh]	0.26		0.00		30.79	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	822	191	66	785	0	2	3	80	190	5	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	208	0	21	178	0	0	0	0	0	0	27
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	1030	191	87	963	0	2	3	80	190	5	93
Peak Hour Factor	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	288	53	24	269	0	1	1	22	53	1	26
Total Analysis Volume [veh/h]	73	1151	213	97	1076	0	2	3	89	212	6	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	11	21	0	0	22	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	51	6	40	40	6	6	8	8	8
g / C, Green / Cycle	0.07	0.52	0.68	0.08	0.53	0.53	0.08	0.08	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.13	0.05	0.28	0.28	0.00	0.06	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1863	1615	1810	1814	1615
c, Capacity [veh/h]	132	1889	1096	147	1007	1007	150	130	187	187	167
d1, Uniform Delay [s]	33.58	12.57	4.46	33.47	11.56	11.56	31.82	33.58	32.10	32.10	32.25
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.55	1.47	0.40	4.99	0.44	0.44	0.09	6.27	2.86	2.85	3.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

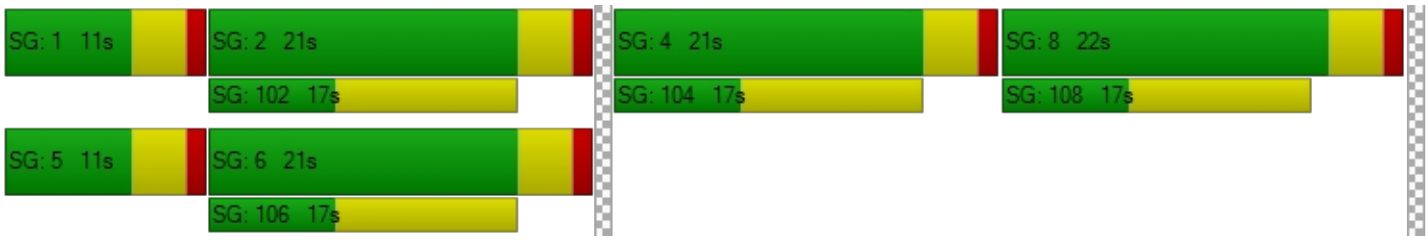
X, volume / capacity	0.55	0.61	0.19	0.66	0.53	0.53	0.03	0.69	0.58	0.58	0.62
d, Delay for Lane Group [s/veh]	37.13	14.04	4.86	38.46	12.00	12.00	31.91	39.86	34.97	34.96	36.03
Lane Group LOS	D	B	A	D	B	B	C	D	C	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.38	6.35	1.06	1.87	5.31	5.31	0.09	1.76	1.98	1.98	1.93
50th-Percentile Queue Length [ft/ln]	34.51	158.87	26.39	46.77	132.63	132.63	2.13	43.99	49.49	49.59	48.30
95th-Percentile Queue Length [veh/ln]	2.48	10.49	1.90	3.37	9.08	9.08	0.15	3.17	3.56	3.57	3.48
95th-Percentile Queue Length [ft/ln]	62.12	262.22	47.50	84.18	227.06	227.06	3.84	79.18	89.08	89.27	86.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.13	14.04	4.86	38.46	12.00	12.00	31.91	31.91	39.86	34.96	34.96	36.03
Movement LOS	D	B	A	D	B	B	C	C	D	C	C	D
d_A, Approach Delay [s/veh]	13.86			14.19			39.43			35.31		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.06											
Intersection LOS	B											
Intersection V/C	0.624											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	231	336	0	0	928	153	0	0	0	122	0	734
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	90	0	0	159	19	0	0	0	8	0	118
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	426	0	0	1087	172	0	0	0	130	0	852
Peak Hour Factor	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	70	122	0	0	310	49	0	0	0	37	0	0
Total Analysis Volume [veh/h]	281	486	0	0	1241	196	0	0	0	148	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	24	54	0	0	30	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	51	51	51	51		51	51
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10	37	23	23		6	6
g / C, Green / Cycle	0.20	0.72	0.45	0.45		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.16	0.13	0.34	0.12		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	357	2617	1622	724		218	194
d1, Uniform Delay [s]	19.54	2.26	11.87	8.87		21.59	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.88	0.03	0.78	0.20		3.70	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

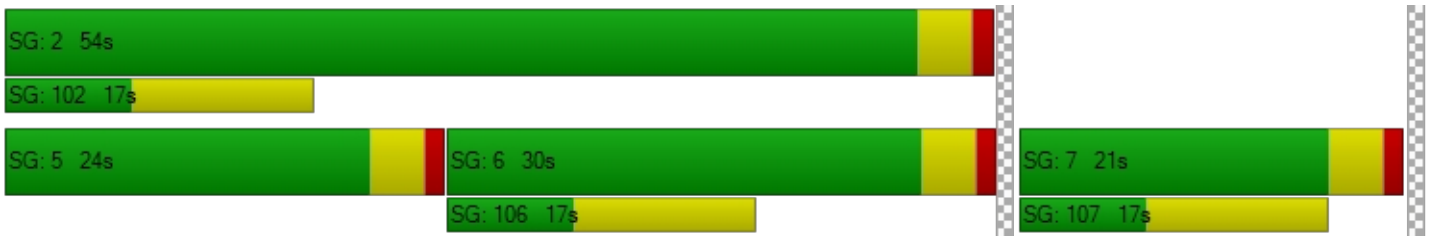
X, volume / capacity	0.79	0.19	0.77	0.27		0.68	0.00
d, Delay for Lane Group [s/veh]	23.43	2.30	12.65	9.07		25.28	0.00
Lane Group LOS	C	A	B	A		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	3.22	0.31	4.86	1.15		1.77	0.00
50th-Percentile Queue Length [ft/ln]	80.51	7.66	121.42	28.65		44.32	0.00
95th-Percentile Queue Length [veh/ln]	5.80	0.55	8.47	2.06		3.19	0.00
95th-Percentile Queue Length [ft/ln]	144.92	13.79	211.77	51.56		79.78	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.43	2.30	0.00	0.00	12.65	9.07	0.00	0.00	0.00	25.28	0.00	0.00
Movement LOS	C	A			B	A				C		A
d_A, Approach Delay [s/veh]	10.04			12.16			0.00			25.28		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	12.29											
Intersection LOS	B											
Intersection V/C	0.758											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.880

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	388	160	460	606	0	182	0	764	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	10	96	71	0	20	0	12	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	473	170	556	677	0	202	0	776	0	0	0
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	128	46	150	183	0	55	0	210	0	0	0
Total Analysis Volume [veh/h]	0	512	184	602	733	0	219	0	840	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	29	50	0	25	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	94	94	94	94	94	94	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17	17	34	54	32	32	
g / C, Green / Cycle	0.18	0.18	0.36	0.58	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.33	0.20	0.12	0.29	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	635	284	650	2089	611	965	
d1, Uniform Delay [s]	37.27	36.11	28.95	10.54	23.50	29.26	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.47	2.49	6.28	0.10	0.36	2.59	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

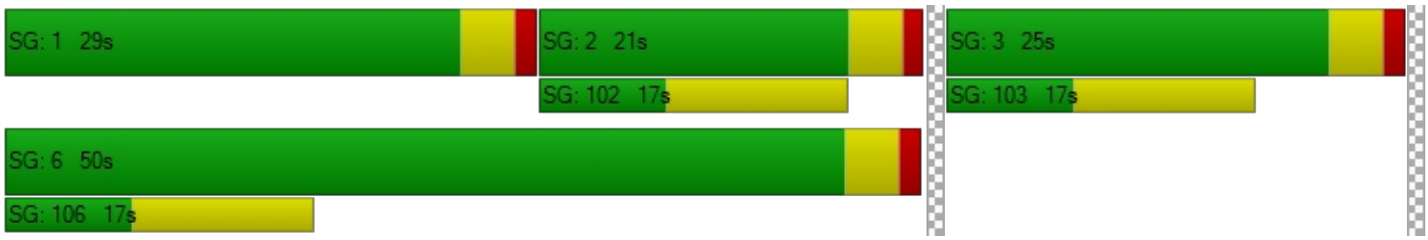
X, volume / capacity	0.81	0.65	0.93	0.35	0.36	0.87	
d, Delay for Lane Group [s/veh]	39.74	38.60	35.23	10.64	23.86	31.85	
Lane Group LOS	D	D	D	B	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.78	4.07	13.63	3.78	3.65	8.92	
50th-Percentile Queue Length [ft/ln]	144.45	101.71	340.68	94.40	91.31	223.07	
95th-Percentile Queue Length [veh/ln]	9.72	7.32	19.68	6.80	6.57	13.82	
95th-Percentile Queue Length [ft/ln]	243.01	183.07	492.04	169.92	164.36	345.54	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	39.74	38.60	35.23	10.64	0.00	23.86	0.00	31.85	0.00	0.00	0.00
Movement LOS		D	D	D	B		C		C			
d_A, Approach Delay [s/veh]	39.44			21.73			30.20			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	28.62											
Intersection LOS	C											
Intersection V/C	0.880											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	304	803	0	0	1149	540	0	0	0	411	0	367
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	28	0	0	52	0	0	0	0	112	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	326	831	0	0	1201	540	0	0	0	523	0	367
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	254	0	0	368	165	0	0	0	160	0	112
Total Analysis Volume [veh/h]	399	1017	0	0	1470	661	0	0	0	640	0	449
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	75	0	0	55	0	0	0	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	129	129	129	129		129	129	129
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	20	88	65	65		35	35	35
g / C, Green / Cycle	0.16	0.68	0.50	0.50		0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.13	0.21	0.22	0.43		0.22	0.22	0.24
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1671	1530
c, Capacity [veh/h]	464	3340	3277	767		441	455	417
d1, Uniform Delay [s]	52.97	8.26	20.68	28.22		43.52	43.83	45.01
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	0.05	0.10	3.02		3.26	3.56	6.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.30	0.45	0.86		0.79	0.81	0.89
d, Delay for Lane Group [s/veh]	57.79	8.31	20.77	31.24		46.77	47.39	51.56
Lane Group LOS	E	A	C	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.60	3.66	7.11	18.04		10.71	11.44	12.05
50th-Percentile Queue Length [ft/ln]	164.99	91.46	177.76	451.08		267.66	286.06	301.14
95th-Percentile Queue Length [veh/ln]	10.81	6.59	11.48	25.01		16.07	16.99	17.74
95th-Percentile Queue Length [ft/ln]	270.32	164.63	287.09	625.23		401.81	424.74	443.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.79	8.31	0.00	0.00	20.77	31.24	0.00	0.00	0.00	47.05	47.39	50.76
Movement LOS	E	A			C	C				D	D	D
d_A, Approach Delay [s/veh]	22.25			24.02			0.00			48.61		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	29.26											
Intersection LOS	C											
Intersection V/C	0.848											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.831

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	763	410	495	1097	0	362	3	463	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	50	49	0	164	0	0	0	53	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	813	459	495	1261	0	362	3	516	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	238	135	145	370	0	106	1	151	0	0	0
Total Analysis Volume [veh/h]	0	953	538	580	1478	0	424	4	605	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	49	0	29	78	0	0	32	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	93	93	93	93	93	93	93	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	37	37	21	62	25	25	25	
g / C, Green / Cycle	0.40	0.40	0.23	0.66	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.28	0.35	0.20	0.43	0.20	0.22	0.23	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1577	1530	
c, Capacity [veh/h]	1379	616	679	2276	439	428	415	
d1, Uniform Delay [s]	23.03	25.65	34.38	9.23	31.09	31.80	32.08	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.63	4.08	3.19	0.32	2.65	3.94	4.78	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.69	0.87	0.85	0.65	0.75	0.82	0.85	
d, Delay for Lane Group [s/veh]	23.66	29.72	37.57	9.55	33.74	35.73	36.86	
Lane Group LOS	C	C	D	A	C	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.41	11.11	6.44	7.62	6.96	7.66	7.81	
50th-Percentile Queue Length [ft/ln]	210.14	277.85	160.98	190.60	174.10	191.48	195.17	
95th-Percentile Queue Length [veh/ln]	13.16	16.58	10.60	12.15	11.29	12.20	12.39	
95th-Percentile Queue Length [ft/ln]	329.01	414.53	265.02	303.81	282.29	304.95	309.73	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	23.66	29.72	37.57	9.55	0.00	34.13	35.73	36.37	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	D	D			
d_A, Approach Delay [s/veh]	25.85			17.44			35.48			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	24.24											
Intersection LOS	C											
Intersection V/C	0.831											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	47.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	867	12	35	1265	253	248	17	56	38	17	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	87	0	0	176	41	12	2	5	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	954	12	35	1441	294	260	19	61	38	23	67
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	278	3	10	419	86	76	6	18	11	7	19
Total Analysis Volume [veh/h]	73	1111	14	41	1678	342	303	22	71	44	27	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	33	0	45	68	0	0	42	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	202	202	202	202	202	202	202	202	202	202	202	202
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	128	128	6	123	123	59	59	59	59	59	59
g / C, Green / Cycle	0.05	0.63	0.63	0.03	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.05	0.31	0.31	0.03	0.56	0.59	0.23	0.01	0.05	0.03	0.02	0.05
s, saturation flow rate [veh/h]	1619	1800	1792	1619	1800	1699	1309	1800	1530	1324	1800	1530
c, Capacity [veh/h]	88	1139	1134	52	1098	1036	353	524	445	362	524	445
d1, Uniform Delay [s]	94.68	19.86	19.86	97.22	35.00	37.89	75.43	51.46	53.31	59.40	51.61	53.57
k, delay calibration	0.11	0.11	0.11	0.11	0.40	0.44	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.52	0.33	0.34	23.24	11.28	20.64	6.03	0.03	0.17	0.15	0.04	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

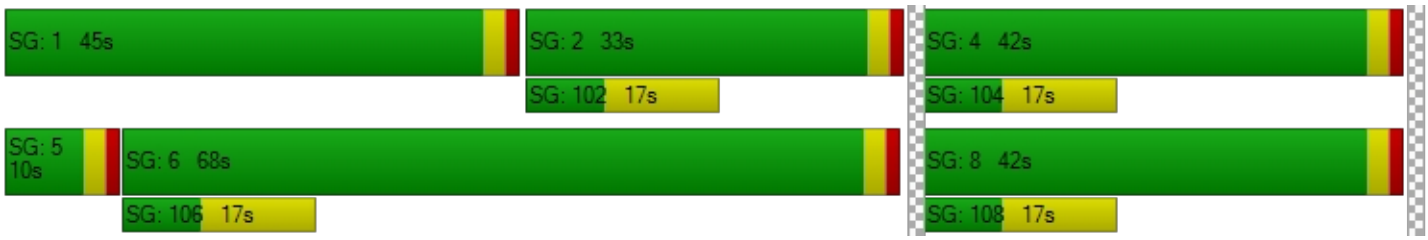
X, volume / capacity	0.83	0.49	0.50	0.79	0.92	0.97	0.86	0.04	0.16	0.12	0.05	0.18
d, Delay for Lane Group [s/veh]	112.20	20.19	20.20	120.46	46.27	58.53	81.46	51.50	53.47	59.55	51.65	53.75
Lane Group LOS	F	C	C	F	D	E	F	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.27	14.68	14.62	2.50	47.21	53.33	16.23	0.83	2.77	1.81	1.02	3.06
50th-Percentile Queue Length [ft/ln]	106.76	366.95	365.48	62.52	1180.25	1333.31	405.80	20.70	69.32	45.28	25.48	76.53
95th-Percentile Queue Length [veh/ln]	7.66	20.96	20.89	4.50	58.48	65.31	22.84	1.49	4.99	3.26	1.83	5.51
95th-Percentile Queue Length [ft/ln]	191.49	524.03	522.25	112.53	1461.96	1632.72	570.98	37.26	124.78	81.51	45.86	137.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	112.20	20.19	20.20	120.46	51.15	58.53	81.46	51.50	53.47	59.55	51.65	53.75
Movement LOS	F	C	C	F	D	E	F	D	D	E	D	D
d_A, Approach Delay [s/veh]	25.80			53.76			74.78			55.08		
Approach LOS	C			D			E			E		
d_I, Intersection Delay [s/veh]	47.19											
Intersection LOS	D											
Intersection V/C	0.898											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	811	10	58	1159	97	112	7	71	20	4	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	78	0	0	148	33	11	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	889	10	58	1307	130	123	7	80	20	4	49
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	253	3	17	372	37	35	2	23	6	1	14
Total Analysis Volume [veh/h]	89	1013	11	66	1489	148	140	8	91	23	5	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	46	41	0	69	64	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	29	29	4	28	28	9	9	9	9	9
g / C, Green / Cycle	0.10	0.56	0.56	0.08	0.54	0.54	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.28	0.28	0.04	0.46	0.47	0.13	0.06	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1793	1619	1800	1744	1130	1530	1430	1800	1530
c, Capacity [veh/h]	160	1007	1003	136	981	950	341	277	150	326	277
d1, Uniform Delay [s]	22.06	6.97	6.97	22.46	9.82	9.97	21.04	18.31	25.61	17.27	17.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.00	0.40	0.40	2.66	2.03	2.34	0.87	0.68	0.47	0.02	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

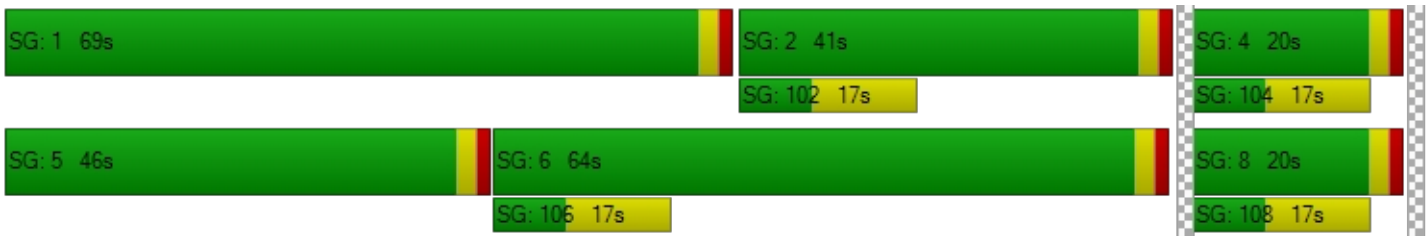
X, volume / capacity	0.56	0.51	0.51	0.49	0.84	0.86	0.43	0.33	0.15	0.02	0.20
d, Delay for Lane Group [s/veh]	25.06	7.37	7.37	25.12	11.85	12.31	21.91	18.99	26.08	17.28	18.23
Lane Group LOS	C	A	A	C	B	B	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.07	2.56	2.55	0.80	6.07	6.14	1.62	0.90	0.28	0.05	0.54
50th-Percentile Queue Length [ft/ln]	26.85	64.07	63.85	20.06	151.77	153.54	40.61	22.57	7.08	1.14	13.45
95th-Percentile Queue Length [veh/ln]	1.93	4.61	4.60	1.44	10.11	10.21	2.92	1.62	0.51	0.08	0.97
95th-Percentile Queue Length [ft/ln]	48.33	115.33	114.93	36.11	252.80	255.15	73.10	40.62	12.74	2.06	24.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.06	7.37	7.37	25.12	12.06	12.31	21.91	21.91	18.99	26.08	17.28	18.23
Movement LOS	C	A	A	C	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	8.78			12.58			20.80			20.32		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	12.07											
Intersection LOS	B											
Intersection V/C	0.738											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	838	1132	61	34	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	79	132	25	8	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	917	1264	86	42	142
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	258	355	24	12	40
Total Analysis Volume [veh/h]	118	1030	1420	97	47	160
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	60	49	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	31	23	23	6	6
g / C, Green / Cycle	0.12	0.71	0.52	0.52	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.07	0.30	0.42	0.43	0.03	0.10
s, saturation flow rate [veh/h]	1619	3427	1800	1760	1619	1530
c, Capacity [veh/h]	199	2446	939	918	240	227
d1, Uniform Delay [s]	18.05	2.55	8.60	8.75	16.25	17.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.80	0.12	1.71	1.96	0.39	3.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.42	0.81	0.83	0.20	0.70
d, Delay for Lane Group [s/veh]	20.84	2.67	10.31	10.71	16.64	21.58
Lane Group LOS	C	A	B	B	B	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.13	0.46	4.23	4.35	0.38	1.57
50th-Percentile Queue Length [ft/ln]	28.33	11.52	105.78	108.74	9.59	39.22
95th-Percentile Queue Length [veh/ln]	2.04	0.83	7.60	7.77	0.69	2.82
95th-Percentile Queue Length [ft/ln]	51.00	20.74	190.11	194.25	17.26	70.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.84	2.67	10.50	10.71	16.64	21.58
Movement LOS	C	A	B	B	B	C
d_A, Approach Delay [s/veh]	4.53		10.51		20.46	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	8.84					
Intersection LOS	A					
Intersection V/C	0.706					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	118	607	44	60	908	171	158	160	93	75	246	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	61	12	17	65	64	40	21	13	6	16	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	668	56	77	973	235	198	181	106	81	262	69
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	194	16	22	283	68	57	53	31	24	76	20
Total Analysis Volume [veh/h]	159	776	65	89	1130	273	230	210	123	94	304	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	20	0	65	58	0	35	34	0	35	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	76	76	76	76	76	76	76	76	76	76	76	76
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	17	37	37	10	30	30	20	0	0	20	0	0
g / C, Green / Cycle	0.22	0.49	0.49	0.13	0.39	0.39	0.26	0.00	0.00	0.26	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.18	0.24	0.24	0.10	0.33	0.18	0.21	0.12	0.08	0.08	0.17	0.05
s, saturation flow rate [veh/h]	901	1800	1752	901	3427	1530	1092	1800	1530	1190	1800	1530
c, Capacity [veh/h]	274	880	856	190	1356	605	353	0	0	377	0	0
d1, Uniform Delay [s]	29.61	13.03	13.03	33.71	20.73	16.91	28.06	0.00	0.00	24.05	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.94	0.42	0.43	1.78	1.41	0.53	2.03	0.00	0.00	0.34	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

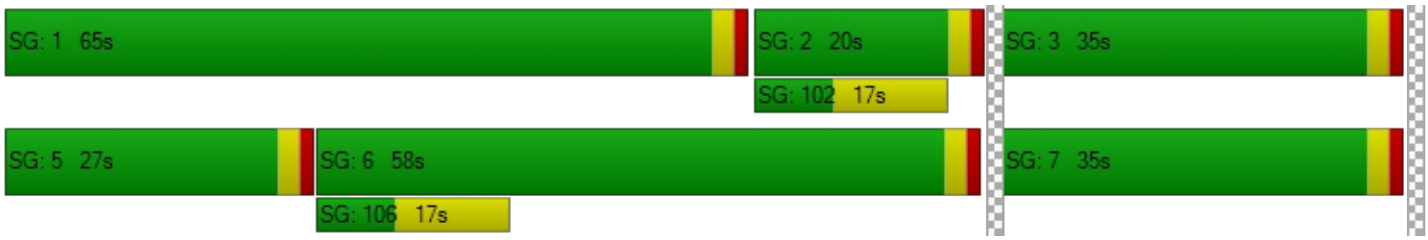
X, volume / capacity	0.58	0.48	0.48	0.47	0.83	0.45	0.65	0.00	0.00	0.25	0.00	0.00
d, Delay for Lane Group [s/veh]	31.55	13.45	13.46	35.49	22.14	17.44	30.09	0.00	0.00	24.39	0.00	0.00
Lane Group LOS	C	B	B	D	C	B	C	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.86	4.54	4.42	1.67	8.63	3.39	4.05	0.00	0.00	1.39	0.00	0.00
50th-Percentile Queue Length [ft/ln]	71.42	113.48	110.50	41.87	215.77	84.66	101.33	0.00	0.00	34.65	0.00	0.00
95th-Percentile Queue Length [veh/ln]	5.14	8.03	7.87	3.01	13.45	6.10	7.30	0.00	0.00	2.49	0.00	0.00
95th-Percentile Queue Length [ft/ln]	128.55	200.83	196.69	75.37	336.22	152.38	182.39	0.00	0.00	62.37	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.55	13.45	13.46	35.49	22.14	17.44	30.09	0.00	0.00	24.39	0.00	0.00
Movement LOS	C	B	B	D	C	B	C	A	A	C	A	A
d_A, Approach Delay [s/veh]	16.33			22.07			12.29			4.80		
Approach LOS	B			C			B			A		
d_I, Intersection Delay [s/veh]	16.55											
Intersection LOS	B											
Intersection V/C	0.801											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	311	11	49	770	320	159	33	37	3	38	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	30	0	0	16	46	25	0	13	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	341	11	49	786	366	184	33	50	3	38	31
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	90	3	13	209	97	49	9	13	1	10	8
Total Analysis Volume [veh/h]	85	362	12	52	834	389	195	35	53	3	40	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	24	0	75	85	0	0	31	0	0	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	21	21	3	19	19	11	11
g / C, Green / Cycle	0.10	0.47	0.47	0.08	0.45	0.45	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.05	0.10	0.10	0.03	0.36	0.36	0.20	0.04
s, saturation flow rate [veh/h]	1619	1800	1780	1619	1800	1610	1408	1700
c, Capacity [veh/h]	169	853	844	123	803	718	483	501
d1, Uniform Delay [s]	18.55	6.77	6.77	19.32	10.46	10.52	15.67	13.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.32	0.13	0.13	2.30	1.91	2.24	1.13	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

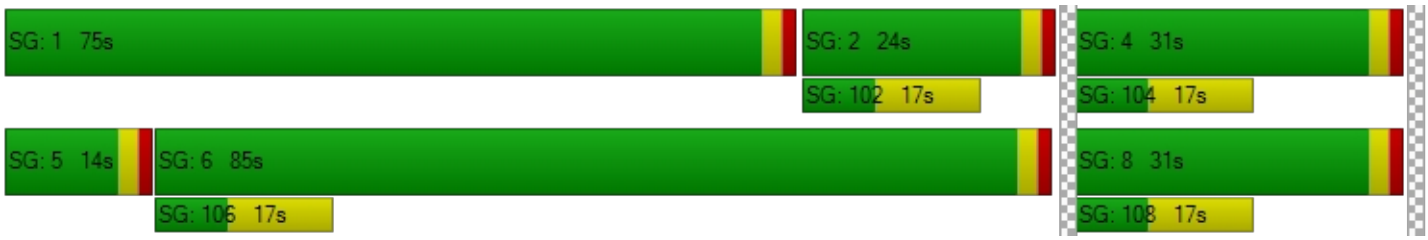
X, volume / capacity	0.50	0.22	0.22	0.42	0.80	0.81	0.59	0.15
d, Delay for Lane Group [s/veh]	20.88	6.89	6.90	21.62	12.37	12.76	16.80	13.23
Lane Group LOS	C	A	A	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.83	0.77	0.76	0.53	4.27	3.94	2.38	0.52
50th-Percentile Queue Length [ft/ln]	20.64	19.14	19.00	13.15	106.75	98.48	59.51	12.98
95th-Percentile Queue Length [veh/ln]	1.49	1.38	1.37	0.95	7.66	7.09	4.28	0.93
95th-Percentile Queue Length [ft/ln]	37.14	34.45	34.20	23.67	191.47	177.27	107.11	23.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.88	6.90	6.90	21.62	12.46	12.76	16.80	16.80	16.80	13.23	13.23	13.23
Movement LOS	C	A	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	9.49			12.92			16.80			13.23		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.70											
Intersection LOS	B											
Intersection V/C	0.712											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

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Scenario 6 Opening Year (2020) Without Project Evening Peak Hour

Report File: C:\...\PMOYWO.pdf

10/1/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.131	64.2	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.005	49.5	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.820	29.1	C
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.762	16.4	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	2.115	92.7	F
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.954	28.8	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	324.9	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	1.036	142.8	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Left	1.519	907.2	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	115.7	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	2.141	34.3	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.834	73.6	E
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.776	43.7	E
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.990	48.8	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.709	11.5	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.659	12.2	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.494	25.8	D

24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	1.072	177.6	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.492	24.3	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.152	15.9	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.652	14.7	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.860	3.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	106.358	270.9	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.656	164.0	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.638	25.3	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.873	24.2	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.056	58.8	E
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.696	14.6	B
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.859	31.1	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.860	33.5	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.707	11.7	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.676	8.1	A
39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.823	17.8	B
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.866	26.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	64.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.131

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	313	1437	0	0	1037	633	0	0	0	293	4	533
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	201	134	0	0	68	15	0	0	0	79	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	514	1571	0	0	1105	648	0	0	0	372	4	545
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	133	407	0	0	286	168	0	0	0	96	1	141
Total Analysis Volume [veh/h]	533	1628	0	0	1145	672	0	0	0	385	4	565
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	40	92	0	0	52	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	37	89	49	49		35	35
g / C, Green / Cycle	0.28	0.68	0.38	0.38		0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.33	0.48	0.23	0.44		0.29	0.31
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1677	1530
c, Capacity [veh/h]	461	2346	1847	576		452	412
d1, Uniform Delay [s]	46.67	12.38	33.09	40.68		47.67	47.67
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	75.83	1.72	1.58	92.51		37.57	74.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.16	0.69	0.62	1.17		1.06	1.15
d, Delay for Lane Group [s/veh]	122.51	14.10	34.66	133.20		85.24	122.60
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	24.55	13.79	10.06	32.99		19.30	21.88
50th-Percentile Queue Length [ft/ln]	613.66	344.67	251.56	824.68		482.38	547.08
95th-Percentile Queue Length [veh/ln]	35.60	19.88	15.26	46.97		27.44	32.07
95th-Percentile Queue Length [ft/ln]	890.07	496.91	381.62	1174.35		686.11	801.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	122.51	14.10	0.00	0.00	34.66	133.20	0.00	0.00	0.00	85.24	85.24	116.74
Movement LOS	F	B			C	F				F	F	F
d_A, Approach Delay [s/veh]	40.84			71.11			0.00			103.85		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	64.18											
Intersection LOS	E											
Intersection V/C	1.131											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	49.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.005

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1091	385	395	934	0	679	2	176	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	315	148	9	138	0	20	0	106	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1406	533	404	1072	0	699	2	282	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	369	140	106	282	0	184	1	74	0	0	0
Total Analysis Volume [veh/h]	0	1477	560	424	1126	0	734	2	296	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	49	0	36	85	0	0	45	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	46	46	33	82	42	42	
g / C, Green / Cycle	0.35	0.35	0.25	0.63	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.37	0.26	0.33	0.31	0.33	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1607	
c, Capacity [veh/h]	1734	541	412	2162	523	519	
d1, Uniform Delay [s]	39.01	42.18	48.67	13.24	43.31	44.18	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.51	47.98	28.71	0.90	10.82	24.29	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.85	1.03	1.03	0.52	0.96	1.02	
d, Delay for Lane Group [s/veh]	44.52	90.16	77.38	14.14	54.14	68.46	
Lane Group LOS	D	F	F	B	D	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	15.33	24.37	16.59	9.05	17.26	20.07	
50th-Percentile Queue Length [ft/ln]	383.19	609.37	414.79	226.30	431.55	501.84	
95th-Percentile Queue Length [veh/ln]	21.75	33.26	23.69	13.99	24.08	27.83	
95th-Percentile Queue Length [ft/ln]	543.71	831.48	592.15	349.65	601.90	695.78	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	44.52	90.16	77.38	14.14	0.00	58.57	68.46	68.46	0.00	0.00	0.00
Movement LOS		D	F	F	B		E	E	E			
d_A, Approach Delay [s/veh]	57.07			31.44			61.51			0.00		
Approach LOS	E			C			E			A		
d_I, Intersection Delay [s/veh]	49.46											
Intersection LOS	D											
Intersection V/C	1.005											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.820

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	896	39	102	740	100	250	371	115	21	125	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	279	6	23	182	32	91	2	11	10	4	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	77	1175	45	125	922	132	341	373	126	31	129	147
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	302	12	32	237	34	88	96	32	8	33	38
Total Analysis Volume [veh/h]	79	1208	46	128	948	136	350	383	129	32	133	151
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	57	0	16	52	0	37	46	0	11	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	87	87	87	87	87	87	87	87	87	87	87	87
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	34	34	9	37	37	21	28	28	4	11	11
g / C, Green / Cycle	0.07	0.39	0.39	0.10	0.42	0.42	0.24	0.33	0.33	0.04	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.35	0.35	0.08	0.31	0.31	0.22	0.11	0.08	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1619	1800	1777	1619	1800	1722	1619	3427	1530	1619	1800	1530
c, Capacity [veh/h]	111	707	698	161	763	730	393	1119	499	70	229	194
d1, Uniform Delay [s]	39.75	24.72	24.74	38.38	20.88	20.91	31.88	22.27	21.60	40.68	35.87	36.86
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.13	4.15	4.26	8.55	1.33	1.40	7.02	0.18	0.27	4.52	2.34	6.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

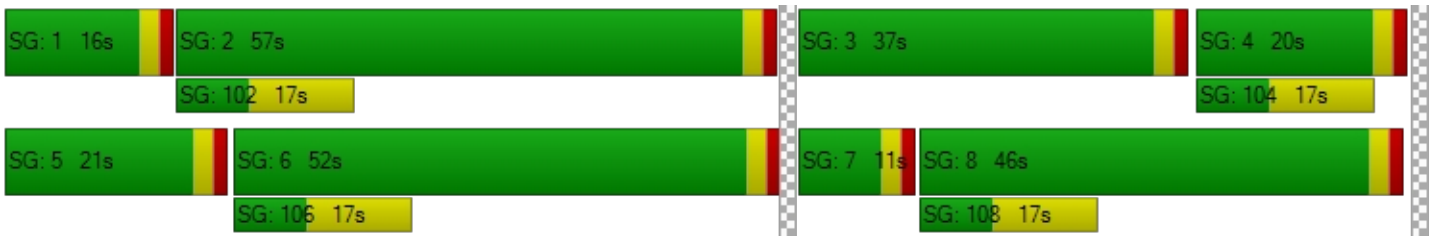
X, volume / capacity	0.71	0.89	0.89	0.79	0.73	0.73	0.89	0.34	0.26	0.45	0.58	0.78
d, Delay for Lane Group [s/veh]	47.88	28.87	29.00	46.94	22.21	22.31	38.90	22.45	21.87	45.21	38.21	43.41
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.88	12.25	12.15	3.01	9.10	8.76	7.65	2.92	1.92	0.75	2.76	3.40
50th-Percentile Queue Length [ft/ln]	47.01	306.33	303.69	75.16	227.56	218.88	191.25	72.91	48.12	18.72	69.10	85.12
95th-Percentile Queue Length [veh/ln]	3.38	17.99	17.86	5.41	14.05	13.61	12.19	5.25	3.46	1.35	4.98	6.13
95th-Percentile Queue Length [ft/ln]	84.61	449.85	446.59	135.29	351.26	340.20	304.65	131.24	86.62	33.70	124.38	153.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.88	28.93	29.00	46.94	22.25	22.31	38.90	22.45	21.87	45.21	38.21	43.41
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	30.06			24.87			29.04			41.40		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	29.10											
Intersection LOS	C											
Intersection V/C	0.820											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	103	886	56	63	716	59	66	161	104	36	118	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	263	5	0	173	30	34	3	12	6	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	1149	61	63	889	89	100	164	116	42	123	37
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	311	17	17	241	24	27	44	31	11	33	10
Total Analysis Volume [veh/h]	131	1245	66	68	963	96	108	178	126	46	133	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	21	78	0	11	68	0	0	41	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	53	53	53	53	53	53	53	53
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	23	23	4	22	22	16	16
g / C, Green / Cycle	0.11	0.44	0.44	0.08	0.41	0.41	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.37	0.37	0.04	0.30	0.30	0.27	0.15
s, saturation flow rate [veh/h]	1619	1800	1768	1619	1800	1743	1554	1489
c, Capacity [veh/h]	183	790	776	136	738	714	563	540
d1, Uniform Delay [s]	22.69	13.19	13.22	23.23	13.18	13.18	17.18	14.56
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.10	2.42	2.52	2.81	1.40	1.45	1.85	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.84	0.84	0.50	0.73	0.73	0.73	0.41
d, Delay for Lane Group [s/veh]	27.79	15.60	15.74	26.04	14.58	14.64	19.04	15.05
Lane Group LOS	C	B	B	C	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.70	6.12	6.07	0.86	4.73	4.59	4.36	1.90
50th-Percentile Queue Length [ft/ln]	42.62	152.93	151.67	21.41	118.22	114.87	109.08	47.51
95th-Percentile Queue Length [veh/ln]	3.07	10.17	10.11	1.54	8.30	8.11	7.79	3.42
95th-Percentile Queue Length [ft/ln]	76.71	254.33	252.66	38.54	207.38	202.75	194.72	85.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.79	15.67	15.74	26.04	14.61	14.64	19.04	19.04	19.04	15.05	15.05	15.05
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.77			15.30			19.04			15.05		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.43											
Intersection LOS	B											
Intersection V/C	0.762											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	92.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.115

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	944	65	110	754	43	57	190	51	70	69	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	172	9	27	142	16	39	14	23	21	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	1116	74	137	896	59	96	204	74	91	79	101
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	286	19	35	229	15	25	52	19	23	20	26
Total Analysis Volume [veh/h]	87	1142	76	140	917	60	98	209	76	93	81	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	18	18	6	19	19	27	27	27	27
g / C, Green / Cycle	0.09	0.29	0.29	0.11	0.31	0.31	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.05	0.34	0.34	0.09	0.27	0.27	1.08	0.05	1.47	0.07
s, saturation flow rate [veh/h]	1619	1800	1761	1619	1800	1761	285	1530	118	1530
c, Capacity [veh/h]	147	527	515	175	558	546	207	688	145	688
d1, Uniform Delay [s]	26.27	21.28	21.28	26.18	19.74	19.74	14.80	9.59	20.67	9.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.25	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.74	94.40	95.90	8.06	18.30	18.67	223.35	0.07	118.54	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	1.17	1.17	0.80	0.88	0.89	1.48	0.11	1.20	0.15
d, Delay for Lane Group [s/veh]	30.01	115.68	117.19	34.25	38.04	38.41	238.14	9.66	139.21	9.87
Lane Group LOS	C	F	F	C	D	D	F	A	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.28	20.45	20.22	2.23	8.71	8.58	14.31	0.52	6.77	0.71
50th-Percentile Queue Length [ft/ln]	32.10	511.24	505.49	55.84	217.63	214.44	357.71	12.93	169.24	17.87
95th-Percentile Queue Length [veh/ln]	2.31	30.49	30.23	4.02	13.54	13.38	25.12	0.93	12.19	1.29
95th-Percentile Queue Length [ft/ln]	57.77	762.23	755.66	100.51	338.60	334.52	627.92	23.27	304.63	32.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.01	116.38	117.19	34.25	38.21	38.41	238.14	238.14	9.66	139.21	139.21	9.87
Movement LOS	C	F	F	C	D	D	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	110.67			37.72			192.80			91.12		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	92.68											
Intersection LOS	F											
Intersection V/C	2.115											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.954

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	115	41	42	158	0	0	1	2	105	2	110
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1289	119	354	1126	15	21	9	23	168	16	266
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	333	31	92	291	4	5	2	6	43	4	69
Total Analysis Volume [veh/h]	14	1333	123	366	1164	16	22	9	24	174	17	275
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	32	0	36	57	0	0	22	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	40	40	20	58	58	18	18	18
g / C, Green / Cycle	0.02	0.44	0.44	0.23	0.64	0.64	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.39	0.39	0.20	0.31	0.31	0.19	0.23	0.17
s, saturation flow rate [veh/h]	1810	1900	1844	1810	1900	1891	293	816	1615
c, Capacity [veh/h]	43	834	810	412	1221	1215	115	240	323
d1, Uniform Delay [s]	43.28	23.15	23.26	33.71	8.35	8.35	31.02	37.33	34.74
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.27	12.99	13.94	6.65	1.37	1.38	3.09	5.98	6.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

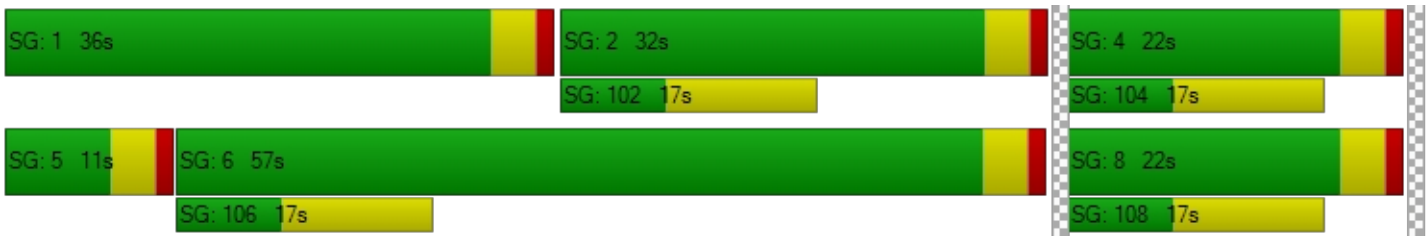
X, volume / capacity	0.32	0.88	0.89	0.89	0.48	0.48	0.48	0.80	0.85
d, Delay for Lane Group [s/veh]	47.55	36.14	37.20	40.36	9.72	9.74	34.11	43.31	41.00
Lane Group LOS	D	D	D	D	A	A	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.36	16.39	16.29	8.31	5.65	5.64	1.07	4.63	6.24
50th-Percentile Queue Length [ft/ln]	8.88	409.77	407.17	207.76	141.20	140.93	26.77	115.65	155.97
95th-Percentile Queue Length [veh/ln]	0.64	23.03	22.91	13.04	9.55	9.53	1.93	8.15	10.33
95th-Percentile Queue Length [ft/ln]	15.98	575.76	572.63	325.96	238.64	238.28	48.19	203.83	258.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.55	36.62	37.20	40.36	9.73	9.74	34.11	34.11	34.11	43.31	43.31	41.00
Movement LOS	D	D	D	D	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	36.77			16.98			34.11			41.94		
Approach LOS	D			B			C			D		
d_I, Intersection Delay [s/veh]	28.76											
Intersection LOS	C											
Intersection V/C	0.954											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	324.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	158	0	0	265	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1394	0	0	1309	15	24	0	36	0	0	1
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	355	0	0	333	4	6	0	9	0	0	0
Total Analysis Volume [veh/h]	18	1420	0	0	1333	15	24	0	37	0	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.79	0.00	0.09	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.21	0.00	0.00	12.41	0.00	0.00	245.48	324.90	135.23	144.50	205.90	14.48
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	2.70	0.00	0.00	0.00	0.00	0.00	108.02	108.02	108.02	0.20	0.20	0.20
d_A, Approach Delay [s/veh]	0.15			0.00			178.61			14.48		
Approach LOS	A			A			F			B		
d_I, Intersection Delay [s/veh]	3.91											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	142.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.036

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	52	46	108	110	47	26	21	23	79	38	80
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	444	521	571	588	75	58	85	26	388	90	556
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	115	135	148	152	19	15	22	7	100	23	0
Total Analysis Volume [veh/h]	62	459	539	590	608	78	60	88	27	401	93	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	11	22	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	390	390	390	390	390	390	390	390	390	390
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	120	120	120	224	224	27	27	107	107
g / C, Green / Cycle	0.04	0.31	0.31	0.31	0.58	0.58	0.07	0.07	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.33	0.33	0.17	0.05	0.03	0.06	0.27	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1824	1826	1615
c, Capacity [veh/h]	71	1116	498	556	2085	931	124	125	502	444
d1, Uniform Delay [s]	185.91	106.54	134.51	134.79	41.99	36.71	174.62	180.19	140.15	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.39	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.82	0.24	64.27	55.69	0.08	0.04	2.92	22.49	31.82	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

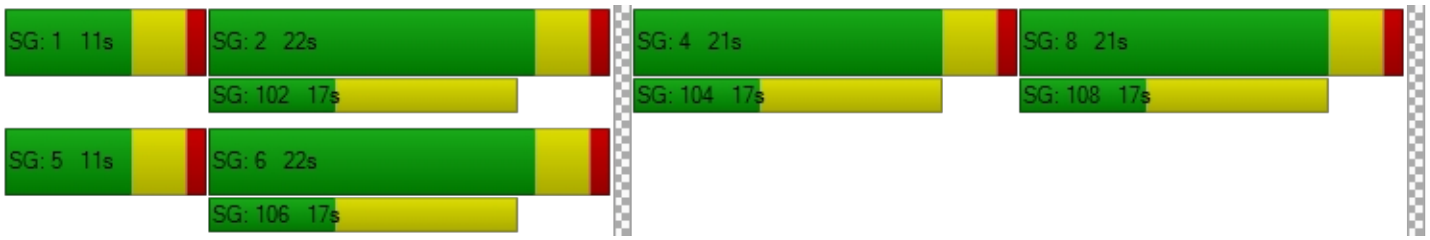
X, volume / capacity	0.87	0.41	1.08	1.06	0.29	0.08	0.49	0.92	0.98	0.00
d, Delay for Lane Group [s/veh]	211.72	106.78	198.78	190.48	42.07	36.75	177.55	202.68	171.97	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.00	18.98	60.79	66.42	15.75	3.54	6.18	12.80	55.61	0.00
50th-Percentile Queue Length [ft/ln]	175.04	474.38	1519.83	1660.45	393.83	88.45	154.50	320.08	1390.26	0.00
95th-Percentile Queue Length [veh/ln]	11.34	26.12	77.79	83.33	22.26	6.37	10.26	18.67	67.84	0.00
95th-Percentile Queue Length [ft/ln]	283.53	652.98	1944.77	2083.17	556.55	159.22	256.43	466.79	1696.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	211.72	106.78	198.78	190.48	42.07	36.75	177.55	202.68	202.68	171.97	171.97	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	159.70			110.37			194.06			171.97		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	142.77											
Intersection LOS	F											
Intersection V/C	1.036											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	907.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.519

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	900	83	123	722	5	4	15	15	26	17	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	212	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1038	83	123	934	5	4	15	15	26	17	37
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	267	21	32	240	1	1	4	4	7	4	10
Total Analysis Volume [veh/h]	18	1067	85	126	960	5	4	15	15	27	17	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.21	0.01	0.00	0.22	0.64	0.03	1.52	0.64	0.08
d_M, Delay for Movement [s/veh]	10.12	0.00	0.00	12.37	0.00	0.00	371.56	329.13	181.89	907.19	841.02	711.88
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	0.74	0.37	0.00	3.31	3.31	3.31	9.07	9.07	9.07
95th-Percentile Queue Length [ft/ln]	1.92	0.96	0.00	18.57	9.29	0.00	82.80	82.80	82.80	226.64	226.64	226.64
d_A, Approach Delay [s/veh]	0.16			1.43			269.16			802.96		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	32.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	115.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	978	29	21	742	3	0	0	10	18	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	212	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1116	29	21	954	3	0	0	10	18	0	22
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	293	8	6	250	1	0	0	3	5	0	6
Total Analysis Volume [veh/h]	7	1171	30	22	1001	3	0	0	10	19	0	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.02	0.35	0.00	0.05
d_M, Delay for Movement [s/veh]	10.21	0.00	0.00	11.36	0.00	0.00	64.85	98.08	12.06	93.32	115.69	34.38
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	D
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.11	0.06	0.00	0.06	0.06	0.06	1.67	1.67	1.67
95th-Percentile Queue Length [ft/ln]	0.76	0.38	0.00	2.77	1.39	0.00	1.47	1.47	1.47	41.64	41.64	41.64
d_A, Approach Delay [s/veh]	0.06			0.24			12.06			61.04		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	1.31											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.141

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	837	47	18	657	22	40	25	25	69	29	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	109	9	0	193	41	29	10	23	10	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	946	56	18	850	63	69	35	48	79	47	13
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	258	15	5	231	17	19	10	13	22	13	4
Total Analysis Volume [veh/h]	108	1031	61	20	926	69	75	38	52	86	51	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	22	22	2	18	18	24	24	24	24
g / C, Green / Cycle	0.10	0.37	0.37	0.03	0.30	0.30	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29	0.29	0.01	0.27	0.27	1.34	0.03	1.39	0.01
s, saturation flow rate [veh/h]	1810	1900	1863	1810	1900	1854	85	1615	99	1615
c, Capacity [veh/h]	181	695	681	65	573	560	133	645	137	645
d1, Uniform Delay [s]	25.98	17.08	17.09	28.33	20.00	20.00	23.49	11.24	23.72	10.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.23	0.11	0.25	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	9.05	9.25	2.63	17.22	17.56	25.79	0.05	55.77	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.79	0.79	0.31	0.88	0.88	0.85	0.08	1.00	0.02
d, Delay for Lane Group [s/veh]	29.12	26.13	26.34	30.96	37.22	37.56	49.28	11.30	79.50	10.99
Lane Group LOS	C	C	C	C	D	D	D	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.56	7.73	7.62	0.32	8.76	8.60	2.52	0.39	4.00	0.10
50th-Percentile Queue Length [ft/ln]	38.90	193.17	190.59	7.88	218.90	214.96	62.89	9.84	100.08	2.58
95th-Percentile Queue Length [veh/ln]	2.80	12.29	12.15	0.57	13.61	13.41	4.53	0.71	7.21	0.19
95th-Percentile Queue Length [ft/ln]	70.01	307.14	303.80	14.19	340.22	335.19	113.20	17.71	180.14	4.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.12	26.23	26.34	30.96	37.37	37.56	49.28	49.28	11.30	79.50	79.50	10.99
Movement LOS	C	C	C	C	D	D	D	D	B	E	E	B
d_A, Approach Delay [s/veh]	26.49			37.26			37.31			73.14		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	34.30											
Intersection LOS	C											
Intersection V/C	2.141											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	73.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	903	0	0	841	28	30	0	136	461	103	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	110	0	0	218	8	6	0	30	49	33	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	1013	0	0	1059	36	36	0	166	510	136	99
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	270	0	0	282	10	10	0	44	136	36	26
Total Analysis Volume [veh/h]	92	1079	0	0	1128	38	38	0	177	543	145	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	59	0	0	59	0	21	0	0	0	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	265	265	265	265	265	265	265	265
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	119	119	119	119	31	31	102	102
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.12	0.12	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.19	0.30	0.31	0.31	0.02	0.11	0.38	0.07
s, saturation flow rate [veh/h]	489	3618	1900	1878	1810	1615	1828	1615
c, Capacity [veh/h]	123	1631	856	847	214	191	705	623
d1, Uniform Delay [s]	105.20	56.82	57.53	57.82	105.03	115.48	79.98	53.34
k, delay calibration	0.11	0.11	0.24	0.24	0.11	0.11	0.36	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.65	0.46	2.10	2.25	0.39	17.22	23.29	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

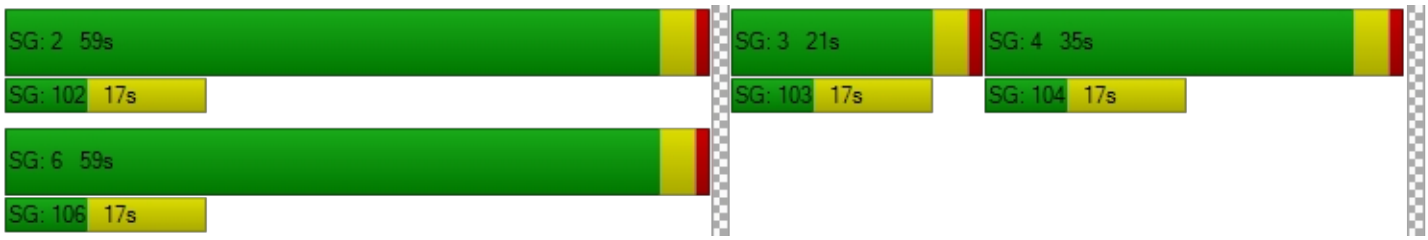
X, volume / capacity	0.75	0.66	0.68	0.69	0.18	0.93	0.98	0.17
d, Delay for Lane Group [s/veh]	113.85	57.29	59.62	60.07	105.43	132.71	103.27	53.47
Lane Group LOS	F	E	E	E	F	F	F	D
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.66	28.92	32.03	32.22	2.43	13.22	51.18	4.77
50th-Percentile Queue Length [ft/ln]	166.56	723.09	800.65	805.45	60.68	330.59	1279.50	119.18
95th-Percentile Queue Length [veh/ln]	10.90	37.74	41.31	41.53	4.37	19.19	62.91	8.35
95th-Percentile Queue Length [ft/ln]	272.38	943.59	1032.67	1038.17	109.23	479.69	1572.81	208.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	113.85	57.29	0.00	0.00	59.84	60.07	105.43	0.00	132.71	103.27	103.27	53.47
Movement LOS	F	E			E	E	F		F	F	F	D
d_A, Approach Delay [s/veh]	61.73			59.85			127.89			96.67		
Approach LOS	E			E			F			F		
d_I, Intersection Delay [s/veh]	73.61											
Intersection LOS	E											
Intersection V/C	0.834											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	43.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	233	1000	927	485	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	127	190	107	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1127	1117	592	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	298	295	156	0	0
Total Analysis Volume [veh/h]	268	1191	1181	626	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.78	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	43.70	0.00	0.00	0.00	0.00	0.00
Movement LOS	E	A	A	A		
95th-Percentile Queue Length [veh/ln]	6.30	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	157.53	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.03		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.59					
Intersection LOS	E					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	48.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.990

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	601	299	84	836	0	625	36	389	15	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	37	81	109	0	68	0	22	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	681	336	165	945	0	693	36	411	15	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	181	89	44	252	0	185	10	109	4	0	1
Total Analysis Volume [veh/h]	0	725	358	176	1006	0	738	38	438	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	40	0	15	55	0	0	39	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	11	51	49	49	3	3
g / C, Green / Cycle	0.31	0.31	0.10	0.44	0.42	0.42	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.29	0.32	0.10	0.28	0.43	0.27	0.01	0.00
s, saturation flow rate [veh/h]	1900	1701	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	597	535	173	1609	766	682	52	46
d1, Uniform Delay [s]	37.81	39.42	52.00	24.55	33.23	26.35	54.73	54.38
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.86	42.03	36.06	1.85	18.59	1.02	3.28	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

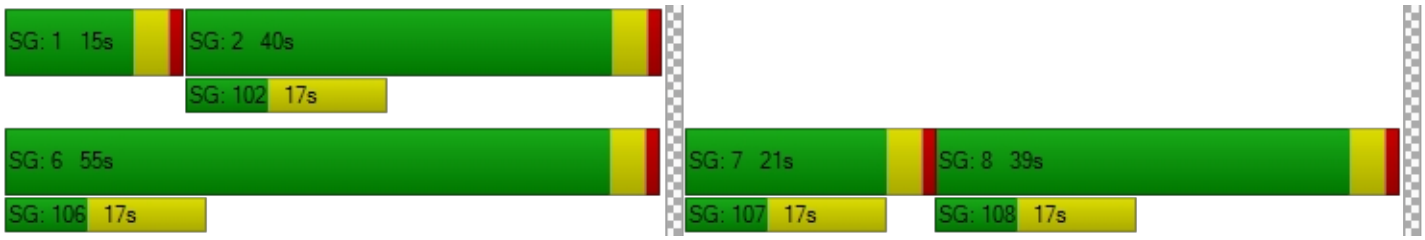
X, volume / capacity	0.91	1.01	1.02	0.63	1.01	0.64	0.31	0.09
d, Delay for Lane Group [s/veh]	57.67	81.45	88.06	26.40	51.82	27.37	58.01	55.16
Lane Group LOS	E	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	17.71	21.10	6.71	10.77	24.56	9.54	0.50	0.12
50th-Percentile Queue Length [ft/ln]	442.86	527.46	167.78	269.37	614.02	238.55	12.54	3.08
95th-Percentile Queue Length [veh/ln]	24.62	28.87	11.03	16.16	33.02	14.61	0.90	0.22
95th-Percentile Queue Length [ft/ln]	615.42	721.71	275.73	403.96	825.61	365.20	22.58	5.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	63.69	81.45	88.06	26.40	0.00	51.82	51.82	27.37	58.01	0.00	55.16
Movement LOS		E	F	F	C		D	D	C	E		E
d_A, Approach Delay [s/veh]	69.56			35.58			43.00			57.44		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	48.80											
Intersection LOS	D											
Intersection V/C	0.990											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	567	65	187	935	155	103	58	12	13	38	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	72	2	40	86	5	4	0	1	2	0	41
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	639	67	227	1021	160	107	58	13	15	38	120
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	167	18	59	267	42	28	15	3	4	10	31
Total Analysis Volume [veh/h]	35	668	70	237	1068	167	112	61	14	16	40	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	27	0	72	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	37	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	11	11	7	15	15	7	7	7
g / C, Green / Cycle	0.06	0.30	0.30	0.18	0.42	0.42	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.18	0.04	0.13	0.30	0.10	0.16	0.03	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1149	1809	1615
c, Capacity [veh/h]	107	1075	480	326	1513	676	383	484	320
d1, Uniform Delay [s]	16.69	11.20	9.55	14.30	8.88	6.98	14.83	12.25	12.90
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	0.59	0.14	3.09	0.61	0.19	0.96	0.11	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

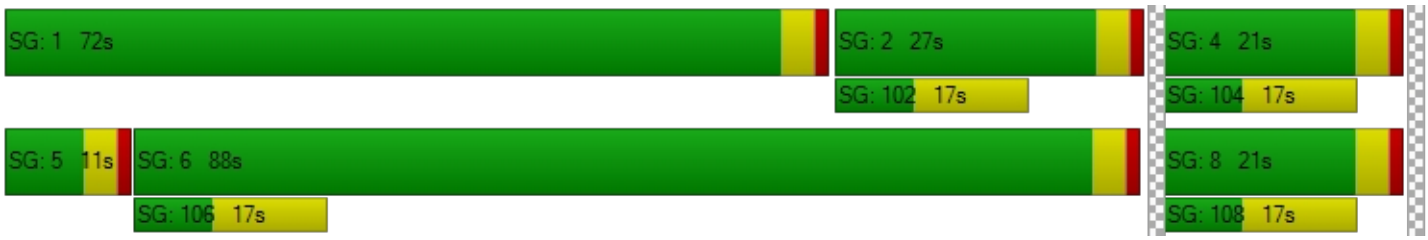
X, volume / capacity	0.33	0.62	0.15	0.73	0.71	0.25	0.49	0.12	0.39
d, Delay for Lane Group [s/veh]	18.45	11.80	9.69	17.39	9.49	7.17	15.79	12.36	13.68
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.29	1.86	0.34	1.79	2.48	0.61	1.34	0.32	0.80
50th-Percentile Queue Length [ft/ln]	7.35	46.59	8.39	44.82	61.99	15.33	33.62	8.03	19.92
95th-Percentile Queue Length [veh/ln]	0.53	3.35	0.60	3.23	4.46	1.10	2.42	0.58	1.43
95th-Percentile Queue Length [ft/ln]	13.23	83.87	15.10	80.67	111.58	27.60	60.52	14.45	35.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.45	11.80	9.69	17.39	9.49	7.17	15.79	15.79	15.79	12.36	12.36	13.68
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.91			10.50			15.79			13.28		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.49											
Intersection LOS	B											
Intersection V/C	0.709											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.659

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	137	0	143	108	385	0	0	214	112
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	46	0	175	74	10	0	0	35	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	183	0	318	182	395	0	0	249	134
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	49	0	84	48	105	0	0	66	36
Total Analysis Volume [veh/h]	0	0	0	194	0	338	193	420	0	0	265	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	24	0	0	24	0	15	25	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	10	6	13	13	0	7	7
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.17	0.37	0.37	0.00	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.13	0.21	0.11	0.12	0.00	0.00	0.11	0.12
s, saturation flow rate [veh/h]	1059	1900	1440	1615	1810	3618	1615	1810	1900	1684
c, Capacity [veh/h]	255	548	548	465	310	1333	595	0	375	332
d1, Uniform Delay [s]	0.00	0.00	11.74	11.20	13.44	7.89	0.00	0.00	12.67	12.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00	0.39	2.18	2.05	0.13	0.00	0.00	1.33	1.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

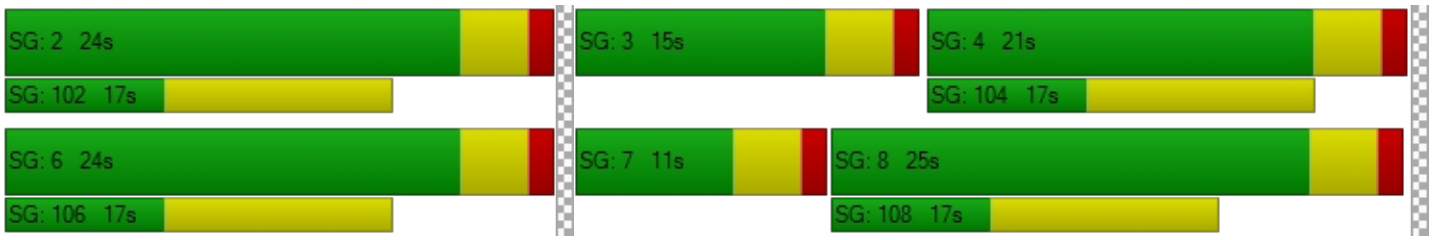
X, volume / capacity	0.00	0.00	0.35	0.73	0.62	0.32	0.00	0.00	0.56	0.59
d, Delay for Lane Group [s/veh]	0.00	0.00	12.13	13.38	15.49	8.02	0.00	0.00	14.01	14.39
Lane Group LOS	A	A	B	B	B	A	A	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	0.00	1.07	2.00	1.29	0.79	0.00	0.00	1.30	1.23
50th-Percentile Queue Length [ft/ln]	0.00	0.00	26.73	49.96	32.18	19.80	0.00	0.00	32.58	30.77
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.92	3.60	2.32	1.43	0.00	0.00	2.35	2.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	48.12	89.93	57.93	35.65	0.00	0.00	58.64	55.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.13	13.38	13.38	15.49	8.02	0.00	0.00	14.08	14.39
Movement LOS	A	A	A	B	B	B	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	0.00			12.92			10.37			14.19		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.25											
Intersection LOS	B											
Intersection V/C	0.659											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	25.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	9	0	0	0	0	23	33	2	31	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	1	10	3	4	5	7	349	130	2	199	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	0	3	1	1	1	2	97	36	1	55	3
Total Analysis Volume [veh/h]	170	1	11	3	4	6	8	386	144	2	220	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.49	0.00	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	25.77	25.40	21.24	15.70	16.24	9.63	7.69	0.00	0.00	8.44	0.00	0.00
Movement LOS	D	D	C	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.81	2.81	2.81	0.09	0.09	0.09	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	70.33	70.33	70.33	2.18	2.18	2.18	0.39	0.39	0.39	0.14	0.14	0.14
d_A, Approach Delay [s/veh]	25.49			13.06			0.11			0.07		
Approach LOS	D			B			A			A		
d_I, Intersection Delay [s/veh]	5.05											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	177.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.072

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	40	847	443	80	93	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	54	78	15	26	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	901	521	95	119	39
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	11	232	134	24	31	0
Total Analysis Volume [veh/h]	42	926	535	98	122	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	1.07	0.00
d_M, Delay for Movement [s/veh]	8.92	0.00	0.00	0.00	177.58	11.99
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	7.30	0.00
95th-Percentile Queue Length [ft/ln]	3.43	0.00	0.00	0.00	182.46	0.00
d_A, Approach Delay [s/veh]	0.39		0.00		177.58	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	12.79					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	24.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	755	23	47	395	65	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	55	0	0	80	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	810	23	47	475	65	169
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	212	6	12	124	17	44
Total Analysis Volume [veh/h]	846	24	49	496	68	177
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.00	0.17	0.49
d_M, Delay for Movement [s/veh]	0.00	0.00	9.90	0.00	16.08	24.35
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.20	0.00	0.62	2.61
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.99	0.00	15.47	65.27
d_A, Approach Delay [s/veh]	0.00		0.89		22.05	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.55					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.152

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	533	427	23	39	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	46	80	0	9	58
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	579	507	23	48	151
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	179	156	7	15	47
Total Analysis Volume [veh/h]	143	715	626	28	59	186
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.01	0.01	0.00	0.15	0.27
d_M, Delay for Movement [s/veh]	9.50	0.00	0.00	0.00	15.94	12.15
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.53	0.00	0.00	0.00	0.53	1.09
95th-Percentile Queue Length [ft/ln]	13.34	0.00	0.00	0.00	13.29	27.27
d_A, Approach Delay [s/veh]	1.58		0.00		13.06	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.59					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	407	163	76	441	10	9	6	17	82	5	227
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	65	0	0	138	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	472	163	76	579	10	9	6	20	82	5	227
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	147	51	24	180	3	3	2	6	26	2	71
Total Analysis Volume [veh/h]	20	589	203	95	722	12	11	7	25	102	6	283
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	46	0	17	52	0	11	39	0	18	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	10	10	5	13	13	1	5	5	5	9	9
g / C, Green / Cycle	0.04	0.25	0.25	0.11	0.33	0.33	0.02	0.13	0.13	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.13	0.05	0.20	0.01	0.01	0.00	0.02	0.06	0.00	0.18
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	64	894	399	207	1179	526	37	247	210	215	433	368
d1, Uniform Delay [s]	19.29	13.89	13.30	16.98	11.65	9.39	19.80	15.59	15.78	16.88	12.27	14.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.69	0.84	1.01	1.58	0.52	0.02	4.29	0.05	0.25	1.62	0.01	3.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

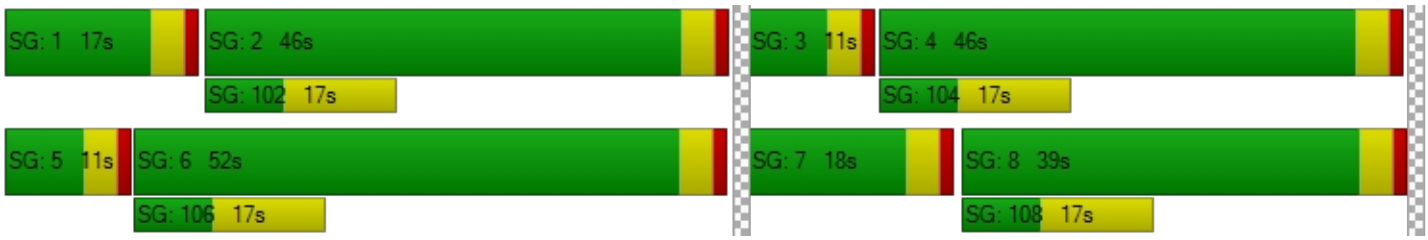
X, volume / capacity	0.31	0.66	0.51	0.46	0.61	0.02	0.29	0.03	0.12	0.47	0.01	0.77
d, Delay for Lane Group [s/veh]	21.98	14.73	14.31	18.56	12.17	9.41	24.08	15.64	16.03	18.50	12.28	18.23
Lane Group LOS	C	B	B	B	B	A	C	B	B	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.21	2.10	1.43	0.81	2.24	0.06	0.14	0.05	0.19	0.87	0.04	2.37
50th-Percentile Queue Length [ft/ln]	5.28	52.40	35.65	20.23	55.90	1.50	3.39	1.31	4.81	21.64	0.92	59.16
95th-Percentile Queue Length [veh/ln]	0.38	3.77	2.57	1.46	4.02	0.11	0.24	0.09	0.35	1.56	0.07	4.26
95th-Percentile Queue Length [ft/ln]	9.50	94.31	64.18	36.42	100.62	2.71	6.10	2.35	8.65	38.96	1.66	106.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.98	14.73	14.31	18.56	12.17	9.41	24.08	15.64	16.03	18.50	12.28	18.23
Movement LOS	C	B	B	B	B	A	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.80			12.86			18.03			18.21		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.74											
Intersection LOS	B											
Intersection V/C	0.652											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	645	71	95	425	57	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	0	0	141	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	711	71	95	566	57	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	192	19	26	153	15	9
Total Analysis Volume [veh/h]	768	77	103	611	62	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	57	0	0	124	63	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.40	0.40	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.21	0.05	0.14	0.32	0.08	0.02
s, saturation flow rate [veh/h]	3618	1615	711	1900	823	1615
c, Capacity [veh/h]	1446	646	396	0	448	258
d1, Uniform Delay [s]	4.16	3.44	9.09	0.00	8.62	6.57
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.08	1.59	0.00	0.14	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

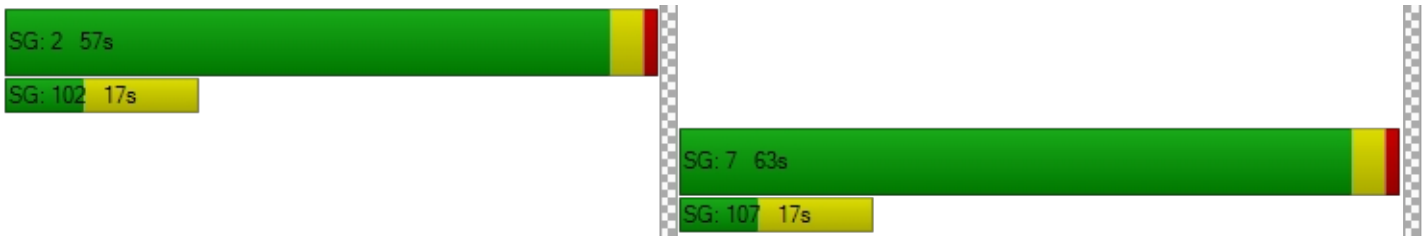
X, volume / capacity	0.53	0.12	0.26	0.00	0.14	0.15
d, Delay for Lane Group [s/veh]	4.46	3.52	10.68	0.00	8.76	6.82
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.12	0.02	0.43	0.00	0.14	0.07
50th-Percentile Queue Length [ft/ln]	3.08	0.62	10.76	0.00	3.50	1.76
95th-Percentile Queue Length [veh/ln]	0.22	0.04	0.77	0.00	0.25	0.13
95th-Percentile Queue Length [ft/ln]	5.54	1.12	19.37	0.00	6.29	3.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.46	3.52	10.68	0.00	8.76	6.82
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.37		1.54		8.02	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.37					
Intersection LOS	A					
Intersection V/C	0.860					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	270.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	106.358

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	82	0	59	24	151	0	0	138	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	248	2	403	551	597	4	2	598	223
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	66	1	108	147	159	1	1	160	59
Total Analysis Volume [veh/h]	3	2	2	265	2	430	588	637	4	2	638	238
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	41	0	0	41	0	13	23	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	37	37	37	9	26	26	0	17	17
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.12	0.34	0.34	0.00	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	88.85	0.27	0.32	0.18	0.00	0.00	0.18	0.15
s, saturation flow rate [veh/h]	69	1615	3	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	111	796	97	796	214	1240	554	8	828	370
d1, Uniform Delay [s]	18.15	9.66	37.39	13.15	33.10	19.67	16.25	37.26	27.10	26.18
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.00	816.42	0.57	790.21	1.52	0.02	17.28	6.84	8.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.00	2.75	0.54	2.75	0.51	0.01	0.26	0.77	0.64
d, Delay for Lane Group [s/veh]	18.32	9.66	853.81	13.72	823.31	21.19	16.27	54.54	33.94	34.54
Lane Group LOS	B	A	F	B	F	C	B	D	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.02	23.75	4.63	50.69	4.44	0.05	0.07	5.90	4.55
50th-Percentile Queue Length [ft/ln]	1.37	0.39	593.68	115.67	1267.32	111.05	1.17	1.81	147.57	113.65
95th-Percentile Queue Length [veh/ln]	0.10	0.03	42.74	8.15	78.82	7.90	0.08	0.13	9.89	8.04
95th-Percentile Queue Length [ft/ln]	2.46	0.70	1068.62	203.86	1970.55	197.46	2.11	3.26	247.18	201.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.32	18.32	9.66	853.81	853.81	13.72	823.31	21.19	16.27	54.54	33.94	34.54
Movement LOS	B	B	A	F	F	B	F	C	B	D	C	C
d_A, Approach Delay [s/veh]	15.84			335.53			404.94			34.15		
Approach LOS	B			F			F			C		
d_I, Intersection Delay [s/veh]	270.95											
Intersection LOS	F											
Intersection V/C	106.358											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	164.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	689	861	58	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	180	233	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	869	1094	58	31	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	231	291	15	8	2
Total Analysis Volume [veh/h]	23	925	1165	62	33	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.66	0.04
d_M, Delay for Movement [s/veh]	11.52	0.00	0.00	0.00	164.00	21.44
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	2.60	0.14
95th-Percentile Queue Length [ft/ln]	3.12	0.00	0.00	0.00	65.00	3.41
d_A, Approach Delay [s/veh]	0.28		0.00		130.84	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	2.66					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	679	286	84	895	0	3	20	140	328	5	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	212	0	28	246	0	0	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	891	286	112	1141	0	3	20	140	328	5	81
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	242	78	30	310	0	1	5	38	89	1	22
Total Analysis Volume [veh/h]	52	970	311	122	1242	0	3	22	152	357	5	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	36	36	17	42	0	0	41	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	62	81	10	66	66	13	13	14	14	14
g / C, Green / Cycle	0.05	0.54	0.70	0.08	0.58	0.58	0.11	0.11	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.27	0.19	0.07	0.33	0.33	0.01	0.09	0.10	0.10	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1889	1615	1810	1812	1615
c, Capacity [veh/h]	89	1962	1130	150	1094	1094	214	183	222	223	198
d1, Uniform Delay [s]	53.51	16.47	6.42	51.89	15.39	15.39	45.85	49.94	49.16	49.16	46.80
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.86	0.89	0.60	10.19	0.47	0.47	0.24	9.41	7.04	7.03	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

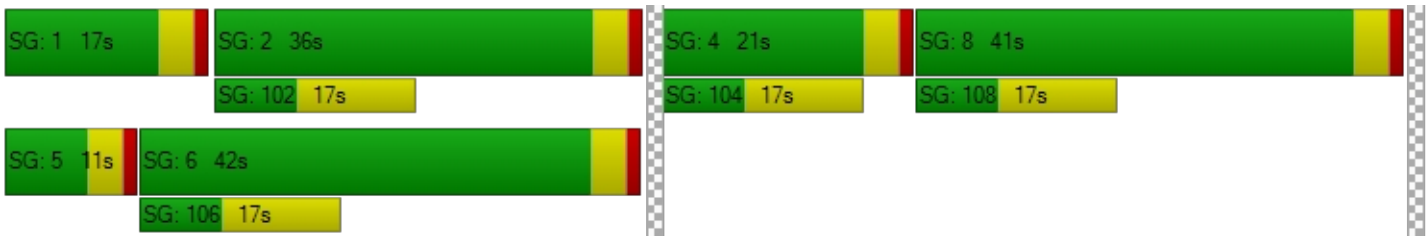
X, volume / capacity	0.58	0.49	0.28	0.81	0.57	0.57	0.12	0.83	0.81	0.81	0.44
d, Delay for Lane Group [s/veh]	59.37	17.36	7.02	62.08	15.86	15.86	46.09	59.35	56.20	56.19	48.35
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.62	8.02	2.77	3.88	9.99	9.99	0.66	4.75	5.49	5.49	2.43
50th-Percentile Queue Length [ft/ln]	40.43	200.50	69.25	97.01	249.64	249.64	16.48	118.71	137.18	137.35	60.63
95th-Percentile Queue Length [veh/ln]	2.91	12.66	4.99	6.98	15.17	15.17	1.19	8.32	9.33	9.34	4.37
95th-Percentile Queue Length [ft/ln]	72.78	316.61	124.65	174.62	379.20	379.20	29.66	208.05	233.22	233.45	109.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.37	17.36	7.02	62.08	15.86	15.86	46.09	46.09	59.35	56.19	56.19	48.35
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	16.59			19.99			57.48			54.66		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	25.32											
Intersection LOS	C											
Intersection V/C	0.638											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.873

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	522	391	0	0	1147	188	0	0	0	93	0	599
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	95	0	0	226	20	0	0	0	13	0	117
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	537	486	0	0	1373	208	0	0	0	106	0	716
Peak Hour Factor	0.9550	0.9550	0.8760	0.8760	0.9550	0.9550	0.8760	0.8760	0.8760	0.9550	0.8760	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	141	127	0	0	359	54	0	0	0	28	0	0
Total Analysis Volume [veh/h]	562	509	0	0	1438	218	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	44	94	0	0	50	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	101	101	101	101		101	101
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	34	85	47	47		8	8
g / C, Green / Cycle	0.33	0.84	0.47	0.47		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.31	0.14	0.40	0.13		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	606	3046	1691	755		143	128
d1, Uniform Delay [s]	32.47	1.47	23.83	16.60		45.75	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	6.75	0.03	1.28	0.21		8.69	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

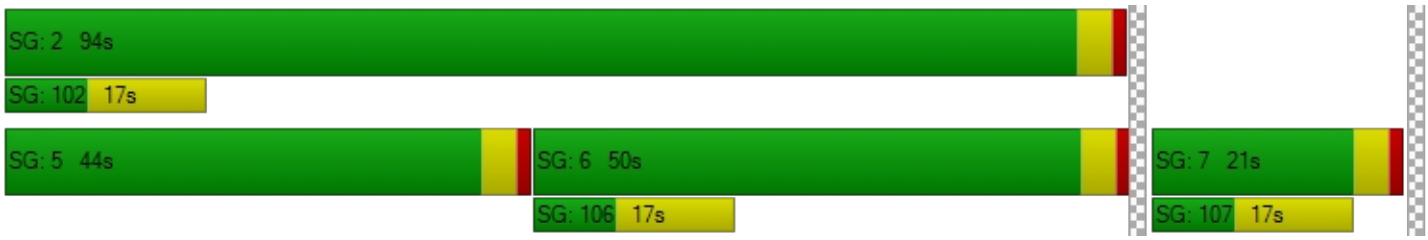
X, volume / capacity	0.93	0.17	0.85	0.29		0.78	0.00
d, Delay for Lane Group [s/veh]	39.22	1.50	25.12	16.81		54.44	0.00
Lane Group LOS	D	A	C	B		D	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	14.02	0.47	14.72	3.09		3.06	0.00
50th-Percentile Queue Length [ft/ln]	350.41	11.80	367.93	77.21		76.60	0.00
95th-Percentile Queue Length [veh/ln]	20.16	0.85	21.01	5.56		5.52	0.00
95th-Percentile Queue Length [ft/ln]	503.91	21.24	525.22	138.97		137.88	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.22	1.50	0.00	0.00	25.12	16.81	0.00	0.00	0.00	54.44	0.00	0.00
Movement LOS	D	A			C	B				D		A
d_A, Approach Delay [s/veh]	21.29			24.02			0.00			54.44		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	24.18											
Intersection LOS	C											
Intersection V/C	0.873											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	58.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.056

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	766	104	514	726	0	148	0	824	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	89	10	143	96	0	21	0	19	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	855	114	657	822	0	169	0	843	0	0	0
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	226	30	174	217	0	45	0	223	0	0	0
Total Analysis Volume [veh/h]	0	904	121	695	869	0	179	0	891	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	31	0	46	77	0	38	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	115	115	115	115	115	115	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	27	27	42	73	34	34	
g / C, Green / Cycle	0.24	0.24	0.37	0.63	0.30	0.30	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.07	0.38	0.24	0.10	0.31	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	851	380	660	2297	535	846	
d1, Uniform Delay [s]	44.16	36.50	36.67	10.13	31.78	40.67	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	48.61	2.20	32.24	0.10	0.36	31.15	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

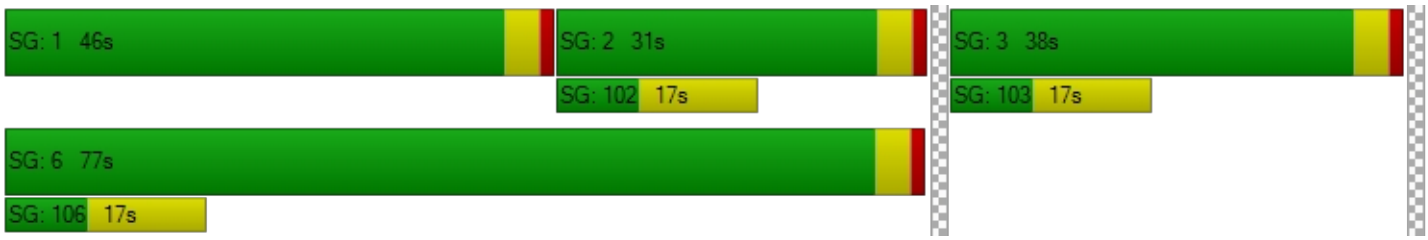
X, volume / capacity	1.06	0.32	1.05	0.38	0.33	1.05	
d, Delay for Lane Group [s/veh]	92.77	38.70	68.91	10.23	32.15	71.82	
Lane Group LOS	F	D	F	B	C	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	17.78	3.06	24.05	5.07	3.96	15.46	
50th-Percentile Queue Length [ft/ln]	444.38	76.44	601.30	126.72	99.00	386.60	
95th-Percentile Queue Length [veh/ln]	25.56	5.50	33.25	8.76	7.13	22.62	
95th-Percentile Queue Length [ft/ln]	638.90	137.60	831.37	219.02	178.21	565.62	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	92.77	38.70	68.91	10.23	0.00	32.15	0.00	71.82	0.00	0.00	0.00
Movement LOS		F	D	F	B		C		F			
d_A, Approach Delay [s/veh]	86.39			36.31			65.18			0.00		
Approach LOS	F			D			E			A		
d_I, Intersection Delay [s/veh]	58.78											
Intersection LOS	E											
Intersection V/C	1.056											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	342	1424	0	0	1066	380	0	0	0	364	8	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	59	62	0	0	36	0	0	0	0	66	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	1486	0	0	1102	380	0	0	0	430	8	573
Peak Hour Factor	0.9740	0.9740	0.8170	0.8170	0.9740	0.9740	0.8170	0.8170	0.8170	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	381	0	0	283	98	0	0	0	110	2	147
Total Analysis Volume [veh/h]	412	1526	0	0	1131	390	0	0	0	441	8	588
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	30	81	0	0	51	0	0	0	0	0	49	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	58	58	58	58		58	58	58
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	11	35	21	21		17	17	17
g / C, Green / Cycle	0.19	0.60	0.36	0.36		0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.14	0.31	0.17	0.25		0.21	0.22	0.23
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1588	1530
c, Capacity [veh/h]	556	2940	2356	551		482	472	455
d1, Uniform Delay [s]	22.36	6.79	14.44	16.02		18.12	18.50	18.70
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.97	0.14	0.15	1.68		1.78	2.36	2.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.52	0.48	0.71		0.69	0.75	0.77
d, Delay for Lane Group [s/veh]	24.33	6.93	14.59	17.71		19.90	20.86	21.54
Lane Group LOS	C	A	B	B		B	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.60	2.69	2.58	4.16		3.79	4.15	4.24
50th-Percentile Queue Length [ft/ln]	65.12	67.27	64.39	104.07		94.67	103.66	105.94
95th-Percentile Queue Length [veh/ln]	4.69	4.84	4.64	7.49		6.82	7.46	7.61
95th-Percentile Queue Length [ft/ln]	117.22	121.09	115.91	187.33		170.41	186.59	190.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.33	6.93	0.00	0.00	14.59	17.71	0.00	0.00	0.00	20.12	20.86	21.26
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.63			15.39			0.00			20.79		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	14.58											
Intersection LOS	B											
Intersection V/C	0.696											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1211	525	417	1013	0	635	2	337	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	121	128	0	102	0	0	0	31	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1332	653	417	1115	0	635	2	368	0	0	0
Peak Hour Factor	0.8530	0.9720	0.9720	0.9720	0.9720	0.8530	0.9720	0.9720	0.9720	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	343	168	107	287	0	163	1	95	0	0	0
Total Analysis Volume [veh/h]	0	1370	672	429	1147	0	653	2	379	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	68	0	25	93	0	0	37	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	128	128	128	128	128	128	128	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	65	65	21	89	33	33	33	
g / C, Green / Cycle	0.50	0.50	0.17	0.69	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.40	0.44	0.14	0.33	0.20	0.21	0.23	
s, saturation flow rate [veh/h]	3427	1533	2959	3427	1619	1699	1530	
c, Capacity [veh/h]	1726	772	495	2379	420	440	397	
d1, Uniform Delay [s]	26.30	28.52	52.16	9.05	44.38	44.49	45.80	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.83	3.53	4.73	0.15	3.37	3.35	6.70	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.79	0.88	0.87	0.48	0.79	0.80	0.89	
d, Delay for Lane Group [s/veh]	27.14	32.05	56.89	9.20	47.75	47.84	52.50	
Lane Group LOS	C	C	E	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	16.95	18.92	7.06	6.98	10.22	10.84	11.47	
50th-Percentile Queue Length [ft/ln]	423.84	473.02	176.44	174.39	255.43	270.94	286.84	
95th-Percentile Queue Length [veh/ln]	23.71	26.05	11.41	11.31	15.46	16.24	17.03	
95th-Percentile Queue Length [ft/ln]	592.66	651.36	285.37	282.68	386.48	405.91	425.71	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	27.17	32.05	56.89	9.20	0.00	47.79	47.84	52.08	0.00	0.00	0.00
Movement LOS		C	C	E	A		D	D	D			
d_A, Approach Delay [s/veh]	28.77			22.18			49.39			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	31.12											
Intersection LOS	C											
Intersection V/C	0.859											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	1295	26	36	1072	232	390	78	152	46	19	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	203	0	0	112	21	46	7	3	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	1498	26	36	1184	253	436	85	155	46	22	35
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	398	7	10	315	67	116	23	41	12	6	9
Total Analysis Volume [veh/h]	56	1592	28	38	1258	269	463	90	165	49	23	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	27	0	10	27	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	117	117	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	57	57	5	56	56	46	46	46	46	46	46
g / C, Green / Cycle	0.05	0.49	0.49	0.04	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.03	0.45	0.45	0.02	0.43	0.44	0.34	0.05	0.11	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1789	1619	1800	1693	1364	1800	1530	1142	1800	1530
c, Capacity [veh/h]	81	877	872	69	863	812	555	708	602	408	708	602
d1, Uniform Delay [s]	54.64	28.00	28.07	54.89	27.92	28.41	36.04	22.66	24.12	29.67	21.80	22.06
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.85	4.80	4.99	6.71	3.82	4.98	3.37	0.08	0.24	0.13	0.02	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

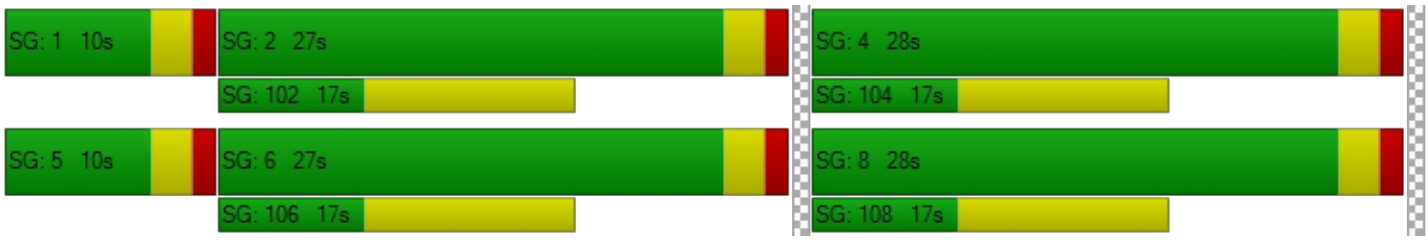
X, volume / capacity	0.69	0.93	0.93	0.55	0.90	0.92	0.83	0.13	0.27	0.12	0.03	0.06
d, Delay for Lane Group [s/veh]	64.49	32.79	33.06	61.60	31.74	33.39	39.41	22.74	24.37	29.80	21.82	22.10
Lane Group LOS	E	C	C	E	C	C	D	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.84	21.49	21.53	1.23	20.14	19.93	13.01	1.61	3.15	1.02	0.39	0.64
50th-Percentile Queue Length [ft/ln]	46.07	537.35	538.18	30.63	503.47	498.31	325.17	40.17	78.68	25.62	9.87	16.10
95th-Percentile Queue Length [veh/ln]	3.32	29.10	29.14	2.21	27.50	27.25	18.92	2.89	5.66	1.84	0.71	1.16
95th-Percentile Queue Length [ft/ln]	82.93	727.43	728.41	55.13	687.47	681.36	473.04	72.31	141.62	46.11	17.77	28.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.49	32.92	33.06	61.60	32.37	33.39	39.41	22.74	24.37	29.80	21.82	22.10
Movement LOS	E	C	C	E	C	C	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	33.98			33.25			33.86			25.50		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	33.45											
Intersection LOS	C											
Intersection V/C	0.860											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	85	1262	31	27	1161	91	99	2	65	37	10	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	170	0	0	99	16	38	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	1432	31	27	1260	107	137	2	75	37	10	63
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	382	8	7	336	29	37	1	20	10	3	17
Total Analysis Volume [veh/h]	101	1528	33	29	1345	114	146	2	80	39	11	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	51	0	39	80	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	46	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	26	26	2	23	23	9	9	9	9	9
g / C, Green / Cycle	0.11	0.56	0.56	0.05	0.50	0.50	0.20	0.20	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.43	0.44	0.02	0.41	0.41	0.14	0.05	0.03	0.01	0.04
s, saturation flow rate [veh/h]	1619	1800	1787	1619	1800	1751	1062	1530	1437	1800	1530
c, Capacity [veh/h]	181	1009	1001	78	894	870	363	297	164	350	297
d1, Uniform Delay [s]	19.17	7.78	7.81	21.03	9.77	9.83	18.59	15.61	22.77	14.88	15.47
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.68	1.31	1.34	2.97	1.99	2.13	0.73	0.48	0.74	0.04	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

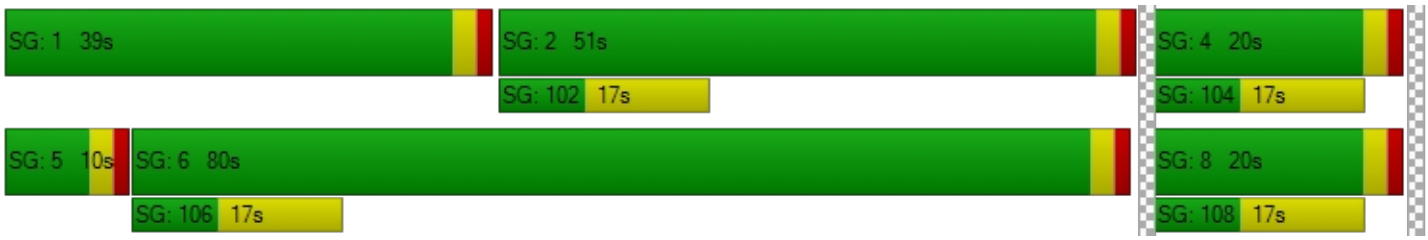
X, volume / capacity	0.56	0.78	0.78	0.37	0.82	0.83	0.41	0.27	0.24	0.03	0.23
d, Delay for Lane Group [s/veh]	21.85	9.10	9.15	23.99	11.77	11.96	19.33	16.09	23.51	14.92	15.85
Lane Group LOS	C	A	A	C	B	B	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.04	4.10	4.10	0.34	4.87	4.82	1.38	0.66	0.42	0.08	0.54
50th-Percentile Queue Length [ft/ln]	25.92	102.45	102.52	8.38	121.65	120.59	34.61	16.41	10.58	2.11	13.58
95th-Percentile Queue Length [veh/ln]	1.87	7.38	7.38	0.60	8.48	8.43	2.49	1.18	0.76	0.15	0.98
95th-Percentile Queue Length [ft/ln]	46.66	184.41	184.53	15.08	212.09	210.64	62.29	29.53	19.04	3.80	24.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.85	9.12	9.15	23.99	11.85	11.96	19.33	19.33	16.09	23.51	14.92	15.85
Movement LOS	C	A	A	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	9.90			12.10			18.19			18.31		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	11.66											
Intersection LOS	B											
Intersection V/C	0.707											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	93	1274	1165	87	37	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	152	96	13	28	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1426	1261	100	65	155
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	369	326	26	17	40
Total Analysis Volume [veh/h]	114	1475	1304	103	67	160
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	18	105	87	0	25	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	28	20	20	6	6
g / C, Green / Cycle	0.13	0.69	0.49	0.49	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.43	0.39	0.40	0.04	0.10
s, saturation flow rate [veh/h]	1619	3427	1800	1755	1619	1530
c, Capacity [veh/h]	203	2377	890	868	258	244
d1, Uniform Delay [s]	16.78	3.36	8.55	8.69	15.03	16.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.42	0.27	1.62	1.88	0.53	2.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.62	0.79	0.81	0.26	0.66
d, Delay for Lane Group [s/veh]	19.20	3.63	10.17	10.57	15.56	19.09
Lane Group LOS	B	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.99	0.84	3.67	3.78	0.50	1.38
50th-Percentile Queue Length [ft/ln]	24.87	21.05	91.74	94.43	12.50	34.61
95th-Percentile Queue Length [veh/ln]	1.79	1.52	6.61	6.80	0.90	2.49
95th-Percentile Queue Length [ft/ln]	44.76	37.90	165.13	169.97	22.50	62.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.20	3.63	10.35	10.57	15.56	19.09
Movement LOS	B	A	B	B	B	B
d_A, Approach Delay [s/veh]	4.74		10.37		18.05	
Approach LOS	A		B		B	
d_I, Intersection Delay [s/veh]	8.14					
Intersection LOS	A					
Intersection V/C	0.676					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.823

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	873	95	73	927	168	200	466	137	32	204	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	80	8	6	76	44	70	21	23	10	24	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	953	103	79	1003	212	270	487	160	42	228	96
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	245	26	20	257	54	69	125	41	11	59	25
Total Analysis Volume [veh/h]	151	978	106	81	1030	218	277	500	164	43	234	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	29	74	0	10	55	0	36	47	0	36	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	83	83	83	83	83	83	83	83	83	83	83	83
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	21	39	39	11	29	29	24	0	0	24	0	0
g / C, Green / Cycle	0.25	0.47	0.47	0.14	0.35	0.35	0.29	0.00	0.00	0.29	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.21	0.31	0.31	0.11	0.30	0.14	0.24	0.28	0.11	0.05	0.13	0.06
s, saturation flow rate [veh/h]	734	1800	1739	734	3427	1530	1165	1800	1530	912	1800	1530
c, Capacity [veh/h]	255	841	813	172	1215	542	393	0	0	327	0	0
d1, Uniform Delay [s]	31.08	16.95	16.97	36.47	24.71	20.15	29.56	0.00	0.00	23.65	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.20	0.87	0.91	2.01	1.74	0.48	2.32	0.00	0.00	0.18	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.65	0.66	0.47	0.85	0.40	0.70	0.00	0.00	0.13	0.00	0.00
d, Delay for Lane Group [s/veh]	33.29	17.82	17.88	38.48	26.44	20.63	31.88	0.00	0.00	23.83	0.00	0.00
Lane Group LOS	C	B	B	D	C	C	C	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.99	7.67	7.44	1.69	9.15	3.13	5.37	0.00	0.00	0.65	0.00	0.00
50th-Percentile Queue Length [ft/ln]	74.65	191.75	186.10	42.23	228.68	78.24	134.34	0.00	0.00	16.30	0.00	0.00
95th-Percentile Queue Length [veh/ln]	5.37	12.21	11.92	3.04	14.11	5.63	9.18	0.00	0.00	1.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	134.36	305.30	297.96	76.02	352.68	140.83	229.38	0.00	0.00	29.34	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.29	17.85	17.88	38.48	26.44	20.63	31.88	0.00	0.00	23.83	0.00	0.00
Movement LOS	C	B	B	D	C	C	C	A	A	C	A	A
d_A, Approach Delay [s/veh]	19.74			26.22			9.39			2.72		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	17.80											
Intersection LOS	B											
Intersection V/C	0.823											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	404	1	2	647	143	446	69	112	1	22	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	8	0	0	21	31	56	0	28	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	412	1	2	668	174	502	69	140	1	22	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	108	0	1	176	46	132	18	37	0	6	2
Total Analysis Volume [veh/h]	60	434	1	2	703	183	528	73	147	1	23	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	33	44	0	0	75	0	0	75	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	84	84	84	84	84	84	84	84
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	30	30	0	25	25	45	45
g / C, Green / Cycle	0.06	0.35	0.35	0.00	0.29	0.29	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.26	0.26	0.51	0.02
s, saturation flow rate [veh/h]	1619	1800	1799	1619	1800	1673	1462	1741
c, Capacity [veh/h]	102	636	636	6	530	493	856	977
d1, Uniform Delay [s]	38.54	20.09	20.09	41.98	28.23	28.23	18.55	9.26
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.33	0.32	0.32	27.28	4.41	4.74	2.98	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

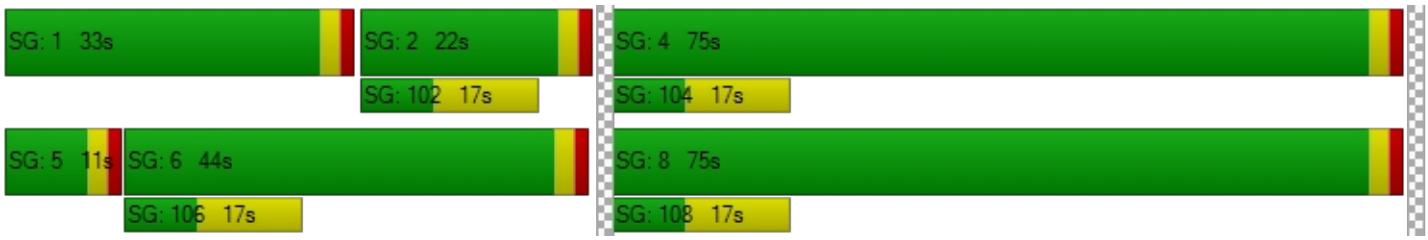
X, volume / capacity	0.59	0.34	0.34	0.32	0.87	0.87	0.87	0.03
d, Delay for Lane Group [s/veh]	43.87	20.40	20.40	69.26	32.64	32.97	21.54	9.27
Lane Group LOS	D	C	C	E	C	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.34	3.09	3.09	0.09	9.07	8.48	12.91	0.26
50th-Percentile Queue Length [ft/ln]	33.48	77.35	77.31	2.20	226.64	211.96	322.77	6.38
95th-Percentile Queue Length [veh/ln]	2.41	5.57	5.57	0.16	14.00	13.25	18.80	0.46
95th-Percentile Queue Length [ft/ln]	60.27	139.24	139.16	3.96	350.08	331.35	470.09	11.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.87	20.40	20.40	69.26	32.75	32.97	21.54	21.54	21.54	9.27	9.27	9.27
Movement LOS	D	C	C	E	C	C	C	C	C	A	A	A
d_A, Approach Delay [s/veh]	23.25			32.88			21.54			9.27		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	26.41											
Intersection LOS	C											
Intersection V/C	0.866											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 7 Opening Year (2020) Without Project Morning Peak Hour - With Improvements

Report File: C:\...\AMOYWOI.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Right	1.028	44.9	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.964	42.9	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.626	18.3	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.664	6.0	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.890	35.0	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	EB Right	0.565	11.1	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.752	18.1	B
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.722	18.2	B
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.869	10.0	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.635	7.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.657	24.8	C
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.036	18.4	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.767	17.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.028

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	315	1261	0	0	1081	765	0	0	0	461	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	78	50	0	0	106	14	0	0	2	129	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	1311	0	0	1187	779	0	0	2	590	0	532
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	339	0	0	307	201	0	0	1	153	0	138
Total Analysis Volume [veh/h]	406	1356	0	0	1228	806	0	0	2	610	0	550
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	34	102	0	0	68	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	31	99	65	65		25	25	25
g / C, Green / Cycle	0.24	0.76	0.50	0.50		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.25	0.40	0.25	0.53		0.18	0.18	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1714	2708
c, Capacity [veh/h]	387	2609	2449	764		330	330	522
d1, Uniform Delay [s]	49.58	6.14	21.77	32.60		51.63	51.63	52.58
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	35.94	0.74	0.74	47.93		10.79	10.79	34.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.05	0.52	0.50	1.05		0.92	0.92	1.05
d, Delay for Lane Group [s/veh]	85.52	6.89	22.51	80.53		62.42	62.42	87.08
Lane Group LOS	F	A	C	F		E	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	16.37	6.71	8.47	33.38		10.75	10.75	11.00
50th-Percentile Queue Length [ft/ln]	409.18	167.76	211.68	834.54		268.74	268.74	275.07
95th-Percentile Queue Length [veh/ln]	23.66	10.96	13.24	44.72		16.13	16.13	16.88
95th-Percentile Queue Length [ft/ln]	591.59	273.97	330.99	1117.89		403.16	403.16	422.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.52	6.89	0.00	0.00	22.51	80.53	0.00	0.00	0.00	62.42	62.42	87.08
Movement LOS	F	A			C	F				E	E	F
d_A, Approach Delay [s/veh]	25.01			45.50			0.00			74.11		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	44.91											
Intersection LOS	D											
Intersection V/C	1.028											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1006	424	484	1054	0	564	0	376	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	122	58	8	229	0	6	0	163	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1128	482	492	1283	0	570	0	539	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	297	127	129	337	0	150	0	142	0	0	0
Total Analysis Volume [veh/h]	0	1186	507	517	1349	0	599	0	567	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	47	0	45	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	44	44	42	89	35	35	35	
g / C, Green / Cycle	0.34	0.34	0.32	0.68	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.33	0.32	0.39	0.24	0.25	0.27	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1534	1445	
c, Capacity [veh/h]	1659	518	523	2346	436	414	390	
d1, Uniform Delay [s]	37.68	42.73	43.93	10.72	45.82	46.63	47.63	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.66	34.76	15.75	1.03	6.41	10.56	20.68	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.71	0.98	0.99	0.58	0.89	0.94	1.00	
d, Delay for Lane Group [s/veh]	40.35	77.48	59.68	11.75	52.23	57.19	68.31	
Lane Group LOS	D	E	E	B	D	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.39	20.96	18.70	9.83	12.82	13.47	14.76	
50th-Percentile Queue Length [ft/ln]	284.71	524.08	467.53	245.63	320.58	336.81	368.99	
95th-Percentile Queue Length [veh/ln]	16.92	28.47	25.79	14.97	18.70	19.49	21.06	
95th-Percentile Queue Length [ft/ln]	423.07	711.80	644.84	374.15	467.39	487.29	526.51	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	40.35	77.48	59.68	11.75	0.00	53.97	57.19	64.81	0.00	0.00	0.00
Movement LOS		D	E	E	B		D	E	E			
d_A, Approach Delay [s/veh]	51.47			25.03			59.24			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	42.95											
Intersection LOS	D											
Intersection V/C	0.964											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	768	38	73	882	37	53	83	33	56	77	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	119	18	44	137	21	15	6	13	7	16	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	887	56	117	1019	58	68	89	46	63	93	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	250	16	33	287	16	19	25	13	18	26	47
Total Analysis Volume [veh/h]	66	999	63	132	1148	65	77	100	52	71	105	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	20	30	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	28	28	6	29	29	17	17	17	17
g / C, Green / Cycle	0.08	0.46	0.46	0.10	0.49	0.49	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.30	0.30	0.08	0.34	0.34	0.07	0.09	0.06	0.18
s, saturation flow rate [veh/h]	1619	1800	1763	1619	1800	1766	1102	1698	1255	1617
c, Capacity [veh/h]	129	830	813	171	877	861	220	481	348	458
d1, Uniform Delay [s]	26.57	12.44	12.44	26.20	11.97	11.99	26.71	16.96	21.33	18.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.12	3.86	3.95	7.17	4.57	4.69	0.95	0.37	0.29	1.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

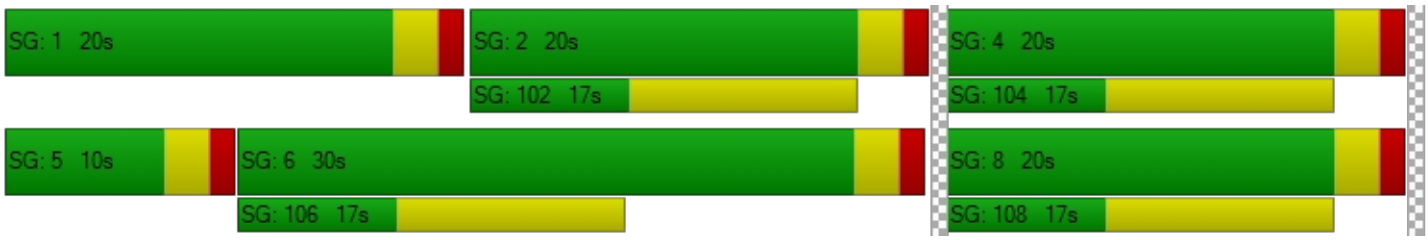
X, volume / capacity	0.51	0.65	0.65	0.77	0.70	0.70	0.35	0.32	0.20	0.64
d, Delay for Lane Group [s/veh]	29.69	16.30	16.39	33.37	16.54	16.68	27.65	17.34	21.61	20.38
Lane Group LOS	C	B	B	C	B	B	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.97	5.55	5.46	2.07	6.35	6.29	1.08	1.57	0.84	3.45
50th-Percentile Queue Length [ft/ln]	24.28	138.69	136.39	51.84	158.83	157.14	26.88	39.13	20.95	86.32
95th-Percentile Queue Length [veh/ln]	1.75	9.41	9.29	3.73	10.49	10.40	1.94	2.82	1.51	6.22
95th-Percentile Queue Length [ft/ln]	43.71	235.26	232.15	93.31	262.18	259.93	48.38	70.43	37.71	155.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.69	16.34	16.39	33.37	16.60	16.68	27.65	17.34	17.34	21.61	20.38	20.38
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.13			18.25			20.81			20.62		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.31											
Intersection LOS	B											
Intersection V/C	0.626											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	231	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	917	0	0	1171	10	5	0	16	0	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	265	0	0	339	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1061	0	0	1355	12	6	0	19	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	73	0	11	73	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	29	29	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	15	15	0	14	14	1	1
g / C, Green / Cycle	0.04	0.54	0.54	0.00	0.50	0.50	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.00	0.36	0.36	0.01	0.00
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1894	1897	16
c, Capacity [veh/h]	76	1023	1023	0	943	940	241	126
d1, Uniform Delay [s]	13.39	4.26	4.26	0.00	5.72	5.72	13.31	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.19	0.41	0.41	0.00	1.08	1.09	0.19	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.52	0.52	0.00	0.73	0.73	0.10	0.00
d, Delay for Lane Group [s/veh]	15.59	4.67	4.67	0.00	6.80	6.81	13.50	0.00
Lane Group LOS	B	A	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.16	0.71	0.71	0.00	1.50	1.50	0.13	0.00
50th-Percentile Queue Length [ft/ln]	3.93	17.77	17.77	0.00	37.56	37.50	3.31	0.00
95th-Percentile Queue Length [veh/ln]	0.28	1.28	1.28	0.00	2.70	2.70	0.24	0.00
95th-Percentile Queue Length [ft/ln]	7.07	31.98	31.98	0.00	67.60	67.50	5.96	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.59	4.67	4.67	0.00	6.80	6.81	13.50	13.50	13.50	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	4.91			6.80			13.50			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	6.04											
Intersection LOS	A											
Intersection V/C	0.664											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.890

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	93	72	71	38	18	43	30	37	31	8	95
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	318	353	602	592	38	61	68	52	313	52	422
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	85	94	161	158	10	16	18	14	84	14	0
Total Analysis Volume [veh/h]	34	340	378	645	634	41	65	73	56	335	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	24	0	38	51	0	12	21	0	12	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	109	109	109	109	109	109	109	109	109	109	109
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	28	28	41	65	65	6	10	13	17	17
g / C, Green / Cycle	0.04	0.26	0.26	0.38	0.60	0.60	0.06	0.09	0.12	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.23	0.36	0.18	0.03	0.04	0.07	0.10	0.03	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1765	3514	1900	1615
c, Capacity [veh/h]	75	947	423	687	2171	969	100	161	423	297	252
d1, Uniform Delay [s]	50.98	32.75	38.74	32.55	10.56	8.94	50.39	48.50	46.55	39.93	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.24	0.23	6.81	6.94	0.07	0.02	6.88	8.85	3.37	0.30	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

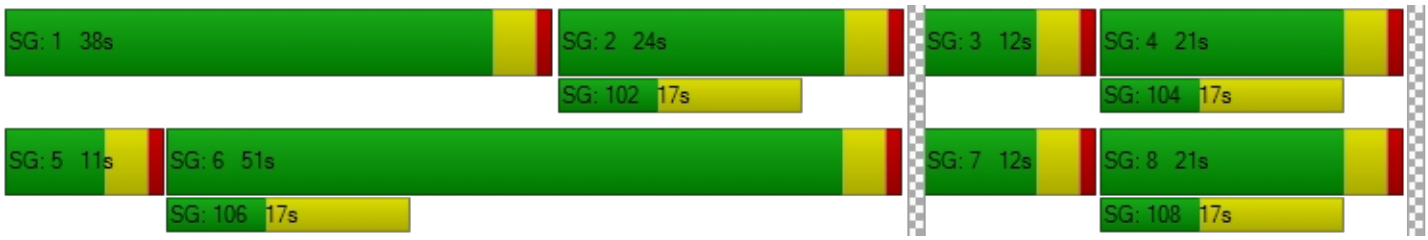
X, volume / capacity	0.45	0.36	0.89	0.94	0.29	0.04	0.65	0.80	0.79	0.19	0.00
d, Delay for Lane Group [s/veh]	55.23	32.98	45.55	39.49	10.64	8.96	57.27	57.36	49.92	40.23	0.00
Lane Group LOS	E	C	D	D	B	A	E	E	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.99	3.67	10.38	17.22	3.56	0.39	1.92	3.81	4.58	1.33	0.00
50th-Percentile Queue Length [ft/ln]	24.79	91.84	259.57	430.40	88.99	9.80	48.02	95.37	114.58	33.23	0.00
95th-Percentile Queue Length [veh/ln]	1.79	6.61	15.67	24.02	6.41	0.71	3.46	6.87	8.09	2.39	0.00
95th-Percentile Queue Length [ft/ln]	44.63	165.32	391.69	600.52	160.18	17.64	86.43	171.67	202.35	59.82	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.23	32.98	45.55	39.49	10.64	8.96	57.27	57.36	57.36	49.92	40.23	0.00
Movement LOS	E	C	D	D	B	A	E	E	E	D	D	A
d_A, Approach Delay [s/veh]	40.31			24.68			57.33			48.54		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	35.00											
Intersection LOS	C											
Intersection V/C	0.890											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.565

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	511	34	112	777	1	2	4	24	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	181	0	0	106	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	692	34	112	883	1	2	4	24	8	3	18
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	183	9	30	234	0	1	1	6	2	1	5
Total Analysis Volume [veh/h]	27	734	36	119	936	1	2	4	25	8	3	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	57	0	21	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	10	5	14	14	2	2
g / C, Green / Cycle	0.05	0.30	0.30	0.14	0.39	0.39	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.02	0.07	0.25	0.25	0.02	0.02
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1899	1659	1689
c, Capacity [veh/h]	86	1076	480	252	740	739	89	88
d1, Uniform Delay [s]	16.10	10.82	8.82	13.86	8.65	8.65	15.96	15.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	0.77	0.07	1.37	0.90	0.90	2.34	2.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.68	0.07	0.47	0.63	0.63	0.35	0.34
d, Delay for Lane Group [s/veh]	18.16	11.59	8.89	15.23	9.55	9.56	18.30	18.27
Lane Group LOS	B	B	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.22	1.92	0.15	0.79	2.07	2.07	0.26	0.25
50th-Percentile Queue Length [ft/ln]	5.56	47.92	3.82	19.72	51.68	51.67	6.39	6.19
95th-Percentile Queue Length [veh/ln]	0.40	3.45	0.28	1.42	3.72	3.72	0.46	0.45
95th-Percentile Queue Length [ft/ln]	10.02	86.26	6.88	35.49	93.03	93.00	11.50	11.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.16	11.59	8.89	15.23	9.55	9.56	18.30	18.30	18.30	18.27	18.27	18.27
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.69			10.19			18.30			18.27		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.08											
Intersection LOS	B											
Intersection V/C	0.565											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	564	18	12	798	0	0	0	3	22	2	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	181	0	0	106	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	745	18	12	904	0	0	0	3	22	2	6
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	198	5	3	240	0	0	0	1	6	1	2
Total Analysis Volume [veh/h]	9	793	19	13	962	0	0	0	3	23	2	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	42	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	17	17	0	2
g / C, Green / Cycle	0.29	0.29	0.29	0.34	0.34	0.01	0.05
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.01	0.27	0.27	0.00	0.02
s, saturation flow rate [veh/h]	1898	1729	1615	1898	1729	1615	1774
c, Capacity [veh/h]	543	494	462	639	583	9	88
d1, Uniform Delay [s]	16.29	16.29	12.84	14.96	14.96	24.64	22.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.39	2.62	0.04	2.34	2.56	18.19	2.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.77	0.04	0.80	0.80	0.32	0.35
d, Delay for Lane Group [s/veh]	18.69	18.91	12.88	17.30	17.52	42.83	25.23
Lane Group LOS	B	B	B	B	B	D	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	4.11	3.77	0.14	4.78	4.39	0.08	0.38
50th-Percentile Queue Length [ft/ln]	102.71	94.34	3.46	119.45	109.73	2.00	9.50
95th-Percentile Queue Length [veh/ln]	7.39	6.79	0.25	8.36	7.83	0.14	0.68
95th-Percentile Queue Length [ft/ln]	184.87	169.82	6.23	209.06	195.63	3.60	17.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.69	18.80	12.88	17.30	17.41	17.52	42.83	42.83	42.83	25.23	25.23	25.23
Movement LOS	B	B	B	B	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	18.66			17.40			42.83			25.23		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	18.14											
Intersection LOS	B											
Intersection V/C	0.752											

Sequence

Ring 1	2	6	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	576	0	0	823	23	13	0	158	351	89	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	121	0	0	117	2	8	0	47	20	10	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	697	0	0	940	25	21	0	205	371	99	131
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	197	0	0	265	7	6	0	58	105	28	37
Total Analysis Volume [veh/h]	43	787	0	0	1061	28	24	0	231	419	112	148
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	53	0	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	25	11	11	12	12	12
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.18	0.18	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.29	0.29	0.01	0.14	0.15	0.15	0.09
s, saturation flow rate [veh/h]	526	3618	1900	1883	1810	1615	1810	1846	1615
c, Capacity [veh/h]	200	1526	801	794	327	291	360	367	321
d1, Uniform Delay [s]	23.51	12.89	14.14	14.19	20.53	23.64	22.65	22.64	21.31
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.27	1.02	1.06	0.09	4.85	2.88	2.79	1.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

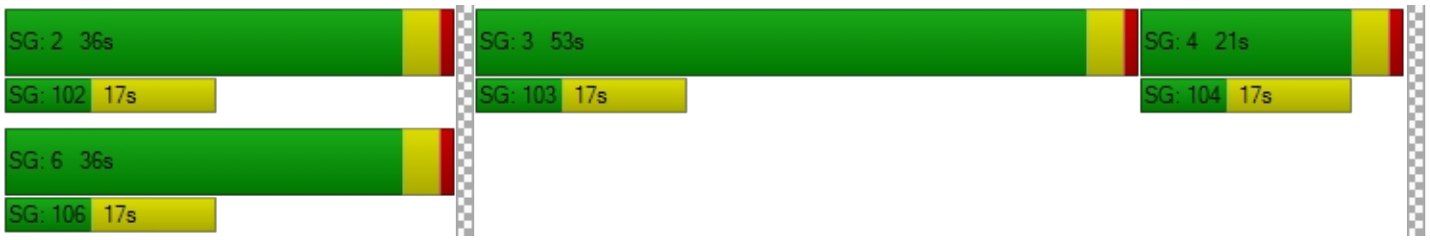
X, volume / capacity	0.21	0.52	0.68	0.69	0.07	0.79	0.73	0.73	0.46
d, Delay for Lane Group [s/veh]	24.04	13.16	15.16	15.25	20.62	28.48	25.53	25.43	22.34
Lane Group LOS	C	B	B	B	C	C	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.56	3.47	5.40	5.43	0.27	3.31	3.52	3.57	1.80
50th-Percentile Queue Length [ft/ln]	13.93	86.68	135.05	135.68	6.79	82.67	88.08	89.36	45.08
95th-Percentile Queue Length [veh/ln]	1.00	6.24	9.21	9.25	0.49	5.95	6.34	6.43	3.25
95th-Percentile Queue Length [ft/ln]	25.07	156.02	230.34	231.20	12.22	148.81	158.54	160.84	81.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.04	13.16	0.00	0.00	15.20	15.25	20.62	0.00	28.48	25.49	25.43	22.34
Movement LOS	C	B			B	B	C		C	C	C	C
d_A, Approach Delay [s/veh]	13.72			15.20			27.74			24.80		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.18											
Intersection LOS	B											
Intersection V/C	0.722											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.869

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	341	610	784	569	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	126	132	52	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	736	916	621	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	211	262	178	0	0
Total Analysis Volume [veh/h]	402	843	1049	711	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	34	110	76	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	59	59	59	59	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	15	55	35	35	
g / C, Green / Cycle	0.26	0.93	0.60	0.60	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.23	0.46	0.53	
s, saturation flow rate [veh/h]	1810	3618	1900	1663	
c, Capacity [veh/h]	475	3372	1144	1001	
d1, Uniform Delay [s]	20.64	0.18	8.70	9.92	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.27	0.04	1.12	2.69	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

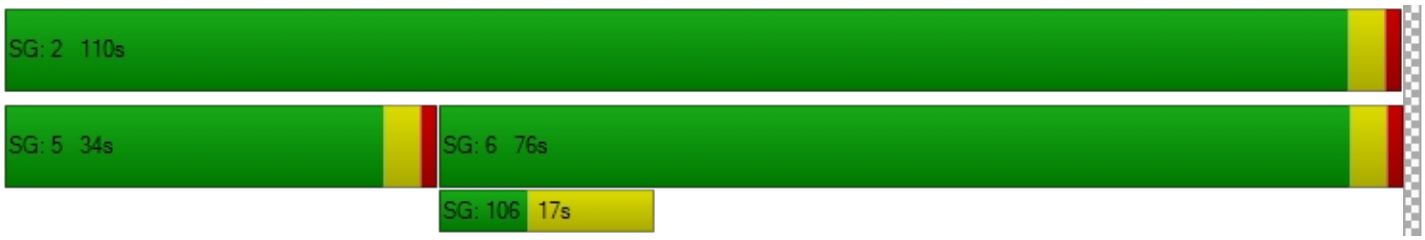
X, volume / capacity	0.85	0.25	0.77	0.88	
d, Delay for Lane Group [s/veh]	24.90	0.22	9.82	12.61	
Lane Group LOS	C	A	A	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.31	0.02	6.30	7.53	
50th-Percentile Queue Length [ft/ln]	132.77	0.45	157.61	188.25	
95th-Percentile Queue Length [veh/ln]	9.09	0.03	10.42	12.03	
95th-Percentile Queue Length [ft/ln]	227.26	0.81	260.56	300.76	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.90	0.22	10.27	12.61	0.00	0.00
Movement LOS	C	A	B	B		
d_A, Approach Delay [s/veh]	8.19		11.22		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	9.96					
Intersection LOS	A					
Intersection V/C	0.869					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	380	471	72	62	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	71	40	23	13	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	451	511	95	75	30
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	143	162	30	24	10
Total Analysis Volume [veh/h]	30	572	648	121	95	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	50	110	60	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	32	32	32	32	32
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	21	16	5	5
g / C, Green / Cycle	0.05	0.66	0.51	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.32	0.44	0.06	0.02
s, saturation flow rate [veh/h]	1619	1800	1751	1619	1530
c, Capacity [veh/h]	84	1189	902	247	234
d1, Uniform Delay [s]	14.71	2.71	6.73	12.25	11.82
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.30	2.40	0.98	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

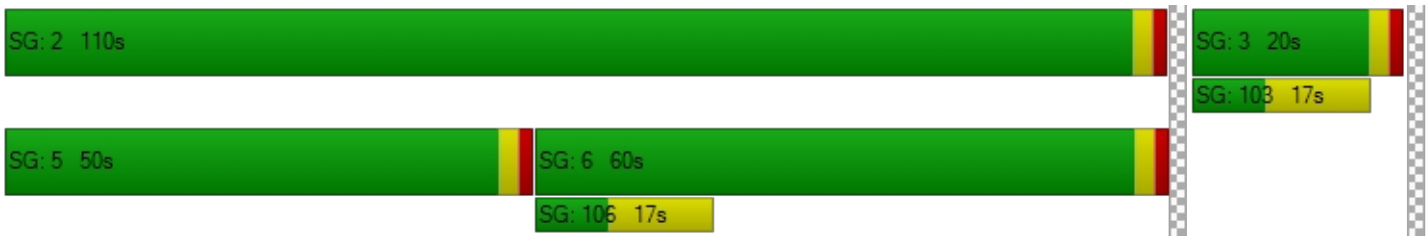
X, volume / capacity	0.36	0.48	0.85	0.38	0.16
d, Delay for Lane Group [s/veh]	17.25	3.01	9.13	13.23	12.15
Lane Group LOS	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.23	0.22	2.56	0.54	0.20
50th-Percentile Queue Length [ft/ln]	5.73	5.40	64.10	13.42	5.06
95th-Percentile Queue Length [veh/ln]	0.41	0.39	4.62	0.97	0.36
95th-Percentile Queue Length [ft/ln]	10.31	9.73	115.38	24.16	9.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.25	3.01	9.13	9.13	13.23	12.15
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.72		9.13		12.92	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.30					
Intersection LOS	A					
Intersection V/C	0.635					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.657

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	38	0	11	52	121	0	0	123	76
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	168	4	316	382	658	13	3	455	241
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	43	1	82	99	170	3	1	117	62
Total Analysis Volume [veh/h]	10	4	3	173	4	326	394	679	13	3	470	249
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	30	0	44	54	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	21	21	21	23	61	61	1	39	39
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.24	0.64	0.64	0.01	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.12	0.00	0.20	0.22	0.19	0.01	0.00	0.13	0.15
s, saturation flow rate [veh/h]	1483	1615	1435	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	400	365	355	429	365	439	2322	1037	11	1466	654
d1, Uniform Delay [s]	28.73	28.57	35.07	28.57	35.72	34.86	7.51	6.15	47.06	19.34	19.89
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.01	1.03	0.01	7.74	6.71	0.32	0.02	12.09	0.58	1.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

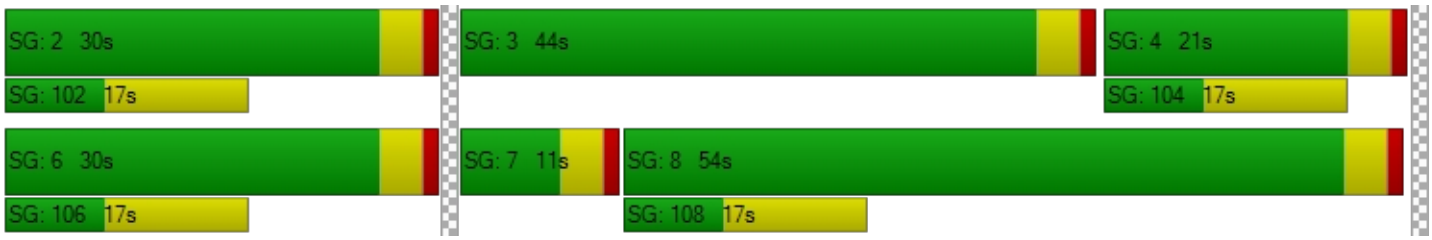
X, volume / capacity	0.04	0.01	0.49	0.01	0.89	0.90	0.29	0.01	0.27	0.32	0.38
d, Delay for Lane Group [s/veh]	28.77	28.57	36.10	28.58	43.47	41.56	7.83	6.17	59.14	19.92	21.57
Lane Group LOS	C	C	D	C	D	D	A	A	E	B	C
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.05	3.72	0.07	7.96	9.44	2.84	0.09	0.11	3.57	4.07
50th-Percentile Queue Length [ft/ln]	6.29	1.34	93.01	1.79	199.06	236.06	71.07	2.31	2.70	89.37	101.84
95th-Percentile Queue Length [veh/ln]	0.45	0.10	6.70	0.13	12.59	14.48	5.12	0.17	0.19	6.43	7.33
95th-Percentile Queue Length [ft/ln]	11.33	2.42	167.41	3.22	314.75	362.04	127.93	4.15	4.86	160.87	183.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.77	28.77	28.57	36.10	28.58	43.47	41.56	7.83	6.17	59.14	19.92	21.57
Movement LOS	C	C	C	D	C	D	D	A	A	E	B	C
d_A, Approach Delay [s/veh]	28.73			40.82			20.05			20.65		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	24.79											
Intersection LOS	C											
Intersection V/C	0.657											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	571	669	23	9	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	199	159	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	770	828	23	9	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	209	224	6	2	4
Total Analysis Volume [veh/h]	22	834	897	25	10	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.04	0.04
d_M, Delay for Movement [s/veh]	9.95	0.00	0.00	0.00	18.39	16.19
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.00	0.11	0.13
95th-Percentile Queue Length [ft/ln]	2.27	0.00	0.00	0.00	2.78	3.25
d_A, Approach Delay [s/veh]	0.26		0.00		17.10	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.35					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	388	160	460	606	0	182	0	764	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	10	96	71	0	20	0	12	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	473	170	556	677	0	202	0	776	0	0	0
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	128	46	150	183	0	55	0	210	0	0	0
Total Analysis Volume [veh/h]	0	512	184	602	733	0	219	0	840	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	21	42	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	57	57	57	57	57	57	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	11	11	13	28	21	21	
g / C, Green / Cycle	0.20	0.20	0.23	0.50	0.37	0.37	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.17	0.20	0.12	0.29	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	715	319	803	1792	662	1046	
d1, Uniform Delay [s]	21.62	20.95	20.71	9.21	13.19	16.42	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.36	1.64	1.44	0.15	0.29	1.49	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.58	0.75	0.41	0.33	0.80	
d, Delay for Lane Group [s/veh]	22.98	22.59	22.15	9.36	13.48	17.91	
Lane Group LOS	C	C	C	A	B	B	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.10	2.21	3.59	2.42	1.86	4.53	
50th-Percentile Queue Length [ft/ln]	77.41	55.20	89.74	60.41	46.48	113.20	
95th-Percentile Queue Length [veh/ln]	5.57	3.97	6.46	4.35	3.35	8.02	
95th-Percentile Queue Length [ft/ln]	139.34	99.37	161.53	108.74	83.67	200.44	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	22.98	22.59	22.15	9.36	0.00	13.48	0.00	17.91	0.00	0.00	0.00
Movement LOS		C	C	C	A		B		B			
d_A, Approach Delay [s/veh]	22.87			15.13			17.00			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	17.51											
Intersection LOS	B											
Intersection V/C	0.767											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 7 Opening Year (2020) Without Project Evening Peak Hour - With Improvements

Report File: C:\...\PMOYWOI.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.026	42.8	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.914	37.5	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.661	19.2	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.672	7.4	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	0.965	46.5	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	NB Left	0.654	12.6	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.820	25.4	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.705	22.9	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.829	6.1	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.743	7.9	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.853	37.2	D
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.152	24.6	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.848	33.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	42.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.026

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	313	1437	0	0	1037	633	0	0	0	293	4	533
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	201	134	0	0	68	15	0	0	0	79	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	514	1571	0	0	1105	648	0	0	0	372	4	545
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	133	407	0	0	286	168	0	0	0	96	1	141
Total Analysis Volume [veh/h]	533	1628	0	0	1145	672	0	0	0	385	4	565
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	42	97	0	0	55	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	125	125	125	125		125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	39	94	52	52		25	25	25
g / C, Green / Cycle	0.31	0.75	0.42	0.42		0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.33	0.48	0.23	0.44		0.11	0.11	0.21
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1716	2708
c, Capacity [veh/h]	505	2576	2038	636		344	344	543
d1, Uniform Delay [s]	43.09	7.36	27.90	36.60		45.17	45.17	50.08
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	35.15	1.19	1.13	51.54		1.47	1.46	29.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.06	0.63	0.56	1.06		0.57	0.57	1.04
d, Delay for Lane Group [s/veh]	78.24	8.55	29.02	88.13		46.64	46.63	79.86
Lane Group LOS	F	A	C	F		D	D	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	20.38	9.33	8.89	28.07		5.61	5.61	10.70
50th-Percentile Queue Length [ft/ln]	509.40	233.20	222.17	701.74		140.15	140.14	267.50
95th-Percentile Queue Length [veh/ln]	28.76	14.34	13.78	38.28		9.49	9.49	16.40
95th-Percentile Queue Length [ft/ln]	718.88	358.42	344.39	956.90		237.23	237.21	410.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	78.24	8.55	0.00	0.00	29.02	88.13	0.00	0.00	0.00	46.63	46.63	79.86
Movement LOS	F	A			C	F				D	D	F
d_A, Approach Delay [s/veh]	25.74			50.88			0.00			66.31		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	42.85											
Intersection LOS	D											
Intersection V/C	1.026											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.914

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1091	385	395	934	0	679	2	176	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	315	148	9	138	0	20	0	106	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1406	533	404	1072	0	699	2	282	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	369	140	106	282	0	184	1	74	0	0	0
Total Analysis Volume [veh/h]	0	1477	560	424	1126	0	734	2	296	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	42	0	47	89	0	0	36	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	125	125	125	125	125	125	125	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	49	49	35	87	32	32	32	
g / C, Green / Cycle	0.39	0.39	0.28	0.69	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.37	0.26	0.33	0.21	0.24	0.20	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1619	1445	
c, Capacity [veh/h]	1916	598	452	2378	418	418	373	
d1, Uniform Delay [s]	33.24	36.64	44.03	8.73	43.73	45.44	43.31	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.07	24.14	9.64	0.68	4.12	10.27	3.85	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

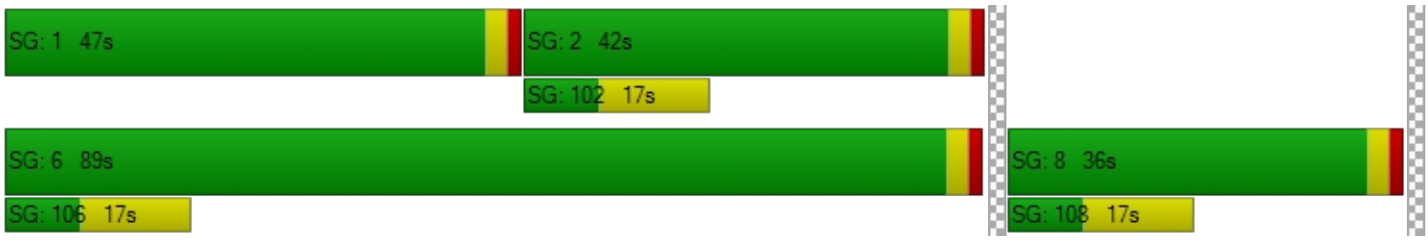
X, volume / capacity	0.77	0.94	0.94	0.47	0.82	0.94	0.79	
d, Delay for Lane Group [s/veh]	36.31	60.77	53.67	9.41	47.85	55.71	47.16	
Lane Group LOS	D	E	D	A	D	E	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	13.41	20.14	13.94	6.71	10.48	13.04	8.92	
50th-Percentile Queue Length [ft/ln]	335.27	503.45	348.60	167.81	262.04	325.92	223.10	
95th-Percentile Queue Length [veh/ln]	19.42	27.50	20.07	10.96	15.79	18.96	13.82	
95th-Percentile Queue Length [ft/ln]	485.42	687.44	501.70	274.04	394.78	473.96	345.58	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	36.31	60.77	53.67	9.41	0.00	52.03	55.71	47.16	0.00	0.00	0.00
Movement LOS		D	E	D	A		D	E	D			
d_A, Approach Delay [s/veh]	43.04			21.51			50.64			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	37.51											
Intersection LOS	D											
Intersection V/C	0.914											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	944	65	110	754	43	57	190	51	70	69	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	172	9	27	142	16	39	14	23	21	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	1116	74	137	896	59	96	204	74	91	79	101
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	286	19	35	229	15	25	52	19	23	20	26
Total Analysis Volume [veh/h]	87	1142	76	140	917	60	98	209	76	93	81	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	20	30	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	27	27	7	29	29	17	17	17	17
g / C, Green / Cycle	0.09	0.46	0.46	0.11	0.48	0.48	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.34	0.34	0.09	0.27	0.27	0.08	0.17	0.08	0.11
s, saturation flow rate [veh/h]	1619	1800	1761	1619	1800	1761	1219	1719	1112	1638
c, Capacity [veh/h]	147	820	802	180	857	838	317	487	240	464
d1, Uniform Delay [s]	26.27	13.54	13.55	26.01	11.38	11.38	23.00	18.51	26.09	17.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.74	6.23	6.42	7.04	2.81	2.88	0.55	1.12	1.02	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

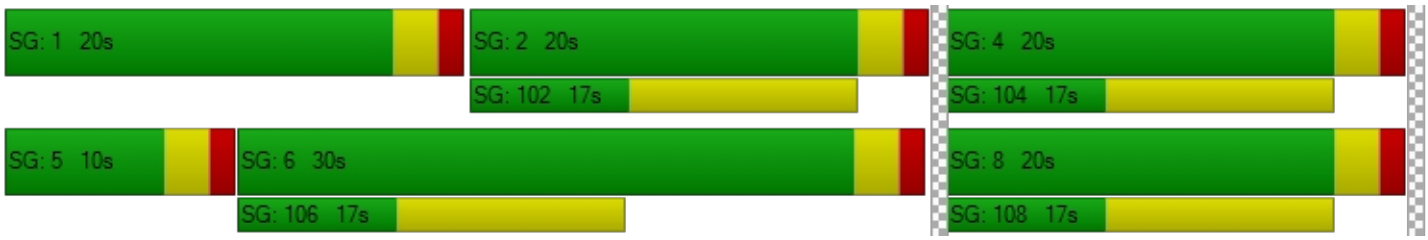
X, volume / capacity	0.59	0.75	0.75	0.78	0.58	0.58	0.31	0.58	0.39	0.40
d, Delay for Lane Group [s/veh]	30.01	19.76	19.97	33.06	14.19	14.26	23.55	19.63	27.10	17.95
Lane Group LOS	C	B	B	C	B	B	C	B	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.28	7.20	7.10	2.19	4.65	4.57	1.23	3.25	1.29	1.95
50th-Percentile Queue Length [ft/ln]	32.10	179.89	177.58	54.66	116.24	114.18	30.82	81.30	32.14	48.80
95th-Percentile Queue Length [veh/ln]	2.31	11.59	11.47	3.94	8.19	8.07	2.22	5.85	2.31	3.51
95th-Percentile Queue Length [ft/ln]	57.77	289.87	286.85	98.38	204.65	201.81	55.47	146.33	57.85	87.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.01	19.86	19.97	33.06	14.23	14.26	23.55	19.63	19.63	27.10	17.95	17.95
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	20.54			16.59			20.63			21.02		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	19.16											
Intersection LOS	B											
Intersection V/C	0.661											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	158	0	0	265	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1394	0	0	1309	15	24	0	36	0	0	1
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	355	0	0	333	4	6	0	9	0	0	0
Total Analysis Volume [veh/h]	18	1420	0	0	1333	15	24	0	37	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	46	0	11	46	0	0	63	0	0	63	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	16	16	0	15	15	3	3
g / C, Green / Cycle	0.03	0.51	0.51	0.00	0.48	0.48	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.37	0.37	0.00	0.36	0.36	0.03	0.00
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1893	1777	511
c, Capacity [veh/h]	60	978	978	0	915	911	331	165
d1, Uniform Delay [s]	14.48	5.77	5.77	0.00	6.39	6.39	13.01	12.59
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.76	1.05	1.05	0.00	1.18	1.19	0.27	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

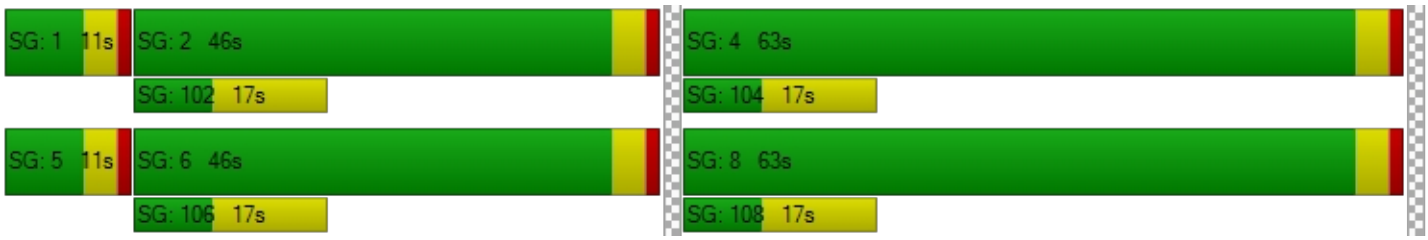
X, volume / capacity	0.30	0.73	0.73	0.00	0.74	0.74	0.18	0.01
d, Delay for Lane Group [s/veh]	17.24	6.81	6.81	0.00	7.58	7.59	13.28	12.61
Lane Group LOS	B	A	A	A	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.14	1.69	1.69	0.00	1.90	1.89	0.33	0.01
50th-Percentile Queue Length [ft/ln]	3.57	42.34	42.34	0.00	47.39	47.29	8.20	0.14
95th-Percentile Queue Length [veh/ln]	0.26	3.05	3.05	0.00	3.41	3.40	0.59	0.01
95th-Percentile Queue Length [ft/ln]	6.43	76.22	76.22	0.00	85.30	85.11	14.76	0.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.24	6.81	6.81	0.00	7.58	7.59	13.28	13.28	13.28	12.61	12.61	12.61
Movement LOS	B	A	A	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	6.94			7.58			13.28			12.61		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.38											
Intersection LOS	A											
Intersection V/C	0.672											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	46.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.965

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	52	46	108	110	47	26	21	23	79	38	80
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	444	521	571	588	75	58	85	26	388	90	556
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	115	135	148	152	19	15	22	7	100	23	0
Total Analysis Volume [veh/h]	62	459	539	590	608	78	60	88	27	401	93	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	60	37	0	44	21	0	18	21	0	18	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	41	41	40	75	75	6	9	14	17	17
g / C, Green / Cycle	0.05	0.34	0.34	0.33	0.62	0.62	0.05	0.08	0.12	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.33	0.33	0.17	0.05	0.03	0.06	0.11	0.05	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1824	3514	1900	1615
c, Capacity [veh/h]	94	1224	546	603	2239	1000	93	144	412	274	233
d1, Uniform Delay [s]	55.99	30.19	39.56	39.73	10.50	9.18	55.98	54.52	52.95	46.34	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.52	0.88	35.38	12.83	0.30	0.15	7.15	9.82	15.30	0.73	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

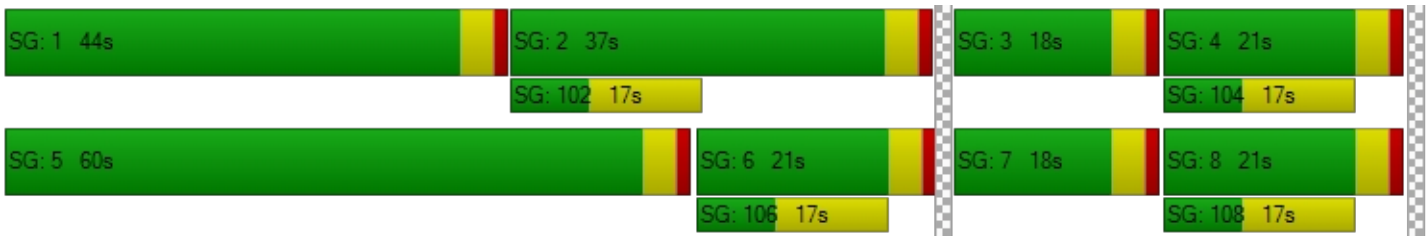
X, volume / capacity	0.66	0.38	0.99	0.98	0.27	0.08	0.64	0.80	0.97	0.34	0.00
d, Delay for Lane Group [s/veh]	63.50	31.07	74.94	52.56	10.80	9.33	63.13	64.34	68.25	47.07	0.00
Lane Group LOS	E	C	E	D	B	A	E	E	E	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.04	5.20	20.90	19.11	3.68	0.85	1.97	3.81	6.89	2.57	0.00
50th-Percentile Queue Length [ft/ln]	51.12	129.93	522.60	477.79	91.88	21.14	49.31	95.35	172.37	64.17	0.00
95th-Percentile Queue Length [veh/ln]	3.68	8.94	28.40	26.28	6.62	1.52	3.55	6.86	11.20	4.62	0.00
95th-Percentile Queue Length [ft/ln]	92.01	223.39	710.05	657.03	165.38	38.06	88.76	171.62	280.02	115.51	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.50	31.07	74.94	52.56	10.80	9.33	63.13	64.34	64.34	68.25	47.07	0.00
Movement LOS	E	C	E	D	B	A	E	E	E	E	D	A
d_A, Approach Delay [s/veh]	55.28			30.02			63.92			64.26		
Approach LOS	E			C			E			E		
d_I, Intersection Delay [s/veh]	46.53											
Intersection LOS	D											
Intersection V/C	0.965											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	900	83	123	722	5	4	15	15	26	17	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	212	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1038	83	123	934	5	4	15	15	26	17	37
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	267	21	32	240	1	1	4	4	7	4	10
Total Analysis Volume [veh/h]	18	1067	85	126	960	5	4	15	15	27	17	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	17	27	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Cycle Length [s]	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	18	18	6	22	22	3	5
g / C, Green / Cycle	0.03	0.39	0.39	0.12	0.48	0.48	0.05	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.29	0.05	0.07	0.25	0.25	0.02	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1897	1753	1730
c, Capacity [veh/h]	57	1399	625	219	904	903	95	171
d1, Uniform Delay [s]	22.33	12.57	9.36	19.59	8.68	8.68	21.51	20.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.05	0.88	0.10	2.39	0.49	0.49	2.26	2.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.76	0.14	0.58	0.53	0.53	0.36	0.48
d, Delay for Lane Group [s/veh]	25.38	13.46	9.46	21.97	9.17	9.18	23.77	22.18
Lane Group LOS	C	B	A	C	A	A	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.23	4.05	0.48	1.31	2.69	2.69	0.39	0.86
50th-Percentile Queue Length [ft/ln]	5.66	101.34	11.93	32.73	67.27	67.15	9.70	21.59
95th-Percentile Queue Length [veh/ln]	0.41	7.30	0.86	2.36	4.84	4.84	0.70	1.55
95th-Percentile Queue Length [ft/ln]	10.18	182.41	21.48	58.91	121.08	120.88	17.46	38.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.38	13.46	9.46	21.97	9.18	9.18	23.77	23.77	23.77	22.18	22.18	22.18
Movement LOS	C	B	A	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.35			10.65			23.77			22.18		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	12.57											
Intersection LOS	B											
Intersection V/C	0.654											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.820

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	978	29	21	742	3	0	0	10	18	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	212	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1116	29	21	954	3	0	0	10	18	0	22
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	293	8	6	250	1	0	0	3	5	0	6
Total Analysis Volume [veh/h]	7	1171	30	22	1001	3	0	0	10	19	0	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	37	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	24	24	1	4
g / C, Green / Cycle	0.38	0.38	0.38	0.33	0.33	0.02	0.06
(v / s)_i Volume / Saturation Flow Rate	0.32	0.32	0.02	0.28	0.28	0.01	0.02
s, saturation flow rate [veh/h]	1899	1729	1615	1896	1727	1615	1698
c, Capacity [veh/h]	713	649	606	627	571	29	94
d1, Uniform Delay [s]	20.94	20.94	14.41	22.66	22.66	35.19	33.16
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.31	3.61	0.03	3.52	3.84	7.07	3.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.86	0.05	0.86	0.86	0.35	0.45
d, Delay for Lane Group [s/veh]	24.24	24.55	14.44	26.18	26.51	42.26	36.44
Lane Group LOS	C	C	B	C	C	D	D
Critical Lane Group	Yes	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	9.48	8.69	0.30	8.53	7.82	0.23	0.78
50th-Percentile Queue Length [ft/ln]	236.98	217.14	7.53	213.17	195.46	5.65	19.47
95th-Percentile Queue Length [veh/ln]	14.53	13.52	0.54	13.32	12.40	0.41	1.40
95th-Percentile Queue Length [ft/ln]	363.21	337.98	13.55	332.89	310.10	10.16	35.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.24	24.39	14.44	26.18	26.34	26.51	42.26	42.26	42.26	36.44	36.44	36.44
Movement LOS	C	C	B	C	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	24.14			26.34			42.26			36.44		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	25.43											
Intersection LOS	C											
Intersection V/C	0.820											

Sequence

Ring 1	2	6	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.705

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	903	0	0	841	28	30	0	136	461	103	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	110	0	0	218	8	6	0	30	49	33	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	1013	0	0	1059	36	36	0	166	510	136	99
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	270	0	0	282	10	10	0	44	136	36	26
Total Analysis Volume [veh/h]	92	1079	0	0	1128	38	38	0	177	543	145	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	55	0	0	55	0	23	0	0	0	37	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	88	88	88	88	88	88	88	88	88
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	44	44	12	12	20	20	20
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.14	0.14	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.19	0.30	0.31	0.31	0.02	0.11	0.19	0.19	0.07
s, saturation flow rate [veh/h]	489	3618	1900	1878	1810	1615	1810	1846	1615
c, Capacity [veh/h]	207	1815	953	943	245	219	410	418	366
d1, Uniform Delay [s]	30.10	15.59	15.78	15.86	33.64	36.99	32.50	32.44	28.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.50	0.31	0.64	0.67	0.29	6.96	4.50	4.23	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.59	0.61	0.62	0.15	0.81	0.83	0.83	0.29
d, Delay for Lane Group [s/veh]	31.61	15.90	16.42	16.53	33.93	43.94	37.00	36.68	28.62
Lane Group LOS	C	B	B	B	C	D	D	D	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.82	7.22	7.98	8.03	0.73	4.05	7.26	7.32	1.84
50th-Percentile Queue Length [ft/ln]	45.58	180.56	199.60	200.73	18.20	101.23	181.61	182.89	46.06
95th-Percentile Queue Length [veh/ln]	3.28	11.63	12.62	12.68	1.31	7.29	11.68	11.75	3.32
95th-Percentile Queue Length [ft/ln]	82.04	290.74	315.46	316.91	32.76	182.22	292.12	293.78	82.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.61	15.90	0.00	0.00	16.47	16.53	33.93	0.00	43.94	36.88	36.68	28.62
Movement LOS	C	B			B	B	C		D	D	D	C
d_A, Approach Delay [s/veh]	17.13			16.47			42.17			35.75		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.93											
Intersection LOS	C											
Intersection V/C	0.705											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	233	1000	927	485	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	127	190	107	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1127	1117	592	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	298	295	156	0	0
Total Analysis Volume [veh/h]	268	1191	1181	626	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	28	115	87	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	45	45	45	45	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	9	41	28	28	
g / C, Green / Cycle	0.19	0.91	0.63	0.63	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.33	0.48	0.53	
s, saturation flow rate [veh/h]	1810	3618	1900	1693	
c, Capacity [veh/h]	349	3298	1198	1067	
d1, Uniform Delay [s]	17.30	0.26	5.89	6.63	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.57	0.07	0.99	1.96	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

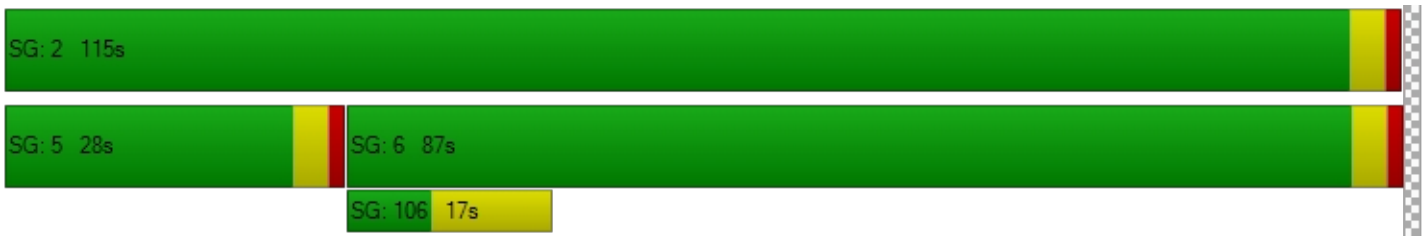
X, volume / capacity	0.77	0.36	0.75	0.85	
d, Delay for Lane Group [s/veh]	20.87	0.33	6.88	8.58	
Lane Group LOS	C	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.63	0.03	3.35	3.98	
50th-Percentile Queue Length [ft/ln]	65.63	0.76	83.77	99.47	
95th-Percentile Queue Length [veh/ln]	4.73	0.05	6.03	7.16	
95th-Percentile Queue Length [ft/ln]	118.14	1.37	150.79	179.04	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.87	0.33	7.28	8.58	0.00	0.00
Movement LOS	C	A	A	A		
d_A, Approach Delay [s/veh]	4.10		7.73		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.11					
Intersection LOS	A					
Intersection V/C	0.829					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	40	847	443	80	93	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	54	78	15	26	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	901	521	95	119	39
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	232	134	24	31	10
Total Analysis Volume [veh/h]	42	926	535	98	122	40
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	60	110	50	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	29	29	29	29	29
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	18	13	5	5
g / C, Green / Cycle	0.07	0.62	0.44	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.51	0.36	0.08	0.03
s, saturation flow rate [veh/h]	1619	1800	1752	1619	1530
c, Capacity [veh/h]	114	1111	778	287	271
d1, Uniform Delay [s]	12.94	4.40	7.06	10.68	10.14
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.97	1.71	2.13	1.00	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

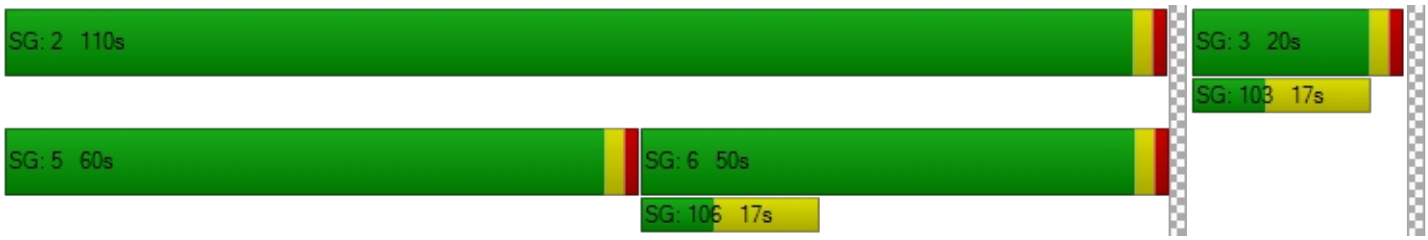
X, volume / capacity	0.37	0.83	0.81	0.43	0.15
d, Delay for Lane Group [s/veh]	14.91	6.12	9.19	11.68	10.39
Lane Group LOS	B	A	A	B	B
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.26	0.93	2.06	0.58	0.17
50th-Percentile Queue Length [ft/ln]	6.54	23.27	51.41	14.39	4.33
95th-Percentile Queue Length [veh/ln]	0.47	1.68	3.70	1.04	0.31
95th-Percentile Queue Length [ft/ln]	11.78	41.88	92.54	25.91	7.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.91	6.12	9.19	9.19	11.68	10.39
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	6.50		9.19		11.36	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.91					
Intersection LOS	A					
Intersection V/C	0.743					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.853

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	82	0	59	24	151	0	0	138	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	248	2	403	551	597	4	2	598	223
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	66	1	108	147	159	1	1	160	59
Total Analysis Volume [veh/h]	3	2	2	265	2	430	588	637	4	2	638	238
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	45	0	0	45	0	54	64	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	34	34	34	34	34	41	73	73	0	32	32
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.34	0.61	0.61	0.00	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.18	0.00	0.27	0.32	0.18	0.00	0.00	0.18	0.15
s, saturation flow rate [veh/h]	1585	1615	1437	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	504	464	443	546	464	624	2201	983	8	968	432
d1, Uniform Delay [s]	30.58	30.53	39.64	30.53	41.56	38.17	11.18	9.23	59.62	39.11	37.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	1.30	0.00	8.40	7.78	0.33	0.01	16.98	3.51	4.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

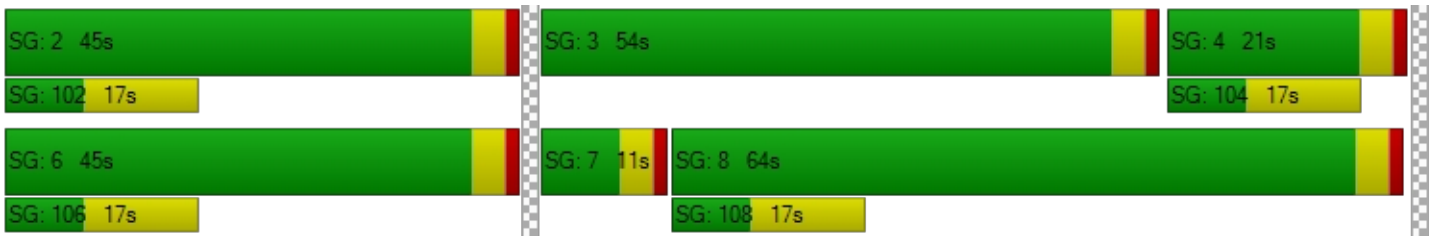
X, volume / capacity	0.01	0.00	0.60	0.00	0.93	0.94	0.29	0.00	0.26	0.66	0.55
d, Delay for Lane Group [s/veh]	30.58	30.54	40.93	30.53	49.96	45.95	11.51	9.24	76.60	42.62	42.76
Lane Group LOS	C	C	D	C	D	D	B	A	E	D	D
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.11	0.04	7.18	0.04	13.33	17.87	4.03	0.04	0.10	8.81	6.61
50th-Percentile Queue Length [ft/ln]	2.65	1.06	179.41	1.06	333.14	446.78	100.71	1.07	2.42	220.19	165.14
95th-Percentile Queue Length [veh/ln]	0.19	0.08	11.57	0.08	19.31	24.80	7.25	0.08	0.17	13.67	10.82
95th-Percentile Queue Length [ft/ln]	4.76	1.90	289.24	1.90	482.81	620.11	181.28	1.92	4.36	341.87	270.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.58	30.58	30.54	40.93	30.53	49.96	45.95	11.51	9.24	76.60	42.62	42.76
Movement LOS	C	C	C	D	C	D	D	B	A	E	D	D
d_A, Approach Delay [s/veh]	30.57			46.47			27.98			42.74		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	37.18											
Intersection LOS	D											
Intersection V/C	0.853											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.152

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	689	861	58	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	180	233	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	869	1094	58	31	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	231	291	15	8	2
Total Analysis Volume [veh/h]	23	925	1165	62	33	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.15	0.04
d_M, Delay for Movement [s/veh]	11.52	0.00	0.00	0.00	24.59	21.44
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.53	0.14
95th-Percentile Queue Length [ft/ln]	3.12	0.00	0.00	0.00	13.18	3.41
d_A, Approach Delay [s/veh]	0.28		0.00		23.86	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.58					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	766	104	514	726	0	148	0	824	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	89	10	143	96	0	21	0	19	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	855	114	657	822	0	169	0	843	0	0	0
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	226	30	174	217	0	45	0	223	0	0	0
Total Analysis Volume [veh/h]	0	904	121	695	869	0	179	0	891	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	33	54	0	61	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	115	115	115	115	115	115	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	38	38	25	67	40	40	
g / C, Green / Cycle	0.33	0.33	0.22	0.58	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.07	0.20	0.24	0.10	0.31	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	1190	531	774	2113	627	990	
d1, Uniform Delay [s]	34.55	28.01	43.62	13.11	27.28	35.72	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.58	1.00	4.06	0.13	0.25	3.28	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

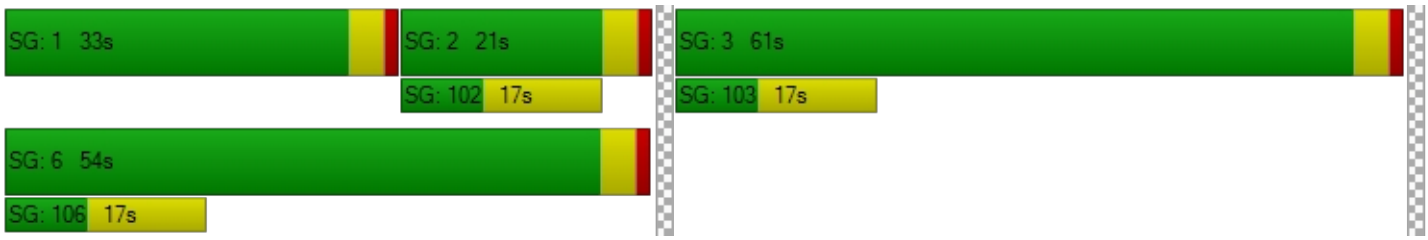
X, volume / capacity	0.76	0.23	0.90	0.41	0.29	0.90	
d, Delay for Lane Group [s/veh]	39.13	29.01	47.68	13.24	27.53	39.00	
Lane Group LOS	D	C	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.93	2.57	9.99	5.99	3.62	12.11	
50th-Percentile Queue Length [ft/ln]	298.24	64.30	249.69	149.64	90.55	302.78	
95th-Percentile Queue Length [veh/ln]	17.59	4.63	15.17	10.00	6.52	17.82	
95th-Percentile Queue Length [ft/ln]	439.85	115.74	379.26	249.95	162.98	445.47	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	39.13	29.01	47.68	13.24	0.00	27.53	0.00	39.00	0.00	0.00	0.00
Movement LOS		D	C	D	B		C		D			
d_A, Approach Delay [s/veh]	37.94			28.54			37.08			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	33.67											
Intersection LOS	C											
Intersection V/C	0.848											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 1

Viridian

Vistro File: C:\...\AME.vistro

Scenario 8 Opening Year (2020) With Project Morning Peak Hour - Alternative 1

Report File: C:\...\AMOYW1.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.203	85.3	F
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.116	67.4	E
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.808	27.1	C
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.767	15.8	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	1.505	54.9	D
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.704	16.0	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.004	11.7	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.601	6.4	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	240.1	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.964	92.5	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	0.080	113.8	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.033	79.0	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	2.026	24.2	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.826	31.8	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	1.156	131.9	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.157	106.1	F
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.712	11.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.006	9.4	A
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.015	12.6	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.423	12.7	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.003	9.0	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.327	16.8	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.006	10.1	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.867	109.9	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.031	15.3	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.095	14.2	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.544	11.6	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.363	4.2	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	167.111	309.9	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.167	76.7	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	EB Right	0.638	20.0	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.768	12.5	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.901	33.8	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.861	33.1	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.842	25.6	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.924	54.2	D
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.760	12.6	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Right	0.730	9.2	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.835	21.0	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.735	13.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	85.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.203

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	315	1261	0	0	1081	765	0	0	0	461	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	94	58	0	0	130	14	0	0	2	131	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	409	1319	0	0	1211	779	0	0	2	592	0	532
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	341	0	0	313	201	0	0	1	153	0	138
Total Analysis Volume [veh/h]	423	1364	0	0	1252	806	0	0	2	612	0	550
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	31	89	0	0	58	0	0	0	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	28	86	55	55		38	38
g / C, Green / Cycle	0.22	0.66	0.42	0.42		0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.26	0.40	0.26	0.53		0.36	0.36
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1530
c, Capacity [veh/h]	350	2267	2072	646		501	448
d1, Uniform Delay [s]	51.16	12.42	29.23	37.69		46.17	46.17
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	100.23	1.19	1.32	123.72		103.34	107.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.21	0.60	0.60	1.25		1.22	1.23
d, Delay for Lane Group [s/veh]	151.39	13.61	30.55	161.41		149.51	153.67
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	21.11	10.98	10.34	42.37		30.50	27.74
50th-Percentile Queue Length [ft/ln]	527.84	274.55	258.54	1059.13		762.41	693.38
95th-Percentile Queue Length [veh/ln]	31.59	16.42	15.62	61.43		44.45	40.96
95th-Percentile Queue Length [ft/ln]	789.76	410.43	390.39	1535.87		1111.25	1024.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	151.39	13.61	0.00	0.00	30.55	161.41	0.00	0.00	0.00	149.51	149.51	153.67
Movement LOS	F	B			C	F				F	F	F
d_A, Approach Delay [s/veh]	46.22			81.80			0.00			151.48		
Approach LOS	D			F			A			F		
d_I, Intersection Delay [s/veh]	85.27											
Intersection LOS	F											
Intersection V/C	1.203											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	67.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.116

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1006	424	484	1054	0	564	0	376	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	146	59	8	255	0	6	0	224	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1152	483	492	1309	0	570	0	600	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	303	127	129	344	0	150	0	158	0	0	0
Total Analysis Volume [veh/h]	0	1211	508	517	1376	0	599	0	631	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	41	0	39	80	0	0	50	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	38	38	36	77	47	47	
g / C, Green / Cycle	0.29	0.29	0.28	0.59	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.33	0.32	0.40	0.37	0.41	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1530	
c, Capacity [veh/h]	1434	448	449	2031	585	553	
d1, Uniform Delay [s]	43.38	46.17	47.17	18.09	41.68	41.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	6.25	84.97	74.39	1.84	22.90	69.95	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.84	1.14	1.15	0.68	1.02	1.14	
d, Delay for Lane Group [s/veh]	49.63	131.15	121.56	19.93	64.58	111.63	
Lane Group LOS	D	F	F	B	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	13.01	24.94	23.73	14.15	22.24	28.25	
50th-Percentile Queue Length [ft/ln]	325.23	623.38	593.18	353.81	556.09	706.32	
95th-Percentile Queue Length [veh/ln]	18.92	35.78	34.47	20.32	30.43	40.38	
95th-Percentile Queue Length [ft/ln]	473.11	894.57	861.64	508.05	760.63	1009.58	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.63	131.15	121.56	19.93	0.00	64.58	111.63	111.63	0.00	0.00	0.00
Movement LOS		D	F	F	B		E	F	F			
d_A, Approach Delay [s/veh]	73.72			47.68			88.78			0.00		
Approach LOS	E			D			F			A		
d_I, Intersection Delay [s/veh]	67.37											
Intersection LOS	E											
Intersection V/C	1.116											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	825	16	97	874	102	182	127	68	16	198	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	157	9	43	313	88	27	4	20	5	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	982	25	140	1187	190	209	131	88	21	199	141
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	250	6	36	302	48	53	33	22	5	51	36
Total Analysis Volume [veh/h]	147	1000	25	143	1209	193	213	133	90	21	203	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	20	0	15	25	0	10	20	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	83	83	83	83	83	83	83	83	83	83	83	83
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	38	38	9	37	37	13	22	22	3	11	11
g / C, Green / Cycle	0.11	0.45	0.45	0.11	0.45	0.45	0.16	0.26	0.26	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.09	0.29	0.29	0.09	0.40	0.40	0.13	0.04	0.06	0.01	0.10	0.11
s, saturation flow rate [veh/h]	1619	1800	1785	1619	1800	1715	1619	3427	1530	1619	1800	1561
c, Capacity [veh/h]	184	812	805	179	807	769	255	898	401	53	247	214
d1, Uniform Delay [s]	36.13	17.61	17.62	36.25	21.02	21.25	34.16	23.68	24.18	39.62	34.59	34.80
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.83	0.82	0.83	7.92	3.39	4.03	7.10	0.08	0.28	4.82	4.21	5.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.63	0.63	0.80	0.88	0.90	0.84	0.15	0.22	0.40	0.73	0.77
d, Delay for Lane Group [s/veh]	43.96	18.44	18.45	44.18	24.41	25.29	41.26	23.75	24.46	44.45	38.80	40.70
Lane Group LOS	D	B	B	D	C	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.25	7.27	7.21	3.17	12.41	12.27	4.58	0.99	1.39	0.49	3.74	3.52
50th-Percentile Queue Length [ft/ln]	81.33	181.66	180.23	79.32	310.32	306.87	114.54	24.81	34.75	12.15	93.40	88.01
95th-Percentile Queue Length [veh/ln]	5.86	11.69	11.61	5.71	18.19	18.02	8.09	1.79	2.50	0.87	6.72	6.34
95th-Percentile Queue Length [ft/ln]	146.39	292.18	290.32	142.77	454.78	450.51	202.30	44.66	62.55	21.86	168.12	158.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.96	18.44	18.45	44.18	24.77	25.29	41.26	23.75	24.46	44.45	39.01	40.70
Movement LOS	D	B	B	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.64			26.63			32.45			39.98		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	27.09											
Intersection LOS	C											
Intersection V/C	0.808											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	89	852	37	68	811	66	68	105	77	73	115	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	161	6	0	312	26	18	4	34	4	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	1013	43	68	1123	92	86	109	111	77	117	46
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	276	12	19	306	25	23	30	30	21	32	13
Total Analysis Volume [veh/h]	116	1105	47	74	1225	100	94	119	121	84	128	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	54	0	28	67	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	53	53	53	53	53	53	53	53
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	25	25	5	24	24	15	15
g / C, Green / Cycle	0.11	0.46	0.46	0.09	0.44	0.44	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.32	0.32	0.05	0.37	0.37	0.24	0.20
s, saturation flow rate [veh/h]	1619	1800	1774	1619	1800	1753	1421	1284
c, Capacity [veh/h]	175	836	825	142	800	779	483	447
d1, Uniform Delay [s]	22.94	11.31	11.32	23.33	13.15	13.19	17.99	16.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	1.04	1.06	2.92	2.41	2.55	1.78	1.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.69	0.69	0.52	0.84	0.84	0.69	0.59
d, Delay for Lane Group [s/veh]	27.20	12.36	12.38	26.26	15.56	15.74	19.77	18.00
Lane Group LOS	C	B	B	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.50	4.56	4.51	0.94	6.24	6.15	3.64	2.63
50th-Percentile Queue Length [ft/ln]	37.45	114.05	112.74	23.50	156.05	153.82	90.96	65.83
95th-Percentile Queue Length [veh/ln]	2.70	8.07	7.99	1.69	10.34	10.22	6.55	4.74
95th-Percentile Queue Length [ft/ln]	67.42	201.63	199.81	42.30	258.49	255.52	163.73	118.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.20	12.37	12.38	26.26	15.64	15.74	19.77	19.77	19.77	18.00	18.00	18.00
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.73			16.21			19.77			18.00		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.75											
Intersection LOS	B											
Intersection V/C	0.767											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	54.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.505

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	768	38	73	882	37	53	83	33	56	77	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	151	18	44	254	21	15	6	18	7	16	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	919	56	117	1136	58	68	89	51	63	93	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	259	16	33	320	16	19	25	14	18	26	47
Total Analysis Volume [veh/h]	66	1035	63	132	1279	65	77	100	57	71	105	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	22	0	10	22	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	20	20	6	21	21	25	25	25	25
g / C, Green / Cycle	0.08	0.33	0.33	0.10	0.35	0.35	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.31	0.08	0.38	0.38	0.94	0.04	0.82	0.12
s, saturation flow rate [veh/h]	1619	1800	1764	1619	1800	1770	189	1530	215	1530
c, Capacity [veh/h]	129	592	580	170	638	627	165	637	173	637
d1, Uniform Delay [s]	26.57	19.57	19.58	26.23	19.42	19.42	18.88	10.65	18.07	11.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.12	24.18	24.64	7.34	52.42	54.26	54.94	0.06	35.65	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.94	0.94	0.78	1.06	1.06	1.08	0.09	1.02	0.30
d, Delay for Lane Group [s/veh]	29.69	43.76	44.22	33.57	71.84	73.67	73.82	10.71	53.72	11.95
Lane Group LOS	C	D	D	C	F	F	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.97	10.64	10.50	2.08	17.09	17.12	3.75	0.42	3.03	1.52
50th-Percentile Queue Length [ft/ln]	24.28	265.88	262.56	52.02	427.18	427.96	93.81	10.41	75.78	38.09
95th-Percentile Queue Length [veh/ln]	1.75	15.98	15.82	3.75	24.79	24.90	6.75	0.75	5.46	2.74
95th-Percentile Queue Length [ft/ln]	43.71	399.58	395.43	93.64	619.66	622.38	168.85	18.74	136.41	68.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.69	43.97	44.22	33.57	72.70	73.67	73.82	73.82	10.71	53.72	53.72	11.95
Movement LOS	C	D	D	C	F	E	E	E	B	D	D	B
d_A, Approach Delay [s/veh]	43.17			69.25			58.45			32.09		
Approach LOS	D			E			E			C		
d_I, Intersection Delay [s/veh]	54.91											
Intersection LOS	D											
Intersection V/C	1.505											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	156	87	154	163	0	0	2	8	31	1	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	731	138	227	1101	8	22	10	28	96	5	108
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	215	41	67	323	2	6	3	8	28	1	32
Total Analysis Volume [veh/h]	18	859	162	267	1294	9	26	12	33	113	6	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	30	30	12	39	39	12	12	12
g / C, Green / Cycle	0.03	0.46	0.46	0.18	0.60	0.60	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.15	0.34	0.34	0.12	0.15	0.08
s, saturation flow rate [veh/h]	1810	1900	1797	1810	1900	1895	571	793	1615
c, Capacity [veh/h]	57	863	816	324	1144	1141	180	252	295
d1, Uniform Delay [s]	30.88	13.41	13.42	25.74	7.85	7.86	23.20	25.59	23.63
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.18	3.18	3.36	5.23	2.06	2.07	1.41	1.37	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

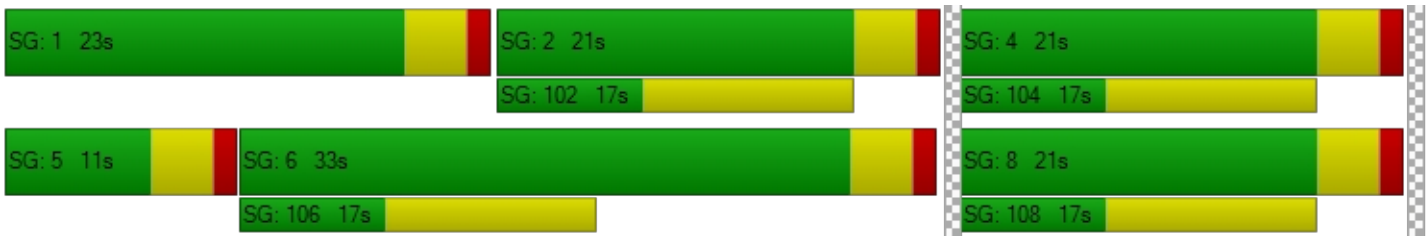
X, volume / capacity	0.32	0.61	0.61	0.82	0.57	0.57	0.40	0.47	0.43
d, Delay for Lane Group [s/veh]	34.06	16.60	16.78	30.96	9.91	9.93	24.60	26.95	24.63
Lane Group LOS	C	B	B	C	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.32	5.81	5.54	4.22	4.92	4.91	0.95	1.76	1.72
50th-Percentile Queue Length [ft/ln]	7.90	145.33	138.49	105.47	122.94	122.86	23.77	44.09	43.05
95th-Percentile Queue Length [veh/ln]	0.57	9.77	9.40	7.59	8.55	8.55	1.71	3.17	3.10
95th-Percentile Queue Length [ft/ln]	14.22	244.19	234.99	189.69	213.86	213.75	42.78	79.37	77.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.06	16.67	16.78	30.96	9.92	9.93	24.60	24.60	24.60	26.95	26.95	24.63
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.99			13.50			24.60			25.75		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.04											
Intersection LOS	B											
Intersection V/C	0.704											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1023	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	247	20	0	202	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	881	20	0	1225	0	2
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	232	6	0	322	0	1
Total Analysis Volume [veh/h]	927	24	0	1289	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.68
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.28
d_A, Approach Delay [s/veh]	0.00		0.00		11.68	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1024	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	251	241	74	128	68	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	885	241	74	1152	68	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	233	63	19	303	18	4
Total Analysis Volume [veh/h]	932	254	78	1213	72	18
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	11	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	32	32	32	32	32	32
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	4	20	4	4
g / C, Green / Cycle	0.39	0.39	0.11	0.63	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.26	0.16	0.04	0.34	0.04	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1420	634	201	2273	221	197
d1, Uniform Delay [s]	7.97	7.03	13.24	3.33	12.87	12.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.41	1.22	0.20	0.85	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.40	0.39	0.53	0.33	0.09
d, Delay for Lane Group [s/veh]	8.50	7.43	14.46	3.53	13.72	12.69
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.68	0.83	0.48	0.44	0.42	0.10
50th-Percentile Queue Length [ft/ln]	42.00	20.74	11.91	11.11	10.50	2.51
95th-Percentile Queue Length [veh/ln]	3.02	1.49	0.86	0.80	0.76	0.18
95th-Percentile Queue Length [ft/ln]	75.61	37.33	21.44	19.99	18.91	4.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.50	7.43	14.46	3.53	13.72	12.69
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.27		4.19		13.51	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.40					
Intersection LOS	A					
Intersection V/C	0.601					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	240.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	492	1	1	195	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1178	1	1	1239	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	341	0	0	359	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1363	1	1	1434	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.00	0.01	0.00	0.23	0.00	0.05	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	12.97	0.00	0.00	12.07	0.00	0.00	159.74	240.10	30.02	146.97	231.87	19.39
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.01	0.00	0.00	1.05	1.05	1.05	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	3.81	0.00	0.00	0.15	0.07	0.00	26.17	26.17	26.17	2.86	2.86	2.86
d_A, Approach Delay [s/veh]	0.22			0.01			61.15			146.97		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	0.69											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	92.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	208	81	110	68	18	43	30	37	35	8	242
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	433	362	641	622	38	61	68	52	317	52	569
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	116	97	172	166	10	16	18	14	85	14	0
Total Analysis Volume [veh/h]	34	464	388	686	666	41	65	73	56	339	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	50	65	0	0	21	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	283	283	283	283	283	283	283	283	283	283
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	71	71	109	174	174	23	23	64	64
g / C, Green / Cycle	0.02	0.25	0.25	0.39	0.61	0.61	0.08	0.08	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.02	0.13	0.24	0.38	0.18	0.03	0.04	0.07	0.22	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1765	1822	1615
c, Capacity [veh/h]	44	909	406	700	2220	991	147	143	409	363
d1, Uniform Delay [s]	137.29	90.99	104.40	85.72	25.88	21.67	123.93	128.90	108.58	0.00
k, delay calibration	0.11	0.11	0.15	0.41	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.88	0.45	16.27	26.28	0.08	0.02	2.10	17.92	14.11	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

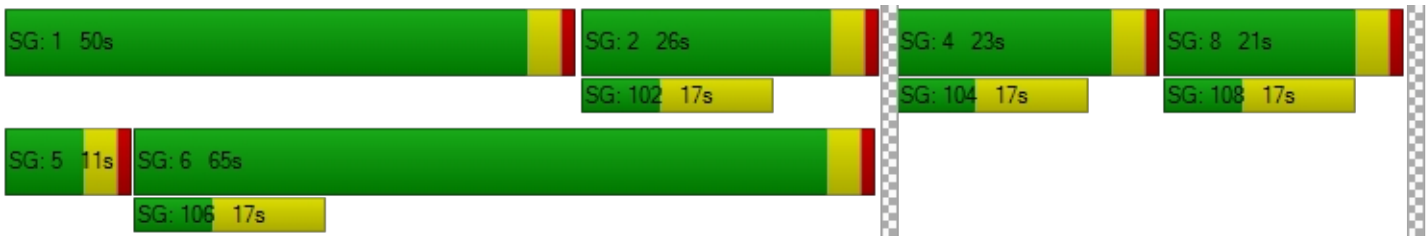
X, volume / capacity	0.78	0.51	0.96	0.98	0.30	0.04	0.44	0.90	0.97	0.00
d, Delay for Lane Group [s/veh]	162.17	91.44	120.67	112.00	25.96	21.68	126.03	146.82	122.69	0.00
Lane Group LOS	F	F	F	F	C	C	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.86	14.97	30.44	55.23	11.25	1.16	4.77	10.37	30.91	0.00
50th-Percentile Queue Length [ft/ln]	71.56	374.14	761.09	1380.83	281.26	29.05	119.14	259.30	772.78	0.00
95th-Percentile Queue Length [veh/ln]	5.15	21.31	39.49	67.42	16.75	2.09	8.35	15.65	40.03	0.00
95th-Percentile Queue Length [ft/ln]	128.81	532.75	987.31	1685.54	418.78	52.28	208.64	391.34	1000.74	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	162.17	91.44	120.67	112.00	25.96	21.68	126.03	146.82	146.82	122.69	122.69	0.00
Movement LOS	F	F	F	F	C	C	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	106.96			68.21			139.86			122.69		
Approach LOS	F			E			F			F		
d_I, Intersection Delay [s/veh]	92.53											
Intersection LOS	F											
Intersection V/C	0.964											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	113.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.080

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	511	34	112	777	1	2	4	24	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	305	0	0	140	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	816	34	112	917	1	2	4	24	8	3	18
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	216	9	30	243	0	1	1	6	2	1	5
Total Analysis Volume [veh/h]	27	865	36	119	972	1	2	4	25	8	3	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.16	0.01	0.00	0.04	0.11	0.05	0.17	0.08	0.03
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	10.59	0.00	0.00	91.41	111.98	17.73	94.22	113.79	24.09
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.11	0.05	0.00	0.51	0.26	0.00	0.73	0.73	0.73	1.06	1.06	1.06
95th-Percentile Queue Length [ft/ln]	2.71	1.35	0.00	12.83	6.41	0.00	18.32	18.32	18.32	26.58	26.58	26.58
d_A, Approach Delay [s/veh]	0.30			1.15			34.65			51.76		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	2.00											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	79.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	564	18	12	798	0	0	0	3	22	2	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	305	0	0	140	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	869	18	12	938	0	0	0	3	22	2	6
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	231	5	3	249	0	0	0	1	6	1	2
Total Analysis Volume [veh/h]	9	924	19	13	998	0	0	0	3	23	2	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.26	0.03	0.01
d_M, Delay for Movement [s/veh]	10.20	0.00	0.00	9.98	0.00	0.00	50.30	65.67	11.93	61.15	79.00	26.53
Movement LOS	B	A	A	A	A	A	F	F	B	F	F	D
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.05	0.02	0.00	0.02	0.02	0.02	1.17	1.17	1.17
95th-Percentile Queue Length [ft/ln]	0.86	0.43	0.00	1.24	0.62	0.00	0.43	0.43	0.43	29.25	29.25	29.25
d_A, Approach Delay [s/veh]	0.10			0.13			11.93			55.60		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	0.99											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.026

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	28	567	19	6	826	24	15	25	30	65	28	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	286	5	0	114	25	43	16	35	4	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	853	24	6	940	49	58	41	65	69	33	9
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	232	7	2	255	13	16	11	18	19	9	2
Total Analysis Volume [veh/h]	43	926	26	7	1021	53	63	45	71	75	36	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	11	22	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	24	24	1	21	21	23	23	23	23
g / C, Green / Cycle	0.06	0.40	0.40	0.01	0.36	0.36	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.25	0.00	0.29	0.29	0.88	0.04	1.31	0.01
s, saturation flow rate [veh/h]	1810	1900	1882	1810	1900	1867	123	1615	85	1615
c, Capacity [veh/h]	114	766	758	28	675	664	142	618	132	618
d1, Uniform Delay [s]	27.13	14.36	14.36	29.35	17.52	17.52	20.83	12.02	23.99	11.56
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.22	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	3.82	3.86	4.73	9.73	9.90	8.20	0.08	23.89	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

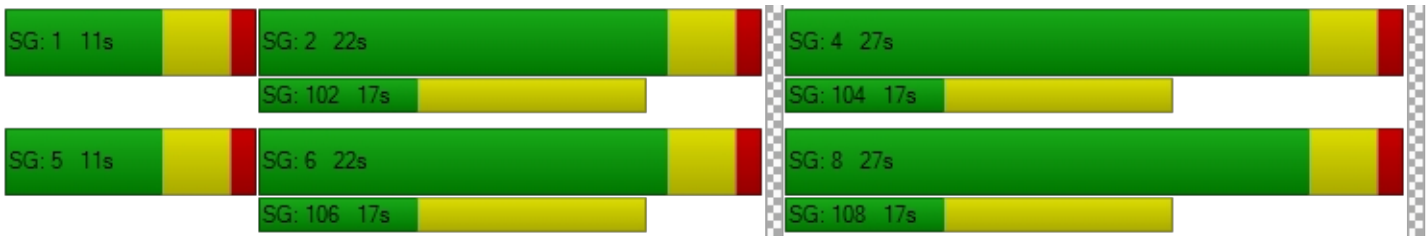
X, volume / capacity	0.38	0.62	0.62	0.25	0.80	0.80	0.76	0.11	0.84	0.02
d, Delay for Lane Group [s/veh]	29.19	18.18	18.22	34.08	27.26	27.42	29.03	12.10	47.89	11.57
Lane Group LOS	C	B	B	C	C	C	C	B	D	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	5.34	5.30	0.13	7.79	7.69	1.82	0.57	2.41	0.08
50th-Percentile Queue Length [ft/ln]	15.72	133.54	132.45	3.29	194.79	192.23	45.39	14.14	60.33	1.91
95th-Percentile Queue Length [veh/ln]	1.13	9.13	9.07	0.24	12.37	12.24	3.27	1.02	4.34	0.14
95th-Percentile Queue Length [ft/ln]	28.30	228.30	226.83	5.93	309.23	305.92	81.70	25.44	108.59	3.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.19	18.20	18.22	34.08	27.33	27.42	29.03	29.03	12.10	47.89	47.89	11.57
Movement LOS	C	B	B	C	C	C	C	C	B	D	D	B
d_A, Approach Delay [s/veh]	18.68			27.38			22.32			44.89		
Approach LOS	B			C			C			D		
d_I, Intersection Delay [s/veh]	24.25											
Intersection LOS	C											
Intersection V/C	2.026											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	576	0	0	823	23	13	0	158	351	89	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	240	0	0	151	2	8	0	47	20	10	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	816	0	0	974	25	21	0	205	371	99	136
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	230	0	0	275	7	6	0	58	105	28	38
Total Analysis Volume [veh/h]	43	921	0	0	1099	28	24	0	231	419	112	153
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	21	0	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	106	106	106	106	106	106	106	106
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	43	18	18	34	34
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.17	0.17	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.30	0.30	0.01	0.14	0.29	0.09
s, saturation flow rate [veh/h]	508	3618	1900	1883	1810	1615	1828	1615
c, Capacity [veh/h]	135	1464	769	762	299	267	580	512
d1, Uniform Delay [s]	43.81	25.28	26.79	26.89	37.55	43.24	34.97	27.40
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.35	0.45	1.37	1.43	0.11	8.22	6.29	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

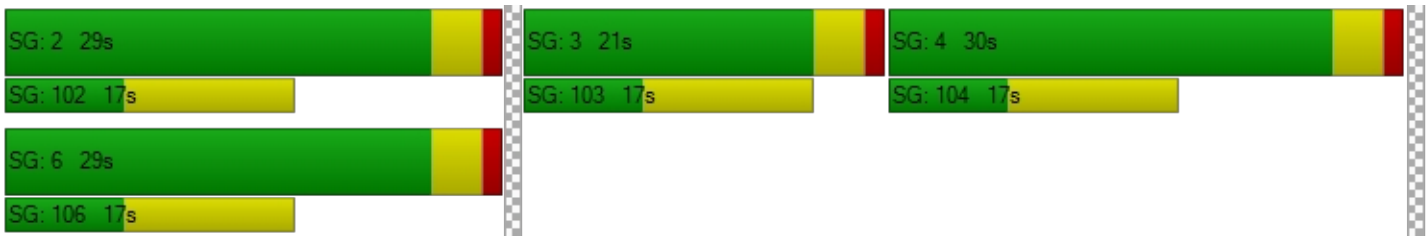
X, volume / capacity	0.32	0.63	0.73	0.74	0.08	0.86	0.92	0.30
d, Delay for Lane Group [s/veh]	45.16	25.73	28.16	28.32	37.67	51.46	41.25	27.73
Lane Group LOS	D	C	C	C	D	D	D	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.12	9.16	12.05	12.10	0.54	6.47	13.93	2.96
50th-Percentile Queue Length [ft/ln]	27.97	228.89	301.16	302.49	13.45	161.69	348.21	74.07
95th-Percentile Queue Length [veh/ln]	2.01	14.12	17.74	17.80	0.97	10.64	20.05	5.33
95th-Percentile Queue Length [ft/ln]	50.35	352.94	443.46	445.11	24.21	265.95	501.23	133.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.16	25.73	0.00	0.00	28.24	28.32	37.67	0.00	51.46	41.25	41.25	27.73
Movement LOS	D	C			C	C	D		D	D	D	C
d_A, Approach Delay [s/veh]	26.60			28.24			50.16			38.23		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.82											
Intersection LOS	C											
Intersection V/C	0.826											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	131.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.156

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	341	610	784	569	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	245	139	79	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	855	923	648	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	245	264	186	0	0
Total Analysis Volume [veh/h]	402	979	1057	742	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.16	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	131.93	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	16.14	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	403.40	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	38.40		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	16.68					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	106.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.157

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	553	546	146	624	0	364	28	258	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	71	36	61	78	0	184	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	624	582	207	702	0	548	28	269	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	178	166	59	201	0	157	8	77	3	0	1
Total Analysis Volume [veh/h]	0	713	665	237	802	0	626	32	307	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	26	0	12	38	0	0	21	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	8	35	31	31	2	2
g / C, Green / Cycle	0.29	0.29	0.10	0.44	0.38	0.38	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.36	0.42	0.13	0.22	0.36	0.19	0.01	0.00
s, saturation flow rate [veh/h]	1900	1623	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	553	472	181	1595	694	618	48	43
d1, Uniform Delay [s]	28.37	28.37	36.01	16.07	23.92	18.82	38.21	38.00
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	125.59	218.07	147.64	1.14	7.66	0.62	3.03	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

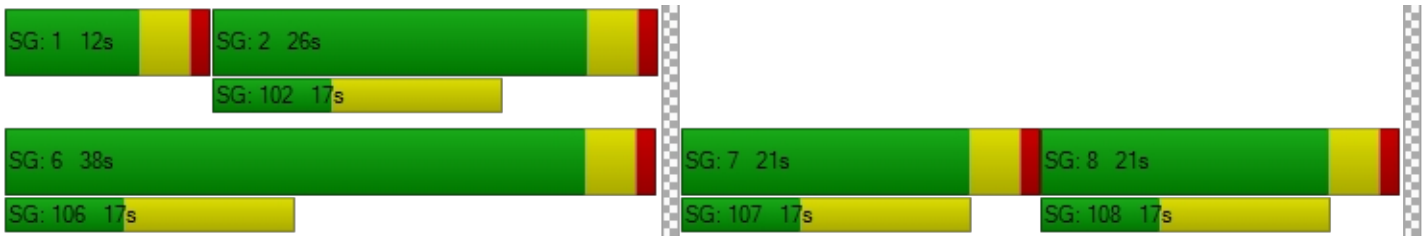
X, volume / capacity	1.25	1.46	1.31	0.50	0.95	0.50	0.27	0.07
d, Delay for Lane Group [s/veh]	153.96	246.45	183.65	17.21	31.58	19.44	41.24	38.69
Lane Group LOS	F	F	F	B	C	B	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	29.33	37.19	10.87	5.18	12.64	4.20	0.29	0.06
50th-Percentile Queue Length [ft/ln]	733.25	929.81	271.72	129.47	316.04	105.11	7.14	1.61
95th-Percentile Queue Length [veh/ln]	43.34	57.23	17.86	8.91	18.47	7.57	0.51	0.12
95th-Percentile Queue Length [ft/ln]	1083.54	1430.69	446.47	222.77	461.82	189.18	12.86	2.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	157.08	246.45	183.65	17.21	0.00	31.58	31.58	19.44	41.24	0.00	38.69
Movement LOS		F	F	F	B		C	C	B	D		D
d_A, Approach Delay [s/veh]	200.21			55.17			27.72			40.76		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	106.12											
Intersection LOS	F											
Intersection V/C	1.157											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	27	771	50	55	656	75	159	35	19	10	20	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	89	2	18	68	3	4	0	1	2	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	860	52	73	724	78	163	35	20	12	20	124
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	232	14	20	195	21	44	9	5	3	5	33
Total Analysis Volume [veh/h]	29	928	56	79	781	84	176	38	22	13	22	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	48	0	11	48	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	40	40	40	40	40	40	40	40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	14	14	4	16	16	10	10	10
g / C, Green / Cycle	0.05	0.35	0.35	0.10	0.40	0.40	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.03	0.04	0.22	0.05	0.20	0.02	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1201	1759	1615
c, Capacity [veh/h]	89	1269	566	188	1466	655	450	552	392
d1, Uniform Delay [s]	18.20	11.23	8.65	16.64	8.93	7.39	14.99	11.57	12.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	0.83	0.08	1.50	0.30	0.09	0.95	0.05	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.73	0.10	0.42	0.53	0.13	0.52	0.06	0.34
d, Delay for Lane Group [s/veh]	20.31	12.06	8.73	18.14	9.23	7.48	15.94	11.62	12.90
Lane Group LOS	C	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.28	2.81	0.26	0.66	1.89	0.34	1.79	0.20	0.85
50th-Percentile Queue Length [ft/ln]	6.90	70.36	6.50	16.39	47.30	8.54	44.72	5.03	21.26
95th-Percentile Queue Length [veh/ln]	0.50	5.07	0.47	1.18	3.41	0.61	3.22	0.36	1.53
95th-Percentile Queue Length [ft/ln]	12.41	126.65	11.69	29.51	85.15	15.37	80.49	9.05	38.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.31	12.06	8.73	18.14	9.23	7.48	15.94	15.94	15.94	11.62	11.62	12.90
Movement LOS	C	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.11			9.82			15.94			12.64		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	11.62											
Intersection LOS	B											
Intersection V/C	0.712											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	231	12	35	77
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	363	12	35	210
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	96	3	9	55
Total Analysis Volume [veh/h]	0	5	382	13	37	221
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	9.39	0.00	0.00	8.16	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.10	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.46	0.00	0.00	2.44	0.00
d_A, Approach Delay [s/veh]	9.39		0.00		1.17	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	10	219	17	14	105
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	10	351	17	14	238
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	92	4	4	63
Total Analysis Volume [veh/h]	7	11	369	18	15	251
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.59	9.38	0.00	0.00	8.08	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	1.11	1.00	0.00	0.00	0.96	0.00
d_A, Approach Delay [s/veh]	10.63		0.00		0.46	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	67	0	43	58	83	0	0	80	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	15	16	6	49	154	55	20	47	62	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	15	83	6	92	212	138	20	47	142	101
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	4	23	2	26	59	39	6	13	40	28
Total Analysis Volume [veh/h]	7	3	17	93	7	103	238	155	22	53	159	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	21	0	0	47	78	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	4	6	17	17	7	7
g / C, Green / Cycle	0.05	0.05	0.12	0.18	0.49	0.49	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.05	0.13	0.04	0.01	0.07	0.08
s, saturation flow rate [veh/h]	1810	1652	1810	1810	3618	1615	1900	1657
c, Capacity [veh/h]	87	79	220	333	1759	785	357	311
d1, Uniform Delay [s]	15.87	16.01	14.18	13.38	4.81	4.67	12.39	12.53
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	1.66	1.28	2.87	0.02	0.01	0.67	0.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.25	0.42	0.72	0.09	0.03	0.38	0.44
d, Delay for Lane Group [s/veh]	16.27	17.66	15.46	16.25	4.83	4.68	13.06	13.50
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	0.16	0.63	1.63	0.17	0.05	0.79	0.82
50th-Percentile Queue Length [ft/ln]	1.35	4.10	15.67	40.87	4.32	1.23	19.78	20.42
95th-Percentile Queue Length [veh/ln]	0.10	0.30	1.13	2.94	0.31	0.09	1.42	1.47
95th-Percentile Queue Length [ft/ln]	2.42	7.38	28.21	73.56	7.78	2.22	35.61	36.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.27	17.66	17.66	15.46	0.00	0.00	16.25	4.83	4.68	0.00	13.12	13.50
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	17.30			15.46			11.37			13.28		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.68											
Intersection LOS	B											
Intersection V/C	0.423											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	151	0	0	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	82	4	5	146
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	233	4	5	306
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	61	1	1	81
Total Analysis Volume [veh/h]	0	3	245	4	5	322
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.96	0.00	0.00	7.72	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.25	0.00	0.00	0.28	0.00
d_A, Approach Delay [s/veh]	8.96		0.00		0.12	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.327

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	0	3	0	0	0	0	44	41	14	75	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	2	5	10	8	12	2	142	92	15	178	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	1	2	3	2	4	1	44	28	5	55	2
Total Analysis Volume [veh/h]	150	2	6	12	10	15	2	176	114	19	220	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.00	0.01	0.03	0.02	0.02	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	16.76	16.63	13.34	13.07	13.75	9.84	7.66	0.00	0.00	7.85	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.48	1.48	1.48	0.21	0.21	0.21	0.00	0.00	0.00	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	37.01	37.01	37.01	5.34	5.34	5.34	0.11	0.11	0.11	0.89	0.89	0.89
d_A, Approach Delay [s/veh]	16.63			11.95			0.05			0.61		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.42											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	49	60	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	75	46	9	4	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	124	106	9	4	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	33	28	2	1	3
Total Analysis Volume [veh/h]	15	131	112	9	4	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	10.07	8.86
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.02	0.05
95th-Percentile Queue Length [ft/ln]	0.77	0.00	0.00	0.00	0.42	1.13
d_A, Approach Delay [s/veh]	0.77		0.00		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.97					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	109.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.867

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	380	471	72	62	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	95	106	83	28	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	475	577	155	90	30
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	151	183	49	29	0
Total Analysis Volume [veh/h]	30	603	732	197	114	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.87	0.00
d_M, Delay for Movement [s/veh]	10.04	0.00	0.00	0.00	109.94	14.66
Movement LOS	B	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.00	5.53	0.00
95th-Percentile Queue Length [ft/ln]	3.14	0.00	0.00	0.00	138.33	0.00
d_A, Approach Delay [s/veh]	0.48		0.00		109.94	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	7.66					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	359	61	109	471	10	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	97	0	0	107	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	456	61	109	578	10	43
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	123	16	29	156	3	12
Total Analysis Volume [veh/h]	492	66	118	624	11	46
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.12	0.01	0.03	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	8.98	0.00	15.33	12.05
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.39	0.00	0.09	0.27
95th-Percentile Queue Length [ft/ln]	0.00	0.00	9.75	0.00	2.36	6.73
d_A, Approach Delay [s/veh]	0.00		1.43		12.68	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.31					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	47	441	579	23	19	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	61	77	46	61	20	26
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	518	625	84	39	77
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	136	164	22	10	20
Total Analysis Volume [veh/h]	114	545	657	88	41	81
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.01	0.01	0.00	0.10	0.12
d_M, Delay for Movement [s/veh]	9.75	0.00	0.00	0.00	14.23	11.08
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.45	0.00	0.00	0.00	0.31	0.41
95th-Percentile Queue Length [ft/ln]	11.23	0.00	0.00	0.00	7.84	10.20
d_A, Approach Delay [s/veh]	1.69		0.00		12.14	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.70					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	446	15	106	546	4	0	3	11	28	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	134	0	0	58	14	4	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	580	15	106	604	18	4	3	21	28	0	64
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	155	4	28	161	5	1	1	6	7	0	17
Total Analysis Volume [veh/h]	64	620	16	113	646	19	4	3	22	30	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	62	0	26	72	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	9	9	5	10	10	0	2	2	2	3	3
g / C, Green / Cycle	0.10	0.26	0.26	0.14	0.31	0.31	0.01	0.06	0.06	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.01	0.06	0.18	0.01	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	176	955	426	254	1111	496	15	108	91	96	193	164
d1, Uniform Delay [s]	13.91	10.75	9.00	12.98	9.62	7.99	16.22	14.67	14.85	15.00	0.00	13.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.75	0.04	1.23	0.48	0.03	9.47	0.10	1.34	1.84	0.00	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.65	0.04	0.45	0.58	0.04	0.27	0.03	0.24	0.31	0.00	0.42
d, Delay for Lane Group [s/veh]	15.17	11.50	9.04	14.20	10.10	8.02	25.69	14.77	16.19	16.84	0.00	15.54
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.42	1.53	0.07	0.68	1.42	0.07	0.06	0.02	0.16	0.22	0.00	0.45
50th-Percentile Queue Length [ft/ln]	10.38	38.14	1.65	17.03	35.49	1.75	1.59	0.51	4.03	5.59	0.00	11.29
95th-Percentile Queue Length [veh/ln]	0.75	2.75	0.12	1.23	2.56	0.13	0.11	0.04	0.29	0.40	0.00	0.81
95th-Percentile Queue Length [ft/ln]	18.68	68.66	2.96	30.66	63.89	3.15	2.86	0.91	7.25	10.06	0.00	20.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.17	11.50	9.04	14.20	10.10	8.02	25.69	14.77	16.19	16.84	0.00	15.54
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.78			10.65			17.35			15.94		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.59											
Intersection LOS	B											
Intersection V/C	0.544											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.363

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	483	80	41	576	54	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	179	0	0	68	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	662	80	41	644	54	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	188	23	12	183	15	14
Total Analysis Volume [veh/h]	751	91	47	731	61	57
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	43	39	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	0	0	8	8
g / C, Green / Cycle	0.73	0.73	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.07	0.38	0.08	0.04
s, saturation flow rate [veh/h]	3618	1615	723	1900	736	1615
c, Capacity [veh/h]	2644	1180	120	0	194	219
d1, Uniform Delay [s]	2.74	2.30	30.01	0.00	26.49	23.23
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.13	9.34	0.00	0.92	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

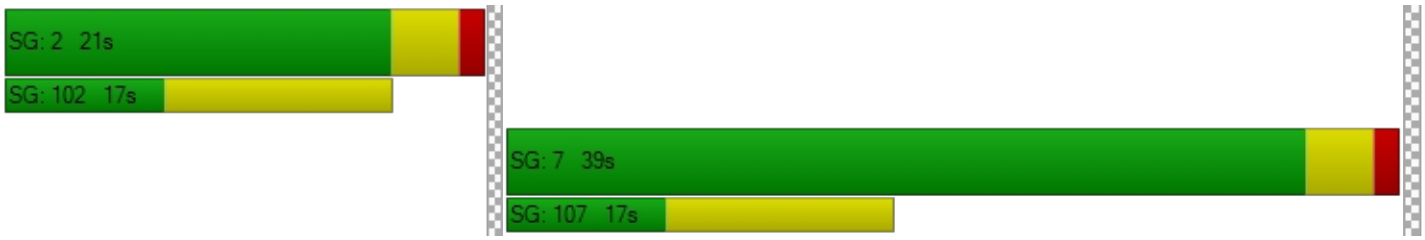
X, volume / capacity	0.28	0.08	0.39	0.00	0.31	0.26
d, Delay for Lane Group [s/veh]	3.01	2.43	39.35	0.00	27.41	23.85
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.86	0.20	1.00	0.00	0.85	0.72
50th-Percentile Queue Length [ft/ln]	21.62	4.94	25.11	0.00	21.36	17.94
95th-Percentile Queue Length [veh/ln]	1.56	0.36	1.81	0.00	1.54	1.29
95th-Percentile Queue Length [ft/ln]	38.91	8.89	45.19	0.00	38.45	32.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.01	2.43	39.35	0.00	27.41	23.85
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	2.95		2.38		25.69	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.24					
Intersection LOS	A					
Intersection V/C	0.363					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	309.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	167.111

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	53	0	15	61	160	0	0	270	118
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	183	4	320	391	697	13	3	602	283
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	47	1	83	101	180	3	1	155	73
Total Analysis Volume [veh/h]	10	4	3	189	4	330	404	719	13	3	621	292
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	86	0	0	86	0	13	23	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	82	82	82	82	9	25	25	1	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.08	0.21	0.21	0.01	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.75	0.00	150.00	0.20	0.22	0.20	0.01	0.00	0.17	0.18
s, saturation flow rate [veh/h]	19	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	64	1103	60	1103	138	764	341	10	508	227
d1, Uniform Delay [s]	33.53	6.03	59.09	7.57	55.43	46.59	37.63	59.43	51.57	51.57
k, delay calibration	0.29	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.55	0.00	1033.00	0.15	871.92	20.97	0.21	15.71	116.38	158.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.00	3.20	0.30	2.93	0.94	0.04	0.30	1.22	1.29
d, Delay for Lane Group [s/veh]	38.08	6.03	1092.09	7.72	927.35	67.56	37.84	75.14	167.95	209.57
Lane Group LOS	D	A	F	A	F	E	D	E	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.40	0.02	19.13	3.23	37.59	12.73	0.33	0.13	15.83	16.76
50th-Percentile Queue Length [ft/ln]	9.92	0.58	478.13	80.71	939.70	318.23	8.16	3.37	395.84	419.02
95th-Percentile Queue Length [veh/ln]	0.71	0.04	34.43	5.81	58.25	18.58	0.59	0.24	24.36	26.06
95th-Percentile Queue Length [ft/ln]	17.86	1.05	860.64	145.28	1456.21	464.51	14.70	6.06	609.12	651.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.08	38.08	6.03	1092.09	1092.09	7.72	927.35	67.56	37.84	75.14	167.95	209.57
Movement LOS	D	D	A	F	F	A	F	E	D	E	F	F
d_A, Approach Delay [s/veh]	32.43			407.88			372.99			180.92		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	309.92											
Intersection LOS	F											
Intersection V/C	167.111											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	76.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.167

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	571	669	23	9	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	388	213	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	959	882	23	9	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	260	239	6	2	4
Total Analysis Volume [veh/h]	22	1039	956	25	10	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.17	0.05
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	0.00	76.66	17.14
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.55	0.14
95th-Percentile Queue Length [ft/ln]	2.39	0.00	0.00	0.00	13.79	3.53
d_A, Approach Delay [s/veh]	0.21		0.00		41.94	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	0.60					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	822	191	66	785	0	2	3	80	190	5	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	397	0	21	232	0	0	0	0	0	0	27
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	1219	191	87	1017	0	2	3	80	190	5	93
Peak Hour Factor	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	341	53	24	284	0	1	1	22	53	1	26
Total Analysis Volume [veh/h]	73	1362	213	97	1136	0	2	3	89	212	6	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	25	35	0	0	48	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	73	87	8	74	74	8	8	10	10	10
g / C, Green / Cycle	0.06	0.63	0.76	0.07	0.65	0.65	0.07	0.07	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.04	0.38	0.13	0.05	0.30	0.30	0.00	0.06	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1863	1615	1810	1814	1615
c, Capacity [veh/h]	100	2293	1223	123	1230	1230	131	113	160	161	143
d1, Uniform Delay [s]	53.51	12.36	3.90	52.76	10.22	10.22	49.86	52.63	50.84	50.83	51.07
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.89	1.14	0.31	10.41	0.27	0.27	0.12	11.27	4.97	4.95	6.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

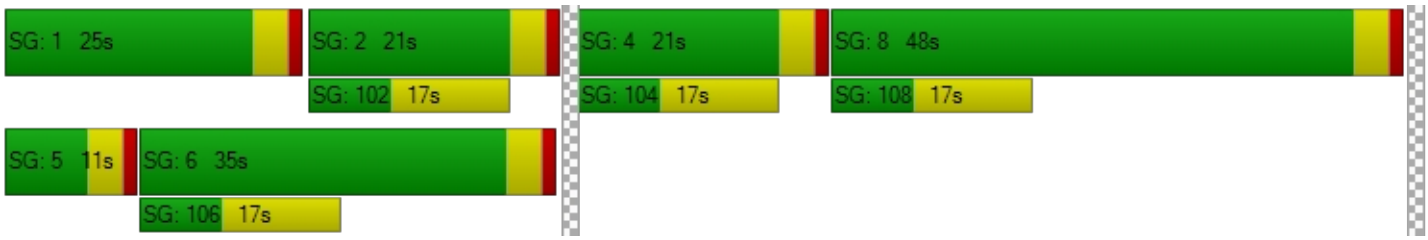
X, volume / capacity	0.73	0.59	0.17	0.79	0.46	0.46	0.04	0.79	0.68	0.68	0.73
d, Delay for Lane Group [s/veh]	63.40	13.50	4.21	63.17	10.49	10.49	49.98	63.89	55.81	55.79	57.93
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	9.98	1.30	3.11	6.89	6.89	0.14	2.88	3.26	3.27	3.19
50th-Percentile Queue Length [ft/ln]	58.77	249.49	32.48	77.82	172.14	172.14	3.47	72.03	81.51	81.69	79.73
95th-Percentile Queue Length [veh/ln]	4.23	15.16	2.34	5.60	11.19	11.19	0.25	5.19	5.87	5.88	5.74
95th-Percentile Queue Length [ft/ln]	105.78	379.01	58.47	140.07	279.72	279.72	6.25	129.65	146.73	147.04	143.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.40	13.50	4.21	63.17	10.49	10.49	49.98	49.98	63.89	55.80	55.79	57.93
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	14.51			14.63			63.15			56.49		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	20.04											
Intersection LOS	C											
Intersection V/C	0.638											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	231	336	0	0	928	153	0	0	0	122	0	734
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	124	0	0	213	19	0	0	0	8	0	273
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	460	0	0	1141	172	0	0	0	130	0	1007
Peak Hour Factor	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	70	131	0	0	326	49	0	0	0	37	0	0
Total Analysis Volume [veh/h]	281	525	0	0	1303	196	0	0	0	148	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	48	94	0	0	46	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	54	54	54	54		54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	11	40	25	25		6	6
g / C, Green / Cycle	0.20	0.74	0.47	0.47		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.16	0.15	0.36	0.12		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	354	2664	1690	754		209	187
d1, Uniform Delay [s]	20.73	2.20	12.00	8.74		23.04	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	4.08	0.04	0.77	0.18		4.35	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

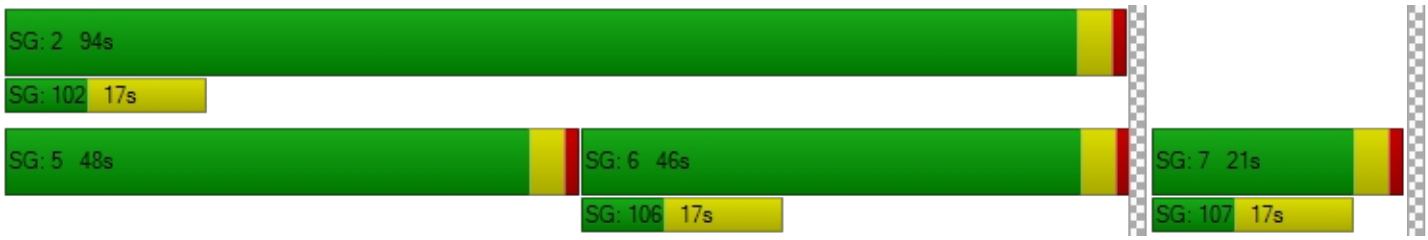
X, volume / capacity	0.79	0.20	0.77	0.26		0.71	0.00
d, Delay for Lane Group [s/veh]	24.81	2.23	12.77	8.92		27.38	0.00
Lane Group LOS	C	A	B	A		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	3.46	0.34	5.39	1.18		1.93	0.00
50th-Percentile Queue Length [ft/ln]	86.46	8.58	134.68	29.46		48.16	0.00
95th-Percentile Queue Length [veh/ln]	6.23	0.62	9.19	2.12		3.47	0.00
95th-Percentile Queue Length [ft/ln]	155.63	15.44	229.84	53.03		86.69	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.81	2.23	0.00	0.00	12.77	8.92	0.00	0.00	0.00	27.38	0.00	0.00
Movement LOS	C	A			B	A				C		A
d_A, Approach Delay [s/veh]	10.10			12.27			0.00			27.38		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	12.47											
Intersection LOS	B											
Intersection V/C	0.768											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.901

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	388	160	460	606	0	182	0	764	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	116	10	141	80	0	20	0	12	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	504	170	601	686	0	202	0	776	0	0	3
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	136	46	163	186	0	55	0	210	0	0	1
Total Analysis Volume [veh/h]	0	545	184	650	742	0	219	0	840	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	23	0	50	73	0	42	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	112	112	112	112	112	112	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20	20	43	67	37	37	
g / C, Green / Cycle	0.18	0.18	0.38	0.60	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.36	0.21	0.12	0.29	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	651	291	691	2162	598	945	
d1, Uniform Delay [s]	44.23	42.40	33.30	11.38	28.46	35.43	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.96	2.28	7.04	0.09	0.37	3.09	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

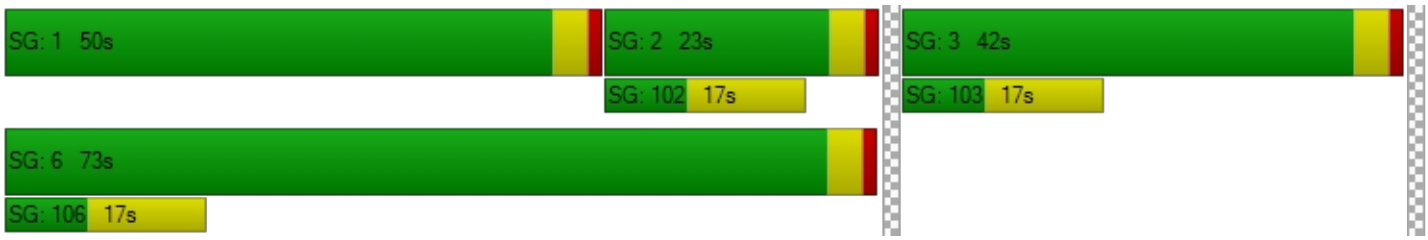
X, volume / capacity	0.84	0.63	0.94	0.34	0.37	0.89	
d, Delay for Lane Group [s/veh]	47.19	44.68	40.34	11.47	28.84	38.52	
Lane Group LOS	D	D	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.50	4.86	17.86	4.50	4.51	11.03	
50th-Percentile Queue Length [ft/ln]	187.40	121.57	446.45	112.56	112.79	275.66	
95th-Percentile Queue Length [veh/ln]	11.99	8.48	24.79	7.98	7.99	16.47	
95th-Percentile Queue Length [ft/ln]	299.65	211.98	619.71	199.56	199.87	411.81	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	47.19	44.68	40.34	11.47	0.00	28.84	0.00	38.52	0.00	0.00	0.00
Movement LOS		D	D	D	B		C		D			
d_A, Approach Delay [s/veh]	46.56			24.95			36.52			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	33.76											
Intersection LOS	C											
Intersection V/C	0.901											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.861

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	304	803	0	0	1149	540	0	0	0	411	0	367
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	35	0	0	74	0	0	0	0	169	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	329	838	0	0	1223	540	0	0	0	580	0	367
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	256	0	0	374	165	0	0	0	177	0	112
Total Analysis Volume [veh/h]	403	1026	0	0	1497	661	0	0	0	710	0	449
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	23	87	0	0	64	0	0	0	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	144	144	144	144		144	144	144
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	22	97	72	72		41	41	41
g / C, Green / Cycle	0.16	0.67	0.50	0.50		0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.14	0.21	0.23	0.43		0.23	0.23	0.26
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1686	1530
c, Capacity [veh/h]	461	3301	3247	760		462	481	436
d1, Uniform Delay [s]	59.54	9.75	23.72	32.19		47.84	48.09	49.63
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	5.36	0.05	0.10	3.24		3.35	3.50	7.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.31	0.46	0.87		0.80	0.82	0.90
d, Delay for Lane Group [s/veh]	64.90	9.80	23.82	35.44		51.19	51.58	56.68
Lane Group LOS	E	A	C	D		D	D	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.56	4.43	8.41	20.79		12.85	13.68	14.50
50th-Percentile Queue Length [ft/ln]	188.92	110.74	210.19	519.70		321.21	342.10	362.38
95th-Percentile Queue Length [veh/ln]	12.06	7.88	13.16	28.27		18.73	19.75	20.74
95th-Percentile Queue Length [ft/ln]	301.62	197.04	329.08	706.63		468.18	493.76	518.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.90	9.80	0.00	0.00	23.82	35.44	0.00	0.00	0.00	51.37	51.58	55.97
Movement LOS	E	A			C	D				D	D	E
d_A, Approach Delay [s/veh]	25.34			27.38			0.00			53.19		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	33.07											
Intersection LOS	C											
Intersection V/C	0.861											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.842

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	763	410	495	1097	0	362	3	463	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	60	66	0	243	0	0	0	57	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	823	476	495	1340	0	362	3	520	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	241	140	145	393	0	106	1	152	0	0	0
Total Analysis Volume [veh/h]	0	965	558	580	1571	0	424	4	610	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	59	0	33	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	99	99	99	99	99	99	99	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	41	41	23	67	27	27	27	
g / C, Green / Cycle	0.41	0.41	0.23	0.67	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.28	0.36	0.20	0.46	0.21	0.22	0.23	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1576	1530	
c, Capacity [veh/h]	1414	631	673	2296	437	425	413	
d1, Uniform Delay [s]	23.92	27.06	36.98	10.01	33.43	34.20	34.51	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.59	4.34	3.42	0.37	2.78	4.20	5.12	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.88	0.86	0.68	0.76	0.83	0.85	
d, Delay for Lane Group [s/veh]	24.51	31.39	40.40	10.38	36.21	38.40	39.62	
Lane Group LOS	C	C	D	B	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.08	12.49	6.98	9.16	7.59	8.35	8.51	
50th-Percentile Queue Length [ft/ln]	227.03	312.15	174.51	229.00	189.64	208.71	212.70	
95th-Percentile Queue Length [veh/ln]	14.02	18.28	11.31	14.12	12.10	13.09	13.29	
95th-Percentile Queue Length [ft/ln]	350.58	457.02	282.83	353.09	302.56	327.17	332.29	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.51	31.39	40.40	10.38	0.00	36.63	38.40	39.09	0.00	0.00	0.00
Movement LOS		C	C	D	B		D	D	D			
d_A, Approach Delay [s/veh]	27.03			18.48			38.11			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	25.57											
Intersection LOS	C											
Intersection V/C	0.842											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	54.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.924

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	867	12	35	1265	253	248	17	56	38	17	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	114	0	0	259	41	12	2	8	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	981	12	35	1524	294	260	19	64	38	23	67
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	286	3	10	444	86	76	6	19	11	7	19
Total Analysis Volume [veh/h]	73	1142	14	41	1774	342	303	22	75	44	27	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	34	0	10	34	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	212	212	212	212	212	212	212	212	212	212	212	212
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	135	135	7	130	130	61	61	61	61	61	61
g / C, Green / Cycle	0.05	0.64	0.64	0.03	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.05	0.32	0.32	0.03	0.59	0.62	0.23	0.01	0.05	0.03	0.02	0.05
s, saturation flow rate [veh/h]	1619	1800	1792	1619	1800	1703	1309	1800	1530	1319	1800	1530
c, Capacity [veh/h]	88	1145	1140	52	1105	1045	352	521	443	356	521	443
d1, Uniform Delay [s]	99.22	20.69	20.70	101.84	38.34	40.91	79.02	54.11	56.20	62.58	54.26	56.32
k, delay calibration	0.11	0.12	0.12	0.11	0.46	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.77	0.40	0.40	23.11	17.66	30.93	6.24	0.03	0.18	0.15	0.04	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

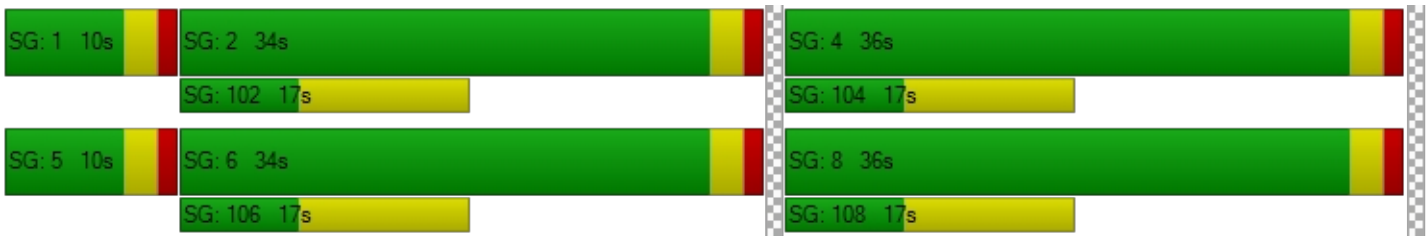
X, volume / capacity	0.83	0.51	0.51	0.79	0.96	1.01	0.86	0.04	0.17	0.12	0.05	0.18
d, Delay for Lane Group [s/veh]	116.99	21.09	21.10	124.95	56.00	71.85	85.26	54.14	56.38	62.73	54.30	56.51
Lane Group LOS	F	C	C	F	E	F	F	D	E	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.47	15.95	15.89	2.61	56.33	62.64	17.04	0.87	3.09	1.91	1.07	3.22
50th-Percentile Queue Length [ft/ln]	111.66	398.64	397.13	65.16	1408.20	1566.07	425.94	21.79	77.27	47.70	26.81	80.53
95th-Percentile Queue Length [veh/ln]	7.93	22.49	22.42	4.69	68.64	76.50	23.81	1.57	5.56	3.43	1.93	5.80
95th-Percentile Queue Length [ft/ln]	198.31	562.36	560.54	117.28	1715.91	1912.60	595.18	39.22	139.09	85.86	48.27	144.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	116.99	21.09	21.10	124.95	62.39	71.85	85.26	54.14	56.38	62.73	54.30	56.51
Movement LOS	F	C	C	F	E	E	F	D	E	E	D	E
d_A, Approach Delay [s/veh]	26.79			65.08			78.14			57.95		
Approach LOS	C			E			E			E		
d_I, Intersection Delay [s/veh]	54.18											
Intersection LOS	D											
Intersection V/C	0.924											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	811	10	58	1159	97	112	7	71	20	4	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	105	0	0	234	33	11	0	12	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	916	10	58	1393	130	123	7	83	20	4	49
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	261	3	17	397	37	35	2	24	6	1	14
Total Analysis Volume [veh/h]	89	1043	11	66	1587	148	140	8	95	23	5	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	43	41	0	69	67	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	56	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	33	33	5	32	32	10	10	10	10	10
g / C, Green / Cycle	0.09	0.58	0.58	0.08	0.57	0.57	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.29	0.04	0.48	0.49	0.13	0.06	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1793	1619	1800	1747	1148	1530	1430	1800	1530
c, Capacity [veh/h]	153	1048	1044	131	1024	994	327	269	140	317	269
d1, Uniform Delay [s]	24.30	6.91	6.91	24.66	10.09	10.30	23.06	20.29	27.90	19.08	19.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.46	0.38	0.38	2.95	2.10	2.49	0.98	0.79	0.55	0.02	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

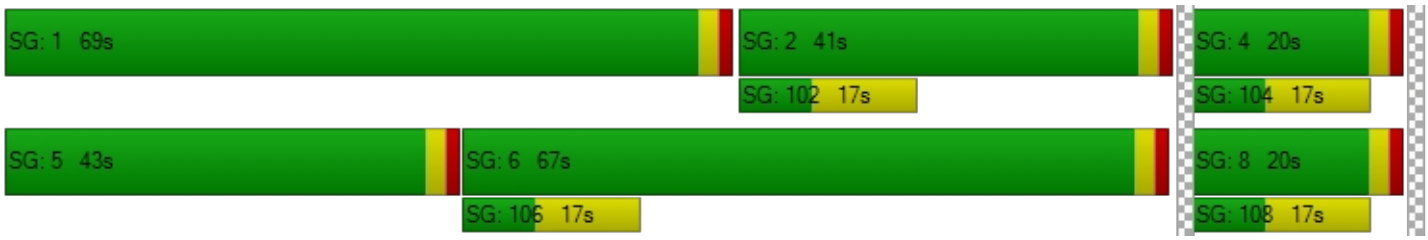
X, volume / capacity	0.58	0.50	0.50	0.50	0.85	0.87	0.45	0.35	0.16	0.02	0.21
d, Delay for Lane Group [s/veh]	27.77	7.29	7.29	27.61	12.18	12.79	24.04	21.07	28.45	19.10	20.13
Lane Group LOS	C	A	A	C	B	B	C	C	C	B	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.20	2.82	2.81	0.89	7.08	7.25	1.82	1.06	0.31	0.05	0.61
50th-Percentile Queue Length [ft/ln]	30.10	70.58	70.34	22.35	177.05	181.34	45.46	26.59	7.86	1.29	15.13
95th-Percentile Queue Length [veh/ln]	2.17	5.08	5.06	1.61	11.45	11.67	3.27	1.91	0.57	0.09	1.09
95th-Percentile Queue Length [ft/ln]	54.17	127.05	126.62	40.23	286.15	291.76	81.82	47.87	14.14	2.32	27.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.77	7.29	7.29	27.61	12.46	12.79	24.04	24.04	21.07	28.45	19.10	20.13
Movement LOS	C	A	A	C	B	B	C	C	C	C	B	C
d_A, Approach Delay [s/veh]	8.88			13.04			22.88			22.34		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	12.56											
Intersection LOS	B											
Intersection V/C	0.760											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	838	1132	61	34	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	106	221	25	8	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	944	1353	86	42	142
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	265	380	24	12	40
Total Analysis Volume [veh/h]	118	1061	1520	97	47	160
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	17	107	90	0	23	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	34	25	25	7	7
g / C, Green / Cycle	0.12	0.73	0.54	0.54	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.07	0.31	0.45	0.46	0.03	0.10
s, saturation flow rate [veh/h]	1619	3427	1800	1763	1619	1530
c, Capacity [veh/h]	191	2491	981	961	235	222
d1, Uniform Delay [s]	19.65	2.53	8.79	8.95	17.63	19.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.25	0.12	1.81	2.09	0.41	4.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.43	0.82	0.84	0.20	0.72
d, Delay for Lane Group [s/veh]	22.91	2.64	10.61	11.03	18.05	23.51
Lane Group LOS	C	A	B	B	B	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.26	0.55	4.93	5.07	0.42	1.74
50th-Percentile Queue Length [ft/ln]	31.56	13.68	123.24	126.75	10.62	43.47
95th-Percentile Queue Length [veh/ln]	2.27	0.98	8.57	8.76	0.76	3.13
95th-Percentile Queue Length [ft/ln]	56.80	24.62	214.27	219.06	19.11	78.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.91	2.64	10.81	11.03	18.05	23.51
Movement LOS	C	A	B	B	B	C
d_A, Approach Delay [s/veh]	4.67		10.82		22.27	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	9.20					
Intersection LOS	A					
Intersection V/C	0.730					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.835

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	118	607	44	60	908	171	158	160	93	75	246	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	61	12	17	65	153	67	33	13	6	53	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	668	56	77	973	324	225	193	106	81	299	69
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	194	16	22	283	94	65	56	31	24	87	20
Total Analysis Volume [veh/h]	159	776	65	89	1130	376	261	224	123	94	347	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	36	35	0	47	46	0	48	26	0	48	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	22	45	45	13	37	37	28	0	0	28	0	0
g / C, Green / Cycle	0.23	0.48	0.48	0.13	0.39	0.39	0.29	0.00	0.00	0.29	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.19	0.24	0.24	0.10	0.33	0.25	0.25	0.12	0.08	0.08	0.19	0.05
s, saturation flow rate [veh/h]	854	1800	1752	854	3427	1530	1050	1800	1530	1175	1800	1530
c, Capacity [veh/h]	253	862	839	174	1323	591	361	0	0	395	0	0
d1, Uniform Delay [s]	36.63	16.90	16.90	41.54	26.71	23.73	33.54	0.00	0.00	27.39	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.44	0.45	2.32	1.68	1.15	2.75	0.00	0.00	0.31	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

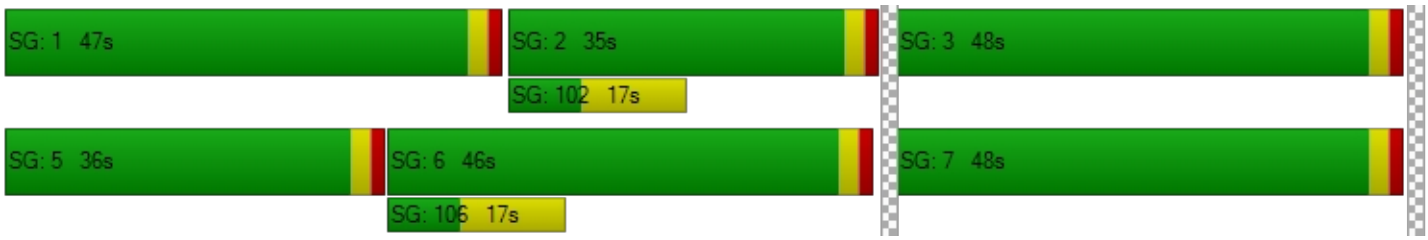
X, volume / capacity	0.63	0.49	0.49	0.51	0.85	0.64	0.72	0.00	0.00	0.24	0.00	0.00
d, Delay for Lane Group [s/veh]	39.18	17.34	17.35	43.86	28.38	24.88	36.29	0.00	0.00	27.70	0.00	0.00
Lane Group LOS	D	B	B	D	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.70	6.18	6.02	2.15	11.55	6.84	5.94	0.00	0.00	1.70	0.00	0.00
50th-Percentile Queue Length [ft/ln]	92.44	154.59	150.51	53.63	288.80	170.94	148.58	0.00	0.00	42.52	0.00	0.00
95th-Percentile Queue Length [veh/ln]	6.66	10.26	10.04	3.86	17.13	11.13	9.94	0.00	0.00	3.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	166.39	256.54	251.10	96.54	428.15	278.15	248.54	0.00	0.00	76.54	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.18	17.34	17.35	43.86	28.38	24.88	36.29	0.00	0.00	27.70	0.00	0.00
Movement LOS	D	B	B	D	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	20.82			28.42			15.58			5.00		
Approach LOS	C			C			B			A		
d_I, Intersection Delay [s/veh]	21.01											
Intersection LOS	C											
Intersection V/C	0.835											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.735

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	311	11	49	770	320	159	33	37	3	38	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	39	30	0	0	16	67	32	0	18	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	341	11	49	786	387	191	33	55	3	38	31
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	90	3	13	209	103	51	9	15	1	10	8
Total Analysis Volume [veh/h]	102	362	12	52	834	411	203	35	58	3	40	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	29	0	11	28	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	23	23	4	21	21	12	12
g / C, Green / Cycle	0.11	0.48	0.48	0.07	0.45	0.45	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.10	0.03	0.36	0.37	0.21	0.04
s, saturation flow rate [veh/h]	1619	1800	1780	1619	1800	1603	1401	1697
c, Capacity [veh/h]	178	870	860	120	805	717	483	509
d1, Uniform Delay [s]	20.14	7.10	7.11	21.09	11.43	11.51	16.87	13.89
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.90	0.12	0.12	2.46	2.05	2.45	1.27	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

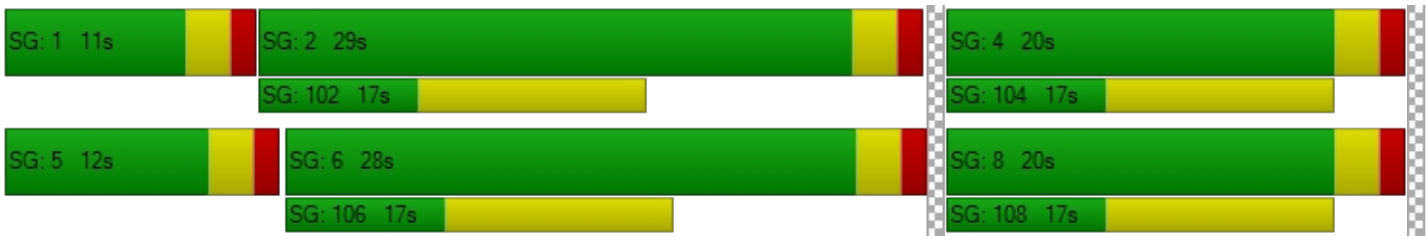
X, volume / capacity	0.57	0.22	0.22	0.43	0.81	0.82	0.61	0.15
d, Delay for Lane Group [s/veh]	23.04	7.23	7.23	23.55	13.48	13.96	18.14	14.03
Lane Group LOS	C	A	A	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.11	0.86	0.85	0.58	5.00	4.61	2.79	0.57
50th-Percentile Queue Length [ft/ln]	27.69	21.41	21.25	14.58	125.06	115.32	69.73	14.32
95th-Percentile Queue Length [veh/ln]	1.99	1.54	1.53	1.05	8.67	8.14	5.02	1.03
95th-Percentile Queue Length [ft/ln]	49.85	38.54	38.24	26.25	216.77	203.38	125.51	25.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.04	7.23	7.23	23.55	13.58	13.96	18.14	18.14	18.14	14.03	14.03	14.03
Movement LOS	C	A	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.62			14.10			18.14			14.03		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.88											
Intersection LOS	B											
Intersection V/C	0.735											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 8 Opening Year (2020) With Project Evening Peak Hour - Alternative 1

Report File: C:\...\PMOYW1.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.180	72.0	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.021	50.9	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.840	32.1	C
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.793	18.6	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	2.156	116.0	F
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	1.009	39.2	D
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.057	16.3	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.740	9.8	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	748.8	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	1.132	170.1	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Left	4.057	2,605.3	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	161.3	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	2.122	38.1	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	NB Left	0.874	76.9	E
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.884	64.3	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.016	54.4	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.710	11.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.053	10.6	B
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.100	21.6	C
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.663	13.0	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.017	10.7	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.716	46.7	E
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.018	11.1	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	1.971	545.0	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.547	28.8	D
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.372	20.1	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.682	16.2	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.869	3.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	516.380	567.3	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	1.014	343.5	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.700	26.0	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.897	34.1	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.160	89.2	F
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.702	15.0	B
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.889	38.7	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.880	38.2	D
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.716	12.1	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Right	0.684	8.2	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.897	32.7	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.895	32.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	72.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.180

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	313	1437	0	0	1037	633	0	0	0	293	4	533
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	267	160	0	0	75	15	0	0	0	79	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	580	1597	0	0	1112	648	0	0	0	372	4	545
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	150	414	0	0	288	168	0	0	0	96	1	141
Total Analysis Volume [veh/h]	601	1655	0	0	1152	672	0	0	0	385	4	565
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	40	86	0	0	46	0	0	0	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	37	83	43	43		31	31
g / C, Green / Cycle	0.31	0.69	0.36	0.36		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.37	0.48	0.23	0.44		0.29	0.31
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1677	1530
c, Capacity [veh/h]	499	2370	1756	548		434	396
d1, Uniform Delay [s]	41.68	11.10	32.46	38.69		44.68	44.68
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	95.96	1.74	1.93	117.35		54.69	95.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.20	0.70	0.66	1.23		1.10	1.20
d, Delay for Lane Group [s/veh]	137.64	12.83	34.39	156.03		99.37	140.27
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	27.91	12.45	9.63	33.70		19.41	22.20
50th-Percentile Queue Length [ft/ln]	697.84	311.16	240.70	842.53		485.17	555.08
95th-Percentile Queue Length [veh/ln]	40.85	18.23	14.72	49.13		28.20	33.10
95th-Percentile Queue Length [ft/ln]	1021.37	455.80	367.92	1228.29		705.00	827.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	137.64	12.83	0.00	0.00	34.39	156.03	0.00	0.00	0.00	99.37	99.37	133.85
Movement LOS	F	B			C	F				F	F	F
d_A, Approach Delay [s/veh]	46.08			79.21			0.00			119.74		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	72.04											
Intersection LOS	E											
Intersection V/C	1.180											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	50.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.021

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1091	385	395	934	0	679	2	176	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	407	151	9	145	0	20	0	131	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1498	536	404	1079	0	699	2	307	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	393	141	106	283	0	184	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1574	563	424	1133	0	734	2	322	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	45	0	33	78	0	0	42	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	42	42	30	75	39	39	
g / C, Green / Cycle	0.35	0.35	0.25	0.63	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.26	0.33	0.32	0.34	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1600	
c, Capacity [veh/h]	1715	535	406	2143	526	520	
d1, Uniform Delay [s]	37.52	39.19	45.17	12.65	40.23	40.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	9.33	53.23	33.81	0.94	13.51	31.79	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.92	1.05	1.05	0.53	0.98	1.05	
d, Delay for Lane Group [s/veh]	46.86	92.41	78.98	13.59	53.74	72.47	
Lane Group LOS	D	F	F	B	D	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	16.04	23.42	15.80	8.44	16.78	19.75	
50th-Percentile Queue Length [ft/ln]	400.91	585.49	395.05	210.94	419.52	493.72	
95th-Percentile Queue Length [veh/ln]	22.60	32.46	22.91	13.20	23.50	27.85	
95th-Percentile Queue Length [ft/ln]	565.09	811.45	572.72	330.04	587.47	696.18	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	46.86	92.41	78.98	13.59	0.00	59.19	72.47	72.47	0.00	0.00	0.00
Movement LOS		D	F	F	B		E	E	E			
d_A, Approach Delay [s/veh]	58.86			31.39			63.37			0.00		
Approach LOS	E			C			E			A		
d_I, Intersection Delay [s/veh]	50.87											
Intersection LOS	D											
Intersection V/C	1.021											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.840

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	896	39	102	740	100	250	371	115	21	125	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	374	6	23	214	32	91	2	14	10	4	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1270	45	125	954	132	341	373	129	31	129	147
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	326	12	32	245	34	88	96	33	8	33	38
Total Analysis Volume [veh/h]	89	1305	46	128	980	136	350	383	133	32	133	151
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	40	0	11	35	0	24	34	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	98	98	98	98	98	98	98	98	98	98	98	98
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	41	41	10	44	44	24	32	32	4	12	12
g / C, Green / Cycle	0.07	0.42	0.42	0.10	0.44	0.44	0.24	0.32	0.32	0.04	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.38	0.38	0.08	0.32	0.32	0.22	0.11	0.09	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1619	1800	1779	1619	1800	1724	1619	3427	1530	1619	1800	1530
c, Capacity [veh/h]	114	750	741	159	800	767	388	1104	493	67	223	189
d1, Uniform Delay [s]	45.11	26.94	26.99	43.54	22.24	22.28	36.35	25.51	24.82	46.20	40.87	42.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.15	4.48	4.64	9.17	1.19	1.25	7.79	0.19	0.29	5.12	2.55	7.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

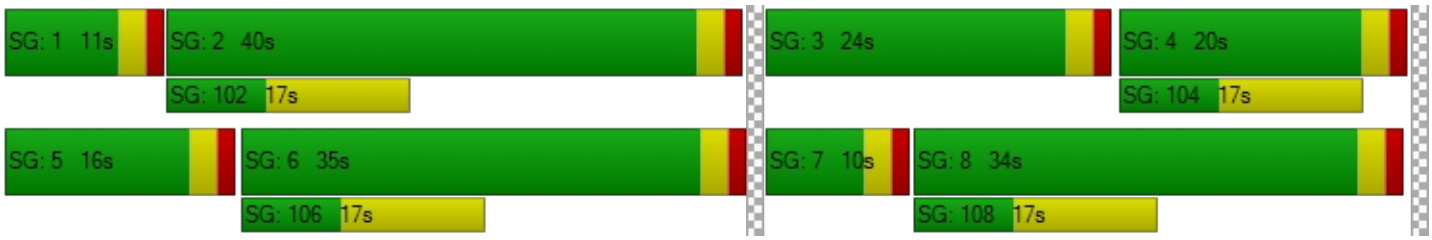
X, volume / capacity	0.78	0.91	0.91	0.81	0.71	0.71	0.90	0.35	0.27	0.48	0.60	0.80
d, Delay for Lane Group [s/veh]	56.26	31.42	31.63	52.72	23.43	23.53	44.14	25.70	25.11	51.32	43.42	49.46
Lane Group LOS	E	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.47	15.17	15.08	3.43	10.50	10.12	8.83	3.40	2.32	0.86	3.18	3.92
50th-Percentile Queue Length [ft/ln]	61.85	379.21	377.07	85.77	262.52	253.01	220.80	85.08	57.99	21.42	79.58	98.05
95th-Percentile Queue Length [veh/ln]	4.45	21.56	21.45	6.18	15.82	15.34	13.71	6.13	4.18	1.54	5.73	7.06
95th-Percentile Queue Length [ft/ln]	111.33	538.89	536.30	154.38	395.38	383.44	342.64	153.14	104.39	38.56	143.25	176.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.26	31.52	31.63	52.72	23.47	23.53	44.14	25.70	25.11	51.32	43.42	49.46
Movement LOS	E	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	33.06			26.49			33.06			47.10		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	32.09											
Intersection LOS	C											
Intersection V/C	0.840											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	103	886	56	63	716	59	66	161	104	36	118	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	368	5	0	208	30	34	3	20	6	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	1254	61	63	924	89	100	164	124	42	123	37
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	340	17	17	250	24	27	44	34	11	33	10
Total Analysis Volume [veh/h]	157	1359	66	68	1001	96	108	178	134	46	133	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	40	0	10	37	0	0	25	0	0	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	28	28	5	26	26	19	19
g / C, Green / Cycle	0.12	0.46	0.46	0.08	0.42	0.42	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.10	0.40	0.40	0.04	0.31	0.31	0.27	0.15
s, saturation flow rate [veh/h]	1619	1800	1771	1619	1800	1745	1539	1437
c, Capacity [veh/h]	202	835	821	128	752	730	551	517
d1, Uniform Delay [s]	25.97	14.61	14.67	27.11	15.00	15.01	19.91	16.64
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.37	2.70	2.86	3.42	1.45	1.50	2.21	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.86	0.86	0.53	0.74	0.74	0.76	0.42
d, Delay for Lane Group [s/veh]	32.34	17.31	17.53	30.53	16.46	16.51	22.12	17.20
Lane Group LOS	C	B	B	C	B	B	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.44	8.01	7.99	1.02	5.93	5.77	5.42	2.29
50th-Percentile Queue Length [ft/ln]	60.89	200.19	199.79	25.62	148.21	144.20	135.55	57.13
95th-Percentile Queue Length [veh/ln]	4.38	12.65	12.63	1.84	9.92	9.71	9.24	4.11
95th-Percentile Queue Length [ft/ln]	109.61	316.21	315.70	46.12	248.04	242.67	231.02	102.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.34	17.41	17.53	30.53	16.48	16.51	22.12	22.12	22.12	17.20	17.20	17.20
Movement LOS	C	B	B	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	18.90			17.30			22.12			17.20		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	18.64											
Intersection LOS	B											
Intersection V/C	0.793											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	116.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.156

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	944	65	110	754	43	57	190	51	70	69	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	301	9	27	185	16	39	14	26	21	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	1245	74	137	939	59	96	204	77	91	79	101
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	319	19	35	240	15	25	52	20	23	20	26
Total Analysis Volume [veh/h]	93	1274	76	140	961	60	98	209	79	93	81	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	18	18	6	18	18	27	27	27	27
g / C, Green / Cycle	0.09	0.29	0.29	0.11	0.31	0.31	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.38	0.09	0.29	0.29	1.08	0.05	1.47	0.07
s, saturation flow rate [veh/h]	1619	1800	1765	1619	1800	1763	285	1530	118	1530
c, Capacity [veh/h]	151	527	516	175	553	542	207	688	145	688
d1, Uniform Delay [s]	26.23	21.28	21.28	26.18	20.22	20.23	14.80	9.61	20.67	9.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.25	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.00	144.82	147.57	8.06	24.63	25.10	223.35	0.07	118.54	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	1.29	1.30	0.80	0.93	0.93	1.48	0.11	1.20	0.15
d, Delay for Lane Group [s/veh]	30.23	166.10	168.85	34.25	44.85	45.33	238.14	9.69	139.21	9.87
Lane Group LOS	C	F	F	C	D	D	F	A	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.38	27.83	27.67	2.23	10.05	9.92	14.31	0.54	6.77	0.71
50th-Percentile Queue Length [ft/ln]	34.44	695.63	691.84	55.84	251.28	248.05	357.71	13.47	169.24	17.87
95th-Percentile Queue Length [veh/ln]	2.48	42.01	41.89	4.02	15.25	15.09	25.12	0.97	12.19	1.29
95th-Percentile Queue Length [ft/ln]	62.00	1050.32	1047.25	100.51	381.26	377.20	627.92	24.24	304.63	32.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.23	167.38	168.85	34.25	45.07	45.33	238.14	238.14	9.69	139.21	139.21	9.87
Movement LOS	C	F	F	C	D	D	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	158.62			43.78			191.39			91.12		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	115.96											
Intersection LOS	F											
Intersection V/C	2.156											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	39.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.009

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	205	45	67	182	0	0	1	2	107	2	165
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1379	123	379	1150	15	21	9	23	170	16	321
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	357	32	98	297	4	5	2	6	44	4	83
Total Analysis Volume [veh/h]	14	1426	127	392	1189	16	22	9	24	176	17	332
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	57	0	32	78	0	0	31	0	0	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	53	53	28	78	78	27	27	27
g / C, Green / Cycle	0.02	0.44	0.44	0.23	0.65	0.65	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.41	0.42	0.22	0.32	0.32	0.28	0.24	0.21
s, saturation flow rate [veh/h]	1810	1900	1846	1810	1900	1891	200	806	1615
c, Capacity [veh/h]	42	843	819	418	1239	1233	87	239	364
d1, Uniform Delay [s]	57.84	31.67	31.91	45.36	10.67	10.68	39.66	47.42	45.42
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.68	17.97	19.76	10.15	1.37	1.38	7.37	6.40	9.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.93	0.94	0.94	0.49	0.49	0.63	0.81	0.91
d, Delay for Lane Group [s/veh]	62.52	49.64	51.67	55.50	12.04	12.06	47.03	53.82	54.48
Lane Group LOS	E	D	D	E	B	B	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.47	25.09	25.16	12.58	8.17	8.16	1.48	6.26	10.52
50th-Percentile Queue Length [ft/ln]	11.84	627.24	628.91	314.53	204.26	203.95	37.05	156.49	262.89
95th-Percentile Queue Length [veh/ln]	0.85	33.30	33.38	18.40	12.86	12.84	2.67	10.36	15.83
95th-Percentile Queue Length [ft/ln]	21.31	832.61	834.55	459.95	321.46	321.05	66.69	259.07	395.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.52	50.55	51.67	55.50	12.05	12.06	47.03	47.03	47.03	53.82	53.82	54.48
Movement LOS	E	D	D	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	50.75			22.72			47.03			54.24		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	39.23											
Intersection LOS	D											
Intersection V/C	1.009											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	237	3	0	291	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1501	3	0	1343	0	16
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	395	1	0	353	0	5
Total Analysis Volume [veh/h]	1580	4	0	1414	0	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.35
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.18
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	4.47
d_A, Approach Delay [s/veh]	0.00		0.00		16.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	164	95	24	267	262	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1428	95	24	1319	262	75
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	376	25	6	347	69	20
Total Analysis Volume [veh/h]	1503	100	25	1388	276	79
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	54	0	11	65	55	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	2	37	11	11
g / C, Green / Cycle	0.55	0.55	0.04	0.66	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.42	0.06	0.01	0.38	0.15	0.05
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1987	887	74	2392	356	317
d1, Uniform Delay [s]	9.76	6.08	26.22	5.23	21.40	19.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	0.06	2.70	0.22	3.66	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

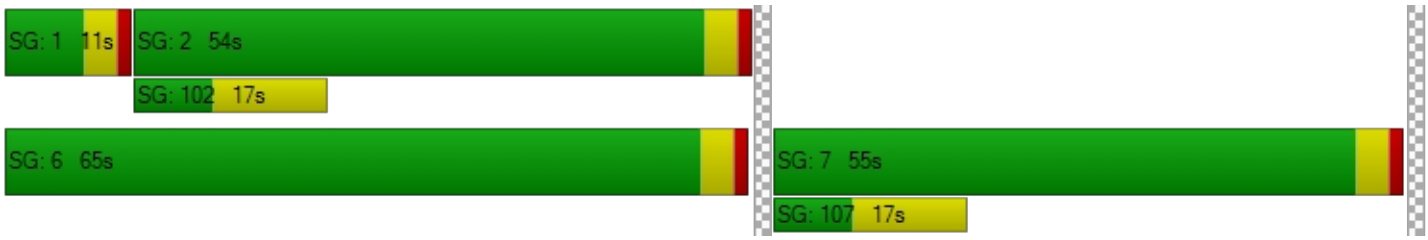
X, volume / capacity	0.76	0.11	0.34	0.58	0.78	0.25
d, Delay for Lane Group [s/veh]	10.37	6.14	28.92	5.46	25.07	19.48
Lane Group LOS	B	A	C	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.48	0.45	0.36	2.77	3.50	0.84
50th-Percentile Queue Length [ft/ln]	137.06	11.36	9.02	69.21	87.44	20.89
95th-Percentile Queue Length [veh/ln]	9.32	0.82	0.65	4.98	6.30	1.50
95th-Percentile Queue Length [ft/ln]	233.06	20.45	16.23	124.58	157.39	37.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.37	6.14	28.92	5.46	25.07	19.48
Movement LOS	B	A	C	A	C	B
d_A, Approach Delay [s/veh]	10.10		5.87		23.82	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	9.77					
Intersection LOS	A					
Intersection V/C	0.740					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	748.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	257	0	0	529	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1493	0	0	1573	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	380	0	0	400	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1520	0	0	1602	15	24	0	37	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.02	0.00	0.00	0.02	0.00	1.41	0.00	0.11	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	14.22	0.00	0.00	13.09	0.00	0.00	610.30	748.82	409.40	226.84	363.95	19.73
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00	6.27	6.27	6.27	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	3.45	0.00	0.00	0.00	0.00	0.00	156.82	156.82	156.82	5.38	5.38	5.38
d_A, Approach Delay [s/veh]	0.17			0.00			488.45			71.51		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	9.42											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	170.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.132

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	98	51	250	233	47	26	21	23	94	38	134
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	490	526	713	711	75	58	85	26	403	90	610
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	127	136	184	184	19	15	22	7	104	23	0
Total Analysis Volume [veh/h]	62	507	544	737	735	78	60	88	27	417	93	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	27	0	38	52	0	0	21	0	0	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	396	396	396	396	396	396	396	396	396	396
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	27	27	113	113
g / C, Green / Cycle	0.04	0.30	0.30	0.30	0.57	0.57	0.07	0.07	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.41	0.20	0.05	0.03	0.06	0.28	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1824	1825	1615
c, Capacity [veh/h]	71	1097	490	549	2052	916	124	125	519	459
d1, Uniform Delay [s]	189.02	111.66	137.81	137.81	46.49	38.92	177.50	183.16	140.57	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.43	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.54	0.30	74.42	166.22	0.11	0.04	2.90	22.06	32.42	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

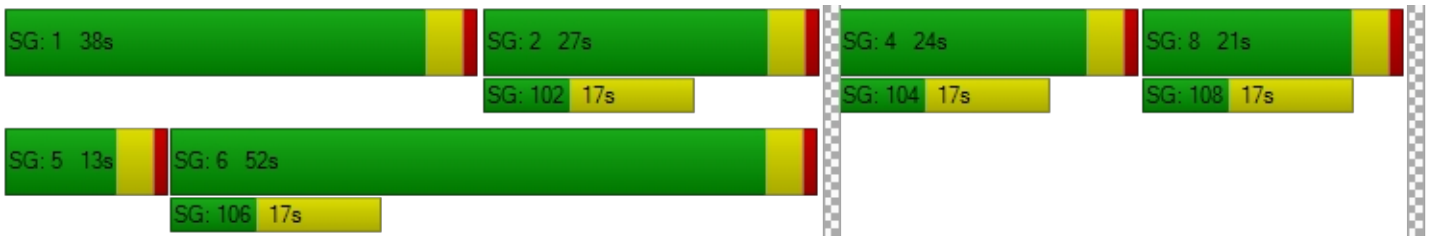
X, volume / capacity	0.87	0.46	1.11	1.34	0.36	0.09	0.48	0.92	0.98	0.00
d, Delay for Lane Group [s/veh]	214.56	111.96	212.23	304.03	46.59	38.96	180.40	205.22	172.99	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.10	21.78	61.95	83.41	20.65	3.67	6.27	12.98	58.30	0.00
50th-Percentile Queue Length [ft/ln]	177.49	544.45	1548.87	2085.18	516.27	91.86	156.87	324.48	1457.44	0.00
95th-Percentile Queue Length [veh/ln]	11.47	29.43	80.46	117.25	28.10	6.61	10.38	18.89	70.82	0.00
95th-Percentile Queue Length [ft/ln]	286.73	735.79	2011.58	2931.21	702.59	165.35	259.57	472.19	1770.48	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	214.56	111.96	212.23	304.03	46.59	38.96	180.40	205.22	205.22	172.99	172.99	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	166.68			168.61			196.71			172.99		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	170.11											
Intersection LOS	F											
Intersection V/C	1.132											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	2,605.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.057

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	900	83	123	722	5	4	15	15	26	17	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	350	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1089	83	123	1072	5	4	15	15	26	17	37
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	280	21	32	275	1	1	4	4	7	4	10
Total Analysis Volume [veh/h]	18	1119	85	126	1102	5	4	15	15	27	17	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.21	0.01	0.00	0.64	0.90	0.03	4.06	0.90	0.08
d_M, Delay for Movement [s/veh]	10.80	0.00	0.00	12.81	0.00	0.00	1068.44	711.32	503.56	2605.26	2254.80	2071.90
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.09	0.04	0.00	0.79	0.39	0.00	4.42	4.42	4.42	11.01	11.01	11.01
95th-Percentile Queue Length [ft/ln]	2.17	1.09	0.00	19.63	9.82	0.00	110.46	110.46	110.46	275.20	275.20	275.20
d_A, Approach Delay [s/veh]	0.16			1.31			661.68			2285.44		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	82.35											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	161.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	978	29	21	742	3	0	0	10	18	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	350	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1167	29	21	1092	3	0	0	10	18	0	22
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	306	8	6	286	1	0	0	3	5	0	6
Total Analysis Volume [veh/h]	7	1225	30	22	1146	3	0	0	10	19	0	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.02	0.44	0.00	0.05
d_M, Delay for Movement [s/veh]	10.92	0.00	0.00	11.68	0.00	0.00	86.23	130.73	12.88	124.75	161.27	49.05
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	E
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.12	0.06	0.00	0.07	0.07	0.07	2.11	2.11	2.11
95th-Percentile Queue Length [ft/ln]	0.86	0.43	0.00	2.91	1.46	0.00	1.64	1.64	1.64	52.72	52.72	52.72
d_A, Approach Delay [s/veh]	0.06			0.22			12.88			83.29		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	1.59											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.122

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	837	47	18	657	22	40	25	25	69	29	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	160	9	0	331	41	29	10	23	10	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	997	56	18	988	63	69	35	48	79	47	13
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	272	15	5	269	17	19	10	13	22	13	4
Total Analysis Volume [veh/h]	108	1086	61	20	1076	69	75	38	52	86	51	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	11	22	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	23	23	2	19	19	23	23	23	23
g / C, Green / Cycle	0.10	0.38	0.38	0.03	0.32	0.32	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.06	0.30	0.30	0.01	0.30	0.30	1.28	0.03	1.33	0.01
s, saturation flow rate [veh/h]	1810	1900	1865	1810	1900	1860	88	1615	103	1615
c, Capacity [veh/h]	181	726	713	65	605	592	133	618	136	618
d1, Uniform Delay [s]	25.98	16.54	16.55	28.33	20.14	20.15	23.77	11.87	23.99	11.59
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.21	0.11	0.23	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	8.84	9.05	2.63	27.25	27.76	23.96	0.06	53.61	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

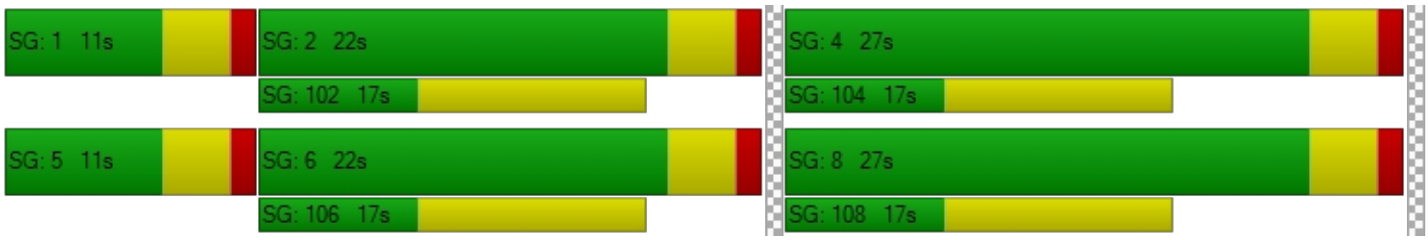
X, volume / capacity	0.60	0.80	0.80	0.31	0.96	0.96	0.85	0.08	1.00	0.02
d, Delay for Lane Group [s/veh]	29.12	25.38	25.60	30.96	47.39	47.91	47.74	11.93	77.61	11.60
Lane Group LOS	C	C	C	C	D	D	D	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.56	7.96	7.87	0.32	11.64	11.49	2.45	0.41	3.92	0.11
50th-Percentile Queue Length [ft/ln]	38.90	198.99	196.69	7.88	291.12	287.31	61.20	10.22	97.97	2.68
95th-Percentile Queue Length [veh/ln]	2.80	12.59	12.47	0.57	17.24	17.05	4.41	0.74	7.05	0.19
95th-Percentile Queue Length [ft/ln]	70.01	314.66	311.69	14.19	431.03	426.30	110.16	18.40	176.35	4.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.12	25.48	25.60	30.96	47.63	47.91	47.74	47.74	11.93	77.61	77.61	11.60
Movement LOS	C	C	C	C	D	D	D	D	B	E	E	B
d_A, Approach Delay [s/veh]	25.80			47.36			36.45			71.49		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	38.14											
Intersection LOS	D											
Intersection V/C	2.122											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	76.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	903	0	0	841	28	30	0	136	461	103	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	158	0	0	356	8	6	0	30	49	33	45
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	1061	0	0	1197	36	36	0	166	510	136	102
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	282	0	0	319	10	10	0	44	136	36	27
Total Analysis Volume [veh/h]	92	1130	0	0	1275	38	38	0	177	543	145	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	73	0	0	73	0	21	0	0	0	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	266	266	266	266	266	266	266	266
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	120	120	120	120	31	31	103	103
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.12	0.12	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.22	0.31	0.35	0.35	0.02	0.11	0.38	0.07
s, saturation flow rate [veh/h]	425	3618	1900	1881	1810	1615	1828	1615
c, Capacity [veh/h]	91	1633	857	849	213	190	705	623
d1, Uniform Delay [s]	118.81	58.21	61.16	61.49	105.66	116.17	80.46	53.81
k, delay calibration	0.11	0.11	0.31	0.31	0.11	0.11	0.36	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.59	0.53	4.05	4.34	0.39	17.39	23.48	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

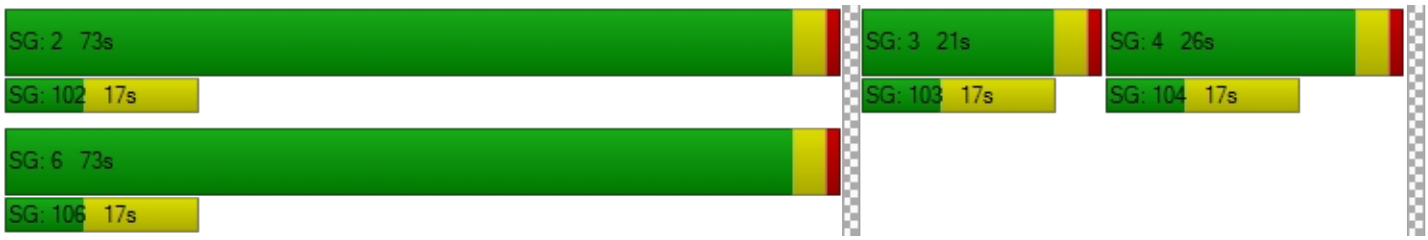
X, volume / capacity	1.01	0.69	0.77	0.77	0.18	0.93	0.98	0.18
d, Delay for Lane Group [s/veh]	164.40	58.74	65.21	65.83	106.05	133.56	103.94	53.94
Lane Group LOS	F	E	E	E	F	F	F	D
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.64	31.08	38.76	39.03	2.44	13.30	51.49	4.99
50th-Percentile Queue Length [ft/ln]	191.08	777.05	969.06	975.66	61.03	332.57	1287.24	124.77
95th-Percentile Queue Length [veh/ln]	12.23	40.23	48.97	49.27	4.39	19.28	63.26	8.65
95th-Percentile Queue Length [ft/ln]	305.85	1005.63	1224.32	1231.79	109.86	482.11	1581.44	216.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	164.40	58.74	0.00	0.00	65.51	65.83	106.05	0.00	133.56	103.94	103.94	53.94
Movement LOS	F	E			E	E	F		F	F	F	D
d_A, Approach Delay [s/veh]	66.70			65.52			128.70			97.10		
Approach LOS	E			E			F			F		
d_I, Intersection Delay [s/veh]	76.85											
Intersection LOS	E											
Intersection V/C	0.874											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	64.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	233	1000	927	485	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	175	225	210	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1175	1152	695	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	311	304	184	0	0
Total Analysis Volume [veh/h]	268	1242	1218	735	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.88	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	64.34	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	8.07	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	201.71	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.42		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.98					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	54.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.016

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	601	299	84	836	0	625	36	389	15	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	37	87	138	0	106	0	22	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	691	336	171	974	0	731	36	411	15	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	184	89	46	259	0	195	10	109	4	0	1
Total Analysis Volume [veh/h]	0	736	358	182	1037	0	778	38	438	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	41	0	16	57	0	0	42	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	37	12	53	52	52	3	3
g / C, Green / Cycle	0.31	0.31	0.10	0.44	0.43	0.43	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.29	0.32	0.10	0.29	0.45	0.27	0.01	0.00
s, saturation flow rate [veh/h]	1900	1703	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	589	528	181	1603	777	692	51	46
d1, Uniform Delay [s]	40.14	41.42	54.00	26.09	34.29	26.89	57.15	56.78
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.25	49.02	32.51	2.03	30.31	0.96	3.38	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

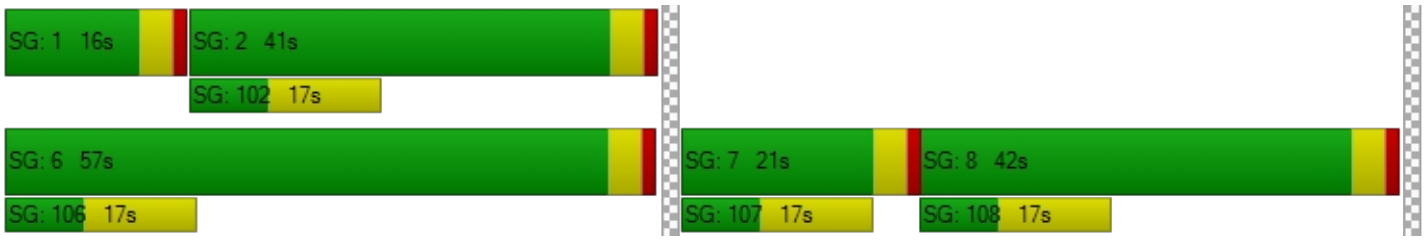
X, volume / capacity	0.93	1.04	1.01	0.65	1.05	0.63	0.31	0.09
d, Delay for Lane Group [s/veh]	63.40	90.43	86.51	28.12	64.60	27.85	60.53	57.59
Lane Group LOS	E	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	19.28	22.58	7.09	11.87	28.49	9.89	0.52	0.13
50th-Percentile Queue Length [ft/ln]	481.94	564.60	177.15	296.66	712.34	247.16	13.11	3.22
95th-Percentile Queue Length [veh/ln]	26.48	31.11	11.48	17.52	38.63	15.04	0.94	0.23
95th-Percentile Queue Length [ft/ln]	661.96	777.80	286.94	437.89	965.87	376.07	23.61	5.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	70.34	90.43	86.51	28.12	0.00	64.60	64.60	27.85	60.53	0.00	57.59
Movement LOS		E	F	F	C		F	E	C	E		E
d_A, Approach Delay [s/veh]	76.91			36.84			51.77			59.94		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	54.41											
Intersection LOS	D											
Intersection V/C	1.016											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	567	65	187	935	155	103	58	12	13	38	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	82	2	40	115	5	4	0	1	2	0	41
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	649	67	227	1050	160	107	58	13	15	38	120
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	170	18	59	275	42	28	15	3	4	10	31
Total Analysis Volume [veh/h]	35	679	70	237	1098	167	112	61	14	16	40	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	27	0	72	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	12	12	7	16	16	8	8	8
g / C, Green / Cycle	0.06	0.31	0.31	0.18	0.43	0.43	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.04	0.13	0.30	0.10	0.16	0.03	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1156	1805	1615
c, Capacity [veh/h]	107	1107	494	325	1544	690	380	478	319
d1, Uniform Delay [s]	17.10	11.23	9.53	14.66	8.93	6.94	15.19	12.57	13.23
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	0.56	0.13	3.12	0.62	0.18	0.99	0.11	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

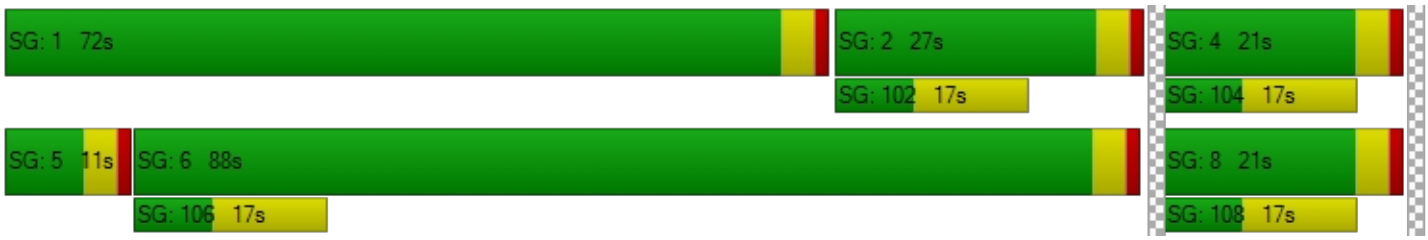
X, volume / capacity	0.33	0.61	0.14	0.73	0.71	0.24	0.49	0.12	0.40
d, Delay for Lane Group [s/veh]	18.87	11.78	9.66	17.78	9.55	7.12	16.17	12.68	14.03
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	1.93	0.34	1.85	2.62	0.62	1.39	0.33	0.83
50th-Percentile Queue Length [ft/ln]	7.57	48.25	8.52	46.27	65.46	15.55	34.76	8.33	20.64
95th-Percentile Queue Length [veh/ln]	0.54	3.47	0.61	3.33	4.71	1.12	2.50	0.60	1.49
95th-Percentile Queue Length [ft/ln]	13.62	86.85	15.33	83.29	117.83	27.99	62.56	14.99	37.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.87	11.78	9.66	17.78	9.55	7.12	16.17	16.17	16.17	12.68	12.68	14.03
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.91			10.57			16.17			13.61		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.57											
Intersection LOS	B											
Intersection V/C	0.710											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	112	1	4	273
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	34	605	1	4	630
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	159	0	1	166
Total Analysis Volume [veh/h]	0	36	637	1	4	663
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	10.56	0.00	0.00	8.78	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.16	0.00	0.00	0.32	0.00
d_A, Approach Delay [s/veh]	10.56		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	27	137	9	8	254
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	27	630	9	8	611
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	166	2	2	161
Total Analysis Volume [veh/h]	24	28	663	9	8	643
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.04	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	21.59	10.61	0.00	0.00	8.91	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.33	0.13	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	8.20	3.27	0.00	0.00	0.65	0.00
d_A, Approach Delay [s/veh]	15.67		0.00		0.11	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.64					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.663

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	137	0	143	108	385	0	0	214	112
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	6	53	46	3	175	78	74	12	23	54	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	6	53	183	3	318	186	459	12	23	268	136
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	14	49	1	84	49	122	3	6	71	36
Total Analysis Volume [veh/h]	28	6	56	194	3	338	198	488	13	26	285	145
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	24	0	0	24	0	15	25	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	11	11	6	11	11	2	7	7
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.17	0.32	0.32	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.14	0.21	0.11	0.13	0.01	0.01	0.12	0.12
s, saturation flow rate [veh/h]	1056	1639	1362	1617	1810	3618	1615	1810	1900	1690
c, Capacity [veh/h]	265	501	500	495	303	1144	511	81	367	326
d1, Uniform Delay [s]	16.28	9.01	12.75	10.99	13.99	9.72	8.48	16.66	13.28	13.34
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.11	0.49	1.72	2.37	0.25	0.02	2.29	1.65	2.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

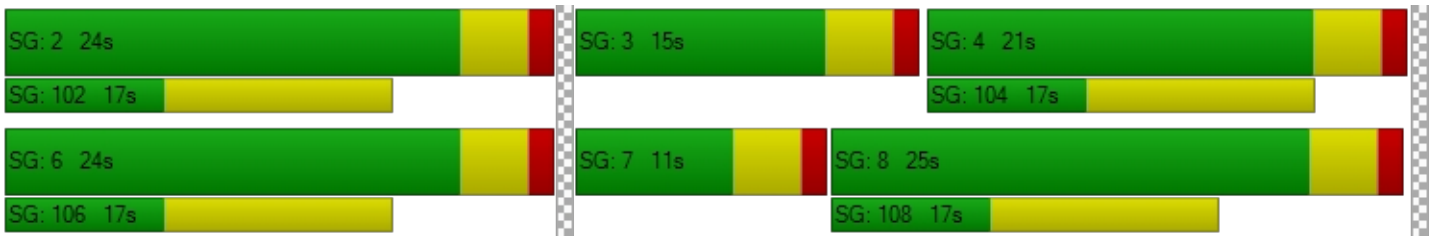
X, volume / capacity	0.11	0.12	0.39	0.69	0.65	0.43	0.03	0.32	0.61	0.63
d, Delay for Lane Group [s/veh]	16.45	9.12	13.24	12.71	16.37	9.98	8.50	18.95	14.94	15.36
Lane Group LOS	B	A	B	B	B	A	A	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	0.28	1.18	1.99	1.41	1.16	0.05	0.23	1.49	1.40
50th-Percentile Queue Length [ft/ln]	4.99	6.91	29.47	49.74	35.32	29.00	1.37	5.69	37.26	35.04
95th-Percentile Queue Length [veh/ln]	0.36	0.50	2.12	3.58	2.54	2.09	0.10	0.41	2.68	2.52
95th-Percentile Queue Length [ft/ln]	8.98	12.45	53.04	89.52	63.58	52.20	2.47	10.24	67.06	63.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.45	9.12	9.12	13.24	12.71	12.71	16.37	9.98	8.50	18.95	15.03	15.36
Movement LOS	B	A	A	B	B	B	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	11.40			12.90			11.76			15.35		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.663											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	522	0	0	326
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	170	2	2	101
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	692	2	2	427
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	182	1	1	112
Total Analysis Volume [veh/h]	0	11	728	2	2	449
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.74	0.00	0.00	9.09	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.31	0.00	0.00	0.17	0.00
d_A, Approach Delay [s/veh]	10.74		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	46.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	0	11	0	0	0	0	88	93	4	48	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	182	1	12	3	4	5	7	414	190	4	216	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	0	3	1	1	1	2	114	53	1	60	3
Total Analysis Volume [veh/h]	201	1	13	3	4	6	8	458	210	4	239	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.72	0.00	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	46.69	45.89	40.67	18.21	19.03	9.83	7.73	0.00	0.00	8.88	0.00	0.00
Movement LOS	E	E	E	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	5.47	5.47	5.47	0.10	0.10	0.10	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	136.76	136.76	136.76	2.59	2.59	2.59	0.40	0.40	0.40	0.32	0.32	0.32
d_A, Approach Delay [s/veh]	46.33			14.60			0.09			0.14		
Approach LOS	E			B			A			A		
d_I, Intersection Delay [s/veh]	8.83											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	130	101	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	55	93	4	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	185	194	4	10	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	49	51	1	3	13
Total Analysis Volume [veh/h]	6	195	204	4	11	52
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	0.00	11.13	9.56
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.06	0.20
95th-Percentile Queue Length [ft/ln]	0.33	0.00	0.00	0.00	1.40	4.93
d_A, Approach Delay [s/veh]	0.23		0.00		9.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.41					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	545.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.971

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	40	847	443	80	93	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	130	105	34	92	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	977	548	114	185	39
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	11	251	141	29	48	0
Total Analysis Volume [veh/h]	42	1004	563	117	190	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	1.97	0.00
d_M, Delay for Movement [s/veh]	9.09	0.00	0.00	0.00	545.03	12.34
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	16.12	0.00
95th-Percentile Queue Length [ft/ln]	3.58	0.00	0.00	0.00	402.97	0.00
d_A, Approach Delay [s/veh]	0.37		0.00		545.03	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	54.25					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	28.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	755	23	47	395	65	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	131	0	0	107	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	886	23	47	502	65	169
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	231	6	12	131	17	44
Total Analysis Volume [veh/h]	926	24	49	525	68	177
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.07	0.01	0.19	0.55
d_M, Delay for Movement [s/veh]	0.00	0.00	10.28	0.00	17.20	28.82
Movement LOS	A	A	B	A	C	D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.21	0.00	0.68	3.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	5.37	0.00	16.99	77.57
d_A, Approach Delay [s/veh]	0.00		0.88		25.59	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	3.83					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	533	427	23	39	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	57	86	21	74	101
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	590	513	44	113	194
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	182	158	14	35	60
Total Analysis Volume [veh/h]	149	728	633	54	140	240
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.01	0.01	0.00	0.37	0.35
d_M, Delay for Movement [s/veh]	9.69	0.00	0.00	0.00	20.11	13.06
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.58	0.00	0.00	0.00	1.68	1.57
95th-Percentile Queue Length [ft/ln]	14.48	0.00	0.00	0.00	42.00	39.32
d_A, Approach Delay [s/veh]	1.65		0.00		15.66	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.80					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	407	163	76	441	10	9	6	17	82	5	227
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	70	0	0	181	6	11	0	33	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	477	163	76	622	16	20	6	50	82	5	227
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	149	51	24	194	5	6	2	16	26	2	71
Total Analysis Volume [veh/h]	45	595	203	95	776	20	25	7	62	102	6	283
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	25	0	16	30	0	11	68	0	11	68	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	11	11	5	13	13	2	7	7	5	10	10
g / C, Green / Cycle	0.07	0.25	0.25	0.11	0.29	0.29	0.04	0.15	0.15	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.13	0.05	0.21	0.01	0.01	0.00	0.04	0.06	0.00	0.18
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	124	904	403	202	1058	472	78	291	247	209	429	365
d1, Uniform Delay [s]	19.24	14.57	13.93	18.02	13.79	10.96	20.10	15.57	16.13	17.93	13.00	15.71
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	0.83	0.97	1.70	1.00	0.04	2.37	0.03	0.52	1.75	0.01	3.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.66	0.50	0.47	0.73	0.04	0.32	0.02	0.25	0.49	0.01	0.78
d, Delay for Lane Group [s/veh]	20.99	15.40	14.90	19.73	14.79	11.00	22.46	15.60	16.65	19.68	13.01	19.26
Lane Group LOS	C	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.44	2.27	1.52	0.87	2.91	0.12	0.27	0.05	0.50	0.93	0.04	2.55
50th-Percentile Queue Length [ft/ln]	11.04	56.86	38.11	21.80	72.64	2.95	6.70	1.34	12.59	23.34	1.00	63.74
95th-Percentile Queue Length [veh/ln]	0.80	4.09	2.74	1.57	5.23	0.21	0.48	0.10	0.91	1.68	0.07	4.59
95th-Percentile Queue Length [ft/ln]	19.88	102.34	68.60	39.23	130.75	5.30	12.07	2.41	22.67	42.01	1.80	114.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.99	15.40	14.90	19.73	14.79	11.00	22.46	15.60	16.65	19.68	13.01	19.26
Movement LOS	C	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.58			15.23			18.12			19.28		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.20											
Intersection LOS	B											
Intersection V/C	0.682											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.869

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	645	71	95	425	57	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	91	0	0	214	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	736	71	95	639	57	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	19	26	173	15	9
Total Analysis Volume [veh/h]	795	77	103	690	62	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	51	0	0	124	69	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.41	0.41	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.22	0.05	0.15	0.36	0.08	0.02
s, saturation flow rate [veh/h]	3618	1615	694	1900	765	1615
c, Capacity [veh/h]	1477	659	389	0	438	258
d1, Uniform Delay [s]	4.15	3.40	9.25	0.00	8.78	6.69
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.08	1.66	0.00	0.15	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

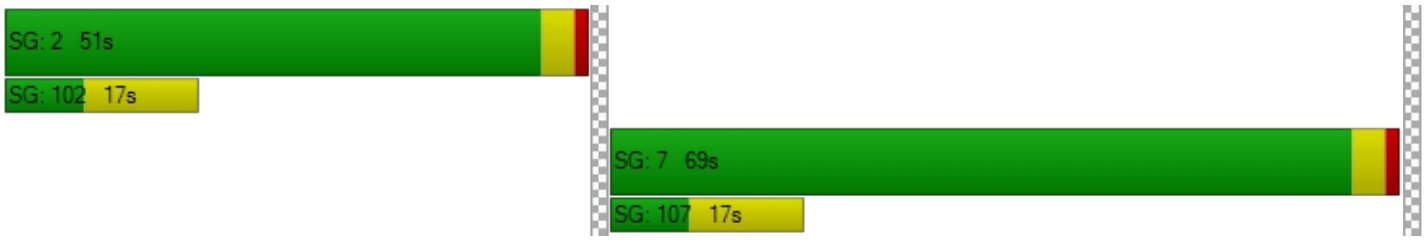
X, volume / capacity	0.54	0.12	0.26	0.00	0.14	0.15
d, Delay for Lane Group [s/veh]	4.46	3.48	10.91	0.00	8.93	6.95
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.03	0.45	0.00	0.15	0.07
50th-Percentile Queue Length [ft/ln]	3.34	0.64	11.17	0.00	3.65	1.84
95th-Percentile Queue Length [veh/ln]	0.24	0.05	0.80	0.00	0.26	0.13
95th-Percentile Queue Length [ft/ln]	6.01	1.15	20.11	0.00	6.58	3.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.46	3.48	10.91	0.00	8.93	6.95
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.37		1.42		8.18	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.26					
Intersection LOS	A					
Intersection V/C	0.869					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	567.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	516.380

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	140	0	74	29	293	0	0	192	62
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	306	2	418	556	739	4	2	652	243
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	82	1	112	148	197	1	1	174	65
Total Analysis Volume [veh/h]	3	2	2	327	2	446	593	789	4	2	696	259
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	77	0	0	77	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	73	73	73	73	8	25	25	0	17	17
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.07	0.22	0.22	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.14	0.00	459.53	0.28	0.33	0.22	0.00	0.00	0.19	0.16
s, saturation flow rate [veh/h]	35	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	76	1071	66	1071	135	809	361	7	553	247
d1, Uniform Delay [s]	29.58	6.24	55.00	8.61	50.90	42.39	33.23	54.65	46.59	46.59
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.00	1836.05	0.26	1532.13	26.12	0.06	21.84	130.22	70.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.00	5.01	0.42	4.40	0.98	0.01	0.29	1.26	1.05
d, Delay for Lane Group [s/veh]	29.94	6.24	1891.06	8.87	1583.03	68.51	33.29	76.48	176.81	117.17
Lane Group LOS	C	A	F	A	F	E	C	E	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.11	0.02	35.34	4.63	61.11	13.45	0.09	0.10	17.51	11.54
50th-Percentile Queue Length [ft/ln]	2.68	0.38	883.53	115.87	1527.73	336.25	2.23	2.42	437.76	288.56
95th-Percentile Queue Length [veh/ln]	0.19	0.03	63.61	8.17	91.37	19.46	0.16	0.17	26.94	17.50
95th-Percentile Queue Length [ft/ln]	4.82	0.68	1590.35	204.13	2284.33	486.61	4.01	4.36	673.58	437.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.94	29.94	6.24	1891.06	1891.06	8.87	1583.03	68.51	33.29	76.48	176.81	117.17
Movement LOS	C	C	A	F	F	A	F	E	C	E	F	F
d_A, Approach Delay [s/veh]	23.17			807.89			716.40			160.46		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	567.28											
Intersection LOS	F											
Intersection V/C	516.380											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	343.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.014

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	689	861	58	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	254	433	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	943	1294	58	31	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	251	345	15	8	2
Total Analysis Volume [veh/h]	23	1004	1378	62	33	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	1.01	0.06
d_M, Delay for Movement [s/veh]	12.92	0.00	0.00	0.00	343.46	27.27
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	3.55	0.18
95th-Percentile Queue Length [ft/ln]	3.79	0.00	0.00	0.00	88.66	4.60
d_A, Approach Delay [s/veh]	0.29		0.00		269.93	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	4.74					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	679	286	84	895	0	3	20	140	328	5	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	286	0	28	446	0	0	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	965	286	112	1341	0	3	20	140	328	5	81
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	263	78	30	365	0	1	5	38	89	1	22
Total Analysis Volume [veh/h]	52	1050	311	122	1459	0	3	22	152	357	5	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	22	16	27	0	0	61	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	66	85	10	70	70	13	13	15	15	15
g / C, Green / Cycle	0.05	0.55	0.71	0.08	0.59	0.59	0.11	0.11	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.29	0.19	0.07	0.38	0.38	0.01	0.09	0.10	0.10	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1889	1615	1810	1812	1615
c, Capacity [veh/h]	87	1993	1139	148	1111	1111	212	182	219	220	196
d1, Uniform Delay [s]	55.99	17.05	6.45	54.22	16.78	16.78	47.90	52.18	51.49	51.49	49.02
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.41	1.00	0.59	10.66	0.67	0.67	0.24	9.68	7.62	7.61	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

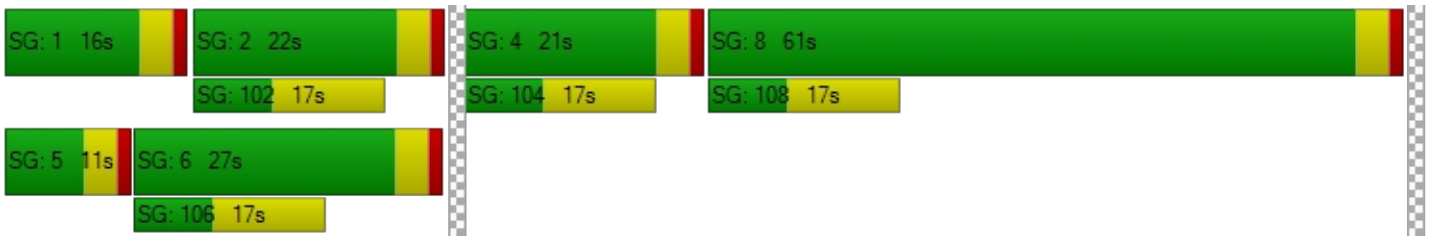
X, volume / capacity	0.60	0.53	0.27	0.82	0.66	0.66	0.12	0.84	0.82	0.82	0.45
d, Delay for Lane Group [s/veh]	62.40	18.05	7.04	64.88	17.45	17.45	48.14	61.86	59.11	59.10	50.63
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.70	9.21	2.86	4.07	13.17	13.17	0.69	4.97	5.77	5.78	2.55
50th-Percentile Queue Length [ft/ln]	42.49	230.33	71.43	101.64	329.28	329.28	17.27	124.23	144.31	144.48	63.65
95th-Percentile Queue Length [veh/ln]	3.06	14.19	5.14	7.32	19.12	19.12	1.24	8.62	9.71	9.72	4.58
95th-Percentile Queue Length [ft/ln]	76.48	354.78	128.58	182.95	478.08	478.08	31.09	215.62	242.81	243.05	114.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.40	18.05	7.04	64.88	17.45	17.45	48.14	48.14	61.86	59.11	59.10	50.63
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	17.26			21.11			59.92			57.45		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	26.02											
Intersection LOS	C											
Intersection V/C	0.700											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	522	391	0	0	1147	188	0	0	0	93	0	599
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	106	0	0	426	20	0	0	0	13	0	180
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	537	497	0	0	1573	208	0	0	0	106	0	779
Peak Hour Factor	0.9550	0.9550	0.8760	0.8760	0.9550	0.9550	0.8760	0.8760	0.8760	0.9550	0.8760	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	141	130	0	0	412	54	0	0	0	28	0	0
Total Analysis Volume [veh/h]	562	520	0	0	1647	218	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	41	99	0	0	58	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	155	155	155	155		155	155
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	51	136	81	81		12	12
g / C, Green / Cycle	0.33	0.87	0.52	0.52		0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.31	0.14	0.46	0.13		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	591	3162	1887	843		135	120
d1, Uniform Delay [s]	51.05	1.44	32.59	20.52		70.81	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	9.09	0.02	1.38	0.16		11.74	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.16	0.87	0.26		0.82	0.00
d, Delay for Lane Group [s/veh]	60.14	1.46	33.96	20.68		82.55	0.00
Lane Group LOS	E	A	C	C		F	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	22.79	0.78	27.15	4.50		4.81	0.00
50th-Percentile Queue Length [ft/ln]	569.83	19.59	678.77	112.59		120.34	0.00
95th-Percentile Queue Length [veh/ln]	30.62	1.41	35.70	7.98		8.41	0.00
95th-Percentile Queue Length [ft/ln]	765.58	35.27	892.40	199.60		210.29	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.14	1.46	0.00	0.00	33.96	20.68	0.00	0.00	0.00	82.55	0.00	0.00
Movement LOS	E	A			C	C				F		A
d_A, Approach Delay [s/veh]	31.94			32.41			0.00			82.55		
Approach LOS	C			C			A			F		
d_I, Intersection Delay [s/veh]	34.06											
Intersection LOS	C											
Intersection V/C	0.897											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	89.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.160

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	766	104	514	726	0	148	0	824	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	99	10	308	131	0	21	0	19	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	865	114	822	857	0	169	0	843	0	0	1
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	229	30	217	226	0	45	0	223	0	0	0
Total Analysis Volume [veh/h]	0	914	121	869	906	0	179	0	891	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	30	0	54	84	0	36	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	26	26	50	80	32	32	
g / C, Green / Cycle	0.22	0.22	0.42	0.67	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.07	0.48	0.25	0.10	0.31	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	786	351	753	2411	483	763	
d1, Uniform Delay [s]	47.15	39.90	35.18	8.93	35.92	44.16	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	86.97	2.67	73.04	0.10	0.47	78.72	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

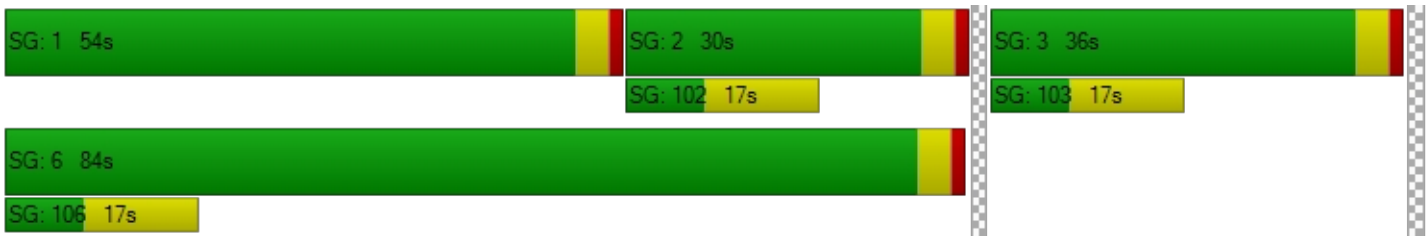
X, volume / capacity	1.16	0.34	1.15	0.38	0.37	1.17	
d, Delay for Lane Group [s/veh]	134.13	42.57	108.21	9.03	36.40	122.88	
Lane Group LOS	F	D	F	A	D	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	21.18	3.30	36.69	5.02	4.36	19.59	
50th-Percentile Queue Length [ft/ln]	529.55	82.61	917.34	125.47	108.88	489.83	
95th-Percentile Queue Length [veh/ln]	31.13	5.95	51.55	8.69	7.78	29.29	
95th-Percentile Queue Length [ft/ln]	778.26	148.70	1288.84	217.32	194.45	732.20	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	134.13	42.57	108.21	9.03	0.00	36.40	0.00	122.88	0.00	0.00	0.00
Movement LOS		F	D	F	A		D		F			
d_A, Approach Delay [s/veh]	123.42			57.59			108.42			0.00		
Approach LOS	F			E			F			A		
d_I, Intersection Delay [s/veh]	89.17											
Intersection LOS	F											
Intersection V/C	1.160											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	342	1424	0	0	1066	380	0	0	0	364	8	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	86	0	0	43	0	0	0	0	89	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	407	1510	0	0	1109	380	0	0	0	453	8	573
Peak Hour Factor	0.9740	0.9740	0.8170	0.8170	0.9740	0.9740	0.8170	0.8170	0.8170	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	388	0	0	285	98	0	0	0	116	2	147
Total Analysis Volume [veh/h]	418	1550	0	0	1139	390	0	0	0	465	8	588
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	30	80	0	0	50	0	0	0	0	0	50	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	11	36	21	21		18	18	18
g / C, Green / Cycle	0.19	0.60	0.36	0.36		0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.14	0.32	0.17	0.25		0.21	0.23	0.24
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1595	1530
c, Capacity [veh/h]	559	2931	2345	549		489	481	462
d1, Uniform Delay [s]	22.87	7.06	14.87	16.48		18.43	18.80	19.04
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.03	0.15	0.16	1.72		1.80	2.36	2.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

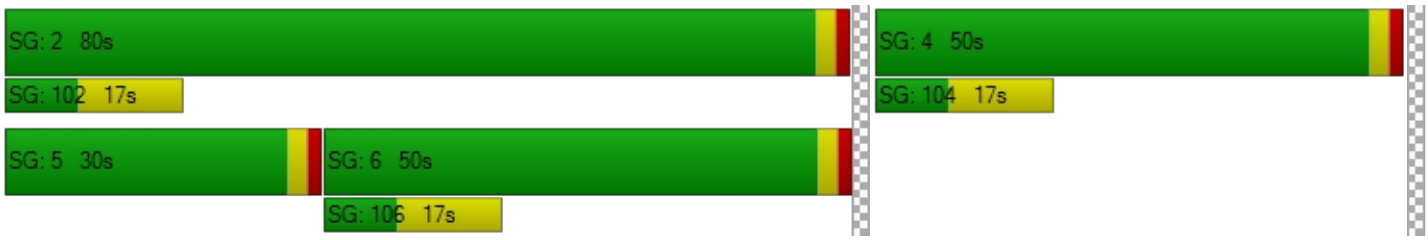
X, volume / capacity	0.75	0.53	0.49	0.71		0.70	0.75	0.78
d, Delay for Lane Group [s/veh]	24.90	7.21	15.02	18.20		20.23	21.16	21.95
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.72	2.89	2.69	4.31		3.98	4.35	4.46
50th-Percentile Queue Length [ft/ln]	68.07	72.28	67.28	107.70		99.55	108.83	111.54
95th-Percentile Queue Length [veh/ln]	4.90	5.20	4.84	7.71		7.17	7.78	7.93
95th-Percentile Queue Length [ft/ln]	122.52	130.10	121.10	192.80		179.20	194.38	198.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.90	7.21	0.00	0.00	15.02	18.20	0.00	0.00	0.00	20.46	21.16	21.64
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.97			15.83			0.00			21.13		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	14.97											
Intersection LOS	B											
Intersection V/C	0.702											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	38.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.889

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1211	525	417	1013	0	635	2	337	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	151	190	0	132	0	0	0	33	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1362	715	417	1145	0	635	2	370	0	0	0
Peak Hour Factor	0.8530	0.9720	0.9720	0.9720	0.9720	0.8530	0.9720	0.9720	0.9720	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	350	184	107	294	0	163	1	95	0	0	0
Total Analysis Volume [veh/h]	0	1401	736	429	1178	0	653	2	381	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	71	0	24	95	0	0	35	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	164	164	164	164	164	164	164	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	87	87	27	116	41	41	41	
g / C, Green / Cycle	0.53	0.53	0.16	0.71	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.41	0.48	0.14	0.34	0.21	0.21	0.23	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1698	1530	
c, Capacity [veh/h]	1813	810	481	2433	410	430	388	
d1, Uniform Delay [s]	30.73	35.01	67.21	10.50	57.47	57.61	59.31	
k, delay calibration	0.11	0.19	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.72	7.12	5.95	0.15	3.87	3.87	8.22	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.77	0.91	0.89	0.48	0.81	0.82	0.91	
d, Delay for Lane Group [s/veh]	31.45	42.12	73.16	10.65	61.33	61.49	67.53	
Lane Group LOS	C	D	E	B	E	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	22.13	27.88	9.23	9.30	13.43	14.25	15.08	
50th-Percentile Queue Length [ft/ln]	553.34	696.88	230.68	232.45	335.74	356.27	376.99	
95th-Percentile Queue Length [veh/ln]	29.85	36.53	14.21	14.30	19.44	20.44	21.45	
95th-Percentile Queue Length [ft/ln]	746.23	913.35	355.22	357.47	485.99	511.04	536.21	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	31.45	42.12	73.16	10.65	0.00	61.41	61.49	66.97	0.00	0.00	0.00
Movement LOS		C	D	E	B		E	E	E			
d_A, Approach Delay [s/veh]	35.13			27.34			63.49			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	38.66											
Intersection LOS	D											
Intersection V/C	0.889											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.880

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	1295	26	36	1072	232	390	78	152	46	19	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	295	0	0	144	21	46	7	3	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	1590	26	36	1216	253	436	85	155	46	22	35
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	422	7	10	323	67	116	23	41	12	6	9
Total Analysis Volume [veh/h]	61	1690	28	38	1292	269	463	90	165	49	23	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	44	0	10	44	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	71	71	5	70	70	54	54	54	54	54	54
g / C, Green / Cycle	0.05	0.51	0.51	0.04	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.04	0.48	0.48	0.02	0.44	0.45	0.34	0.05	0.11	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1790	1619	1800	1695	1364	1800	1530	1142	1800	1530
c, Capacity [veh/h]	77	917	912	63	901	848	540	697	592	393	697	592
d1, Uniform Delay [s]	65.86	32.17	32.29	66.16	31.22	31.84	43.57	27.63	29.42	35.88	26.59	26.90
k, delay calibration	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.94	5.64	6.01	9.10	3.04	3.94	4.06	0.08	0.25	0.14	0.02	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

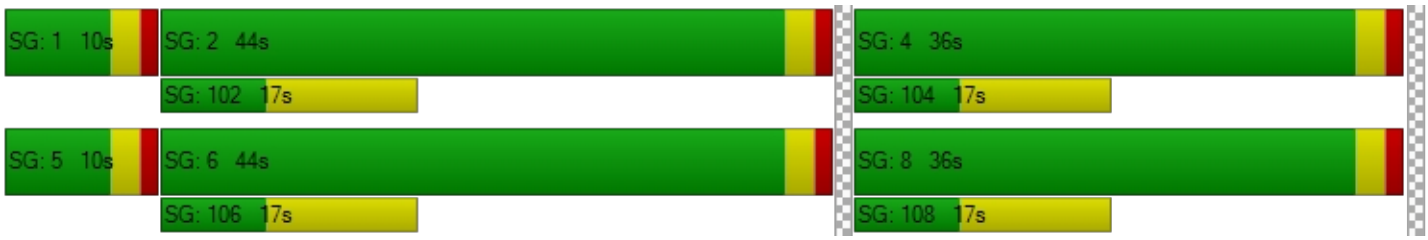
X, volume / capacity	0.79	0.94	0.94	0.61	0.88	0.90	0.86	0.13	0.28	0.12	0.03	0.06
d, Delay for Lane Group [s/veh]	81.80	37.82	38.30	75.26	34.26	35.77	47.63	27.72	29.68	36.02	26.61	26.95
Lane Group LOS	F	D	D	E	C	D	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.50	28.01	28.14	1.50	24.22	24.02	16.03	1.99	3.90	1.26	0.49	0.80
50th-Percentile Queue Length [ft/ln]	62.55	700.28	703.57	37.44	605.51	600.40	400.87	49.87	97.61	31.49	12.26	19.98
95th-Percentile Queue Length [veh/ln]	4.50	36.69	36.84	2.70	32.29	32.05	22.60	3.59	7.03	2.27	0.88	1.44
95th-Percentile Queue Length [ft/ln]	112.59	917.27	921.08	67.39	807.29	801.33	565.05	89.76	175.70	56.69	22.06	35.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	81.80	38.05	38.30	75.26	34.84	35.77	47.63	27.72	29.68	36.02	26.61	26.95
Movement LOS	F	D	D	E	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	39.56			35.96			41.01			30.95		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	38.21											
Intersection LOS	D											
Intersection V/C	0.880											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	85	1262	31	27	1161	91	99	2	65	37	10	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	266	0	0	131	16	38	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	1528	31	27	1292	107	137	2	75	37	10	63
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	408	8	7	345	29	37	1	20	10	3	17
Total Analysis Volume [veh/h]	106	1631	33	29	1379	114	146	2	80	39	11	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	61	0	44	94	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	27	27	2	24	24	9	9	9	9	9
g / C, Green / Cycle	0.11	0.57	0.57	0.05	0.50	0.50	0.19	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.07	0.46	0.46	0.02	0.42	0.42	0.14	0.05	0.03	0.01	0.04
s, saturation flow rate [veh/h]	1619	1800	1787	1619	1800	1752	1075	1530	1437	1800	1530
c, Capacity [veh/h]	182	1026	1019	77	910	886	357	293	161	344	293
d1, Uniform Delay [s]	19.87	8.11	8.14	21.77	9.92	9.98	19.26	16.27	23.55	15.52	16.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.92	1.60	1.65	2.98	2.01	2.16	0.77	0.50	0.77	0.04	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

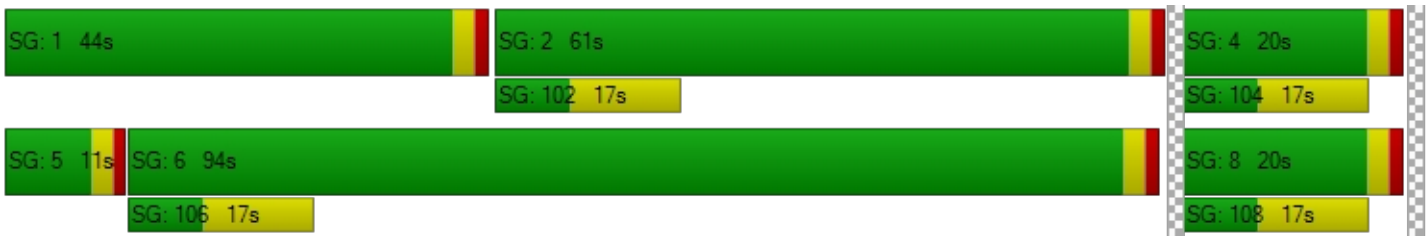
X, volume / capacity	0.58	0.81	0.82	0.37	0.83	0.84	0.41	0.27	0.24	0.03	0.23
d, Delay for Lane Group [s/veh]	22.79	9.71	9.80	24.74	11.93	12.15	20.03	16.77	24.32	15.55	16.52
Lane Group LOS	C	A	A	C	B	B	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.14	4.74	4.76	0.35	5.18	5.15	1.45	0.69	0.44	0.09	0.57
50th-Percentile Queue Length [ft/ln]	28.49	118.47	118.94	8.68	129.57	128.76	36.18	17.23	10.99	2.22	14.26
95th-Percentile Queue Length [veh/ln]	2.05	8.31	8.33	0.62	8.92	8.87	2.61	1.24	0.79	0.16	1.03
95th-Percentile Queue Length [ft/ln]	51.28	207.73	208.37	15.62	222.91	221.81	65.13	31.02	19.79	3.99	25.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.79	9.76	9.80	24.74	12.03	12.15	20.03	20.03	16.77	24.32	15.55	16.52
Movement LOS	C	A	A	C	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	10.54			12.28			18.89			19.03		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.06											
Intersection LOS	B											
Intersection V/C	0.716											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.684

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	93	1274	1165	87	37	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	252	128	13	28	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1526	1293	100	65	155
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	395	334	26	17	40
Total Analysis Volume [veh/h]	114	1578	1337	103	67	160
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	18	105	87	0	25	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	29	21	21	6	6
g / C, Green / Cycle	0.12	0.70	0.50	0.50	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.46	0.40	0.41	0.04	0.10
s, saturation flow rate [veh/h]	1619	3427	1800	1756	1619	1530
c, Capacity [veh/h]	201	2395	904	882	254	240
d1, Uniform Delay [s]	17.14	3.49	8.57	8.71	15.40	16.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.51	0.31	1.65	1.91	0.55	3.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.66	0.80	0.82	0.26	0.67
d, Delay for Lane Group [s/veh]	19.65	3.81	10.22	10.63	15.94	19.66
Lane Group LOS	B	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.02	0.96	3.83	3.94	0.52	1.43
50th-Percentile Queue Length [ft/ln]	25.58	24.10	95.79	98.61	12.88	35.76
95th-Percentile Queue Length [veh/ln]	1.84	1.73	6.90	7.10	0.93	2.58
95th-Percentile Queue Length [ft/ln]	46.04	43.37	172.42	177.51	23.19	64.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.65	3.81	10.41	10.63	15.94	19.66
Movement LOS	B	A	B	B	B	B
d_A, Approach Delay [s/veh]	4.87		10.42		18.56	
Approach LOS	A		B		B	
d_I, Intersection Delay [s/veh]	8.18					
Intersection LOS	A					
Intersection V/C	0.684					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	873	95	73	927	168	200	466	137	32	204	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	80	8	6	76	76	170	63	23	10	38	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	953	103	79	1003	244	370	529	160	42	242	96
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	245	26	20	257	63	95	136	41	11	62	25
Total Analysis Volume [veh/h]	151	978	106	81	1030	251	380	543	164	43	248	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	20	0	18	21	0	27	68	0	27	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	145	145	145	145	145	145	145	145	145	145	145	145
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	36	64	64	21	48	48	52	0	0	52	0	0
g / C, Green / Cycle	0.25	0.44	0.44	0.14	0.33	0.33	0.36	0.00	0.00	0.36	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.22	0.31	0.31	0.12	0.30	0.16	0.33	0.30	0.11	0.05	0.14	0.06
s, saturation flow rate [veh/h]	696	1800	1739	696	3427	1530	1150	1800	1530	877	1800	1530
c, Capacity [veh/h]	213	789	762	138	1138	508	447	0	0	353	0	0
d1, Uniform Delay [s]	54.49	33.08	33.12	62.64	46.42	38.84	46.47	0.00	0.00	32.72	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.35	1.13	1.18	3.88	3.05	0.75	4.59	0.00	0.00	0.15	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

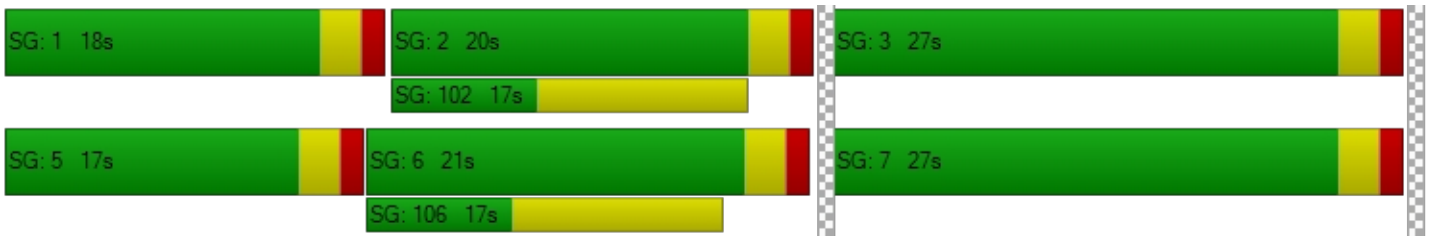
X, volume / capacity	0.71	0.70	0.70	0.59	0.91	0.49	0.85	0.00	0.00	0.12	0.00	0.00
d, Delay for Lane Group [s/veh]	58.83	34.21	34.30	66.53	49.46	39.58	51.06	0.00	0.00	32.87	0.00	0.00
Lane Group LOS	E	C	C	E	D	D	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	5.66	15.97	15.49	3.11	18.23	7.34	13.92	0.00	0.00	1.08	0.00	0.00
50th-Percentile Queue Length [ft/ln]	141.56	399.25	387.33	77.84	455.82	183.61	347.97	0.00	0.00	26.96	0.00	0.00
95th-Percentile Queue Length [veh/ln]	9.57	22.52	21.95	5.60	25.24	11.79	20.04	0.00	0.00	1.94	0.00	0.00
95th-Percentile Queue Length [ft/ln]	239.13	563.10	548.71	140.12	630.89	294.72	500.93	0.00	0.00	48.53	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.83	34.25	34.30	66.53	49.46	39.58	51.06	0.00	0.00	32.87	0.00	0.00
Movement LOS	E	C	C	E	D	D	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	37.26			48.66			17.85			3.62		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	32.67											
Intersection LOS	C											
Intersection V/C	0.897											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.895

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	404	1	2	647	143	446	69	112	1	22	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	8	0	0	21	39	81	0	45	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	412	1	2	668	182	527	69	157	1	22	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	108	0	1	176	48	139	18	41	0	6	2
Total Analysis Volume [veh/h]	66	434	1	2	703	192	555	73	165	1	23	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	24	0	15	29	0	0	56	0	0	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	102	102	102	102	102	102	102	102
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	35	35	0	30	30	58	58
g / C, Green / Cycle	0.06	0.34	0.34	0.00	0.29	0.29	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.26	0.26	0.54	0.02
s, saturation flow rate [veh/h]	1619	1800	1799	1619	1800	1669	1459	1744
c, Capacity [veh/h]	94	621	620	6	523	485	882	1019
d1, Uniform Delay [s]	47.40	25.01	25.01	50.91	34.74	34.75	21.36	9.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.14	0.34	0.34	27.69	5.30	5.70	3.65	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

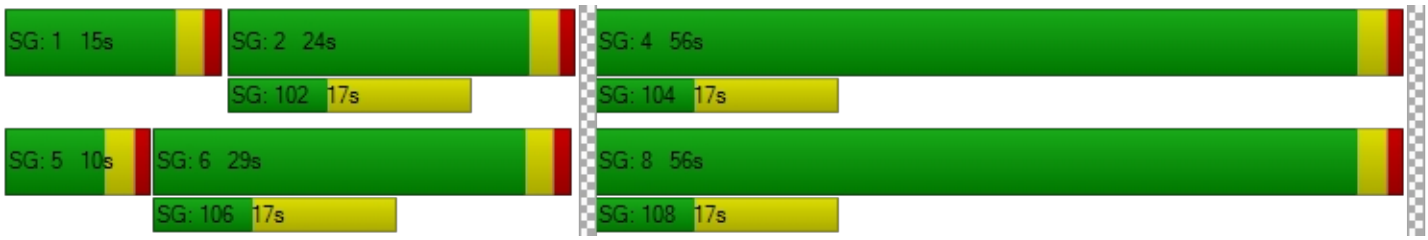
X, volume / capacity	0.70	0.35	0.35	0.32	0.89	0.89	0.90	0.03
d, Delay for Lane Group [s/veh]	56.54	25.35	25.35	78.60	40.04	40.45	25.01	9.96
Lane Group LOS	E	C	C	E	D	D	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.88	3.96	3.95	0.10	11.59	10.80	17.42	0.30
50th-Percentile Queue Length [ft/ln]	47.06	98.89	98.83	2.46	289.75	270.10	435.48	7.59
95th-Percentile Queue Length [veh/ln]	3.39	7.12	7.12	0.18	17.17	16.19	24.26	0.55
95th-Percentile Queue Length [ft/ln]	84.71	178.00	177.90	4.43	429.33	404.87	606.60	13.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.54	25.35	25.35	78.60	40.18	40.45	25.01	25.01	25.01	9.96	9.96	9.96
Movement LOS	E	C	C	E	D	D	C	C	C	A	A	A
d_A, Approach Delay [s/veh]	29.46			40.32			25.01			9.96		
Approach LOS	C			D			C			A		
d_I, Intersection Delay [s/veh]	31.99											
Intersection LOS	C											
Intersection V/C	0.895											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

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Scenario 9 Opening Year (2020) With Project Morning Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\AMOYW1-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.039	46.4	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.980	44.9	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.685	19.8	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.637	5.3	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.715	24.0	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	EB Right	0.598	11.0	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	WB Left	0.752	15.6	B
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.725	18.7	B
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.877	10.0	A
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	WB Left	0.854	33.4	C
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.505	6.0	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.878	8.7	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.716	22.3	C
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.043	21.0	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.782	18.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	46.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.039

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	315	1261	0	0	1081	765	0	0	0	461	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	94	58	0	0	130	14	0	0	2	131	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	409	1319	0	0	1211	779	0	0	2	592	0	532
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	341	0	0	313	201	0	0	1	153	0	138
Total Analysis Volume [veh/h]	423	1364	0	0	1252	806	0	0	2	612	0	550
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	35	102	0	0	67	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	32	99	64	64		25	25	25
g / C, Green / Cycle	0.25	0.76	0.49	0.49		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.26	0.40	0.26	0.53		0.18	0.18	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1714	2708
c, Capacity [veh/h]	399	2609	2411	752		330	330	522
d1, Uniform Delay [s]	49.08	6.17	22.59	33.10		51.67	51.67	52.58
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	39.07	0.75	0.80	53.55		11.09	11.09	34.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.06	0.52	0.52	1.07		0.93	0.93	1.05
d, Delay for Lane Group [s/veh]	88.15	6.92	23.39	86.65		62.76	62.76	87.08
Lane Group LOS	F	A	C	F		E	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	17.22	6.78	8.85	34.11		10.82	10.82	11.00
50th-Percentile Queue Length [ft/ln]	430.62	169.42	221.33	852.71		270.39	270.39	275.07
95th-Percentile Queue Length [veh/ln]	24.86	11.05	13.73	46.10		16.21	16.21	16.88
95th-Percentile Queue Length [ft/ln]	621.62	276.16	343.32	1152.62		405.23	405.23	422.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	88.15	6.92	0.00	0.00	23.39	86.65	0.00	0.00	0.00	62.76	62.76	87.08
Movement LOS	F	A			C	F				E	E	F
d_A, Approach Delay [s/veh]	26.15			48.16			0.00			74.27		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	46.37											
Intersection LOS	D											
Intersection V/C	1.039											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.980

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1006	424	484	1054	0	564	0	376	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	146	59	8	255	0	6	0	224	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1152	483	492	1309	0	570	0	600	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	303	127	129	344	0	150	0	158	0	0	0
Total Analysis Volume [veh/h]	0	1211	508	517	1376	0	599	0	631	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	46	0	44	90	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	43	43	41	87	37	37	37	
g / C, Green / Cycle	0.33	0.33	0.32	0.67	0.28	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.33	0.32	0.40	0.25	0.27	0.28	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1520	1445	
c, Capacity [veh/h]	1622	506	511	2293	461	433	412	
d1, Uniform Delay [s]	38.82	43.68	44.68	11.93	44.70	45.70	46.60	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.18	40.97	21.59	1.17	6.03	10.95	19.71	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

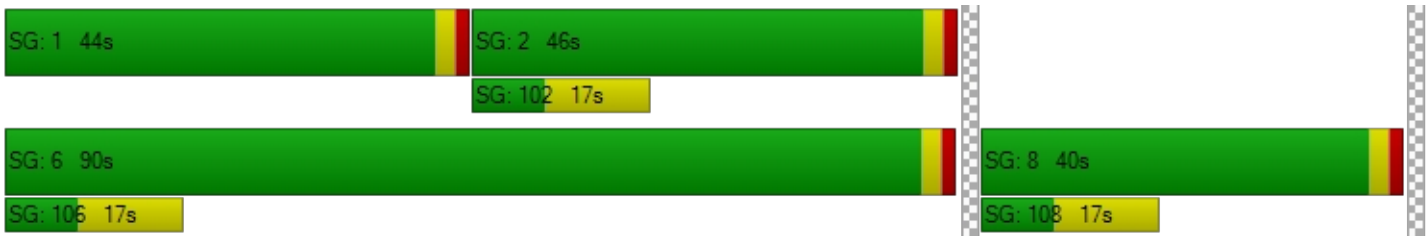
X, volume / capacity	0.75	1.00	1.01	0.60	0.89	0.95	1.00	
d, Delay for Lane Group [s/veh]	42.00	84.65	66.27	13.10	50.72	56.65	66.31	
Lane Group LOS	D	F	F	B	D	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.91	21.89	19.39	10.82	13.40	14.23	15.42	
50th-Percentile Queue Length [ft/ln]	297.83	547.21	484.81	270.41	334.95	355.69	385.44	
95th-Percentile Queue Length [veh/ln]	17.57	29.64	26.83	16.21	19.40	20.41	21.86	
95th-Percentile Queue Length [ft/ln]	439.35	741.01	670.80	405.26	485.02	510.34	546.42	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	42.00	84.65	66.27	13.10	0.00	52.59	56.65	62.93	0.00	0.00	0.00
Movement LOS		D	F	F	B		D	E	E			
d_A, Approach Delay [s/veh]	54.61			27.62			57.89			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	44.89											
Intersection LOS	D											
Intersection V/C	0.980											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	768	38	73	882	37	53	83	33	56	77	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	151	18	44	254	21	15	6	18	7	16	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	919	56	117	1136	58	68	89	51	63	93	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	259	16	33	320	16	19	25	14	18	26	47
Total Analysis Volume [veh/h]	66	1035	63	132	1279	65	77	100	57	71	105	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	25	35	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	32	32	7	34	34	17	17	17	17
g / C, Green / Cycle	0.08	0.50	0.50	0.10	0.52	0.52	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.33	0.33	0.08	0.40	0.40	0.07	0.09	0.06	0.18
s, saturation flow rate [veh/h]	1619	1700	1666	1619	1700	1671	1102	1692	1249	1617
c, Capacity [veh/h]	124	842	825	170	890	875	185	443	308	423
d1, Uniform Delay [s]	28.97	12.33	12.33	28.41	12.28	12.31	30.46	19.58	24.50	21.71
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.52	4.02	4.11	7.35	6.05	6.26	1.49	0.48	0.38	2.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

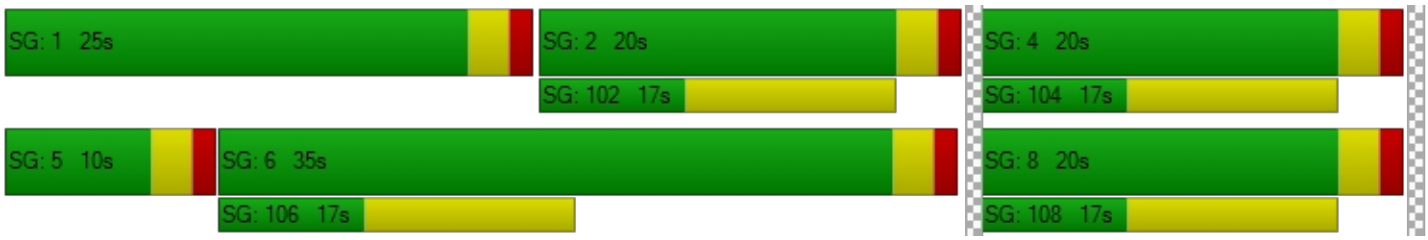
X, volume / capacity	0.53	0.66	0.66	0.78	0.76	0.76	0.42	0.35	0.23	0.69
d, Delay for Lane Group [s/veh]	32.48	16.35	16.45	35.76	18.33	18.57	31.96	20.06	24.88	23.77
Lane Group LOS	C	B	B	D	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.07	6.07	5.97	2.26	7.91	7.88	1.23	1.87	0.96	4.00
50th-Percentile Queue Length [ft/ln]	26.81	151.63	149.24	56.51	197.87	196.97	30.85	46.76	24.04	100.07
95th-Percentile Queue Length [veh/ln]	1.93	10.10	9.98	4.07	12.53	12.48	2.22	3.37	1.73	7.20
95th-Percentile Queue Length [ft/ln]	48.25	252.60	249.42	101.72	313.21	312.05	55.54	84.16	43.28	180.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.48	16.40	16.45	35.76	18.44	18.57	31.96	20.06	20.06	24.88	23.77	23.77
Movement LOS	C	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.31			20.00			23.97			23.99		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.77											
Intersection LOS	B											
Intersection V/C	0.685											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	492	1	1	195	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1178	1	1	1239	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	341	0	0	359	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1363	1	1	1434	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	22	22	0	20	20	2	2	2	2
g / C, Green / Cycle	0.04	0.61	0.61	0.00	0.58	0.58	0.04	0.04	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.38	0.00	0.00	0.40	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	74	2226	994	4	2086	931	204	71	204	83
d1, Uniform Delay [s]	16.50	4.21	2.62	17.64	5.26	3.20	17.71	16.38	17.71	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.37	0.28	0.00	35.93	0.41	0.01	0.06	2.00	0.01	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.61	0.00	0.27	0.69	0.01	0.03	0.27	0.00	0.00
d, Delay for Lane Group [s/veh]	18.88	4.48	2.62	53.58	5.67	3.20	17.76	18.38	17.71	0.00
Lane Group LOS	B	A	A	D	A	A	B	B	B	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.20	1.07	0.00	0.04	1.63	0.02	0.05	0.16	0.01	0.00
50th-Percentile Queue Length [ft/ln]	5.02	26.63	0.03	1.09	40.80	0.42	1.13	4.11	0.19	0.00
95th-Percentile Queue Length [veh/ln]	0.36	1.92	0.00	0.08	2.94	0.03	0.08	0.30	0.01	0.00
95th-Percentile Queue Length [ft/ln]	9.03	47.94	0.05	1.96	73.44	0.76	2.03	7.39	0.34	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.88	4.48	2.62	53.58	5.67	3.20	17.76	18.38	18.38	17.71	0.00	0.00
Movement LOS	B	A	A	D	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	4.72			5.68			18.23			17.71		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.33											
Intersection LOS	A											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.715

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	208	81	110	68	18	43	30	37	35	8	242
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	433	362	641	622	38	61	68	52	317	52	569
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	116	97	172	166	10	16	18	14	85	14	0
Total Analysis Volume [veh/h]	34	464	388	686	666	41	65	73	56	339	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	25	35	0	13	21	0	13	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	30	43	18	44	44	5	7	9	11	11
g / C, Green / Cycle	0.05	0.37	0.53	0.23	0.55	0.55	0.07	0.09	0.11	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.13	0.24	0.20	0.18	0.03	0.04	0.07	0.10	0.03	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1765	3514	1900	1615
c, Capacity [veh/h]	86	1328	856	796	1975	882	123	166	397	264	224
d1, Uniform Delay [s]	37.07	18.43	11.67	29.82	10.13	8.48	36.13	35.51	34.93	30.64	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.90	0.73	1.73	2.92	0.46	0.10	3.48	7.60	5.33	0.40	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.35	0.45	0.86	0.34	0.05	0.53	0.78	0.85	0.21	0.00
d, Delay for Lane Group [s/veh]	39.97	19.15	13.40	32.73	10.60	8.58	39.61	43.11	40.25	31.03	0.00
Lane Group LOS	D	B	B	C	B	A	D	D	D	C	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.70	3.11	4.27	6.44	3.06	0.33	1.32	2.76	3.46	0.97	0.00
50th-Percentile Queue Length [ft/ln]	17.61	77.68	106.73	160.90	76.61	8.18	33.08	68.90	86.40	24.21	0.00
95th-Percentile Queue Length [veh/ln]	1.27	5.59	7.66	10.60	5.52	0.59	2.38	4.96	6.22	1.74	0.00
95th-Percentile Queue Length [ft/ln]	31.69	139.82	191.44	264.91	137.90	14.72	59.55	124.02	155.52	43.57	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.97	19.15	13.40	32.73	10.60	8.58	39.61	43.11	43.11	40.25	31.03	0.00
Movement LOS	D	B	B	C	B	A	D	D	D	D	C	A
d_A, Approach Delay [s/veh]	17.43			21.44			41.94			38.95		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	24.00											
Intersection LOS	C											
Intersection V/C	0.715											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	511	34	112	777	1	2	4	24	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	305	0	0	140	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	816	34	112	917	1	2	4	24	8	3	18
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	216	9	30	243	0	1	1	6	2	1	5
Total Analysis Volume [veh/h]	27	865	36	119	972	1	2	4	25	8	3	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	59	0	19	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Cycle Length [s]	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	12	12	5	16	16	2	2
g / C, Green / Cycle	0.05	0.33	0.33	0.13	0.42	0.42	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.02	0.07	0.26	0.26	0.02	0.02
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1899	1659	1689
c, Capacity [veh/h]	84	1211	541	243	802	802	87	86
d1, Uniform Delay [s]	17.26	10.88	8.47	15.01	8.39	8.39	17.11	17.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.15	0.80	0.05	1.53	0.74	0.74	2.45	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.71	0.07	0.49	0.61	0.61	0.36	0.35
d, Delay for Lane Group [s/veh]	19.41	11.68	8.52	16.54	9.14	9.14	19.57	19.54
Lane Group LOS	B	B	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.24	2.42	0.16	0.88	2.20	2.20	0.28	0.27
50th-Percentile Queue Length [ft/ln]	6.05	60.38	3.89	21.97	54.94	54.93	6.96	6.74
95th-Percentile Queue Length [veh/ln]	0.44	4.35	0.28	1.58	3.96	3.95	0.50	0.49
95th-Percentile Queue Length [ft/ln]	10.90	108.69	7.00	39.54	98.90	98.87	12.52	12.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.41	11.68	8.52	16.54	9.14	9.14	19.57	19.57	19.57	19.54	19.54	19.54
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.78			9.95			19.57			19.54		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	11.05											
Intersection LOS	B											
Intersection V/C	0.598											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	564	18	12	798	0	0	0	3	22	2	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	305	0	0	140	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	869	18	12	938	0	0	0	3	22	2	6
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	231	5	3	249	0	0	0	1	6	1	2
Total Analysis Volume [veh/h]	9	924	19	13	998	0	0	0	3	23	2	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	48	0	0	51	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	16	16	2	2
g / C, Green / Cycle	0.33	0.33	0.33	0.35	0.35	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.26	0.26	0.01	0.28	0.28	0.01	0.02
s, saturation flow rate [veh/h]	1898	1729	1615	1898	1729	217	1853
c, Capacity [veh/h]	629	573	535	672	612	90	232
d1, Uniform Delay [s]	13.69	13.69	10.29	13.16	13.16	20.55	20.85
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.10	2.30	0.03	2.09	2.29	0.15	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

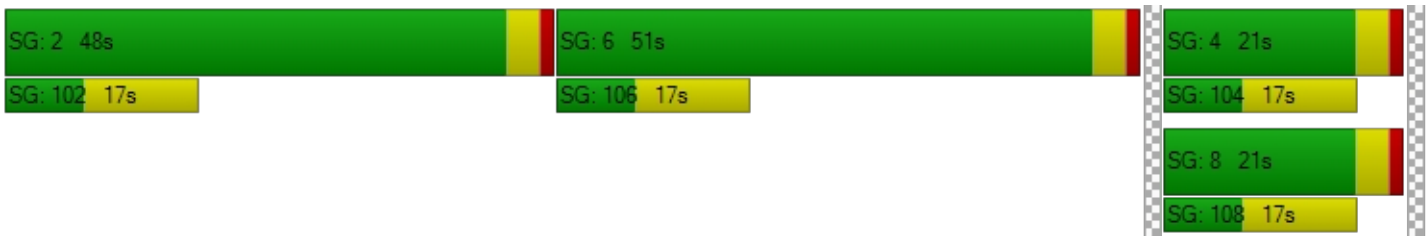
X, volume / capacity	0.78	0.78	0.04	0.79	0.79	0.03	0.13
d, Delay for Lane Group [s/veh]	15.79	15.99	10.32	15.25	15.45	20.69	21.11
Lane Group LOS	B	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.01	3.68	0.11	4.24	3.90	0.03	0.30
50th-Percentile Queue Length [ft/ln]	100.14	92.01	2.76	106.04	97.47	0.77	7.56
95th-Percentile Queue Length [veh/ln]	7.21	6.62	0.20	7.62	7.02	0.06	0.54
95th-Percentile Queue Length [ft/ln]	180.24	165.61	4.97	190.48	175.44	1.39	13.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.79	15.89	10.32	15.25	15.35	15.45	20.69	20.69	20.69	21.11	21.11	21.11
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	15.77			15.35			20.69			21.11		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.65											
Intersection LOS	B											
Intersection V/C	0.752											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	576	0	0	823	23	13	0	158	351	89	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	240	0	0	151	2	8	0	47	20	10	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	816	0	0	974	25	21	0	205	371	99	136
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	230	0	0	275	7	6	0	58	105	28	38
Total Analysis Volume [veh/h]	43	921	0	0	1099	28	24	0	231	419	112	153
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	0	0	40	0	58	0	0	0	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	28	28	11	11	12	12	12
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.18	0.18	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.30	0.30	0.01	0.14	0.15	0.15	0.09
s, saturation flow rate [veh/h]	508	3618	1900	1883	1810	1615	1810	1846	1615
c, Capacity [veh/h]	196	1575	827	820	324	289	356	363	317
d1, Uniform Delay [s]	24.28	13.58	14.39	14.44	21.69	24.97	23.99	23.98	22.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.35	1.00	1.03	0.10	5.05	3.04	2.94	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

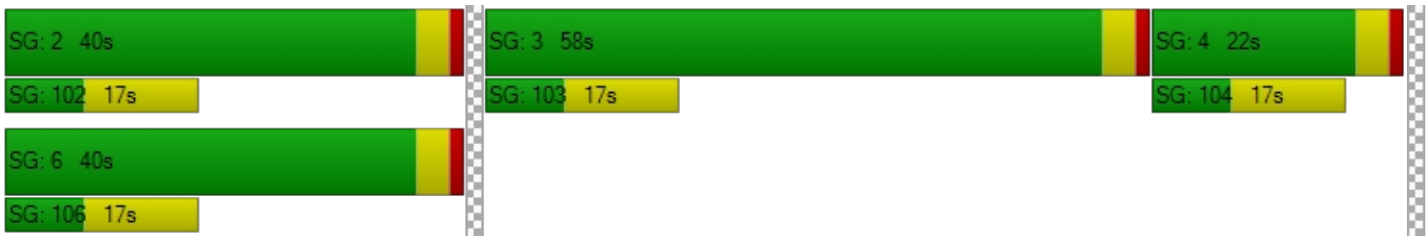
X, volume / capacity	0.22	0.58	0.68	0.69	0.07	0.80	0.74	0.74	0.48
d, Delay for Lane Group [s/veh]	24.83	13.93	15.39	15.48	21.78	30.03	27.03	26.92	23.78
Lane Group LOS	C	B	B	B	C	C	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.59	4.43	5.88	5.90	0.29	3.52	3.77	3.82	2.00
50th-Percentile Queue Length [ft/ln]	14.67	110.75	146.88	147.56	7.24	88.04	94.15	95.49	50.04
95th-Percentile Queue Length [veh/ln]	1.06	7.88	9.85	9.89	0.52	6.34	6.78	6.88	3.60
95th-Percentile Queue Length [ft/ln]	26.41	197.05	246.26	247.18	13.04	158.47	169.46	171.89	90.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.83	13.93	0.00	0.00	15.43	15.48	21.78	0.00	30.03	26.99	26.92	23.78
Movement LOS	C	B			B	B	C		C	C	C	C
d_A, Approach Delay [s/veh]	14.41			15.43			29.25			26.26		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.71											
Intersection LOS	B											
Intersection V/C	0.725											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.877

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	341	610	784	569	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	245	139	79	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	855	923	648	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	245	264	186	0	0
Total Analysis Volume [veh/h]	402	979	1057	742	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	37	120	83	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	62	62	62	62	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	16	58	38	38	
g / C, Green / Cycle	0.26	0.94	0.61	0.61	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.27	0.47	0.54	
s, saturation flow rate [veh/h]	1810	3618	1900	1659	
c, Capacity [veh/h]	471	3386	1162	1015	
d1, Uniform Delay [s]	21.98	0.18	8.94	10.28	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.52	0.05	1.13	2.84	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

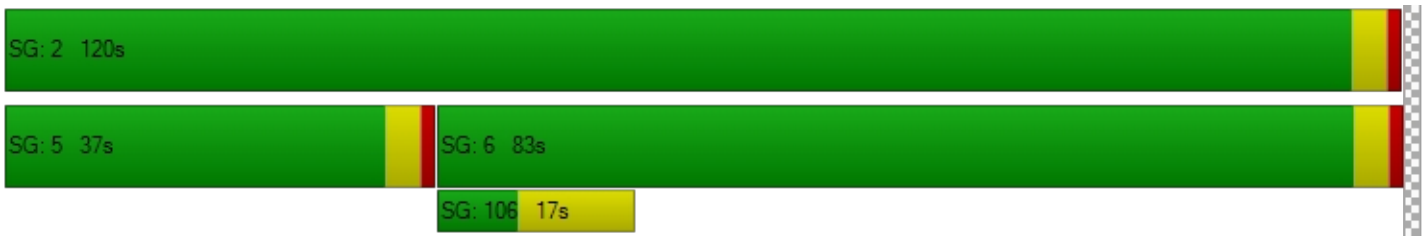
X, volume / capacity	0.85	0.29	0.77	0.89	
d, Delay for Lane Group [s/veh]	26.50	0.22	10.07	13.12	
Lane Group LOS	C	A	B	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.73	0.02	6.93	8.35	
50th-Percentile Queue Length [ft/ln]	143.16	0.55	173.26	208.81	
95th-Percentile Queue Length [veh/ln]	9.65	0.04	11.25	13.09	
95th-Percentile Queue Length [ft/ln]	241.27	0.99	281.19	327.31	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.50	0.22	10.53	13.12	0.00	0.00
Movement LOS	C	A	B	B		
d_A, Approach Delay [s/veh]	7.87		11.60		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	9.98					
Intersection LOS	A					
Intersection V/C	0.877					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	553	546	146	624	0	364	28	258	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	71	36	61	78	0	184	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	624	582	207	702	0	548	28	269	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	178	166	59	201	0	157	8	77	3	0	1
Total Analysis Volume [veh/h]	0	713	665	237	802	0	626	32	307	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	21	0	52	73	0	0	26	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	18	79	26	26	26	3	3
g / C, Green / Cycle	0.47	0.47	0.15	0.66	0.22	0.22	0.22	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.20	0.41	0.13	0.22	0.18	0.18	0.19	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1818	1615	1810	1615
c, Capacity [veh/h]	1711	764	272	2376	396	398	353	45	40
d1, Uniform Delay [s]	20.79	28.37	49.91	9.10	44.83	44.79	45.29	57.56	57.25
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	12.97	8.41	0.39	4.57	4.44	6.59	3.49	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

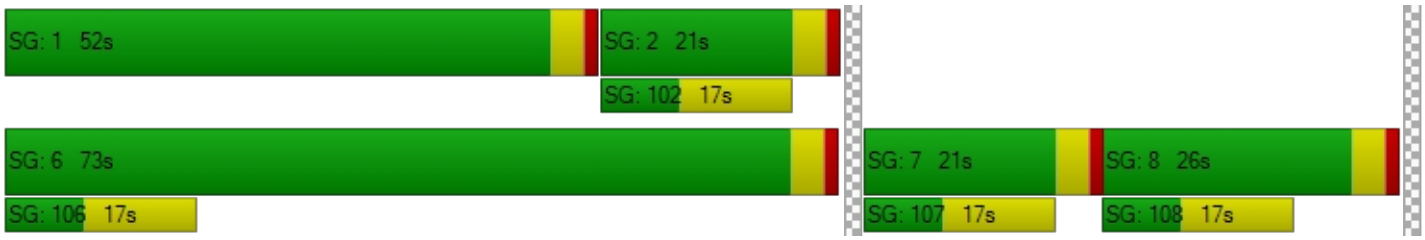
X, volume / capacity	0.42	0.87	0.87	0.34	0.83	0.83	0.87	0.29	0.07
d, Delay for Lane Group [s/veh]	21.54	41.34	58.32	9.49	49.40	49.23	51.88	61.05	58.04
Lane Group LOS	C	D	E	A	D	D	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.69	19.34	7.58	4.54	9.82	9.80	9.43	0.43	0.10
50th-Percentile Queue Length [ft/ln]	167.30	483.42	189.59	113.44	245.56	245.08	235.82	10.80	2.45
95th-Percentile Queue Length [veh/ln]	10.93	26.55	12.10	8.03	14.96	14.94	14.47	0.78	0.18
95th-Percentile Queue Length [ft/ln]	273.37	663.71	302.49	200.77	374.06	373.45	361.74	19.44	4.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.54	41.34	58.32	9.49	0.00	49.32	49.23	51.88	61.05	0.00	58.04
Movement LOS		C	D	E	A		D	D	D	E		E
d_A, Approach Delay [s/veh]	31.09			20.63			50.13			60.49		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	33.44											
Intersection LOS	C											
Intersection V/C	0.854											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	0	3	0	0	0	0	44	41	14	75	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	2	5	10	8	12	2	142	92	15	178	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	1	2	3	2	4	1	44	28	5	55	2
Total Analysis Volume [veh/h]	150	2	6	12	10	15	2	176	114	19	220	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	5	5	5	5
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.11	0.00	0.01	0.01	0.00	0.16	0.02	0.12
s, saturation flow rate [veh/h]	1408	1678	1430	1718	1173	1777	1106	1891
c, Capacity [veh/h]	576	377	589	386	551	557	496	593
d1, Uniform Delay [s]	7.62	5.23	6.74	5.28	6.79	4.88	7.58	4.64
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.02	0.01	0.07	0.00	0.76	0.03	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.02	0.02	0.06	0.00	0.52	0.04	0.38
d, Delay for Lane Group [s/veh]	7.86	5.25	6.76	5.35	6.79	5.63	7.61	5.04
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	0.01	0.02	0.03	0.00	0.25	0.03	0.17
50th-Percentile Queue Length [ft/ln]	6.67	0.22	0.46	0.71	0.08	6.36	0.86	4.21
95th-Percentile Queue Length [veh/ln]	0.48	0.02	0.03	0.05	0.01	0.46	0.06	0.30
95th-Percentile Queue Length [ft/ln]	12.00	0.40	0.82	1.28	0.14	11.45	1.55	7.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.86	5.25	5.25	6.76	5.35	5.35	6.79	5.63	5.63	7.61	5.04	5.04
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.72			5.81			5.64			5.24		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.97											
Intersection LOS	A											
Intersection V/C	0.505											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	380	471	72	62	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	95	106	83	28	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	475	577	155	90	30
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	151	183	49	29	10
Total Analysis Volume [veh/h]	30	603	732	197	114	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	37	110	73	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	41	41	41	41	41
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	30	25	6	6
g / C, Green / Cycle	0.05	0.72	0.59	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.34	0.54	0.07	0.02
s, saturation flow rate [veh/h]	1619	1800	1735	1619	1530
c, Capacity [veh/h]	81	1288	1030	226	214
d1, Uniform Delay [s]	19.12	2.52	7.38	16.54	15.77
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.83	0.27	3.22	1.73	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.47	0.90	0.50	0.18
d, Delay for Lane Group [s/veh]	21.96	2.79	10.60	18.27	16.16
Lane Group LOS	C	A	B	B	B
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.31	0.45	4.52	0.97	0.30
50th-Percentile Queue Length [ft/ln]	7.75	11.31	113.03	24.26	7.43
95th-Percentile Queue Length [veh/ln]	0.56	0.81	8.01	1.75	0.53
95th-Percentile Queue Length [ft/ln]	13.95	20.36	200.20	43.67	13.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.96	2.79	10.60	10.60	18.27	16.16
Movement LOS	C	A	B	B	B	B
d_A, Approach Delay [s/veh]	3.70		10.60		17.75	
Approach LOS	A		B		B	
d_I, Intersection Delay [s/veh]	8.69					
Intersection LOS	A					
Intersection V/C	0.878					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	53	0	15	61	160	0	0	270	118
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	183	4	320	391	697	13	3	602	283
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	47	1	83	101	180	3	1	155	73
Total Analysis Volume [veh/h]	10	4	3	189	4	330	404	719	13	3	621	292
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	26	0	0	26	0	33	43	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	19	20	49	49	0	29	29
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.25	0.61	0.61	0.01	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.13	0.00	0.20	0.22	0.20	0.01	0.00	0.17	0.18
s, saturation flow rate [veh/h]	1476	1615	1435	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	419	374	370	440	374	456	2214	988	12	1326	592
d1, Uniform Delay [s]	23.83	23.69	29.87	23.70	29.72	28.88	7.53	6.08	39.63	19.41	19.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.01	1.09	0.01	6.84	5.97	0.39	0.02	11.40	1.19	2.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

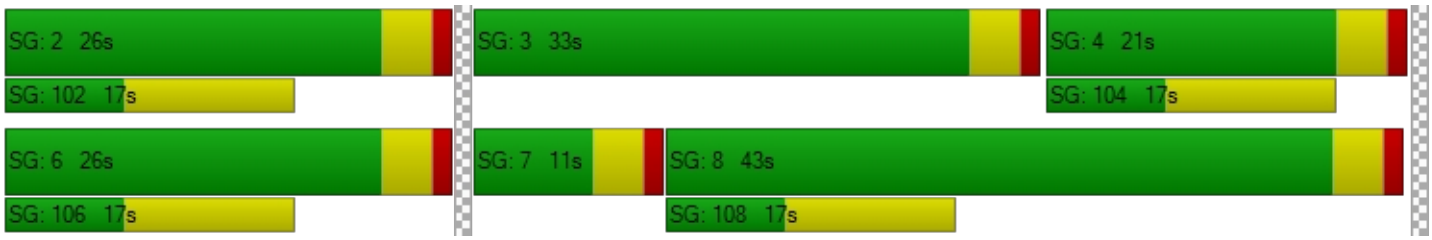
X, volume / capacity	0.03	0.01	0.51	0.01	0.88	0.89	0.32	0.01	0.26	0.47	0.49
d, Delay for Lane Group [s/veh]	23.86	23.70	30.96	23.70	36.56	34.84	7.92	6.10	51.03	20.60	22.55
Lane Group LOS	C	C	C	C	D	C	A	A	D	C	C
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	0.04	3.38	0.06	6.61	7.92	2.69	0.08	0.09	4.41	4.47
50th-Percentile Queue Length [ft/ln]	5.11	1.09	84.56	1.45	165.18	197.88	67.23	2.04	2.36	110.29	111.68
95th-Percentile Queue Length [veh/ln]	0.37	0.08	6.09	0.10	10.82	12.53	4.84	0.15	0.17	7.86	7.93
95th-Percentile Queue Length [ft/ln]	9.19	1.96	152.20	2.61	270.56	313.23	121.02	3.68	4.25	196.41	198.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.86	23.86	23.70	30.96	23.70	36.56	34.84	7.92	6.10	51.03	20.60	22.55
Movement LOS	C	C	C	C	C	D	C	A	A	D	C	C
d_A, Approach Delay [s/veh]	23.83			34.44			17.47			21.32		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	22.30											
Intersection LOS	C											
Intersection V/C	0.716											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	571	669	23	9	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	388	213	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	959	882	23	9	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	260	239	6	2	4
Total Analysis Volume [veh/h]	22	1039	956	25	10	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.04	0.05
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	0.00	21.01	17.14
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.13	0.14
95th-Percentile Queue Length [ft/ln]	2.39	0.00	0.00	0.00	3.32	3.53
d_A, Approach Delay [s/veh]	0.21		0.00		18.76	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.33					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.782

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	388	160	460	606	0	182	0	764	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	116	10	141	80	0	20	0	12	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	504	170	601	686	0	202	0	776	0	0	3
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	136	46	163	186	0	55	0	210	0	0	1
Total Analysis Volume [veh/h]	0	545	184	650	742	0	219	0	840	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	29	0	34	63	0	52	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	61	61	61	61	61	61	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	13	13	15	31	22	22	
g / C, Green / Cycle	0.20	0.20	0.24	0.51	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.18	0.21	0.12	0.29	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	738	330	843	1841	654	1033	
d1, Uniform Delay [s]	22.98	22.02	21.84	9.35	14.30	17.80	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.47	1.48	1.53	0.14	0.30	1.61	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

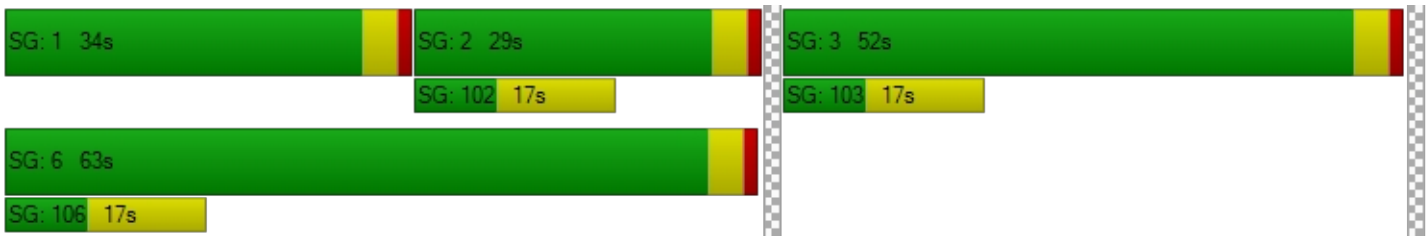
X, volume / capacity	0.74	0.56	0.77	0.40	0.34	0.81	
d, Delay for Lane Group [s/veh]	24.44	23.50	23.37	9.49	14.60	19.41	
Lane Group LOS	C	C	C	A	B	B	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.58	2.36	4.20	2.60	2.05	5.00	
50th-Percentile Queue Length [ft/ln]	89.59	58.94	105.07	65.07	51.32	125.05	
95th-Percentile Queue Length [veh/ln]	6.45	4.24	7.57	4.69	3.70	8.67	
95th-Percentile Queue Length [ft/ln]	161.27	106.10	189.13	117.13	92.38	216.74	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.44	23.50	23.37	9.49	0.00	14.60	0.00	19.41	0.00	0.00	0.00
Movement LOS		C	C	C	A		B		B			
d_A, Approach Delay [s/veh]	24.21			15.97			18.42			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	18.67											
Intersection LOS	B											
Intersection V/C	0.782											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 9 Opening Year (2020) With Project Evening Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\PMOYW1-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.068	50.1	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.908	39.1	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.693	19.6	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.638	6.0	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.982	41.5	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	NB Left	0.665	12.7	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	WB Right	0.832	22.9	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.728	26.5	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.856	6.8	A
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.753	24.4	C
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.728	7.8	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.844	11.3	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.889	36.9	D
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.186	29.9	D
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.902	37.3	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.068

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	313	1437	0	0	1037	633	0	0	0	293	4	533
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	267	160	0	0	75	15	0	0	0	79	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	580	1597	0	0	1112	648	0	0	0	372	4	545
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	150	414	0	0	288	168	0	0	0	96	1	141
Total Analysis Volume [veh/h]	601	1655	0	0	1152	672	0	0	0	385	4	565
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	47	102	0	0	55	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	44	99	52	52		25	25	25
g / C, Green / Cycle	0.34	0.76	0.40	0.40		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.37	0.48	0.23	0.44		0.11	0.11	0.21
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1716	2708
c, Capacity [veh/h]	548	2609	1960	612		330	331	522
d1, Uniform Delay [s]	43.09	7.18	30.67	39.09		47.88	47.87	52.58
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	50.52	1.19	1.30	66.33		1.67	1.66	45.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.10	0.63	0.59	1.10		0.59	0.59	1.08
d, Delay for Lane Group [s/veh]	93.61	8.37	31.97	105.42		49.55	49.54	97.80
Lane Group LOS	F	A	C	F		D	D	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	25.11	9.62	9.68	30.44		5.92	5.92	11.78
50th-Percentile Queue Length [ft/ln]	627.67	240.45	241.91	760.90		148.10	148.09	294.50
95th-Percentile Queue Length [veh/ln]	35.41	14.70	14.78	42.20		9.92	9.91	18.11
95th-Percentile Queue Length [ft/ln]	885.34	367.61	369.45	1055.12		247.89	247.87	452.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	93.61	8.37	0.00	0.00	31.97	105.42	0.00	0.00	0.00	49.54	49.54	97.80
Movement LOS	F	A			C	F				D	D	F
d_A, Approach Delay [s/veh]	31.08			59.03			0.00			78.12		
Approach LOS	C			E			A			E		
d_I, Intersection Delay [s/veh]	50.12											
Intersection LOS	D											
Intersection V/C	1.068											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1091	385	395	934	0	679	2	176	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	407	151	9	145	0	20	0	131	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1498	536	404	1079	0	699	2	307	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	393	141	106	283	0	184	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1574	563	424	1133	0	734	2	322	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	20	0	73	93	0	0	37	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	52	52	36	91	33	33	33	
g / C, Green / Cycle	0.40	0.40	0.28	0.70	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.26	0.33	0.22	0.24	0.22	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1619	1445	
c, Capacity [veh/h]	1949	608	453	2401	410	410	366	
d1, Uniform Delay [s]	34.80	37.38	45.69	8.72	46.37	47.52	46.67	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.72	22.21	9.37	0.67	5.35	10.04	6.87	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

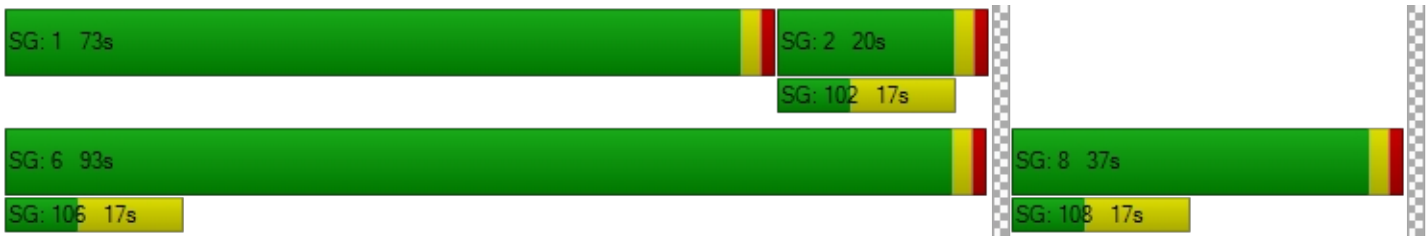
X, volume / capacity	0.81	0.93	0.94	0.47	0.86	0.93	0.88	
d, Delay for Lane Group [s/veh]	38.52	59.59	55.06	9.39	51.72	57.56	53.54	
Lane Group LOS	D	E	E	A	D	E	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	15.25	20.55	14.47	6.93	11.48	13.25	10.68	
50th-Percentile Queue Length [ft/ln]	381.21	513.87	361.82	173.27	286.91	331.21	267.12	
95th-Percentile Queue Length [veh/ln]	21.65	27.99	20.71	11.25	17.03	19.22	16.05	
95th-Percentile Queue Length [ft/ln]	541.31	699.75	517.80	281.21	425.81	480.44	401.14	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	38.52	59.59	55.06	9.39	0.00	54.75	57.56	53.54	0.00	0.00	0.00
Movement LOS		D	E	E	A		D	E	D			
d_A, Approach Delay [s/veh]	44.07			21.83			54.39			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	39.08											
Intersection LOS	D											
Intersection V/C	0.908											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.693

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	944	65	110	754	43	57	190	51	70	69	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	301	9	27	185	16	39	14	26	21	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	1245	74	137	939	59	96	204	77	91	79	101
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	319	19	35	240	15	25	52	20	23	20	26
Total Analysis Volume [veh/h]	93	1274	76	140	961	60	98	209	79	93	81	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	30	40	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	36	36	8	38	38	17	17	17	17
g / C, Green / Cycle	0.08	0.52	0.52	0.11	0.54	0.54	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.38	0.09	0.29	0.29	0.08	0.17	0.08	0.11
s, saturation flow rate [veh/h]	1619	1800	1765	1619	1800	1763	1219	1717	1108	1638
c, Capacity [veh/h]	137	932	914	179	979	959	250	417	172	398
d1, Uniform Delay [s]	31.17	13.10	13.14	30.37	10.23	10.23	29.50	24.15	33.43	22.64
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.71	5.00	5.18	7.21	2.03	2.07	1.00	2.04	2.61	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

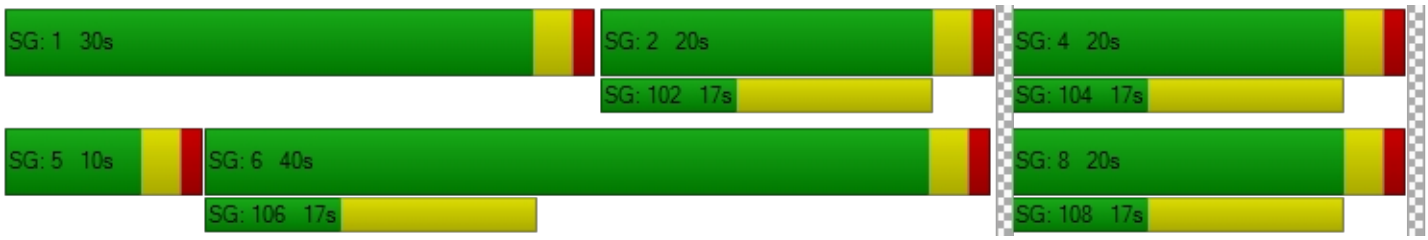
X, volume / capacity	0.68	0.73	0.73	0.78	0.53	0.53	0.39	0.69	0.54	0.46
d, Delay for Lane Group [s/veh]	36.88	18.11	18.32	37.58	12.26	12.31	30.50	26.19	36.04	23.48
Lane Group LOS	D	B	B	D	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.69	8.39	8.32	2.57	4.88	4.79	1.59	4.34	1.67	2.55
50th-Percentile Queue Length [ft/ln]	42.31	209.63	207.93	64.31	121.91	119.83	39.67	108.47	41.68	63.73
95th-Percentile Queue Length [veh/ln]	3.05	13.13	13.05	4.63	8.50	8.38	2.86	7.75	3.00	4.59
95th-Percentile Queue Length [ft/ln]	76.15	328.35	326.17	115.76	212.45	209.59	71.41	193.87	75.03	114.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.88	18.21	18.32	37.58	12.28	12.31	30.50	26.19	26.19	36.04	23.48	23.48
Movement LOS	D	B	B	D	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	19.42			15.33			27.29			27.70		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.60											
Intersection LOS	B											
Intersection V/C	0.693											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	257	0	0	529	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1493	0	0	1573	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	380	0	0	400	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1520	0	0	1602	15	24	0	37	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	84	0	15	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	31	31	0	30	30	4	4	4	4
g / C, Green / Cycle	0.03	0.66	0.66	0.00	0.63	0.63	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.44	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1393	1615
c, Capacity [veh/h]	57	2400	1071	0	2286	1020	209	133	179	133
d1, Uniform Delay [s]	22.34	4.61	0.00	0.00	5.74	3.23	22.14	20.33	22.71	19.90
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.11	0.28	0.00	0.00	0.40	0.01	0.24	1.13	0.01	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.63	0.00	0.00	0.70	0.01	0.11	0.28	0.01	0.02
d, Delay for Lane Group [s/veh]	25.46	4.89	0.00	0.00	6.14	3.23	22.39	21.45	22.72	19.97
Lane Group LOS	C	A	A	A	A	A	C	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	2.09	0.00	0.00	2.91	0.03	0.25	0.39	0.01	0.03
50th-Percentile Queue Length [ft/ln]	5.68	52.25	0.00	0.00	72.67	0.77	6.26	9.67	0.26	0.75
95th-Percentile Queue Length [veh/ln]	0.41	3.76	0.00	0.00	5.23	0.06	0.45	0.70	0.02	0.05
95th-Percentile Queue Length [ft/ln]	10.22	94.05	0.00	0.00	130.80	1.39	11.27	17.41	0.48	1.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.46	4.89	0.00	0.00	6.14	3.23	22.39	21.45	21.45	22.72	19.97	19.97
Movement LOS	C	A	A	A	A	A	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	5.13			6.11			21.82			20.66		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	5.96											
Intersection LOS	A											
Intersection V/C	0.638											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	41.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.982

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	98	51	250	233	47	26	21	23	94	38	134
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	490	526	713	711	75	58	85	26	403	90	610
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	127	136	184	184	19	15	22	7	104	23	158
Total Analysis Volume [veh/h]	62	507	544	737	735	78	60	88	27	417	93	631
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	30	40	0	11	21	0	43	53	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	20	52	26	40	40	6	26	27	47	47
g / C, Green / Cycle	0.05	0.18	0.45	0.22	0.35	0.35	0.05	0.22	0.24	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.21	0.20	0.05	0.03	0.06	0.12	0.05	0.39
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1824	3514	1900	1615
c, Capacity [veh/h]	95	641	726	789	1263	564	94	405	834	774	657
d1, Uniform Delay [s]	53.46	45.28	26.29	43.78	30.59	25.61	53.46	37.18	37.95	21.26	33.19
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.28	9.61	6.98	5.87	1.96	0.51	6.93	0.38	0.46	0.07	9.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.79	0.75	0.93	0.58	0.14	0.64	0.28	0.50	0.12	0.96
d, Delay for Lane Group [s/veh]	60.73	54.89	33.27	49.65	32.55	26.12	60.39	37.56	38.42	21.33	42.50
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.95	7.75	13.49	10.85	8.60	1.55	1.88	2.74	5.14	1.59	18.33
50th-Percentile Queue Length [ft/ln]	48.77	193.83	337.13	271.35	215.08	38.69	47.06	68.46	128.54	39.63	458.35
95th-Percentile Queue Length [veh/ln]	3.51	12.32	19.51	16.26	13.41	2.79	3.39	4.93	8.86	2.85	25.36
95th-Percentile Queue Length [ft/ln]	87.79	307.99	487.69	406.42	335.33	69.65	84.70	123.22	221.51	71.34	633.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.73	54.89	33.27	49.65	32.55	26.12	60.39	37.56	37.56	38.42	21.33	42.50
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	44.65			40.36			45.39			39.28		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.47											
Intersection LOS	D											
Intersection V/C	0.982											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	900	83	123	722	5	4	15	15	26	17	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	350	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1089	83	123	1072	5	4	15	15	26	17	37
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	280	21	32	275	1	1	4	4	7	4	10
Total Analysis Volume [veh/h]	18	1119	85	126	1102	5	4	15	15	27	17	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	61	0	17	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Cycle Length [s]	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	19	19	6	24	24	3	5
g / C, Green / Cycle	0.03	0.40	0.40	0.12	0.49	0.49	0.05	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.31	0.05	0.07	0.29	0.29	0.02	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1897	1753	1730
c, Capacity [veh/h]	57	1454	649	214	929	927	94	168
d1, Uniform Delay [s]	23.04	12.59	9.18	20.31	8.97	8.97	22.21	20.81
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.12	0.89	0.09	2.56	0.62	0.62	2.33	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.77	0.13	0.59	0.60	0.60	0.36	0.49
d, Delay for Lane Group [s/veh]	26.16	13.48	9.27	22.88	9.59	9.59	24.54	22.99
Lane Group LOS	C	B	A	C	A	A	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.23	4.38	0.48	1.37	3.29	3.29	0.40	0.90
50th-Percentile Queue Length [ft/ln]	5.86	109.41	12.03	34.27	82.35	82.24	10.08	22.53
95th-Percentile Queue Length [veh/ln]	0.42	7.81	0.87	2.47	5.93	5.92	0.73	1.62
95th-Percentile Queue Length [ft/ln]	10.54	195.18	21.65	61.69	148.23	148.03	18.14	40.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.16	13.48	9.27	22.88	9.59	9.59	24.54	24.54	24.54	22.99	22.99	22.99
Movement LOS	C	B	A	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.37			10.94			24.54			22.99		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	12.66											
Intersection LOS	B											
Intersection V/C	0.665											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.832

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	978	29	21	742	3	0	0	10	18	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	350	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1167	29	21	1092	3	0	0	10	18	0	22
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	306	8	6	286	1	0	0	3	5	0	6
Total Analysis Volume [veh/h]	7	1225	30	22	1146	3	0	0	10	19	0	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	21	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	69	69	69	69	69	69	69
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	26	26	4	4
g / C, Green / Cycle	0.39	0.39	0.39	0.38	0.38	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.34	0.34	0.02	0.32	0.32	0.01	0.02
s, saturation flow rate [veh/h]	1899	1729	1615	1897	1727	946	1734
c, Capacity [veh/h]	748	681	636	712	649	106	174
d1, Uniform Delay [s]	19.17	19.17	12.90	19.86	19.86	30.87	31.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.09	3.38	0.03	3.21	3.50	0.38	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

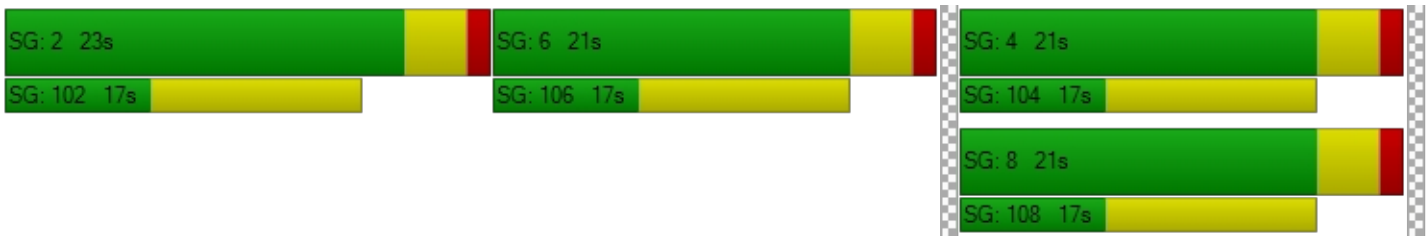
X, volume / capacity	0.86	0.86	0.05	0.86	0.86	0.09	0.24
d, Delay for Lane Group [s/veh]	22.26	22.55	12.93	23.07	23.36	31.26	32.12
Lane Group LOS	C	C	B	C	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.13	8.37	0.27	8.82	8.09	0.16	0.68
50th-Percentile Queue Length [ft/ln]	228.22	209.14	6.77	220.55	202.20	4.09	17.11
95th-Percentile Queue Length [veh/ln]	14.08	13.11	0.49	13.69	12.75	0.29	1.23
95th-Percentile Queue Length [ft/ln]	352.10	327.73	12.19	342.33	318.80	7.36	30.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.26	22.40	12.93	23.07	23.21	23.36	31.26	31.26	31.26	32.12	32.12	32.12
Movement LOS	C	C	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	22.18			23.21			31.26			32.12		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.87											
Intersection LOS	C											
Intersection V/C	0.832											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	903	0	0	841	28	30	0	136	461	103	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	158	0	0	356	8	6	0	30	49	33	45
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	1061	0	0	1197	36	36	0	166	510	136	102
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	282	0	0	319	10	10	0	44	136	36	27
Total Analysis Volume [veh/h]	92	1130	0	0	1275	38	38	0	177	543	145	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	37	0	21	0	0	0	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	109	109	109	109	109	109	109	109	109
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	59	59	14	14	24	24	24
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.13	0.13	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.22	0.31	0.35	0.35	0.02	0.11	0.19	0.19	0.07
s, saturation flow rate [veh/h]	425	3618	1900	1881	1810	1615	1810	1846	1615
c, Capacity [veh/h]	183	1952	1025	1015	237	211	397	405	354
d1, Uniform Delay [s]	36.58	16.80	17.65	17.74	42.02	46.20	40.90	40.83	35.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.27	0.67	0.70	0.31	8.49	5.57	5.20	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

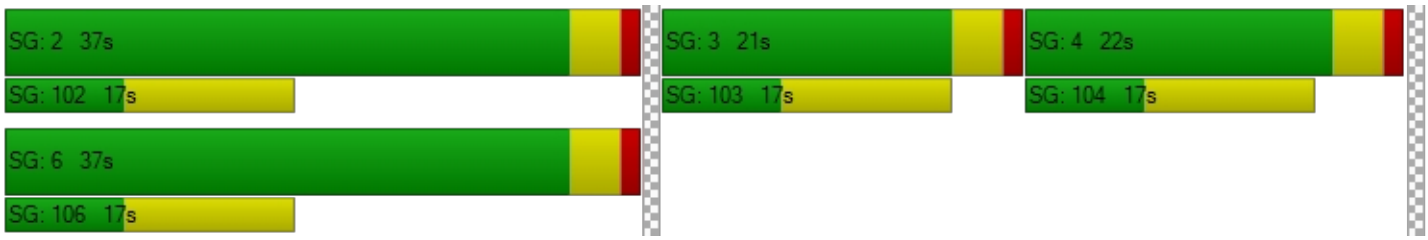
X, volume / capacity	0.50	0.58	0.64	0.65	0.16	0.84	0.86	0.85	0.31
d, Delay for Lane Group [s/veh]	38.72	17.07	18.32	18.44	42.33	54.69	46.47	46.03	36.06
Lane Group LOS	D	B	B	B	D	D	D	D	D
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.34	9.14	11.25	11.32	0.93	5.14	9.34	9.40	2.47
50th-Percentile Queue Length [ft/ln]	58.61	228.38	281.34	282.98	23.19	128.60	233.46	235.00	61.67
95th-Percentile Queue Length [veh/ln]	4.22	14.09	16.76	16.84	1.67	8.86	14.35	14.43	4.44
95th-Percentile Queue Length [ft/ln]	105.50	352.30	418.88	420.92	41.75	221.59	358.74	360.70	111.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.72	17.07	0.00	0.00	18.38	18.44	42.33	0.00	54.69	46.31	46.03	36.06
Movement LOS	D	B			B	B	D		D	D	D	D
d_A, Approach Delay [s/veh]	18.70			18.38			52.50			44.86		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.51											
Intersection LOS	C											
Intersection V/C	0.728											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.856

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	233	1000	927	485	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	175	225	210	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1175	1152	695	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	311	304	184	0	0
Total Analysis Volume [veh/h]	268	1242	1218	735	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	19	80	61	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	54	54	54	54	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	10	50	36	36	
g / C, Green / Cycle	0.19	0.93	0.67	0.67	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.34	0.51	0.58	
s, saturation flow rate [veh/h]	1810	3618	1900	1677	
c, Capacity [veh/h]	339	3352	1265	1117	
d1, Uniform Delay [s]	21.09	0.22	6.26	7.28	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.16	0.07	1.03	2.33	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

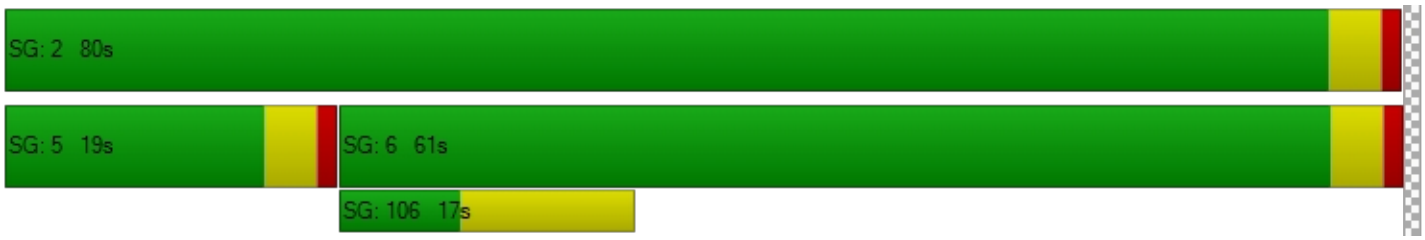
X, volume / capacity	0.79	0.37	0.77	0.87	
d, Delay for Lane Group [s/veh]	25.25	0.29	7.29	9.61	
Lane Group LOS	C	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.34	0.03	4.71	5.78	
50th-Percentile Queue Length [ft/ln]	83.58	0.79	117.66	144.43	
95th-Percentile Queue Length [veh/ln]	6.02	0.06	8.26	9.72	
95th-Percentile Queue Length [ft/ln]	150.44	1.43	206.60	242.98	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.25	0.29	7.75	9.61	0.00	0.00
Movement LOS	C	A	A	A		
d_A, Approach Delay [s/veh]	4.72		8.45		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.82					
Intersection LOS	A					
Intersection V/C	0.856					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	601	299	84	836	0	625	36	389	15	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	37	87	138	0	106	0	22	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	691	336	171	974	0	731	36	411	15	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	184	89	46	259	0	195	10	109	4	0	1
Total Analysis Volume [veh/h]	0	736	358	182	1037	0	778	38	438	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	21	0	14	35	0	0	24	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26	26	10	40	25	25	25	3	3
g / C, Green / Cycle	0.33	0.33	0.12	0.50	0.32	0.32	0.32	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.20	0.22	0.10	0.29	0.23	0.22	0.27	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1818	1615	1810	1615
c, Capacity [veh/h]	1186	529	222	1809	575	578	513	59	53
d1, Uniform Delay [s]	22.75	23.29	34.34	14.05	24.10	24.07	25.61	37.86	37.62
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.45	6.79	7.39	1.33	1.63	1.60	4.16	2.43	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

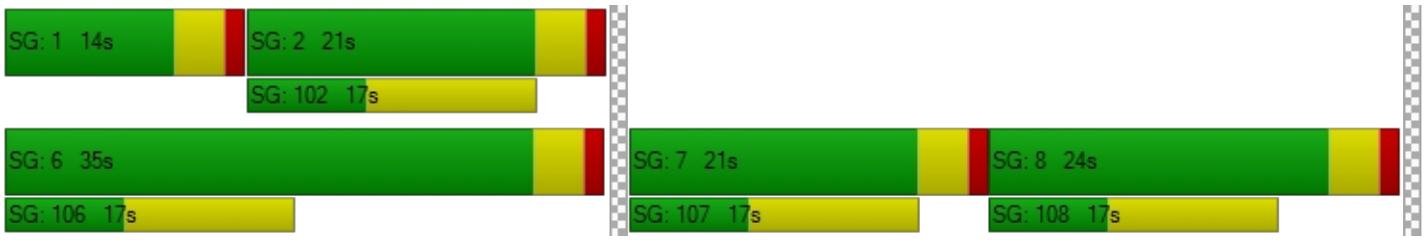
X, volume / capacity	0.62	0.68	0.82	0.57	0.71	0.71	0.85	0.27	0.08
d, Delay for Lane Group [s/veh]	25.20	30.08	41.73	15.38	25.73	25.67	29.77	40.30	38.23
Lane Group LOS	C	C	D	B	C	C	C	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.97	6.54	3.83	6.31	6.74	6.73	7.99	0.34	0.08
50th-Percentile Queue Length [ft/ln]	149.24	163.51	95.63	157.81	168.54	168.23	199.66	8.53	2.09
95th-Percentile Queue Length [veh/ln]	9.98	10.73	6.89	10.43	11.00	10.98	12.62	0.61	0.15
95th-Percentile Queue Length [ft/ln]	249.42	268.36	172.13	260.81	274.99	274.59	315.52	15.35	3.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.20	30.08	41.73	15.38	0.00	25.70	25.67	29.77	40.30	0.00	38.23
Movement LOS		C	C	D	B		C	C	C	D		D
d_A, Approach Delay [s/veh]	26.80			19.31			27.12			39.88		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	24.44											
Intersection LOS	C											
Intersection V/C	0.753											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	0	11	0	0	0	0	88	93	4	48	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	182	1	12	3	4	5	7	414	190	4	216	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	0	3	1	1	1	2	114	53	1	60	3
Total Analysis Volume [veh/h]	201	1	13	3	4	6	8	458	210	4	239	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	39	0	0	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	27	27	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	6	12	12	12	12
g / C, Green / Cycle	0.24	0.24	0.24	0.24	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.14	0.01	0.00	0.01	0.01	0.37	0.01	0.13
s, saturation flow rate [veh/h]	1427	1632	1422	1718	1146	1800	781	1883
c, Capacity [veh/h]	499	388	495	408	644	838	339	877
d1, Uniform Delay [s]	11.00	7.90	9.52	7.88	6.11	6.12	11.16	4.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.04	0.00	0.02	0.01	1.79	0.01	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

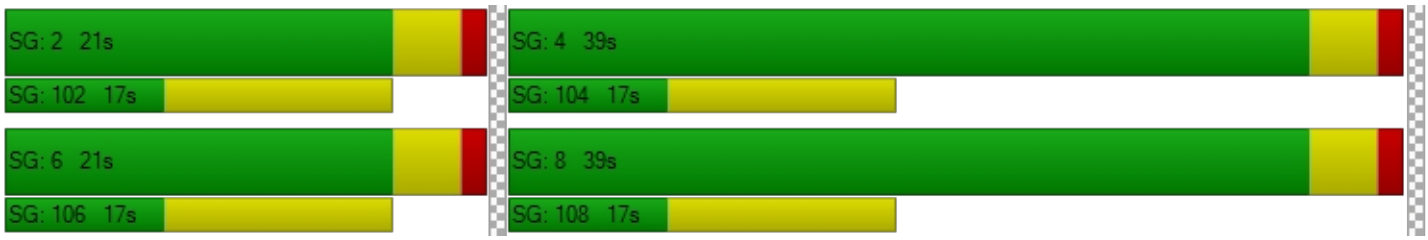
X, volume / capacity	0.40	0.04	0.01	0.02	0.01	0.80	0.01	0.29
d, Delay for Lane Group [s/veh]	11.52	7.94	9.53	7.90	6.12	7.90	11.17	4.62
Lane Group LOS	B	A	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.86	0.04	0.01	0.03	0.02	1.62	0.02	0.37
50th-Percentile Queue Length [ft/ln]	21.46	1.09	0.27	0.77	0.47	40.60	0.43	9.36
95th-Percentile Queue Length [veh/ln]	1.54	0.08	0.02	0.06	0.03	2.92	0.03	0.67
95th-Percentile Queue Length [ft/ln]	38.62	1.96	0.49	1.39	0.84	73.08	0.77	16.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.52	7.94	7.94	9.53	7.90	7.90	6.12	7.90	7.90	11.17	4.62	4.62
Movement LOS	B	A	A	A	A	A	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	11.29			8.28			7.88			4.72		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	7.82											
Intersection LOS	A											
Intersection V/C	0.728											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.844

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	40	847	443	80	93	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	130	105	34	92	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	977	548	114	185	39
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	251	141	29	48	10
Total Analysis Volume [veh/h]	42	1004	563	117	190	40
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	10	30	20	0	30	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	45	38	9	9
g / C, Green / Cycle	0.06	0.75	0.64	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.56	0.39	0.12	0.03
s, saturation flow rate [veh/h]	1619	1800	1747	1619	1530
c, Capacity [veh/h]	98	1345	1113	248	234
d1, Uniform Delay [s]	27.26	4.34	6.49	24.45	22.16
k, delay calibration	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.94	3.81	2.51	4.94	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.75	0.61	0.77	0.17
d, Delay for Lane Group [s/veh]	30.20	8.15	9.00	29.40	22.51
Lane Group LOS	C	A	A	C	C
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	4.42	4.28	2.77	0.49
50th-Percentile Queue Length [ft/ln]	15.81	110.44	107.01	69.15	12.13
95th-Percentile Queue Length [veh/ln]	1.14	7.86	7.67	4.98	0.87
95th-Percentile Queue Length [ft/ln]	28.46	196.62	191.83	124.47	21.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.20	8.15	9.00	9.00	29.40	22.51
Movement LOS	C	A	A	A	C	C
d_A, Approach Delay [s/veh]	9.04		9.00		28.20	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	11.28					
Intersection LOS	B					
Intersection V/C	0.844					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	36.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.889

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	140	0	74	29	293	0	0	192	62
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	306	2	418	556	739	4	2	652	243
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	82	1	112	148	197	1	1	174	65
Total Analysis Volume [veh/h]	3	2	2	327	2	446	593	789	4	2	696	259
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	54	64	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	34	34	34	34	34	40	69	69	0	29	29
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.35	0.60	0.60	0.00	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.23	0.00	0.28	0.33	0.22	0.00	0.00	0.19	0.16
s, saturation flow rate [veh/h]	1584	1615	1437	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	516	476	454	560	476	630	2160	964	8	916	409
d1, Uniform Delay [s]	28.73	28.69	39.49	28.68	39.58	36.38	11.96	9.37	57.14	39.76	38.24
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	2.18	0.00	9.26	7.67	0.48	0.01	16.73	5.90	7.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

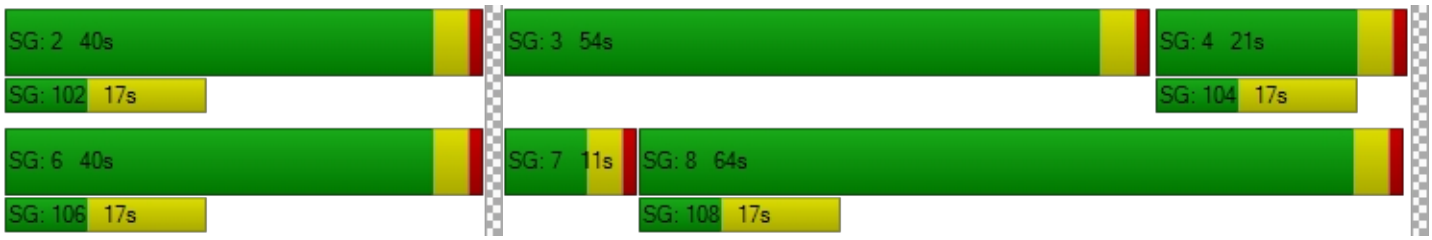
X, volume / capacity	0.01	0.00	0.72	0.00	0.94	0.94	0.37	0.00	0.26	0.76	0.63
d, Delay for Lane Group [s/veh]	28.73	28.69	41.67	28.68	48.84	44.06	12.44	9.38	73.87	45.66	45.53
Lane Group LOS	C	C	D	C	D	D	B	A	E	D	D
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	0.04	8.91	0.04	13.35	17.18	5.18	0.04	0.09	9.79	7.30
50th-Percentile Queue Length [ft/ln]	2.49	1.00	222.68	0.99	333.66	429.55	129.47	1.05	2.35	244.68	182.42
95th-Percentile Queue Length [veh/ln]	0.18	0.07	13.80	0.07	19.34	23.98	8.91	0.08	0.17	14.92	11.73
95th-Percentile Queue Length [ft/ln]	4.49	1.79	345.05	1.79	483.44	599.51	222.77	1.89	4.22	372.95	293.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.73	28.73	28.69	41.67	28.68	48.84	44.06	12.44	9.38	73.87	45.66	45.53
Movement LOS	C	C	C	D	C	D	D	B	A	E	D	D
d_A, Approach Delay [s/veh]	28.72			45.76			25.96			45.69		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	36.92											
Intersection LOS	D											
Intersection V/C	0.889											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	29.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.186

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	689	861	58	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	254	433	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	943	1294	58	31	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	251	345	15	8	2
Total Analysis Volume [veh/h]	23	1004	1378	62	33	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.19	0.06
d_M, Delay for Movement [s/veh]	12.92	0.00	0.00	0.00	29.93	27.27
Movement LOS	B	A	A	A	D	D
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.66	0.18
95th-Percentile Queue Length [ft/ln]	3.79	0.00	0.00	0.00	16.57	4.60
d_A, Approach Delay [s/veh]	0.29		0.00		29.31	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	766	104	514	726	0	148	0	824	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	99	10	308	131	0	21	0	19	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	865	114	822	857	0	169	0	843	0	0	1
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	229	30	217	226	0	45	0	223	0	0	0
Total Analysis Volume [veh/h]	0	914	121	869	906	0	179	0	891	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	35	0	39	74	0	46	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	36	36	32	72	40	40	
g / C, Green / Cycle	0.30	0.30	0.27	0.60	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.07	0.25	0.25	0.10	0.31	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	1082	483	944	2174	602	950	
d1, Uniform Delay [s]	39.48	31.90	42.69	12.76	29.70	38.89	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.11	1.24	4.27	0.13	0.27	5.19	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

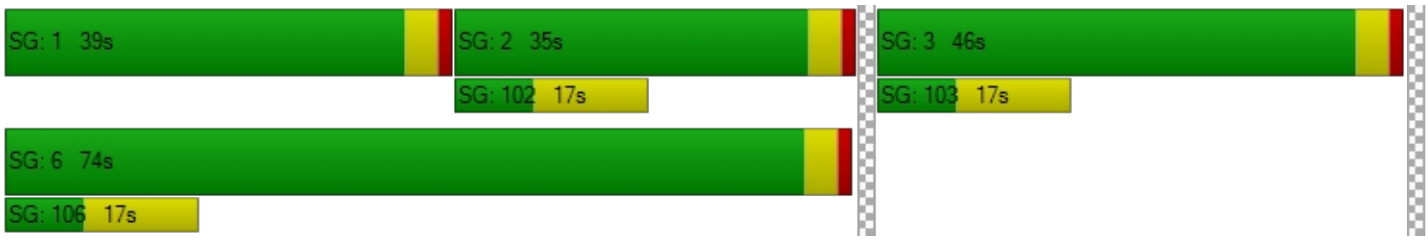
X, volume / capacity	0.84	0.25	0.92	0.42	0.30	0.94	
d, Delay for Lane Group [s/veh]	47.60	33.14	46.96	12.89	29.98	44.07	
Lane Group LOS	D	C	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	13.74	2.84	12.98	6.33	3.90	13.23	
50th-Percentile Queue Length [ft/ln]	343.44	71.11	324.57	158.32	97.44	330.86	
95th-Percentile Queue Length [veh/ln]	19.82	5.12	18.89	10.46	7.02	19.20	
95th-Percentile Queue Length [ft/ln]	495.41	127.99	472.30	261.50	175.38	480.02	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	47.60	33.14	46.96	12.89	0.00	29.98	0.00	44.07	0.00	0.00	0.00
Movement LOS		D	C	D	B		C		D			
d_A, Approach Delay [s/veh]	45.91			29.57			41.72			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	37.28											
Intersection LOS	D											
Intersection V/C	0.902											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 2

Viridian

Vistro File: C:\...\AME.vistro

Scenario 10 Opening Year (2020) With Project Morning Peak Hour - Alternative 2

Report File: C:\...\AMOYW2.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.202	85.2	F
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.111	66.2	E
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	WB Left	0.805	26.8	C
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.761	15.5	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	1.500	53.3	D
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.701	15.9	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.022	11.8	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.618	6.1	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	217.4	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.964	92.9	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	0.077	109.5	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.032	76.0	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	2.029	24.3	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.827	31.8	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	1.159	133.1	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.161	111.2	F
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.711	11.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.016	9.4	A
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.014	12.5	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.414	12.5	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.003	9.0	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.290	15.9	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.006	10.0	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.866	107.0	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.030	15.2	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.093	14.2	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.544	11.6	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.364	4.2	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	174.023	307.4	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.158	72.3	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	EB Right	0.686	17.6	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.768	12.5	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.899	33.3	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.859	32.2	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.842	25.7	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.918	53.0	D
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.755	12.4	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Right	0.725	9.1	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.833	20.7	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.733	13.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	85.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.202

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	315	1261	0	0	1081	765	0	0	0	461	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	93	58	0	0	125	14	0	0	2	131	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	408	1319	0	0	1206	779	0	0	2	592	0	532
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	105	341	0	0	312	201	0	0	1	153	0	138
Total Analysis Volume [veh/h]	422	1364	0	0	1247	806	0	0	2	612	0	550
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	31	89	0	0	58	0	0	0	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	28	86	55	55		38	38
g / C, Green / Cycle	0.22	0.66	0.42	0.42		0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.26	0.40	0.25	0.53		0.36	0.36
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1530
c, Capacity [veh/h]	350	2267	2072	646		501	448
d1, Uniform Delay [s]	51.16	12.42	29.19	37.69		46.17	46.17
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	99.00	1.19	1.30	123.72		103.34	107.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.21	0.60	0.60	1.25		1.22	1.23
d, Delay for Lane Group [s/veh]	150.16	13.61	30.49	161.41		149.51	153.67
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	20.99	10.98	10.29	42.37		30.50	27.74
50th-Percentile Queue Length [ft/ln]	524.86	274.55	257.13	1059.13		762.41	693.38
95th-Percentile Queue Length [veh/ln]	31.40	16.42	15.54	61.43		44.45	40.96
95th-Percentile Queue Length [ft/ln]	785.03	410.43	388.61	1535.87		1111.25	1024.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	150.16	13.61	0.00	0.00	30.49	161.41	0.00	0.00	0.00	149.51	149.51	153.67
Movement LOS	F	B			C	F				F	F	F
d_A, Approach Delay [s/veh]	45.88			81.89			0.00			151.48		
Approach LOS	D			F			A			F		
d_I, Intersection Delay [s/veh]	85.20											
Intersection LOS	F											
Intersection V/C	1.202											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	66.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.111

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1006	424	484	1054	0	564	0	376	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	145	59	8	250	0	6	0	211	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1151	483	492	1304	0	570	0	587	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	303	127	129	343	0	150	0	154	0	0	0
Total Analysis Volume [veh/h]	0	1210	508	517	1371	0	599	0	617	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	41	0	39	80	0	0	50	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	38	38	36	77	47	47	
g / C, Green / Cycle	0.29	0.29	0.28	0.59	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.33	0.32	0.40	0.36	0.41	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1532	
c, Capacity [veh/h]	1434	448	449	2031	585	554	
d1, Uniform Delay [s]	43.37	46.17	47.17	18.04	41.68	41.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	6.22	84.97	74.39	1.82	19.68	63.91	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.84	1.14	1.15	0.67	1.01	1.13	
d, Delay for Lane Group [s/veh]	49.59	131.15	121.56	19.86	61.36	105.59	
Lane Group LOS	D	F	F	B	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	12.99	24.94	23.73	14.06	21.72	27.36	
50th-Percentile Queue Length [ft/ln]	324.80	623.38	593.18	351.60	543.00	683.92	
95th-Percentile Queue Length [veh/ln]	18.90	35.78	34.47	20.21	29.56	38.95	
95th-Percentile Queue Length [ft/ln]	472.58	894.57	861.64	505.36	739.07	973.77	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.59	131.15	121.56	19.86	0.00	61.36	105.59	105.59	0.00	0.00	0.00
Movement LOS		D	F	F	B		E	F	F			
d_A, Approach Delay [s/veh]	73.71			47.71			84.10			0.00		
Approach LOS	E			D			F			A		
d_I, Intersection Delay [s/veh]	66.15											
Intersection LOS	E											
Intersection V/C	1.111											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.805

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	825	16	97	874	102	182	127	68	16	198	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	156	9	43	295	88	27	4	19	5	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	981	25	140	1169	190	209	131	87	21	199	141
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	250	6	36	298	48	53	33	22	5	51	36
Total Analysis Volume [veh/h]	149	999	25	143	1190	193	213	133	89	21	203	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	26	0	20	35	0	14	23	0	11	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	82	82	82	82	82	82	82	82	82	82	82	82
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	37	37	9	36	36	13	22	22	3	11	11
g / C, Green / Cycle	0.11	0.45	0.45	0.11	0.44	0.44	0.16	0.26	0.26	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.09	0.29	0.29	0.09	0.39	0.40	0.13	0.04	0.06	0.01	0.10	0.11
s, saturation flow rate [veh/h]	1619	1800	1785	1619	1800	1714	1619	3427	1530	1619	1800	1561
c, Capacity [veh/h]	186	806	799	179	798	760	255	901	402	53	248	215
d1, Uniform Delay [s]	35.45	17.54	17.54	35.64	20.87	21.09	33.57	23.24	23.71	38.96	33.98	34.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.71	0.85	0.85	7.84	3.38	3.99	7.00	0.07	0.27	4.78	4.14	5.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

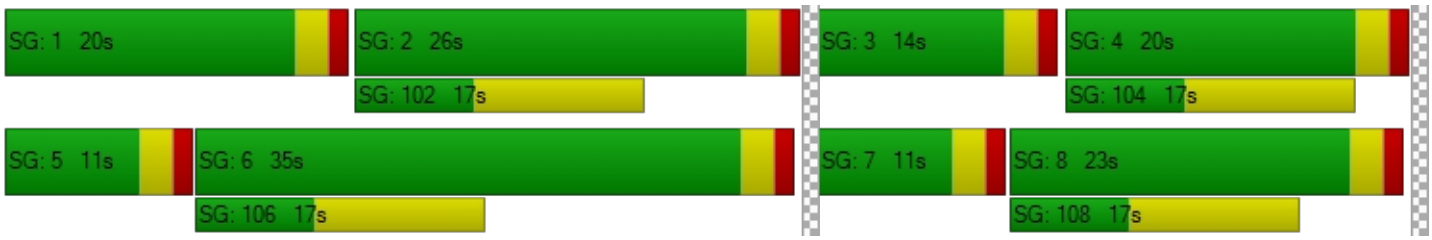
X, volume / capacity	0.80	0.64	0.64	0.80	0.88	0.89	0.83	0.15	0.22	0.40	0.73	0.77
d, Delay for Lane Group [s/veh]	43.15	18.39	18.40	43.48	24.25	25.08	40.56	23.31	23.99	43.73	38.12	39.97
Lane Group LOS	D	B	B	D	C	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.23	7.17	7.11	3.12	12.04	11.88	4.49	0.97	1.34	0.48	3.66	3.45
50th-Percentile Queue Length [ft/ln]	80.83	179.16	177.76	77.88	301.07	296.93	112.35	24.29	33.62	11.94	91.57	86.29
95th-Percentile Queue Length [veh/ln]	5.82	11.56	11.48	5.61	17.73	17.53	7.97	1.75	2.42	0.86	6.59	6.21
95th-Percentile Queue Length [ft/ln]	145.49	288.92	287.09	140.18	443.36	438.23	199.27	43.72	60.52	21.48	164.83	155.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.15	18.39	18.40	43.48	24.59	25.08	40.56	23.31	23.99	43.73	38.32	39.97
Movement LOS	D	B	B	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.54			26.42			31.90			39.27		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	26.82											
Intersection LOS	C											
Intersection V/C	0.805											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	89	852	37	68	811	66	68	105	77	73	115	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	162	6	0	293	26	18	4	31	4	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	1014	43	68	1104	92	86	109	108	77	117	46
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	276	12	19	301	25	23	30	29	21	32	13
Total Analysis Volume [veh/h]	118	1106	47	74	1204	100	94	119	118	84	128	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	60	0	33	76	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	24	24	5	23	23	14	14
g / C, Green / Cycle	0.11	0.46	0.46	0.09	0.44	0.44	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.32	0.32	0.05	0.37	0.37	0.23	0.20
s, saturation flow rate [veh/h]	1619	1800	1774	1619	1800	1752	1422	1293
c, Capacity [veh/h]	179	830	818	144	792	771	483	450
d1, Uniform Delay [s]	22.29	11.18	11.19	22.72	12.93	12.97	17.57	16.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.12	1.08	1.10	2.83	2.37	2.50	1.73	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.70	0.70	0.51	0.83	0.84	0.68	0.58
d, Delay for Lane Group [s/veh]	26.41	12.26	12.29	25.54	15.30	15.47	19.30	17.64
Lane Group LOS	C	B	B	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.47	4.45	4.40	0.91	5.95	5.86	3.49	2.55
50th-Percentile Queue Length [ft/ln]	36.86	111.29	110.02	22.78	148.84	146.53	87.18	63.85
95th-Percentile Queue Length [veh/ln]	2.65	7.91	7.84	1.64	9.96	9.83	6.28	4.60
95th-Percentile Queue Length [ft/ln]	66.35	197.79	196.03	41.00	248.88	245.79	156.92	114.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.41	12.27	12.29	25.54	15.38	15.47	19.30	19.30	19.30	17.64	17.64	17.64
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.59			15.93			19.30			17.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.49											
Intersection LOS	B											
Intersection V/C	0.761											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	53.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.500

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	768	38	73	882	37	53	83	33	56	77	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	154	18	44	232	21	15	6	18	7	16	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	922	56	117	1114	58	68	89	51	63	93	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	260	16	33	314	16	19	25	14	18	26	47
Total Analysis Volume [veh/h]	69	1038	63	132	1255	65	77	100	57	71	105	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	22	0	10	22	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	20	20	6	21	21	25	25	25	25
g / C, Green / Cycle	0.08	0.33	0.33	0.10	0.35	0.35	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.31	0.08	0.37	0.37	0.94	0.04	0.82	0.12
s, saturation flow rate [veh/h]	1619	1800	1764	1619	1800	1769	189	1530	215	1530
c, Capacity [veh/h]	132	592	580	170	635	624	165	637	173	637
d1, Uniform Delay [s]	26.51	19.60	19.60	26.23	19.47	19.47	18.88	10.65	18.07	11.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.19	24.59	25.05	7.34	48.46	50.10	54.94	0.06	35.65	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.94	0.94	0.78	1.05	1.05	1.08	0.09	1.02	0.30
d, Delay for Lane Group [s/veh]	29.70	44.18	44.65	33.57	67.93	69.58	73.82	10.71	53.72	11.95
Lane Group LOS	C	D	D	C	F	F	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.01	10.73	10.60	2.08	16.31	16.31	3.75	0.42	3.03	1.52
50th-Percentile Queue Length [ft/ln]	25.37	268.18	264.88	52.02	407.64	407.76	93.81	10.41	75.78	38.09
95th-Percentile Queue Length [veh/ln]	1.83	16.10	15.93	3.75	23.62	23.69	6.75	0.75	5.46	2.74
95th-Percentile Queue Length [ft/ln]	45.66	402.46	398.34	93.64	590.53	592.24	168.85	18.74	136.41	68.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.70	44.40	44.65	33.57	68.71	69.58	73.82	73.82	10.71	53.72	53.72	11.95
Movement LOS	C	D	D	C	E	E	E	E	B	D	D	B
d_A, Approach Delay [s/veh]	43.55			65.55			58.45			32.09		
Approach LOS	D			E			E			C		
d_I, Intersection Delay [s/veh]	53.25											
Intersection LOS	D											
Intersection V/C	1.500											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	163	87	148	146	0	0	2	8	31	1	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	738	138	221	1084	8	22	10	28	96	5	108
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	217	41	65	318	2	6	3	8	28	1	32
Total Analysis Volume [veh/h]	18	867	162	260	1274	9	26	12	33	113	6	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	30	30	11	39	39	12	12	12
g / C, Green / Cycle	0.03	0.46	0.46	0.17	0.60	0.60	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.14	0.34	0.34	0.12	0.15	0.08
s, saturation flow rate [veh/h]	1810	1900	1797	1810	1900	1895	571	793	1615
c, Capacity [veh/h]	57	870	823	317	1144	1141	180	252	295
d1, Uniform Delay [s]	30.88	13.26	13.26	25.87	7.79	7.79	23.20	25.59	23.63
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.18	3.15	3.33	5.22	1.99	2.00	1.41	1.37	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

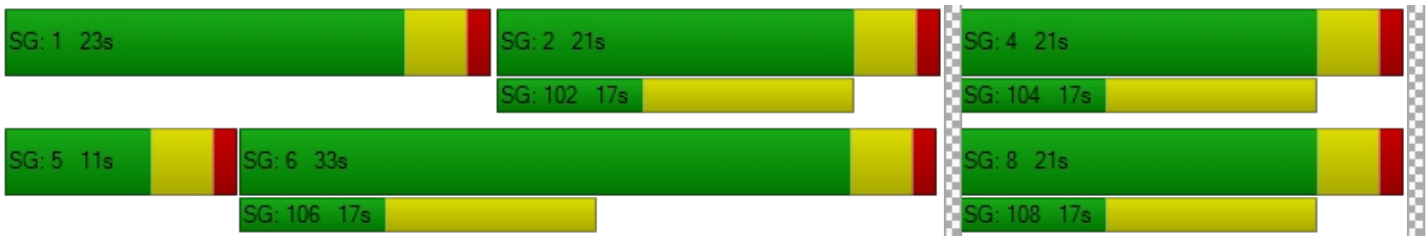
X, volume / capacity	0.32	0.61	0.61	0.82	0.56	0.56	0.40	0.47	0.43
d, Delay for Lane Group [s/veh]	34.06	16.41	16.59	31.09	9.78	9.79	24.60	26.95	24.63
Lane Group LOS	C	B	B	C	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.32	5.81	5.54	4.12	4.80	4.79	0.95	1.76	1.72
50th-Percentile Queue Length [ft/ln]	7.90	145.30	138.52	102.88	119.92	119.82	23.77	44.09	43.05
95th-Percentile Queue Length [veh/ln]	0.57	9.77	9.40	7.41	8.39	8.38	1.71	3.17	3.10
95th-Percentile Queue Length [ft/ln]	14.22	244.15	235.04	185.19	209.71	209.58	42.78	79.37	77.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.06	16.48	16.59	31.09	9.79	9.79	24.60	24.60	24.60	26.95	26.95	24.63
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.80			13.38			24.60			25.75		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.93											
Intersection LOS	B											
Intersection V/C	0.701											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1023	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	246	15	0	185	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	880	15	0	1208	0	10
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	232	5	0	318	0	3
Total Analysis Volume [veh/h]	926	18	0	1272	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.77
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.69
d_A, Approach Delay [s/veh]	0.00		0.00		11.77	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1024	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	246	189	57	128	67	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	880	189	57	1152	67	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	232	50	15	303	18	4
Total Analysis Volume [veh/h]	926	199	60	1213	71	17
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	11	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	3	19	4	4
g / C, Green / Cycle	0.39	0.39	0.09	0.62	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.26	0.12	0.03	0.34	0.04	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1417	633	169	2228	222	198
d1, Uniform Delay [s]	7.60	6.45	13.00	3.40	12.25	11.90
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.28	1.27	0.21	0.82	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.31	0.36	0.54	0.32	0.09
d, Delay for Lane Group [s/veh]	8.12	6.73	14.27	3.60	13.08	12.08
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.51	0.56	0.36	0.40	0.39	0.09
50th-Percentile Queue Length [ft/ln]	37.79	14.10	8.92	10.07	9.66	2.21
95th-Percentile Queue Length [veh/ln]	2.72	1.01	0.64	0.72	0.70	0.16
95th-Percentile Queue Length [ft/ln]	68.03	25.37	16.05	18.12	17.39	3.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.12	6.73	14.27	3.60	13.08	12.08
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.87		4.11		12.88	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.12					
Intersection LOS	A					
Intersection V/C	0.618					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	217.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	435	1	1	194	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1121	1	1	1238	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	324	0	0	358	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1297	1	1	1433	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.00	0.01	0.00	0.22	0.00	0.05	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	12.96	0.00	0.00	11.67	0.00	0.00	150.03	217.41	28.40	130.80	209.50	17.84
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.01	0.00	0.00	0.99	0.99	0.99	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	3.80	0.00	0.00	0.14	0.07	0.00	24.79	24.79	24.79	2.55	2.55	2.55
d_A, Approach Delay [s/veh]	0.23			0.01			57.59			130.80		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	0.67											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	92.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	185	81	108	69	18	43	30	37	37	8	208
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	410	362	639	623	38	61	68	52	319	52	535
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	110	97	171	167	10	16	18	14	85	14	0
Total Analysis Volume [veh/h]	34	439	388	684	667	41	65	73	56	342	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	49	64	0	0	21	0	0	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	284	284	284	284	284	284	284	284	284	284
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	71	71	110	174	174	23	23	64	64
g / C, Green / Cycle	0.02	0.25	0.25	0.39	0.61	0.61	0.08	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.24	0.38	0.18	0.03	0.04	0.07	0.22	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1765	1822	1615
c, Capacity [veh/h]	44	908	405	698	2215	989	146	143	412	365
d1, Uniform Delay [s]	137.77	90.65	104.83	86.19	26.17	21.90	124.37	129.36	108.73	0.00
k, delay calibration	0.11	0.11	0.15	0.41	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.92	0.40	16.54	26.35	0.08	0.02	2.10	17.96	14.48	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

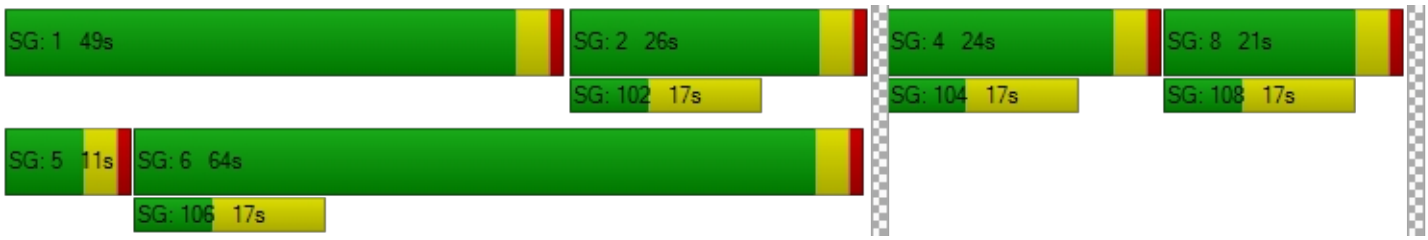
X, volume / capacity	0.78	0.48	0.96	0.98	0.30	0.04	0.44	0.90	0.97	0.00
d, Delay for Lane Group [s/veh]	162.68	91.05	121.37	112.54	26.24	21.92	126.47	147.32	123.21	0.00
Lane Group LOS	F	F	F	F	C	C	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	14.10	30.59	55.28	11.36	1.17	4.78	10.41	31.29	0.00
50th-Percentile Queue Length [ft/ln]	71.80	352.55	764.66	1382.04	283.98	29.27	119.57	260.22	782.33	0.00
95th-Percentile Queue Length [veh/ln]	5.17	20.26	39.66	67.48	16.89	2.11	8.37	15.70	40.47	0.00
95th-Percentile Queue Length [ft/ln]	129.24	506.51	991.41	1686.89	422.16	52.69	209.23	392.50	1011.69	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	162.68	91.05	121.37	112.54	26.24	21.92	126.47	147.32	147.32	123.21	123.21	0.00
Movement LOS	F	F	F	F	C	C	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	107.54			68.52			140.34			123.21		
Approach LOS	F			E			F			F		
d_I, Intersection Delay [s/veh]	92.88											
Intersection LOS	F											
Intersection V/C	0.964											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	109.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.077

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	511	34	112	777	1	2	4	24	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	282	0	0	143	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	793	34	112	920	1	2	4	24	8	3	18
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	210	9	30	244	0	1	1	6	2	1	5
Total Analysis Volume [veh/h]	27	841	36	119	976	1	2	4	25	8	3	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.15	0.01	0.00	0.04	0.11	0.05	0.16	0.08	0.03
d_M, Delay for Movement [s/veh]	10.24	0.00	0.00	10.46	0.00	0.00	89.50	108.27	17.46	89.80	109.46	22.89
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.11	0.05	0.00	0.50	0.25	0.00	0.71	0.71	0.71	1.02	1.02	1.02
95th-Percentile Queue Length [ft/ln]	2.72	1.36	0.00	12.53	6.26	0.00	17.85	17.85	17.85	25.43	25.43	25.43
d_A, Approach Delay [s/veh]	0.31			1.14			33.82			49.39		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	1.97											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	76.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	564	18	12	798	0	0	0	3	22	2	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	282	0	0	143	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	846	18	12	941	0	0	0	3	22	2	6
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	225	5	3	250	0	0	0	1	6	1	2
Total Analysis Volume [veh/h]	9	900	19	13	1001	0	0	0	3	23	2	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.25	0.03	0.01
d_M, Delay for Movement [s/veh]	10.21	0.00	0.00	9.88	0.00	0.00	49.54	63.83	11.95	58.35	75.98	25.18
Movement LOS	B	A	A	A	A	A	E	F	B	F	F	D
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.05	0.02	0.00	0.02	0.02	0.02	1.12	1.12	1.12
95th-Percentile Queue Length [ft/ln]	0.87	0.43	0.00	1.22	0.61	0.00	0.43	0.43	0.43	28.03	28.03	28.03
d_A, Approach Delay [s/veh]	0.10			0.13			11.95			53.06		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	0.96											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.029

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	28	567	19	6	826	24	15	25	30	65	28	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	262	5	0	116	26	44	16	35	4	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	829	24	6	942	50	59	41	65	69	33	9
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	225	7	2	256	14	16	11	18	19	9	2
Total Analysis Volume [veh/h]	43	900	26	7	1023	54	64	45	71	75	36	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	11	22	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	24	24	1	21	21	23	23	23	23
g / C, Green / Cycle	0.06	0.40	0.40	0.01	0.36	0.36	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.24	0.00	0.29	0.29	0.90	0.04	1.31	0.01
s, saturation flow rate [veh/h]	1810	1900	1881	1810	1900	1867	121	1615	84	1615
c, Capacity [veh/h]	114	766	758	28	675	663	141	618	132	618
d1, Uniform Delay [s]	27.13	14.23	14.23	29.35	17.54	17.54	21.06	12.02	23.99	11.56
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.23	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	3.57	3.60	4.73	9.85	10.02	8.63	0.08	23.95	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

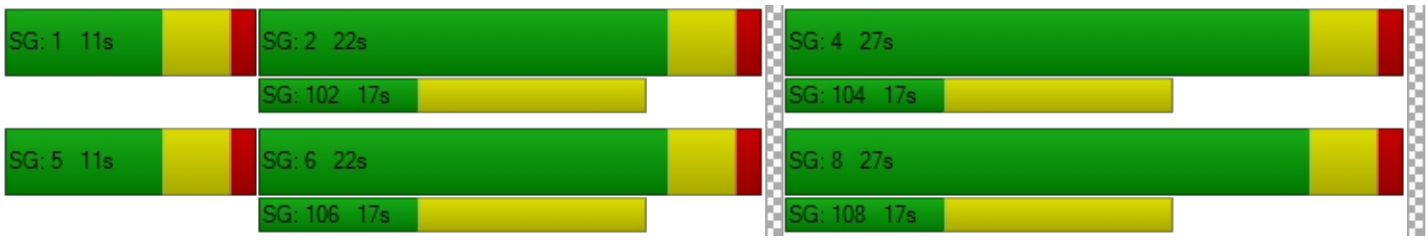
X, volume / capacity	0.38	0.61	0.61	0.25	0.80	0.80	0.77	0.11	0.84	0.02
d, Delay for Lane Group [s/veh]	29.19	17.80	17.83	34.08	27.40	27.57	29.69	12.10	47.94	11.57
Lane Group LOS	C	B	B	C	C	C	C	B	D	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	5.12	5.08	0.13	7.84	7.73	1.85	0.57	2.42	0.08
50th-Percentile Queue Length [ft/ln]	15.72	128.11	127.03	3.29	195.97	193.36	46.13	14.14	60.38	1.91
95th-Percentile Queue Length [veh/ln]	1.13	8.84	8.78	0.24	12.43	12.30	3.32	1.02	4.35	0.14
95th-Percentile Queue Length [ft/ln]	28.30	220.92	219.44	5.93	310.76	307.38	83.03	25.44	108.68	3.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.19	17.81	17.83	34.08	27.48	27.57	29.69	29.69	12.10	47.94	47.94	11.57
Movement LOS	C	B	B	C	C	C	C	C	B	D	D	B
d_A, Approach Delay [s/veh]	18.32			27.52			22.75			44.94		
Approach LOS	B			C			C			D		
d_I, Intersection Delay [s/veh]	24.27											
Intersection LOS	C											
Intersection V/C	2.029											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	33	576	0	0	823	23	13	0	158	351	89	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	217	0	0	153	2	8	0	47	20	10	54
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	793	0	0	976	25	21	0	205	371	99	135
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	224	0	0	275	7	6	0	58	105	28	38
Total Analysis Volume [veh/h]	43	895	0	0	1102	28	24	0	231	419	112	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	21	0	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	106	106	106	106	106	106	106	106
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	43	18	18	34	34
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.17	0.17	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.30	0.30	0.01	0.14	0.29	0.09
s, saturation flow rate [veh/h]	506	3618	1900	1884	1810	1615	1828	1615
c, Capacity [veh/h]	134	1464	769	762	299	267	580	512
d1, Uniform Delay [s]	43.91	25.04	26.82	26.92	37.54	43.23	34.96	27.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.42	1.38	1.44	0.11	8.22	6.29	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

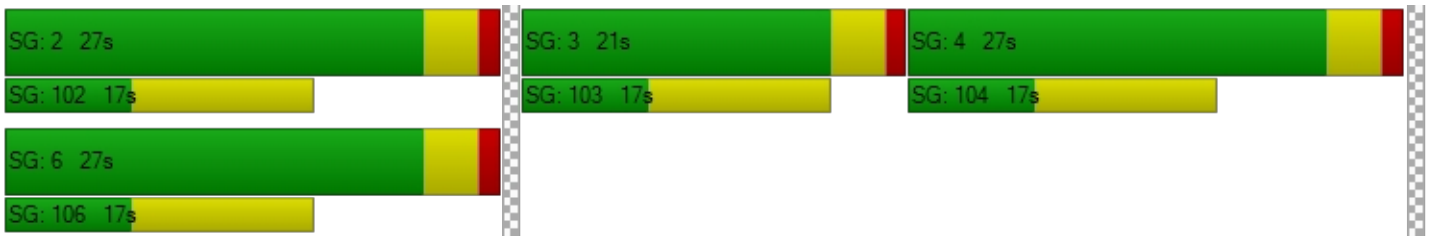
X, volume / capacity	0.32	0.61	0.73	0.74	0.08	0.86	0.92	0.30
d, Delay for Lane Group [s/veh]	45.28	25.45	28.20	28.36	37.66	51.45	41.25	27.70
Lane Group LOS	D	C	C	C	D	D	D	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.12	8.81	12.09	12.14	0.54	6.47	13.93	2.94
50th-Percentile Queue Length [ft/ln]	28.01	220.16	302.26	303.60	13.45	161.64	348.13	73.51
95th-Percentile Queue Length [veh/ln]	2.02	13.67	17.79	17.86	0.97	10.64	20.04	5.29
95th-Percentile Queue Length [ft/ln]	50.42	341.83	444.82	446.48	24.20	265.89	501.12	132.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.28	25.45	0.00	0.00	28.28	28.36	37.66	0.00	51.45	41.25	41.25	27.70
Movement LOS	D	C			C	C	D		D	D	D	C
d_A, Approach Delay [s/veh]	26.36			28.28			50.15			38.23		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.80											
Intersection LOS	C											
Intersection V/C	0.827											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	133.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.159

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	341	610	784	569	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	222	141	79	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	832	925	648	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	238	265	186	0	0
Total Analysis Volume [veh/h]	402	953	1060	742	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.16	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	133.13	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	16.21	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	405.23	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	39.50		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	16.95					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	111.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.161

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	553	546	146	624	0	364	28	258	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	36	62	79	0	166	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	619	582	208	703	0	530	28	269	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	177	166	59	201	0	151	8	77	3	0	1
Total Analysis Volume [veh/h]	0	707	665	238	803	0	606	32	307	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	22	0	11	33	0	0	21	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	7	32	29	29	2	2
g / C, Green / Cycle	0.29	0.29	0.09	0.43	0.38	0.38	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.36	0.42	0.13	0.22	0.35	0.19	0.01	0.00
s, saturation flow rate [veh/h]	1900	1622	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	543	463	169	1564	691	615	48	43
d1, Uniform Delay [s]	26.81	26.81	34.02	15.54	22.18	17.76	35.80	35.61
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	133.04	227.54	190.96	1.21	5.80	0.63	2.91	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

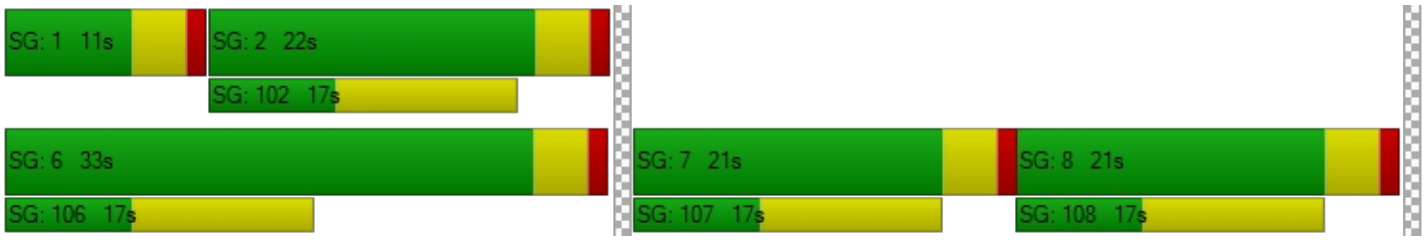
X, volume / capacity	1.26	1.48	1.41	0.51	0.92	0.50	0.27	0.07
d, Delay for Lane Group [s/veh]	159.85	254.35	224.98	16.75	27.99	18.38	38.71	36.28
Lane Group LOS	F	F	F	B	C	B	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	29.18	37.08	11.96	4.88	10.97	3.90	0.27	0.06
50th-Percentile Queue Length [ft/ln]	729.40	926.96	298.91	122.03	274.13	97.54	6.68	1.51
95th-Percentile Queue Length [veh/ln]	43.38	57.29	19.69	8.50	16.40	7.02	0.48	0.11
95th-Percentile Queue Length [ft/ln]	1084.57	1432.27	492.15	212.62	409.89	175.57	12.02	2.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	162.65	254.35	224.98	16.75	0.00	27.99	27.99	18.38	38.71	0.00	36.28
Movement LOS		F	F	F	B		C	C	B	D		D
d_A, Approach Delay [s/veh]	207.10			64.35			24.87			38.25		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	111.22											
Intersection LOS	F											
Intersection V/C	1.161											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	27	771	50	55	656	75	159	35	19	10	20	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	2	18	69	3	4	0	1	2	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	855	52	73	725	78	163	35	20	12	20	124
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	231	14	20	196	21	44	9	5	3	5	33
Total Analysis Volume [veh/h]	29	922	56	79	782	84	176	38	22	13	22	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	48	0	11	48	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	14	14	4	16	16	10	10	10
g / C, Green / Cycle	0.05	0.35	0.35	0.10	0.40	0.40	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.03	0.04	0.22	0.05	0.20	0.02	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1200	1760	1615
c, Capacity [veh/h]	89	1263	564	188	1461	652	451	552	392
d1, Uniform Delay [s]	18.12	11.22	8.66	16.56	8.94	7.39	14.93	11.52	12.33
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	0.83	0.08	1.49	0.31	0.09	0.94	0.05	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.73	0.10	0.42	0.54	0.13	0.52	0.06	0.34
d, Delay for Lane Group [s/veh]	20.23	12.04	8.73	18.05	9.25	7.48	15.87	11.56	12.84
Lane Group LOS	C	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	2.78	0.26	0.65	1.89	0.34	1.78	0.20	0.84
50th-Percentile Queue Length [ft/ln]	6.86	69.57	6.48	16.30	47.25	8.52	44.43	4.99	21.12
95th-Percentile Queue Length [veh/ln]	0.49	5.01	0.47	1.17	3.40	0.61	3.20	0.36	1.52
95th-Percentile Queue Length [ft/ln]	12.35	125.22	11.66	29.33	85.05	15.33	79.98	8.99	38.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.23	12.04	8.73	18.05	9.25	7.48	15.87	15.87	15.87	11.56	11.56	12.84
Movement LOS	C	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.10			9.83			15.87			12.58		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	11.60											
Intersection LOS	B											
Intersection V/C	0.711											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	231	6	12	77
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	363	6	12	210
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	96	2	3	55
Total Analysis Volume [veh/h]	0	13	382	6	13	221
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	9.44	0.00	0.00	8.08	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.20	0.00	0.00	0.83	0.00
d_A, Approach Delay [s/veh]	9.44		0.00		0.45	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	10	226	17	14	82
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	10	358	17	14	215
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	94	4	4	57
Total Analysis Volume [veh/h]	7	11	377	18	15	226
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.54	9.41	0.00	0.00	8.10	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	1.10	1.01	0.00	0.00	0.97	0.00
d_A, Approach Delay [s/veh]	10.63		0.00		0.50	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	67	0	43	58	83	0	0	80	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	15	16	6	52	155	61	20	47	36	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	15	83	6	95	213	144	20	47	116	101
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	4	23	2	27	60	40	6	13	33	28
Total Analysis Volume [veh/h]	7	3	17	93	7	107	239	161	22	53	130	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	22	0	0	48	77	0	0	29	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	4	6	17	17	6	6
g / C, Green / Cycle	0.05	0.05	0.12	0.18	0.48	0.48	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.05	0.13	0.04	0.01	0.06	0.07
s, saturation flow rate [veh/h]	1810	1652	1810	1810	3618	1615	1900	1632
c, Capacity [veh/h]	87	79	221	334	1751	782	350	300
d1, Uniform Delay [s]	15.78	15.92	14.09	13.28	4.83	4.68	12.33	12.47
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	1.66	1.27	2.85	0.02	0.01	0.59	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

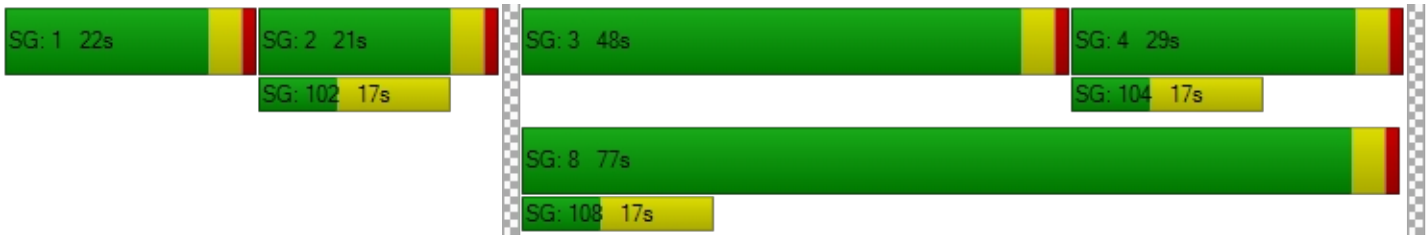
X, volume / capacity	0.08	0.25	0.42	0.71	0.09	0.03	0.35	0.40
d, Delay for Lane Group [s/veh]	16.18	17.57	15.37	16.13	4.85	4.69	12.93	13.35
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	0.16	0.62	1.63	0.18	0.05	0.70	0.72
50th-Percentile Queue Length [ft/ln]	1.34	4.08	15.54	40.65	4.49	1.23	17.47	18.05
95th-Percentile Queue Length [veh/ln]	0.10	0.29	1.12	2.93	0.32	0.09	1.26	1.30
95th-Percentile Queue Length [ft/ln]	2.40	7.34	27.98	73.17	8.08	2.21	31.45	32.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.18	17.57	17.57	15.37	0.00	0.00	16.13	4.85	4.69	0.00	12.95	13.35
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	17.21			15.37			11.23			13.14		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.52											
Intersection LOS	B											
Intersection V/C	0.414											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	151	0	0	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	88	4	5	120
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	239	4	5	280
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	63	1	1	74
Total Analysis Volume [veh/h]	0	3	252	4	5	295
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.98	0.00	0.00	7.74	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.25	0.00	0.00	0.29	0.00
d_A, Approach Delay [s/veh]	8.98		0.00		0.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.290

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	0	3	0	0	0	0	47	44	14	60	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	2	5	10	8	12	2	145	95	15	163	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	1	2	3	2	4	1	45	29	5	50	2
Total Analysis Volume [veh/h]	136	2	6	12	10	15	2	179	117	19	201	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.29	0.00	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.89	15.80	12.69	12.88	13.59	9.72	7.62	0.00	0.00	7.86	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.26	1.26	1.26	0.21	0.21	0.21	0.00	0.00	0.00	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	31.43	31.43	31.43	5.22	5.22	5.22	0.11	0.11	0.11	0.89	0.89	0.89
d_A, Approach Delay [s/veh]	15.76			11.79			0.05			0.66		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.07											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	49	60	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	64	49	9	4	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	113	109	9	4	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	30	29	2	1	3
Total Analysis Volume [veh/h]	15	119	115	9	4	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	10.01	8.88
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.02	0.05
95th-Percentile Queue Length [ft/ln]	0.77	0.00	0.00	0.00	0.42	1.13
d_A, Approach Delay [s/veh]	0.84		0.00		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	107.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	380	471	72	62	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	94	95	68	31	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	474	566	140	93	30
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	150	180	44	30	0
Total Analysis Volume [veh/h]	30	602	718	178	118	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.87	0.00
d_M, Delay for Movement [s/veh]	9.89	0.00	0.00	0.00	107.03	14.36
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	5.61	0.00
95th-Percentile Queue Length [ft/ln]	3.05	0.00	0.00	0.00	140.14	0.00
d_A, Approach Delay [s/veh]	0.47		0.00		107.03	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	7.85					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	359	61	109	471	10	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	96	0	0	96	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	455	61	109	567	10	43
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	123	16	29	153	3	12
Total Analysis Volume [veh/h]	491	66	118	612	11	46
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.12	0.01	0.03	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	8.97	0.00	15.20	12.04
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.39	0.00	0.09	0.27
95th-Percentile Queue Length [ft/ln]	0.00	0.00	9.74	0.00	2.33	6.72
d_A, Approach Delay [s/veh]	0.00		1.45		12.65	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.093

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	47	441	579	23	19	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	61	77	46	50	19	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	518	625	73	38	81
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	136	164	19	10	21
Total Analysis Volume [veh/h]	114	545	657	77	40	85
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.01	0.01	0.00	0.09	0.13
d_M, Delay for Movement [s/veh]	9.70	0.00	0.00	0.00	14.20	11.12
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.44	0.00	0.00	0.00	0.30	0.43
95th-Percentile Queue Length [ft/ln]	11.11	0.00	0.00	0.00	7.62	10.78
d_A, Approach Delay [s/veh]	1.68		0.00		12.11	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.73					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	446	15	106	546	4	0	3	11	28	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	134	0	0	62	14	4	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	580	15	106	608	18	4	3	21	28	0	64
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	155	4	28	163	5	1	1	6	7	0	17
Total Analysis Volume [veh/h]	64	620	16	113	650	19	4	3	22	30	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	62	0	26	72	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	9	9	5	10	10	0	2	2	2	3	3
g / C, Green / Cycle	0.10	0.26	0.26	0.14	0.31	0.31	0.01	0.06	0.06	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.01	0.06	0.18	0.01	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	176	955	426	254	1111	496	15	108	91	96	193	164
d1, Uniform Delay [s]	13.91	10.75	9.00	12.98	9.63	7.99	16.22	14.67	14.85	15.00	0.00	13.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.75	0.04	1.23	0.49	0.03	9.47	0.10	1.34	1.84	0.00	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.65	0.04	0.45	0.59	0.04	0.27	0.03	0.24	0.31	0.00	0.42
d, Delay for Lane Group [s/veh]	15.17	11.50	9.04	14.20	10.12	8.02	25.69	14.77	16.19	16.84	0.00	15.54
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.42	1.53	0.07	0.68	1.43	0.07	0.06	0.02	0.16	0.22	0.00	0.45
50th-Percentile Queue Length [ft/ln]	10.38	38.14	1.65	17.03	35.78	1.75	1.59	0.51	4.03	5.59	0.00	11.29
95th-Percentile Queue Length [veh/ln]	0.75	2.75	0.12	1.23	2.58	0.13	0.11	0.04	0.29	0.40	0.00	0.81
95th-Percentile Queue Length [ft/ln]	18.68	68.66	2.96	30.66	64.40	3.15	2.86	0.91	7.25	10.06	0.00	20.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.17	11.50	9.04	14.20	10.12	8.02	25.69	14.77	16.19	16.84	0.00	15.54
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.78			10.66			17.35			15.94		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.59											
Intersection LOS	B											
Intersection V/C	0.544											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	483	80	41	576	54	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	179	0	0	72	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	662	80	41	648	54	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	188	23	12	184	15	14
Total Analysis Volume [veh/h]	751	91	47	736	61	57
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	43	39	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	0	0	8	8
g / C, Green / Cycle	0.73	0.73	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.07	0.39	0.08	0.04
s, saturation flow rate [veh/h]	3618	1615	723	1900	733	1615
c, Capacity [veh/h]	2643	1180	120	0	194	220
d1, Uniform Delay [s]	2.75	2.31	30.01	0.00	26.48	23.21
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.13	9.34	0.00	0.92	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

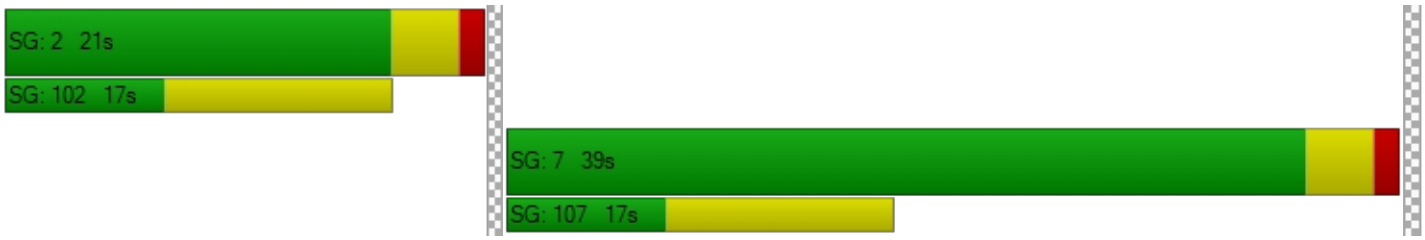
X, volume / capacity	0.28	0.08	0.39	0.00	0.32	0.26
d, Delay for Lane Group [s/veh]	3.02	2.44	39.35	0.00	27.40	23.82
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	0.20	1.00	0.00	0.85	0.72
50th-Percentile Queue Length [ft/ln]	21.70	4.95	25.11	0.00	21.36	17.93
95th-Percentile Queue Length [veh/ln]	1.56	0.36	1.81	0.00	1.54	1.29
95th-Percentile Queue Length [ft/ln]	39.05	8.92	45.19	0.00	38.45	32.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.02	2.44	39.35	0.00	27.40	23.82
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	2.96		2.36		25.67	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.23					
Intersection LOS	A					
Intersection V/C	0.364					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	307.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	174.023

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	55	0	17	61	158	0	0	236	118
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	185	4	322	391	695	13	3	568	283
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	48	1	83	101	179	3	1	147	73
Total Analysis Volume [veh/h]	10	4	3	191	4	332	404	717	13	3	586	292
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	86	0	0	86	0	13	23	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	82	82	82	82	9	25	25	1	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.08	0.21	0.21	0.01	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.75	0.00	156.22	0.21	0.22	0.20	0.01	0.00	0.16	0.18
s, saturation flow rate [veh/h]	19	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	64	1103	60	1103	138	764	341	10	509	227
d1, Uniform Delay [s]	33.53	6.03	59.10	7.58	55.43	46.56	37.63	59.43	51.56	51.56
k, delay calibration	0.29	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.56	0.00	1048.26	0.15	873.52	20.58	0.21	15.71	88.99	157.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.00	3.24	0.30	2.93	0.94	0.04	0.30	1.15	1.29
d, Delay for Lane Group [s/veh]	38.09	6.03	1107.36	7.73	928.95	67.14	37.84	75.14	140.55	209.25
Lane Group LOS	D	A	F	A	F	E	D	E	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.40	0.02	19.37	3.25	37.60	12.65	0.33	0.13	13.91	16.75
50th-Percentile Queue Length [ft/ln]	9.93	0.58	484.36	81.33	940.09	316.28	8.17	3.37	347.69	418.78
95th-Percentile Queue Length [veh/ln]	0.71	0.04	34.87	5.86	58.27	18.48	0.59	0.24	21.31	26.05
95th-Percentile Queue Length [ft/ln]	17.87	1.05	871.84	146.39	1456.74	462.12	14.70	6.06	532.85	651.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.09	38.09	6.03	1107.36	1107.36	7.73	928.95	67.14	37.84	75.14	140.55	209.25
Movement LOS	D	D	A	F	F	A	F	E	D	E	F	F
d_A, Approach Delay [s/veh]	32.43			414.61			373.83			163.10		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	307.41											
Intersection LOS	F											
Intersection V/C	174.023											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	72.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.158

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	571	669	23	9	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	354	213	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	925	882	23	9	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	251	239	6	2	4
Total Analysis Volume [veh/h]	22	1002	956	25	10	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.16	0.05
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	0.00	72.29	17.14
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.52	0.14
95th-Percentile Queue Length [ft/ln]	2.39	0.00	0.00	0.00	13.05	3.53
d_A, Approach Delay [s/veh]	0.22		0.00		40.12	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	0.59					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	822	191	66	785	0	2	3	80	190	5	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	362	0	21	232	0	0	0	0	0	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	1184	191	87	1017	0	2	3	80	190	5	94
Peak Hour Factor	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	331	53	24	284	0	1	1	22	53	1	26
Total Analysis Volume [veh/h]	73	1323	213	97	1136	0	2	3	89	212	6	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	22	11	22	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	39	51	6	40	40	6	6	8	8	8
g / C, Green / Cycle	0.07	0.52	0.68	0.08	0.53	0.53	0.08	0.08	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.37	0.13	0.05	0.30	0.30	0.00	0.06	0.06	0.06	0.07
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1863	1615	1810	1814	1615
c, Capacity [veh/h]	132	1886	1096	147	1006	1006	150	130	188	188	168
d1, Uniform Delay [s]	33.58	13.55	4.46	33.47	11.85	11.85	31.82	33.59	32.06	32.06	32.23
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.55	2.20	0.40	4.99	0.50	0.50	0.09	6.27	2.81	2.80	3.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

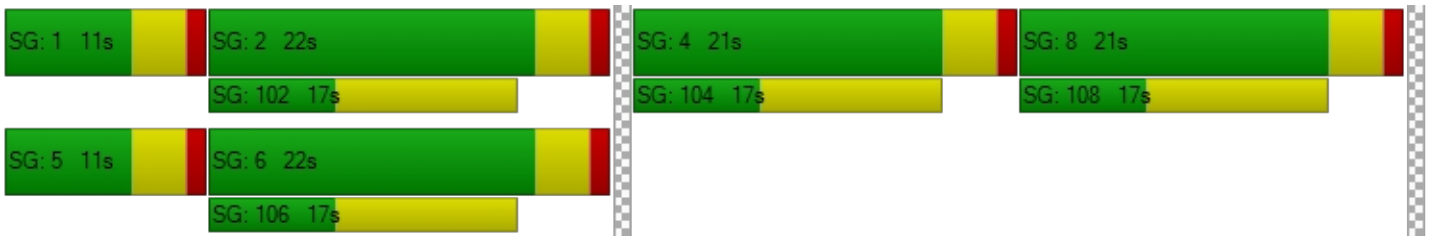
X, volume / capacity	0.55	0.70	0.19	0.66	0.56	0.56	0.03	0.69	0.58	0.58	0.63
d, Delay for Lane Group [s/veh]	37.13	15.75	4.86	38.46	12.35	12.35	31.91	39.86	34.87	34.86	36.02
Lane Group LOS	D	B	A	D	B	B	C	D	C	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.38	7.96	1.06	1.87	5.74	5.74	0.09	1.76	1.98	1.98	1.95
50th-Percentile Queue Length [ft/ln]	34.51	199.12	26.39	46.77	143.59	143.59	2.13	43.99	49.40	49.51	48.76
95th-Percentile Queue Length [veh/ln]	2.48	12.59	1.90	3.37	9.67	9.67	0.15	3.17	3.56	3.56	3.51
95th-Percentile Queue Length [ft/ln]	62.12	314.83	47.50	84.18	241.85	241.85	3.84	79.18	88.93	89.11	87.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.13	15.75	4.86	38.46	12.35	12.35	31.91	31.91	39.86	34.86	34.86	36.02
Movement LOS	D	B	A	D	B	B	C	C	D	C	C	D
d_A, Approach Delay [s/veh]	15.28			14.41			39.43			35.24		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.62											
Intersection LOS	B											
Intersection V/C	0.686											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	231	336	0	0	928	153	0	0	0	122	0	734
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	119	0	0	213	19	0	0	0	8	0	243
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	455	0	0	1141	172	0	0	0	130	0	977
Peak Hour Factor	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	70	130	0	0	326	49	0	0	0	37	0	0
Total Analysis Volume [veh/h]	281	519	0	0	1303	196	0	0	0	148	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	23	54	0	0	31	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	54	54	54	54		54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	11	40	25	25		6	6
g / C, Green / Cycle	0.20	0.74	0.47	0.47		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.16	0.14	0.36	0.12		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	354	2665	1691	755		209	187
d1, Uniform Delay [s]	20.75	2.19	12.01	8.75		23.08	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	4.06	0.04	0.77	0.18		4.35	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

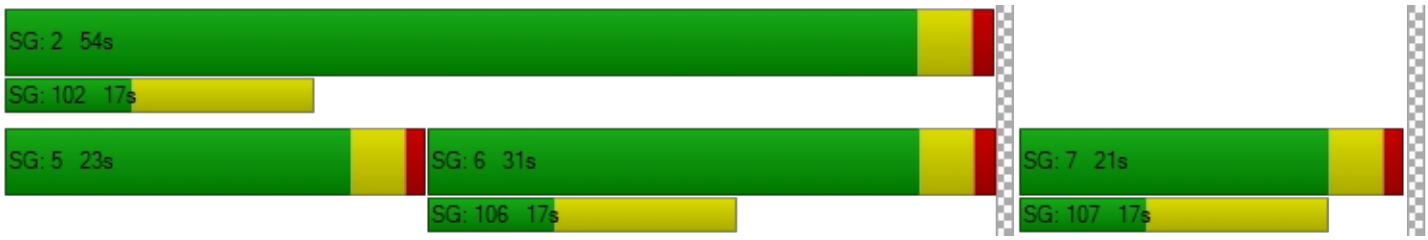
X, volume / capacity	0.79	0.19	0.77	0.26		0.71	0.00
d, Delay for Lane Group [s/veh]	24.81	2.23	12.78	8.93		27.43	0.00
Lane Group LOS	C	A	B	A		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	3.46	0.34	5.39	1.18		1.93	0.00
50th-Percentile Queue Length [ft/ln]	86.51	8.47	134.85	29.50		48.23	0.00
95th-Percentile Queue Length [veh/ln]	6.23	0.61	9.20	2.12		3.47	0.00
95th-Percentile Queue Length [ft/ln]	155.71	15.25	230.08	53.10		86.82	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.81	2.23	0.00	0.00	12.78	8.93	0.00	0.00	0.00	27.43	0.00	0.00
Movement LOS	C	A			B	A				C		A
d_A, Approach Delay [s/veh]	10.16			12.28			0.00			27.43		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	12.50											
Intersection LOS	B											
Intersection V/C	0.768											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	388	160	460	606	0	182	0	764	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	111	10	139	82	0	20	0	12	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	499	170	599	688	0	202	0	776	0	0	3
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	135	46	162	186	0	55	0	210	0	0	1
Total Analysis Volume [veh/h]	0	540	184	648	745	0	219	0	840	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	31	52	0	23	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	110	110	110	110	110	110	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20	20	42	66	36	36	
g / C, Green / Cycle	0.18	0.18	0.38	0.60	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.36	0.21	0.12	0.29	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	647	289	690	2157	599	947	
d1, Uniform Delay [s]	43.70	41.96	32.90	11.32	28.05	34.92	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.92	2.33	6.98	0.10	0.37	3.05	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

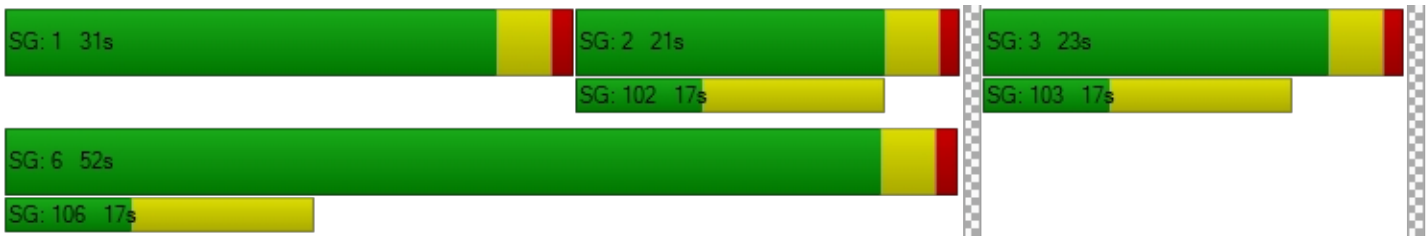
X, volume / capacity	0.83	0.64	0.94	0.35	0.37	0.89	
d, Delay for Lane Group [s/veh]	46.62	44.29	39.88	11.41	28.43	37.97	
Lane Group LOS	D	D	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.32	4.80	17.54	4.47	4.44	10.85	
50th-Percentile Queue Length [ft/ln]	182.97	120.10	438.46	111.74	111.01	271.32	
95th-Percentile Queue Length [veh/ln]	11.76	8.40	24.41	7.94	7.90	16.26	
95th-Percentile Queue Length [ft/ln]	293.88	209.96	610.16	198.43	197.41	406.38	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	46.62	44.29	39.88	11.41	0.00	28.43	0.00	37.97	0.00	0.00	0.00
Movement LOS		D	D	D	B		C		D			
d_A, Approach Delay [s/veh]	46.03			24.66			35.99			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	33.31											
Intersection LOS	C											
Intersection V/C	0.899											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	304	803	0	0	1149	540	0	0	0	411	0	367
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	35	0	0	69	0	0	0	0	157	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	329	838	0	0	1218	540	0	0	0	568	0	367
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	256	0	0	373	165	0	0	0	174	0	112
Total Analysis Volume [veh/h]	403	1026	0	0	1491	661	0	0	0	695	0	449
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	23	87	0	0	64	0	0	0	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	141	141	141	141		141	141	141
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	22	95	70	70		40	40	40
g / C, Green / Cycle	0.16	0.67	0.50	0.50		0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.14	0.21	0.23	0.43		0.23	0.23	0.25
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1683	1530
c, Capacity [veh/h]	462	3310	3252	761		457	475	432
d1, Uniform Delay [s]	58.09	9.42	23.05	31.33		46.92	47.18	48.64
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	5.25	0.05	0.10	3.20		3.33	3.51	6.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.31	0.46	0.87		0.80	0.82	0.90
d, Delay for Lane Group [s/veh]	63.34	9.47	23.16	34.53		50.25	50.70	55.59
Lane Group LOS	E	A	C	C		D	D	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.36	4.27	8.12	20.19		12.37	13.19	13.95
50th-Percentile Queue Length [ft/ln]	184.07	106.67	203.02	504.84		309.29	329.64	348.73
95th-Percentile Queue Length [veh/ln]	11.81	7.65	12.79	27.56		18.14	19.14	20.07
95th-Percentile Queue Length [ft/ln]	295.32	191.37	319.86	689.08		453.50	478.52	501.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.34	9.47	0.00	0.00	23.16	34.53	0.00	0.00	0.00	50.46	50.70	54.85
Movement LOS	E	A			C	C				D	D	D
d_A, Approach Delay [s/veh]	24.66			26.65			0.00			52.22		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	32.24											
Intersection LOS	C											
Intersection V/C	0.859											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.842

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	763	410	495	1097	0	362	3	463	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	60	67	0	226	0	0	0	57	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	823	477	495	1323	0	362	3	520	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	241	140	145	388	0	106	1	152	0	0	0
Total Analysis Volume [veh/h]	0	965	559	580	1551	0	424	4	610	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	59	0	33	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	41	41	23	67	27	27	27	
g / C, Green / Cycle	0.41	0.41	0.23	0.67	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.28	0.37	0.20	0.45	0.21	0.22	0.23	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1576	1530	
c, Capacity [veh/h]	1415	632	672	2297	437	425	413	
d1, Uniform Delay [s]	23.96	27.12	37.10	9.92	33.55	34.32	34.63	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.59	4.35	3.44	0.35	2.79	4.21	5.13	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.88	0.86	0.68	0.76	0.83	0.85	
d, Delay for Lane Group [s/veh]	24.55	31.48	40.54	10.27	36.33	38.54	39.76	
Lane Group LOS	C	C	D	B	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.11	12.56	7.01	8.97	7.61	8.38	8.54	
50th-Percentile Queue Length [ft/ln]	227.65	313.89	175.16	224.35	190.36	209.50	213.51	
95th-Percentile Queue Length [veh/ln]	14.05	18.37	11.35	13.89	12.14	13.13	13.33	
95th-Percentile Queue Length [ft/ln]	351.37	459.17	283.69	347.17	303.50	328.19	333.32	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.55	31.48	40.54	10.27	0.00	36.76	38.54	39.23	0.00	0.00	0.00
Movement LOS		C	C	D	B		D	D	D			
d_A, Approach Delay [s/veh]	27.09			18.51			38.24			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	25.66											
Intersection LOS	C											
Intersection V/C	0.842											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	53.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.918

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	867	12	35	1265	253	248	17	56	38	17	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	115	0	0	242	41	12	2	7	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	982	12	35	1507	294	260	19	63	38	23	67
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	286	3	10	439	86	76	6	18	11	7	19
Total Analysis Volume [veh/h]	73	1143	14	41	1754	342	303	22	73	44	27	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	45	0	10	45	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	212	212	212	212	212	212	212	212	212	212	212	212
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	135	135	7	130	130	61	61	61	61	61	61
g / C, Green / Cycle	0.05	0.64	0.64	0.03	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.05	0.32	0.32	0.03	0.58	0.62	0.23	0.01	0.05	0.03	0.02	0.05
s, saturation flow rate [veh/h]	1619	1800	1792	1619	1800	1702	1309	1800	1530	1321	1800	1530
c, Capacity [veh/h]	88	1144	1140	52	1104	1044	352	522	443	358	522	443
d1, Uniform Delay [s]	99.24	20.72	20.72	101.86	37.86	40.94	79.03	54.10	56.11	62.41	54.25	56.30
k, delay calibration	0.11	0.12	0.12	0.11	0.45	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.80	0.40	0.40	23.15	16.15	28.62	6.23	0.03	0.17	0.15	0.04	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.51	0.51	0.79	0.95	1.00	0.86	0.04	0.16	0.12	0.05	0.18
d, Delay for Lane Group [s/veh]	117.04	21.12	21.13	125.01	54.02	69.56	85.26	54.13	56.28	62.56	54.29	56.49
Lane Group LOS	F	C	C	F	D	F	F	D	E	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.47	15.98	15.92	2.61	54.74	61.93	17.04	0.87	3.00	1.91	1.07	3.22
50th-Percentile Queue Length [ft/ln]	111.70	399.39	397.88	65.18	1368.50	1548.37	426.00	21.79	75.11	47.63	26.81	80.53
95th-Percentile Queue Length [veh/ln]	7.93	22.53	22.46	4.69	66.87	75.09	23.81	1.57	5.41	3.43	1.93	5.80
95th-Percentile Queue Length [ft/ln]	198.36	563.27	561.45	117.32	1671.84	1877.35	595.25	39.21	135.19	85.74	48.26	144.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	117.04	21.12	21.13	125.01	60.27	69.56	85.26	54.13	56.28	62.56	54.29	56.49
Movement LOS	F	C	C	F	E	E	F	D	E	E	D	E
d_A, Approach Delay [s/veh]	26.82			63.00			78.23			57.89		
Approach LOS	C			E			E			E		
d_I, Intersection Delay [s/veh]	52.98											
Intersection LOS	D											
Intersection V/C	0.918											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.755

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	811	10	58	1159	97	112	7	71	20	4	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	106	0	0	216	33	11	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	917	10	58	1375	130	123	7	82	20	4	49
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	261	3	17	392	37	35	2	23	6	1	14
Total Analysis Volume [veh/h]	89	1044	11	66	1566	148	140	8	93	23	5	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	43	42	0	68	67	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	55	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	32	32	4	31	31	10	10	10	10	10
g / C, Green / Cycle	0.10	0.58	0.58	0.08	0.56	0.56	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.29	0.04	0.48	0.49	0.13	0.06	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1793	1619	1800	1747	1144	1530	1430	1800	1530
c, Capacity [veh/h]	155	1040	1036	132	1015	985	330	271	142	318	271
d1, Uniform Delay [s]	23.78	6.94	6.94	24.15	10.02	10.22	22.60	19.82	27.38	18.66	19.32
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.35	0.39	0.39	2.88	2.08	2.46	0.96	0.75	0.53	0.02	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

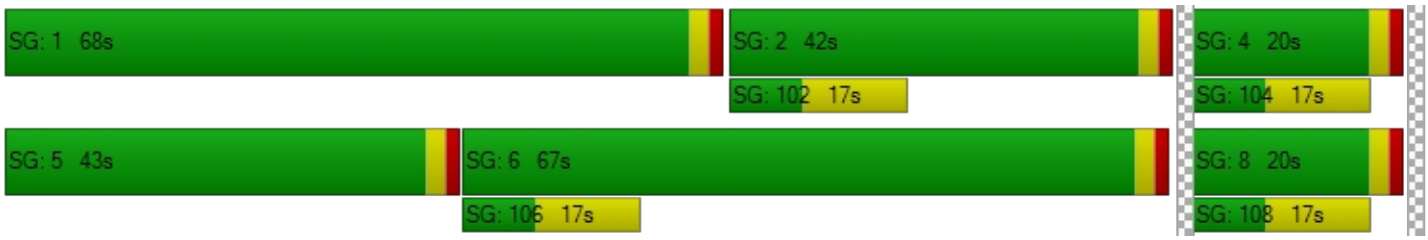
X, volume / capacity	0.58	0.51	0.51	0.50	0.85	0.87	0.45	0.34	0.16	0.02	0.21
d, Delay for Lane Group [s/veh]	27.13	7.33	7.33	27.03	12.11	12.68	23.55	20.57	27.90	18.68	19.69
Lane Group LOS	C	A	A	C	B	B	C	C	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.17	2.79	2.78	0.87	6.85	6.99	1.77	1.01	0.31	0.05	0.59
50th-Percentile Queue Length [ft/ln]	29.34	69.78	69.54	21.82	171.18	174.84	44.35	25.33	7.68	1.25	14.74
95th-Percentile Queue Length [veh/ln]	2.11	5.02	5.01	1.57	11.14	11.33	3.19	1.82	0.55	0.09	1.06
95th-Percentile Queue Length [ft/ln]	52.82	125.60	125.18	39.28	278.46	283.27	79.82	45.59	13.82	2.26	26.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.13	7.33	7.33	27.03	12.36	12.68	23.55	23.55	20.57	27.90	18.68	19.69
Movement LOS	C	A	A	C	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	8.87			12.93			22.40			21.88		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	12.44											
Intersection LOS	B											
Intersection V/C	0.755											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	838	1132	61	34	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	107	202	25	8	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	945	1334	86	42	142
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	265	375	24	12	40
Total Analysis Volume [veh/h]	118	1062	1499	97	47	160
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	70	59	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	33	25	25	7	7
g / C, Green / Cycle	0.12	0.72	0.54	0.54	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.07	0.31	0.44	0.45	0.03	0.10
s, saturation flow rate [veh/h]	1619	3427	1800	1762	1619	1530
c, Capacity [veh/h]	193	2483	973	952	236	223
d1, Uniform Delay [s]	19.31	2.54	8.75	8.90	17.35	18.81
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	0.12	1.78	2.05	0.41	4.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.43	0.82	0.84	0.20	0.72
d, Delay for Lane Group [s/veh]	22.45	2.65	10.53	10.95	17.76	23.13
Lane Group LOS	C	A	B	B	B	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.23	0.53	4.77	4.90	0.42	1.70
50th-Percentile Queue Length [ft/ln]	30.84	13.27	119.24	122.62	10.40	42.58
95th-Percentile Queue Length [veh/ln]	2.22	0.96	8.35	8.54	0.75	3.07
95th-Percentile Queue Length [ft/ln]	55.52	23.89	208.78	213.42	18.72	76.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.45	2.65	10.73	10.95	17.76	23.13
Movement LOS	C	A	B	B	B	C
d_A, Approach Delay [s/veh]	4.63		10.74		21.91	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	9.10					
Intersection LOS	A					
Intersection V/C	0.725					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	118	607	44	60	908	171	158	160	93	75	246	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	61	12	17	65	134	68	34	13	6	46	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	668	56	77	973	305	226	194	106	81	292	69
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	194	16	22	283	89	66	56	31	24	85	20
Total Analysis Volume [veh/h]	159	776	65	89	1130	354	262	225	123	94	339	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	36	35	0	47	46	0	48	26	0	48	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	94	94	94	94	94	94	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	21	45	45	13	36	36	27	0	0	27	0	0
g / C, Green / Cycle	0.23	0.48	0.48	0.13	0.38	0.38	0.29	0.00	0.00	0.29	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.18	0.24	0.24	0.10	0.33	0.23	0.25	0.13	0.08	0.08	0.19	0.05
s, saturation flow rate [veh/h]	860	1800	1752	860	3427	1530	1058	1800	1530	1174	1800	1530
c, Capacity [veh/h]	254	861	838	175	1323	590	363	0	0	395	0	0
d1, Uniform Delay [s]	36.19	16.70	16.70	41.03	26.36	22.99	33.11	0.00	0.00	27.08	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.51	0.44	0.45	2.28	1.68	0.98	2.71	0.00	0.00	0.31	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

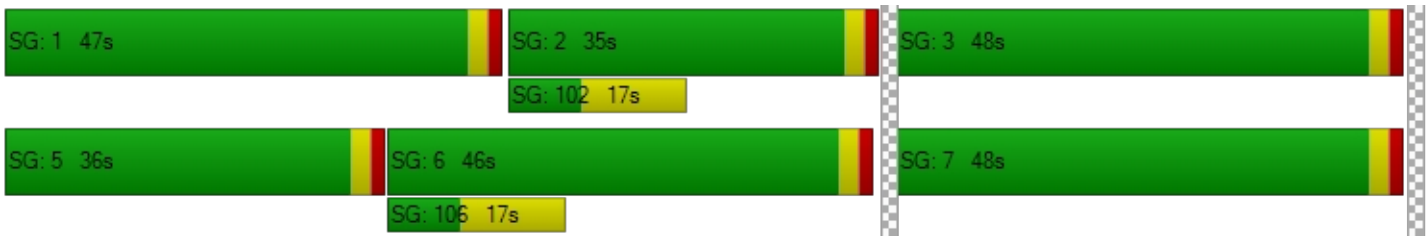
X, volume / capacity	0.62	0.49	0.49	0.51	0.85	0.60	0.72	0.00	0.00	0.24	0.00	0.00
d, Delay for Lane Group [s/veh]	38.70	17.14	17.15	43.32	28.05	23.97	35.82	0.00	0.00	27.39	0.00	0.00
Lane Group LOS	D	B	B	D	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.64	6.09	5.93	2.11	11.38	6.21	5.87	0.00	0.00	1.68	0.00	0.00
50th-Percentile Queue Length [ft/ln]	91.06	152.21	148.19	52.85	284.39	155.18	146.84	0.00	0.00	41.92	0.00	0.00
95th-Percentile Queue Length [veh/ln]	6.56	10.14	9.92	3.81	16.91	10.29	9.85	0.00	0.00	3.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	163.90	253.38	248.01	95.14	422.67	257.33	246.21	0.00	0.00	75.46	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.70	17.15	17.15	43.32	28.05	23.97	35.82	0.00	0.00	27.39	0.00	0.00
Movement LOS	D	B	B	D	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	20.58			27.99			15.39			5.02		
Approach LOS	C			C			B			A		
d_I, Intersection Delay [s/veh]	20.72											
Intersection LOS	C											
Intersection V/C	0.833											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	311	11	49	770	320	159	33	37	3	38	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	30	0	0	16	63	32	0	19	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	341	11	49	786	383	191	33	56	3	38	31
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	90	3	13	209	102	51	9	15	1	10	8
Total Analysis Volume [veh/h]	99	362	12	52	834	407	203	35	59	3	40	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	33	0	12	34	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	23	23	3	21	21	12	12
g / C, Green / Cycle	0.11	0.48	0.48	0.07	0.45	0.45	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.10	0.03	0.36	0.37	0.21	0.04
s, saturation flow rate [veh/h]	1619	1800	1780	1619	1800	1604	1403	1697
c, Capacity [veh/h]	176	866	856	120	804	716	485	511
d1, Uniform Delay [s]	20.00	7.11	7.11	20.93	11.36	11.44	16.72	13.77
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.80	0.12	0.13	2.44	2.04	2.43	1.26	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

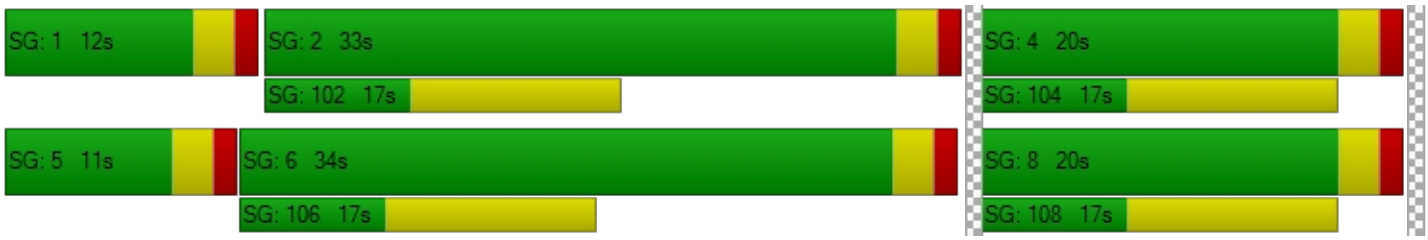
X, volume / capacity	0.56	0.22	0.22	0.43	0.81	0.82	0.61	0.15
d, Delay for Lane Group [s/veh]	22.80	7.23	7.24	23.37	13.40	13.86	17.98	13.90
Lane Group LOS	C	A	A	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.06	0.85	0.85	0.58	4.93	4.55	2.77	0.57
50th-Percentile Queue Length [ft/ln]	26.59	21.29	21.13	14.45	123.27	113.66	69.18	14.15
95th-Percentile Queue Length [veh/ln]	1.91	1.53	1.52	1.04	8.57	8.04	4.98	1.02
95th-Percentile Queue Length [ft/ln]	47.85	38.33	38.04	26.01	214.31	201.08	124.52	25.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.80	7.24	7.24	23.37	13.50	13.86	17.98	17.98	17.98	13.90	13.90	13.90
Movement LOS	C	A	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.49			14.01			17.98			13.90		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.78											
Intersection LOS	B											
Intersection V/C	0.733											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 10 Opening Year (2020) With Project Evening Peak Hour - Alternative 2

Report File: C:\...\PMOYW2.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.174	70.9	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.021	50.6	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.838	31.7	C
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.793	18.7	B
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	2.180	114.9	F
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	1.010	39.9	D
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.102	17.0	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.720	8.6	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	685.1	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	1.119	167.1	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Left	4.058	2,605.7	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	161.6	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	2.230	44.6	D
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	NB Left	0.870	76.4	E
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Two-way stop	HCM 2010	NB Left	0.872	61.7	F
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.019	55.0	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.710	11.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.061	10.6	B
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.101	21.9	C
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.671	13.1	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.017	10.8	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.720	47.6	E
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.019	11.2	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	1.890	509.8	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.540	28.1	D
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.337	19.3	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.686	16.3	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.874	3.2	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	547.612	676.7	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	1.028	344.9	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.691	26.1	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.893	32.2	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	1.149	85.5	F
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.703	15.0	B
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.884	37.2	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.878	37.4	D
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.717	12.0	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Right	0.685	8.2	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.890	30.5	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	0.895	31.8	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	70.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.174

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	313	1437	0	0	1037	633	0	0	0	293	4	533
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	258	157	0	0	77	15	0	0	0	79	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	571	1594	0	0	1114	648	0	0	0	372	4	545
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	413	0	0	289	168	0	0	0	96	1	141
Total Analysis Volume [veh/h]	592	1652	0	0	1154	672	0	0	0	385	4	565
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	39	86	0	0	47	0	0	0	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	36	83	44	44		31	31
g / C, Green / Cycle	0.30	0.69	0.37	0.37		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.37	0.48	0.24	0.44		0.29	0.31
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1677	1530
c, Capacity [veh/h]	486	2370	1797	561		434	396
d1, Uniform Delay [s]	42.18	11.08	31.64	38.19		44.68	44.68
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	102.45	1.73	1.78	105.80		54.69	95.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

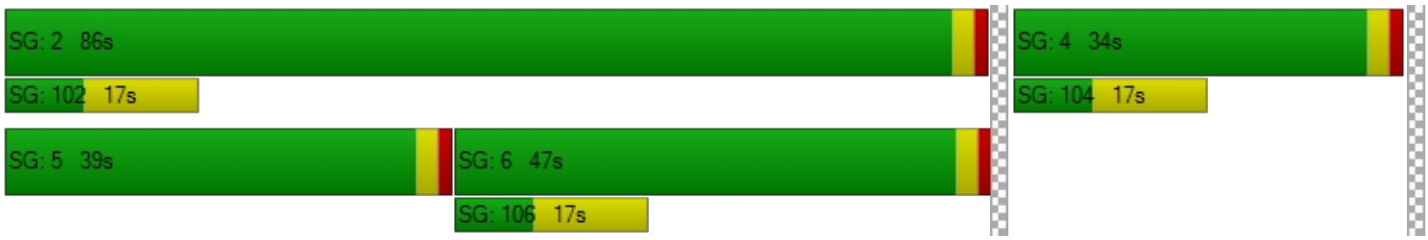
X, volume / capacity	1.22	0.70	0.64	1.20		1.10	1.20
d, Delay for Lane Group [s/veh]	144.63	12.80	33.42	143.99		99.37	140.27
Lane Group LOS	F	B	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	28.07	12.40	9.49	32.65		19.41	22.20
50th-Percentile Queue Length [ft/ln]	701.63	310.03	237.29	816.20		485.17	555.08
95th-Percentile Queue Length [veh/ln]	41.26	18.18	14.54	47.21		28.20	33.10
95th-Percentile Queue Length [ft/ln]	1031.50	454.42	363.61	1180.34		705.00	827.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	144.63	12.80	0.00	0.00	33.42	143.99	0.00	0.00	0.00	99.37	99.37	133.85
Movement LOS	F	B			C	F				F	F	F
d_A, Approach Delay [s/veh]	47.58			74.11			0.00			119.74		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	70.93											
Intersection LOS	E											
Intersection V/C	1.174											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	50.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.021

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1091	385	395	934	0	679	2	176	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	395	151	9	147	0	20	0	131	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1486	536	404	1081	0	699	2	307	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	390	141	106	284	0	184	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1561	563	424	1136	0	734	2	322	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	45	0	33	78	0	0	42	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	42	42	30	75	39	39	
g / C, Green / Cycle	0.35	0.35	0.25	0.63	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.26	0.33	0.32	0.34	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1600	
c, Capacity [veh/h]	1715	535	406	2143	526	520	
d1, Uniform Delay [s]	37.38	39.19	45.17	12.66	40.23	40.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.73	53.23	33.81	0.94	13.51	31.79	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.91	1.05	1.05	0.53	0.98	1.05	
d, Delay for Lane Group [s/veh]	46.11	92.41	78.98	13.61	53.74	72.47	
Lane Group LOS	D	F	F	B	D	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	15.76	23.42	15.80	8.47	16.78	19.75	
50th-Percentile Queue Length [ft/ln]	394.10	585.49	395.05	211.79	419.52	493.72	
95th-Percentile Queue Length [veh/ln]	22.28	32.46	22.91	13.24	23.50	27.85	
95th-Percentile Queue Length [ft/ln]	556.88	811.45	572.72	331.12	587.47	696.18	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	46.11	92.41	78.98	13.61	0.00	59.19	72.47	72.47	0.00	0.00	0.00
Movement LOS		D	F	F	B		E	E	E			
d_A, Approach Delay [s/veh]	58.38			31.38			63.37			0.00		
Approach LOS	E			C			E			A		
d_I, Intersection Delay [s/veh]	50.61											
Intersection LOS	D											
Intersection V/C	1.021											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.838

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	896	39	102	740	100	250	371	115	21	125	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	362	6	23	216	32	91	2	18	10	4	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	1258	45	125	956	132	341	373	133	31	129	147
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	323	12	32	246	34	88	96	34	8	33	38
Total Analysis Volume [veh/h]	90	1293	46	128	983	136	350	383	137	32	133	151
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	56	0	15	58	0	34	43	0	11	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	97	97	97	97	97	97	97	97	97	97	97	97
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	40	40	10	43	43	23	31	31	4	12	12
g / C, Green / Cycle	0.07	0.41	0.41	0.10	0.44	0.44	0.24	0.32	0.32	0.04	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.37	0.37	0.08	0.32	0.32	0.22	0.11	0.09	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1619	1800	1778	1619	1800	1725	1619	3427	1530	1619	1800	1530
c, Capacity [veh/h]	115	745	736	159	794	761	389	1106	494	68	224	190
d1, Uniform Delay [s]	44.36	26.65	26.69	42.85	22.21	22.24	35.75	25.08	24.47	45.46	40.20	41.31
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.01	4.43	4.59	9.08	1.24	1.31	7.68	0.19	0.30	5.03	2.52	7.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

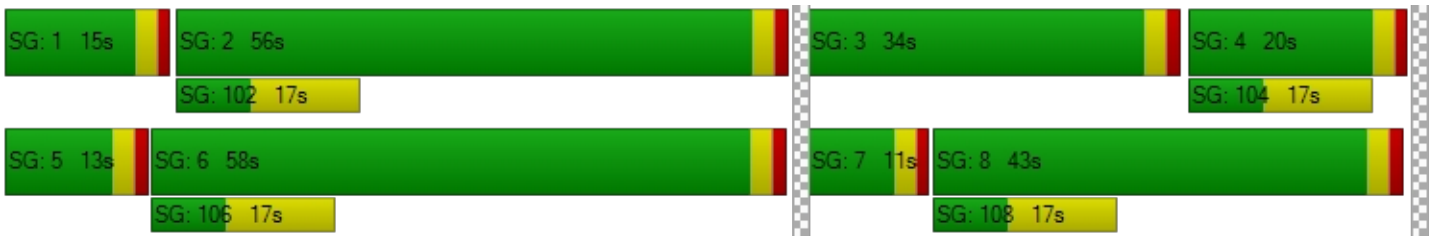
X, volume / capacity	0.78	0.90	0.91	0.80	0.72	0.72	0.90	0.35	0.28	0.47	0.59	0.79
d, Delay for Lane Group [s/veh]	55.37	31.08	31.28	51.93	23.44	23.55	43.43	25.26	24.77	50.50	42.72	48.64
Lane Group LOS	E	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.46	14.77	14.68	3.37	10.43	10.06	8.67	3.34	2.35	0.84	3.13	3.85
50th-Percentile Queue Length [ft/ln]	61.48	369.25	367.04	84.34	260.79	251.41	216.83	83.44	58.78	21.06	78.18	96.32
95th-Percentile Queue Length [veh/ln]	4.43	21.07	20.97	6.07	15.73	15.26	13.50	6.01	4.23	1.52	5.63	6.93
95th-Percentile Queue Length [ft/ln]	110.66	526.82	524.14	151.80	393.21	381.43	337.57	150.20	105.80	37.90	140.72	173.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.37	31.18	31.28	51.93	23.49	23.55	43.43	25.26	24.77	50.50	42.72	48.64
Movement LOS	E	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	32.70			26.41			32.50			46.34		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	31.74											
Intersection LOS	C											
Intersection V/C	0.838											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	103	886	56	63	716	59	66	161	104	36	118	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	357	6	0	214	30	34	3	24	7	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	1243	62	63	930	89	100	164	128	43	123	37
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	337	17	17	252	24	27	44	35	12	33	10
Total Analysis Volume [veh/h]	157	1347	67	68	1008	96	108	178	139	47	133	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	34	0	10	27	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	28	28	5	25	25	19	19
g / C, Green / Cycle	0.12	0.46	0.46	0.08	0.41	0.41	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.10	0.39	0.40	0.04	0.31	0.31	0.28	0.15
s, saturation flow rate [veh/h]	1619	1800	1770	1619	1800	1746	1541	1424
c, Capacity [veh/h]	202	829	815	128	747	724	557	518
d1, Uniform Delay [s]	25.93	14.69	14.75	27.06	15.18	15.19	19.79	16.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.36	2.70	2.86	3.41	1.54	1.60	2.21	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

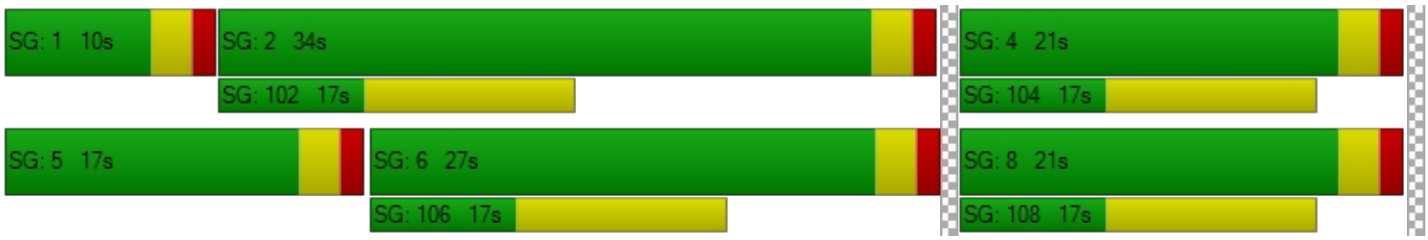
X, volume / capacity	0.78	0.86	0.86	0.53	0.75	0.75	0.76	0.43
d, Delay for Lane Group [s/veh]	32.29	17.39	17.61	30.47	16.72	16.79	22.00	17.05
Lane Group LOS	C	B	B	C	B	B	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.43	7.96	7.94	1.02	6.03	5.87	5.47	2.28
50th-Percentile Queue Length [ft/ln]	60.79	198.96	198.46	25.57	150.65	146.63	136.63	57.02
95th-Percentile Queue Length [veh/ln]	4.38	12.59	12.56	1.84	10.05	9.84	9.30	4.11
95th-Percentile Queue Length [ft/ln]	109.41	314.63	313.97	46.03	251.29	245.92	232.48	102.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.29	17.49	17.61	30.47	16.75	16.79	22.00	22.00	22.00	17.05	17.05	17.05
Movement LOS	C	B	B	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	18.97			17.55			22.00			17.05		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	18.74											
Intersection LOS	B											
Intersection V/C	0.793											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	114.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.180

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	944	65	110	754	43	57	190	51	70	69	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	291	10	27	196	16	39	14	31	22	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	1235	75	137	950	59	96	204	82	92	79	101
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	316	19	35	243	15	25	52	21	24	20	26
Total Analysis Volume [veh/h]	96	1264	77	140	972	60	98	209	84	94	81	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	18	18	6	18	18	27	27	27	27
g / C, Green / Cycle	0.09	0.29	0.29	0.11	0.31	0.31	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.38	0.09	0.29	0.29	1.08	0.05	1.50	0.07
s, saturation flow rate [veh/h]	1619	1800	1764	1619	1800	1763	285	1530	117	1530
c, Capacity [veh/h]	153	527	516	175	551	540	207	688	144	688
d1, Uniform Delay [s]	26.21	21.28	21.28	26.18	20.38	20.38	14.80	9.65	20.74	9.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.26	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.15	141.31	144.04	8.06	26.94	27.44	223.35	0.08	123.32	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	1.28	1.29	0.80	0.95	0.95	1.48	0.12	1.21	0.15
d, Delay for Lane Group [s/veh]	30.36	162.59	165.32	34.25	47.31	47.83	238.14	9.73	144.06	9.87
Lane Group LOS	C	F	F	C	D	D	F	A	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.43	27.31	27.16	2.23	10.50	10.37	14.31	0.57	6.94	0.71
50th-Percentile Queue Length [ft/ln]	35.64	682.82	678.90	55.84	262.43	259.19	357.72	14.37	173.57	17.87
95th-Percentile Queue Length [veh/ln]	2.57	41.20	41.07	4.02	15.81	15.65	25.12	1.03	12.50	1.29
95th-Percentile Queue Length [ft/ln]	64.15	1030.07	1026.80	100.51	395.27	391.20	627.92	25.87	312.42	32.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.36	163.86	165.32	34.25	47.55	47.83	238.14	238.14	9.73	144.06	144.06	9.87
Movement LOS	C	F	F	C	D	D	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	155.02			45.98			189.07			94.34		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	114.95											
Intersection LOS	F											
Intersection V/C	2.180											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	39.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.010

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	201	45	86	185	0	0	1	2	107	2	165
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1375	123	398	1153	15	21	9	23	170	16	321
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	355	32	103	298	4	5	2	6	44	4	83
Total Analysis Volume [veh/h]	16	1422	127	412	1192	16	22	9	24	176	17	332
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	57	0	33	79	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	53	53	29	79	79	26	26	26
g / C, Green / Cycle	0.02	0.44	0.44	0.24	0.66	0.66	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.41	0.42	0.23	0.32	0.32	0.27	0.24	0.21
s, saturation flow rate [veh/h]	1810	1900	1846	1810	1900	1891	207	806	1615
c, Capacity [veh/h]	46	839	815	437	1250	1244	87	232	350
d1, Uniform Delay [s]	57.63	31.85	32.09	44.77	10.32	10.33	40.47	48.34	46.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	18.31	20.12	10.38	1.34	1.35	7.40	7.53	12.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.93	0.94	0.94	0.48	0.48	0.63	0.83	0.95
d, Delay for Lane Group [s/veh]	62.11	50.15	52.21	55.15	11.66	11.69	47.87	55.87	59.33
Lane Group LOS	E	D	D	E	B	B	D	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.54	25.16	25.22	13.23	8.02	8.01	1.50	6.37	10.97
50th-Percentile Queue Length [ft/ln]	13.40	628.89	630.54	330.70	200.39	200.13	37.46	159.22	274.35
95th-Percentile Queue Length [veh/ln]	0.96	33.38	33.46	19.19	12.66	12.65	2.70	10.51	16.41
95th-Percentile Queue Length [ft/ln]	24.11	834.53	836.44	479.82	316.47	316.13	67.43	262.69	410.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.11	51.08	52.21	55.15	11.68	11.69	47.87	47.87	47.87	55.87	55.87	59.33
Movement LOS	E	D	D	E	B	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	51.28			22.73			47.87			58.06		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	39.89											
Intersection LOS	D											
Intersection V/C	1.010											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.102

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	222	26	0	294	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1486	26	0	1346	0	28
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	391	8	0	354	0	8
Total Analysis Volume [veh/h]	1564	31	0	1417	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.02
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.34
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	8.44
d_A, Approach Delay [s/veh]	0.00		0.00		17.02	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.19					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	187	96	27	267	210	60
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1451	96	27	1319	210	60
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	382	25	7	347	55	16
Total Analysis Volume [veh/h]	1527	101	28	1388	221	63
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	82	0	11	93	27	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	2	37	9	9
g / C, Green / Cycle	0.57	0.57	0.04	0.69	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.42	0.06	0.02	0.38	0.12	0.04
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2054	917	81	2485	298	266
d1, Uniform Delay [s]	8.71	5.37	24.97	4.29	21.42	19.57
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.05	2.51	0.20	3.63	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.11	0.35	0.56	0.74	0.24
d, Delay for Lane Group [s/veh]	9.26	5.42	27.48	4.49	25.05	20.02
Lane Group LOS	A	A	C	A	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.88	0.40	0.38	2.09	2.72	0.66
50th-Percentile Queue Length [ft/ln]	122.00	9.97	9.51	52.27	67.94	16.57
95th-Percentile Queue Length [veh/ln]	8.50	0.72	0.68	3.76	4.89	1.19
95th-Percentile Queue Length [ft/ln]	212.57	17.94	17.12	94.09	122.28	29.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.26	5.42	27.48	4.49	25.05	20.02
Movement LOS	A	A	C	A	C	C
d_A, Approach Delay [s/veh]	9.02		4.94		23.93	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	8.56					
Intersection LOS	A					
Intersection V/C	0.720					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	685.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	281	0	0	477	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1517	0	0	1521	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	386	0	0	387	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1545	0	0	1549	15	24	0	37	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.02	0.00	0.00	0.02	0.00	1.31	0.00	0.11	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	13.78	0.00	0.00	13.27	0.00	0.00	546.98	685.10	360.59	224.79	348.39	19.88
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.00	0.00	0.00	6.04	6.04	6.04	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.28	0.00	0.00	0.00	0.00	0.00	151.11	151.11	151.11	5.34	5.34	5.34
d_A, Approach Delay [s/veh]	0.16			0.00			433.92			71.10		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	8.46											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	167.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.119

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	108	51	219	212	47	26	21	23	104	38	148
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	500	526	682	690	75	58	85	26	413	90	624
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	129	136	176	178	19	15	22	7	107	23	0
Total Analysis Volume [veh/h]	62	517	544	705	714	78	60	88	27	427	93	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	31	0	35	53	0	0	22	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	399	399	399	399	399	399	399	399	399	399
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	27	27	116	116
g / C, Green / Cycle	0.04	0.30	0.30	0.30	0.56	0.56	0.07	0.07	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.39	0.20	0.05	0.03	0.06	0.28	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1824	1825	1615
c, Capacity [veh/h]	71	1089	486	545	2035	909	124	125	528	468
d1, Uniform Delay [s]	190.52	113.67	139.37	139.37	47.53	40.09	178.91	184.62	140.75	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.45	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.65	0.32	77.68	145.84	0.10	0.04	2.90	22.13	33.32	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.47	1.12	1.29	0.35	0.09	0.48	0.92	0.98	0.00
d, Delay for Lane Group [s/veh]	216.17	113.99	217.05	285.21	47.64	40.13	181.82	206.75	174.06	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.15	22.54	62.34	80.15	20.31	3.75	6.33	13.08	60.03	0.00
50th-Percentile Queue Length [ft/ln]	178.87	563.53	1558.48	2003.68	507.85	93.70	158.13	327.01	1500.66	0.00
95th-Percentile Queue Length [veh/ln]	11.54	30.33	81.30	111.05	27.71	6.75	10.45	19.01	72.73	0.00
95th-Percentile Queue Length [ft/ln]	288.54	758.19	2032.52	2776.35	692.64	168.65	261.24	475.30	1818.32	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	216.17	113.99	217.05	285.21	47.64	40.13	181.82	206.75	206.75	174.06	174.06	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	169.55			159.13			198.20			174.06		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	167.07											
Intersection LOS	F											
Intersection V/C	1.119											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	2,605.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.058

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	900	83	123	722	5	4	15	15	26	17	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	199	0	0	339	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1099	83	123	1061	5	4	15	15	26	17	37
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	282	21	32	273	1	1	4	4	7	4	10
Total Analysis Volume [veh/h]	18	1129	85	126	1090	5	4	15	15	27	17	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.22	0.01	0.00	0.62	0.90	0.03	4.06	0.90	0.08
d_M, Delay for Movement [s/veh]	10.74	0.00	0.00	12.89	0.00	0.00	1051.60	704.41	496.90	2605.68	2254.78	2072.21
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.09	0.04	0.00	0.79	0.40	0.00	4.40	4.40	4.40	11.01	11.01	11.01
95th-Percentile Queue Length [ft/ln]	2.15	1.08	0.00	19.84	9.92	0.00	110.11	110.11	110.11	275.20	275.20	275.20
d_A, Approach Delay [s/veh]	0.16			1.33			653.71			2285.71		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	82.32											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	161.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	978	29	21	742	3	0	0	10	18	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	199	0	0	339	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1177	29	21	1081	3	0	0	10	18	0	22
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	309	8	6	284	1	0	0	3	5	0	6
Total Analysis Volume [veh/h]	7	1235	30	22	1134	3	0	0	10	19	0	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.02	0.45	0.00	0.05
d_M, Delay for Movement [s/veh]	10.86	0.00	0.00	11.74	0.00	0.00	85.29	130.37	12.81	125.95	161.56	49.74
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	E
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.12	0.06	0.00	0.07	0.07	0.07	2.12	2.12	2.12
95th-Percentile Queue Length [ft/ln]	0.85	0.43	0.00	2.94	1.47	0.00	1.63	1.63	1.63	53.12	53.12	53.12
d_A, Approach Delay [s/veh]	0.06			0.22			12.81			84.21		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	1.61											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.230

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	837	47	18	657	22	40	25	25	69	29	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	167	9	0	317	44	32	10	23	10	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	1004	56	18	974	66	72	35	48	79	47	13
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	273	15	5	265	18	20	10	13	22	13	4
Total Analysis Volume [veh/h]	108	1094	61	20	1061	72	78	38	52	86	51	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	22	22	2	18	18	24	24	24	24
g / C, Green / Cycle	0.10	0.37	0.37	0.03	0.30	0.30	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.06	0.31	0.31	0.01	0.30	0.30	1.42	0.03	1.39	0.01
s, saturation flow rate [veh/h]	1810	1900	1865	1810	1900	1858	81	1615	99	1615
c, Capacity [veh/h]	181	695	682	65	573	561	132	645	137	645
d1, Uniform Delay [s]	25.98	17.49	17.50	28.33	21.04	21.05	23.91	11.24	23.72	10.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.27	0.11	0.25	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	11.57	11.85	2.63	37.24	37.85	32.55	0.05	55.88	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.84	0.84	0.31	1.00	1.00	0.88	0.08	1.00	0.02
d, Delay for Lane Group [s/veh]	29.12	29.06	29.36	30.96	58.28	58.90	56.45	11.30	79.60	10.99
Lane Group LOS	C	C	C	C	E	E	E	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.56	8.70	8.61	0.32	13.13	12.94	2.80	0.39	4.01	0.10
50th-Percentile Queue Length [ft/ln]	38.90	217.61	215.31	7.88	328.15	323.44	70.01	9.84	100.16	2.58
95th-Percentile Queue Length [veh/ln]	2.80	13.54	13.43	0.57	19.07	18.84	5.04	0.71	7.21	0.19
95th-Percentile Queue Length [ft/ln]	70.01	338.57	335.63	14.19	476.70	470.91	126.02	17.71	180.29	4.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.12	29.20	29.36	30.96	58.56	58.90	56.45	56.45	11.30	79.60	79.60	10.99
Movement LOS	C	C	C	C	E	E	E	E	B	E	E	B
d_A, Approach Delay [s/veh]	29.20			58.11			42.48			73.24		
Approach LOS	C			E			D			E		
d_I, Intersection Delay [s/veh]	44.63											
Intersection LOS	D											
Intersection V/C	2.230											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	76.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.870

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	903	0	0	841	28	30	0	136	461	103	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	164	0	0	342	8	6	0	30	49	33	46
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	1067	0	0	1183	36	36	0	166	510	136	103
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	284	0	0	315	10	10	0	44	136	36	27
Total Analysis Volume [veh/h]	92	1136	0	0	1260	38	38	0	177	543	145	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	72	0	0	72	0	21	0	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	266	266	266	266	266	266	266	266
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	120	120	120	120	31	31	103	103
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.12	0.12	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.21	0.31	0.34	0.35	0.02	0.11	0.38	0.07
s, saturation flow rate [veh/h]	431	3618	1900	1881	1810	1615	1828	1615
c, Capacity [veh/h]	94	1632	857	849	213	190	705	623
d1, Uniform Delay [s]	117.80	58.37	60.81	61.14	105.67	116.18	80.46	53.84
k, delay calibration	0.11	0.11	0.30	0.31	0.11	0.11	0.36	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.31	0.54	3.79	4.06	0.39	17.36	23.46	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

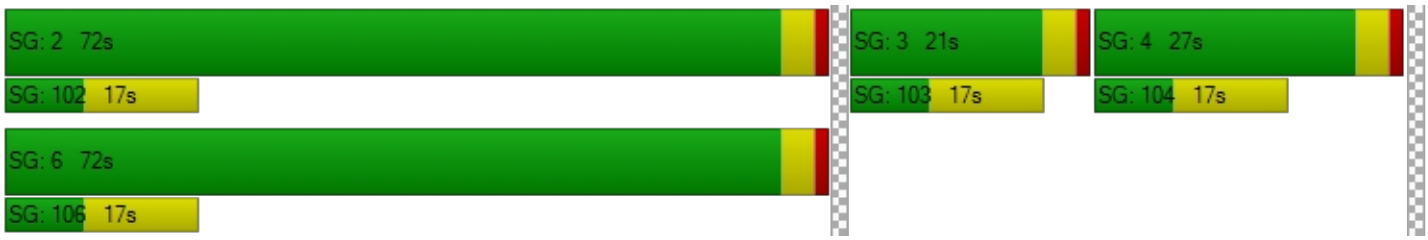
X, volume / capacity	0.98	0.70	0.76	0.76	0.18	0.93	0.98	0.18
d, Delay for Lane Group [s/veh]	155.11	58.91	64.60	65.20	106.06	133.55	103.92	53.97
Lane Group LOS	F	E	E	E	F	F	F	D
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.51	31.33	38.05	38.31	2.44	13.30	51.49	5.04
50th-Percentile Queue Length [ft/ln]	187.79	783.24	951.28	957.67	61.04	332.57	1287.21	126.01
95th-Percentile Queue Length [veh/ln]	12.01	40.51	48.17	48.46	4.39	19.28	63.26	8.72
95th-Percentile Queue Length [ft/ln]	300.16	1012.72	1204.19	1211.43	109.87	482.10	1581.41	218.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	155.11	58.91	0.00	0.00	64.89	65.20	106.06	0.00	133.55	103.92	103.92	53.97
Movement LOS	F	E			E	E	F		F	F	F	D
d_A, Approach Delay [s/veh]	66.12			64.90			128.69			97.04		
Approach LOS	E			E			F			F		
d_I, Intersection Delay [s/veh]	76.45											
Intersection LOS	E											
Intersection V/C	0.870											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Two-way stop	Delay (sec / veh):	61.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.872

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	233	1000	927	485	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	181	222	199	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1181	1149	684	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	312	304	181	0	0
Total Analysis Volume [veh/h]	268	1248	1215	723	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.87	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	61.67	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	7.87	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	196.77	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.90		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.79					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	55.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.019

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	601	299	84	836	0	625	36	389	15	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	93	37	86	136	0	109	0	22	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	694	336	170	972	0	734	36	411	15	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	185	89	45	259	0	195	10	109	4	0	1
Total Analysis Volume [veh/h]	0	739	358	181	1035	0	782	38	438	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	41	0	16	57	0	0	42	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	37	12	53	52	52	3	3
g / C, Green / Cycle	0.31	0.31	0.10	0.44	0.43	0.43	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.29	0.32	0.10	0.29	0.45	0.27	0.01	0.00
s, saturation flow rate [veh/h]	1900	1704	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	588	528	181	1603	777	692	51	46
d1, Uniform Delay [s]	40.19	41.42	54.00	26.07	34.29	26.89	57.15	56.78
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.65	49.78	31.15	2.02	32.19	0.96	3.38	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

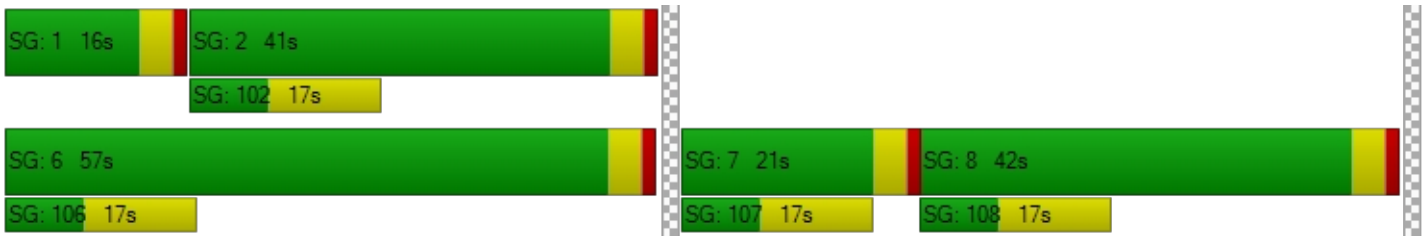
X, volume / capacity	0.93	1.04	1.00	0.65	1.06	0.63	0.31	0.09
d, Delay for Lane Group [s/veh]	63.84	91.19	85.15	28.09	66.48	27.85	60.53	57.59
Lane Group LOS	E	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	19.40	22.70	7.02	11.83	28.90	9.89	0.52	0.13
50th-Percentile Queue Length [ft/ln]	485.07	567.50	175.45	295.83	722.51	247.15	13.11	3.22
95th-Percentile Queue Length [veh/ln]	26.63	31.30	11.36	17.47	39.26	15.04	0.94	0.23
95th-Percentile Queue Length [ft/ln]	665.67	782.56	284.09	436.87	981.48	376.07	23.61	5.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	70.89	91.19	85.15	28.09	0.00	66.48	66.48	27.85	60.53	0.00	57.59
Movement LOS		E	F	F	C		F	E	C	E		E
d_A, Approach Delay [s/veh]	77.52			36.58			53.03			59.94		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	54.98											
Intersection LOS	D											
Intersection V/C	1.019											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	567	65	187	935	155	103	58	12	13	38	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	85	2	40	113	5	4	0	1	2	0	41
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	652	67	227	1048	160	107	58	13	15	38	120
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	171	18	59	274	42	28	15	3	4	10	31
Total Analysis Volume [veh/h]	35	682	70	237	1096	167	112	61	14	16	40	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	27	0	72	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	12	12	7	16	16	8	8	8
g / C, Green / Cycle	0.06	0.30	0.30	0.18	0.42	0.42	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.04	0.13	0.30	0.10	0.16	0.03	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1155	1805	1615
c, Capacity [veh/h]	107	1105	493	325	1542	689	380	479	319
d1, Uniform Delay [s]	17.07	11.24	9.53	14.63	8.93	6.94	15.16	12.55	13.21
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	0.57	0.13	3.12	0.62	0.18	0.99	0.11	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

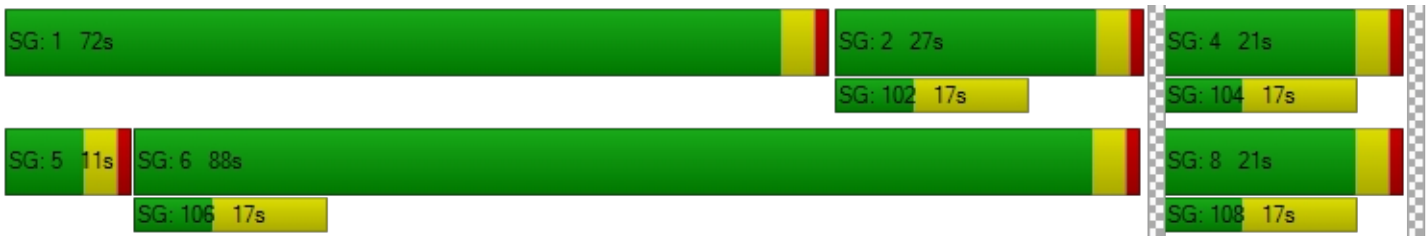
X, volume / capacity	0.33	0.62	0.14	0.73	0.71	0.24	0.49	0.12	0.40
d, Delay for Lane Group [s/veh]	18.84	11.81	9.66	17.75	9.54	7.12	16.15	12.66	14.01
Lane Group LOS	B	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	1.94	0.34	1.85	2.61	0.62	1.39	0.33	0.82
50th-Percentile Queue Length [ft/ln]	7.55	48.48	8.51	46.17	65.23	15.54	34.68	8.31	20.59
95th-Percentile Queue Length [veh/ln]	0.54	3.49	0.61	3.32	4.70	1.12	2.50	0.60	1.48
95th-Percentile Queue Length [ft/ln]	13.59	87.26	15.32	83.11	117.41	27.96	62.42	14.95	37.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.84	11.81	9.66	17.75	9.54	7.12	16.15	16.15	16.15	12.66	12.66	14.01
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.93			10.57			16.15			13.59		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.57											
Intersection LOS	B											
Intersection V/C	0.710											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	112	20	16	273
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	40	605	20	16	630
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	11	159	5	4	166
Total Analysis Volume [veh/h]	0	42	637	21	17	663
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	10.61	0.00	0.00	8.90	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.20	0.00	0.00	0.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.90	0.00	0.00	1.38	0.00
d_A, Approach Delay [s/veh]	10.61		0.00		0.22	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.101

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	27	143	9	8	266
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	27	636	9	8	623
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	167	2	2	164
Total Analysis Volume [veh/h]	24	28	669	9	8	656
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.04	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	21.93	10.63	0.00	0.00	8.93	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.33	0.13	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	8.36	3.28	0.00	0.00	0.66	0.00
d_A, Approach Delay [s/veh]	15.85		0.00		0.11	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.64					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	137	0	143	108	385	0	0	214	112
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	6	53	46	3	180	81	77	12	23	61	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	6	53	183	3	323	189	462	12	23	275	136
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	14	49	1	86	50	123	3	6	73	36
Total Analysis Volume [veh/h]	28	6	56	194	3	343	201	491	13	26	292	145
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	56	0	0	56	0	21	33	0	11	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	11	11	6	12	12	2	7	7
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.17	0.32	0.32	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.14	0.21	0.11	0.14	0.01	0.01	0.12	0.12
s, saturation flow rate [veh/h]	1051	1639	1362	1617	1810	3618	1615	1810	1900	1693
c, Capacity [veh/h]	260	501	500	494	304	1151	514	81	370	330
d1, Uniform Delay [s]	16.48	9.07	12.80	11.10	14.09	9.73	8.47	16.75	13.32	13.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.11	0.49	1.82	2.46	0.25	0.02	2.29	1.66	2.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

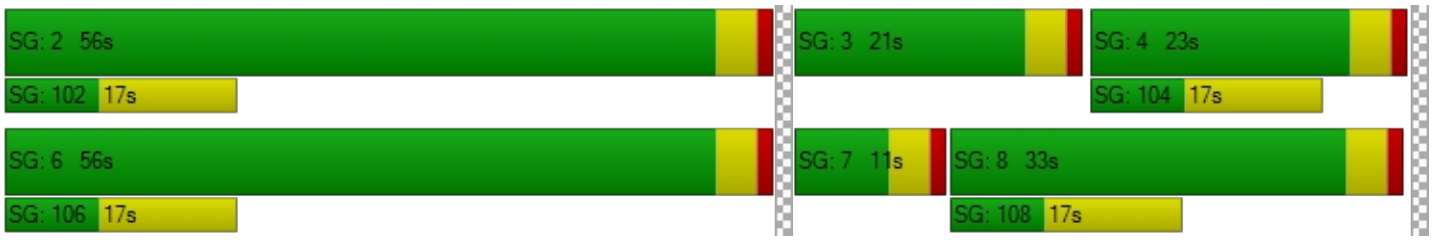
X, volume / capacity	0.11	0.12	0.39	0.70	0.66	0.43	0.03	0.32	0.62	0.63
d, Delay for Lane Group [s/veh]	16.66	9.18	13.30	12.91	16.55	9.98	8.49	19.04	14.98	15.39
Lane Group LOS	B	A	B	B	B	A	A	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	0.28	1.19	2.05	1.45	1.17	0.06	0.23	1.52	1.43
50th-Percentile Queue Length [ft/ln]	5.06	6.98	29.69	51.30	36.27	29.29	1.38	5.72	38.07	35.79
95th-Percentile Queue Length [veh/ln]	0.36	0.50	2.14	3.69	2.61	2.11	0.10	0.41	2.74	2.58
95th-Percentile Queue Length [ft/ln]	9.10	12.56	53.44	92.34	65.29	52.73	2.48	10.30	68.52	64.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.66	9.18	9.18	13.30	12.91	12.91	16.55	9.98	8.49	19.04	15.07	15.39
Movement LOS	B	A	A	B	B	B	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	11.50			13.05			11.82			15.40		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.10											
Intersection LOS	B											
Intersection V/C	0.671											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	522	0	0	326
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	173	2	2	108
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	695	2	2	434
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	183	1	1	114
Total Analysis Volume [veh/h]	0	11	732	2	2	457
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.75	0.00	0.00	9.10	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.32	0.00	0.00	0.17	0.00
d_A, Approach Delay [s/veh]	10.75		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	47.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	0	11	0	0	0	0	82	102	4	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	181	1	12	3	4	5	7	408	199	4	224	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	0	3	1	1	1	2	113	55	1	62	3
Total Analysis Volume [veh/h]	200	1	13	3	4	6	8	451	220	4	248	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.72	0.00	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	47.58	46.75	41.40	18.37	19.26	9.89	7.75	0.00	0.00	8.89	0.00	0.00
Movement LOS	E	E	E	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	5.52	5.52	5.52	0.11	0.11	0.11	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	138.05	138.05	138.05	2.63	2.63	2.63	0.40	0.40	0.40	0.32	0.32	0.32
d_A, Approach Delay [s/veh]	47.20			14.73			0.09			0.13		
Approach LOS	E			B			A			A		
d_I, Intersection Delay [s/veh]	8.87											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	130	101	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	54	102	4	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	184	203	4	10	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	48	53	1	3	13
Total Analysis Volume [veh/h]	6	194	214	4	11	52
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.65	0.00	0.00	0.00	11.21	9.62
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.06	0.20
95th-Percentile Queue Length [ft/ln]	0.33	0.00	0.00	0.00	1.42	5.00
d_A, Approach Delay [s/veh]	0.23		0.00		9.90	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	509.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.890

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	40	847	443	80	93	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	120	104	42	86	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	967	547	122	179	39
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	11	248	141	31	46	0
Total Analysis Volume [veh/h]	42	994	562	125	184	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	1.89	0.00
d_M, Delay for Movement [s/veh]	9.12	0.00	0.00	0.00	509.78	12.37
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	15.33	0.00
95th-Percentile Queue Length [ft/ln]	3.60	0.00	0.00	0.00	383.30	0.00
d_A, Approach Delay [s/veh]	0.37		0.00		509.78	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	49.39					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	28.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	755	23	47	395	65	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	121	0	0	106	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	876	23	47	501	65	169
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	229	6	12	131	17	44
Total Analysis Volume [veh/h]	915	24	49	524	68	177
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.07	0.01	0.19	0.54
d_M, Delay for Movement [s/veh]	0.00	0.00	10.22	0.00	17.05	28.12
Movement LOS	A	A	B	A	C	D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.21	0.00	0.67	3.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	5.32	0.00	16.79	75.73
d_A, Approach Delay [s/veh]	0.00		0.87		25.05	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	3.78					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.337

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	533	427	23	39	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	57	86	20	64	120
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	590	513	43	103	213
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	182	158	13	32	66
Total Analysis Volume [veh/h]	149	728	633	53	127	263
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.01	0.01	0.00	0.34	0.38
d_M, Delay for Movement [s/veh]	9.69	0.00	0.00	0.00	19.35	13.49
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.58	0.00	0.00	0.00	1.46	1.81
95th-Percentile Queue Length [ft/ln]	14.46	0.00	0.00	0.00	36.46	45.17
d_A, Approach Delay [s/veh]	1.65		0.00		15.40	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	407	163	76	441	10	9	6	17	82	5	227
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	70	0	0	200	6	11	0	33	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	477	163	76	641	16	20	6	50	82	5	227
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	149	51	24	200	5	6	2	16	26	2	71
Total Analysis Volume [veh/h]	45	595	203	95	799	20	25	7	62	102	6	283
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	12	31	0	11	65	0	13	67	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	11	11	5	13	13	2	7	7	5	10	10
g / C, Green / Cycle	0.07	0.26	0.26	0.11	0.30	0.30	0.04	0.15	0.15	0.11	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.13	0.05	0.22	0.01	0.01	0.00	0.04	0.06	0.00	0.18
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	124	929	415	200	1081	483	77	292	248	208	429	364
d1, Uniform Delay [s]	19.55	14.52	13.88	18.34	13.86	10.93	20.41	15.80	16.37	18.24	13.22	15.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	0.74	0.90	1.74	1.01	0.03	2.38	0.03	0.52	1.79	0.01	3.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

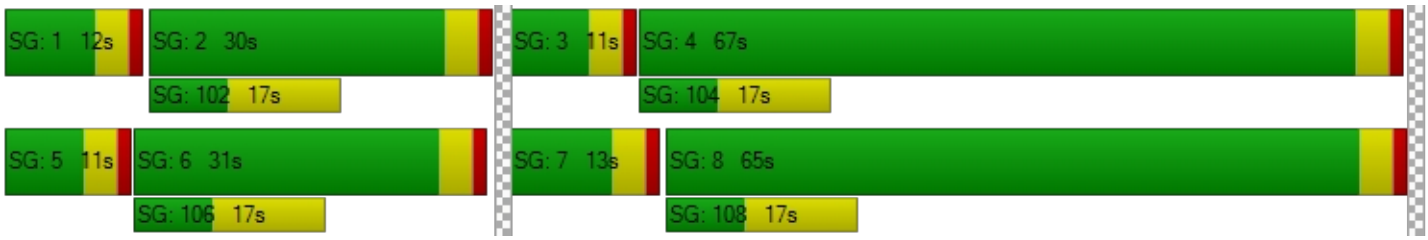
X, volume / capacity	0.36	0.64	0.49	0.47	0.74	0.04	0.32	0.02	0.25	0.49	0.01	0.78
d, Delay for Lane Group [s/veh]	21.32	15.27	14.78	20.08	14.87	10.97	22.79	15.83	16.89	20.04	13.23	19.56
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.45	2.29	1.53	0.89	3.04	0.12	0.27	0.05	0.51	0.95	0.04	2.60
50th-Percentile Queue Length [ft/ln]	11.26	57.14	38.28	22.27	76.04	2.97	6.82	1.37	12.84	23.85	1.02	65.09
95th-Percentile Queue Length [veh/ln]	0.81	4.11	2.76	1.60	5.48	0.21	0.49	0.10	0.92	1.72	0.07	4.69
95th-Percentile Queue Length [ft/ln]	20.26	102.86	68.90	40.08	136.88	5.35	12.28	2.46	23.10	42.93	1.84	117.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.32	15.27	14.78	20.08	14.87	10.97	22.79	15.83	16.89	20.04	13.23	19.56
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.47			15.32			18.38			19.59		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.25											
Intersection LOS	B											
Intersection V/C	0.686											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	645	71	95	425	57	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	91	0	0	233	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	736	71	95	658	57	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	19	26	178	15	9
Total Analysis Volume [veh/h]	795	77	103	711	62	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	51	0	0	124	69	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.41	0.41	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.22	0.05	0.15	0.37	0.08	0.02
s, saturation flow rate [veh/h]	3618	1615	694	1900	750	1615
c, Capacity [veh/h]	1477	659	389	0	437	258
d1, Uniform Delay [s]	4.15	3.40	9.25	0.00	8.79	6.69
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.08	1.66	0.00	0.15	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

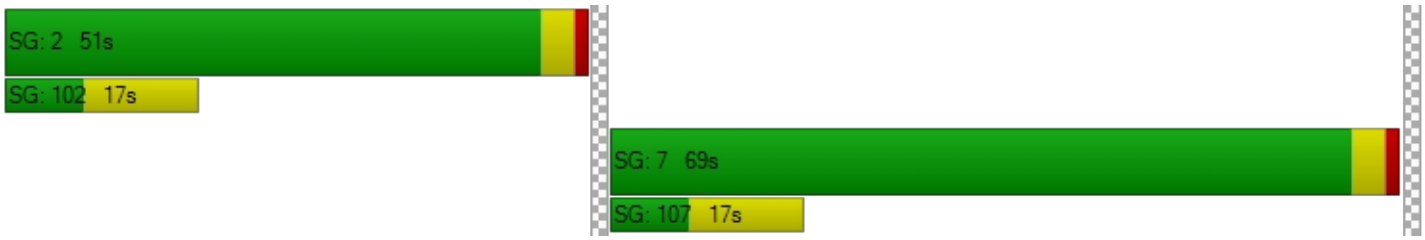
X, volume / capacity	0.54	0.12	0.26	0.00	0.14	0.15
d, Delay for Lane Group [s/veh]	4.46	3.48	10.91	0.00	8.94	6.95
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.03	0.45	0.00	0.15	0.07
50th-Percentile Queue Length [ft/ln]	3.34	0.64	11.17	0.00	3.66	1.84
95th-Percentile Queue Length [veh/ln]	0.24	0.05	0.80	0.00	0.26	0.13
95th-Percentile Queue Length [ft/ln]	6.02	1.15	20.11	0.00	6.59	3.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.46	3.48	10.91	0.00	8.94	6.95
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.37		1.38		8.18	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.22					
Intersection LOS	A					
Intersection V/C	0.874					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	676.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	547.612

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	149	0	84	29	262	0	0	206	62
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	315	2	428	556	708	4	2	666	243
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	84	1	114	148	189	1	1	178	65
Total Analysis Volume [veh/h]	3	2	2	336	2	457	593	756	4	2	711	259
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	83	0	0	83	0	11	21	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	79	79	79	79	7	24	24	0	17	17
g / C, Green / Cycle	0.69	0.69	0.69	0.69	0.06	0.21	0.21	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.15	0.00	489.95	0.28	0.33	0.21	0.00	0.00	0.20	0.16
s, saturation flow rate [veh/h]	32	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	72	1109	63	1109	113	742	331	7	529	236
d1, Uniform Delay [s]	31.87	5.65	57.50	7.87	53.90	45.71	36.42	57.13	49.09	49.09
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.00	2002.83	0.25	1908.02	37.87	0.07	22.03	167.14	86.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.00	5.37	0.41	5.23	1.02	0.01	0.29	1.34	1.10
d, Delay for Lane Group [s/veh]	32.27	5.65	2060.33	8.11	1961.92	83.58	36.49	79.16	216.23	135.93
Lane Group LOS	C	A	F	A	F	F	D	E	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.12	0.01	36.82	4.61	63.36	14.41	0.10	0.10	19.83	12.44
50th-Percentile Queue Length [ft/ln]	2.90	0.36	920.49	115.32	1584.07	360.23	2.41	2.49	495.71	310.91
95th-Percentile Queue Length [veh/ln]	0.21	0.03	66.28	8.14	93.50	20.85	0.17	0.18	30.67	19.00
95th-Percentile Queue Length [ft/ln]	5.21	0.65	1656.88	203.38	2337.54	521.21	4.34	4.49	766.77	475.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.27	32.27	5.65	2060.33	2060.33	8.11	1961.92	83.58	36.49	79.16	216.23	135.93
Movement LOS	C	C	A	F	F	A	F	F	D	E	F	F
d_A, Approach Delay [s/veh]	24.66			880.63			906.69			194.55		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	676.73											
Intersection LOS	F											
Intersection V/C	547.612											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	344.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.028

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	689	861	58	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	267	409	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	956	1270	60	32	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	255	338	16	9	2
Total Analysis Volume [veh/h]	23	1018	1353	64	34	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	1.03	0.06
d_M, Delay for Movement [s/veh]	12.76	0.00	0.00	0.00	344.88	26.51
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	3.63	0.18
95th-Percentile Queue Length [ft/ln]	3.71	0.00	0.00	0.00	90.75	4.44
d_A, Approach Delay [s/veh]	0.28		0.00		272.53	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	4.91					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	679	286	84	895	0	3	20	140	328	5	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	297	0	31	419	0	0	0	0	0	0	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	976	286	115	1314	0	3	20	140	328	5	83
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	266	78	31	357	0	1	5	38	89	1	23
Total Analysis Volume [veh/h]	52	1062	311	125	1430	0	3	22	152	357	5	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	43	43	14	46	0	0	42	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	66	85	10	70	70	13	13	15	15	15
g / C, Green / Cycle	0.05	0.55	0.70	0.08	0.59	0.59	0.11	0.11	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.29	0.19	0.07	0.38	0.38	0.01	0.09	0.10	0.10	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1889	1615	1810	1812	1615
c, Capacity [veh/h]	87	1989	1138	151	1112	1112	212	181	219	220	196
d1, Uniform Delay [s]	55.98	17.21	6.49	54.16	16.56	16.56	47.92	52.20	51.49	51.49	49.08
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.41	1.03	0.59	10.93	0.63	0.63	0.24	9.80	7.62	7.61	1.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

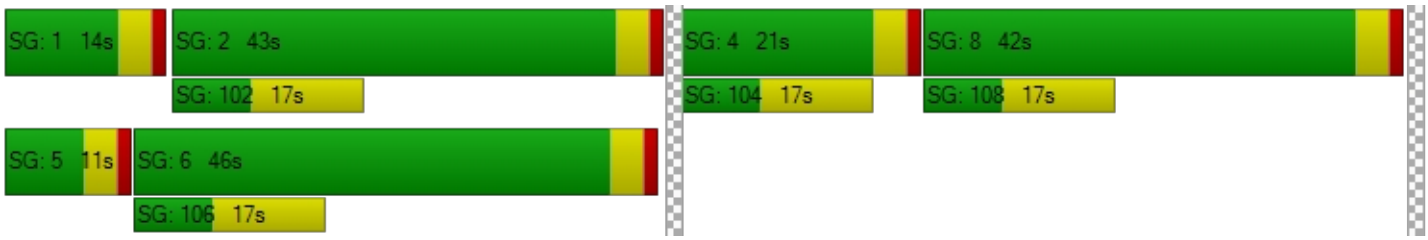
X, volume / capacity	0.60	0.53	0.27	0.83	0.64	0.64	0.12	0.84	0.82	0.82	0.46
d, Delay for Lane Group [s/veh]	62.40	18.24	7.09	65.09	17.19	17.19	48.17	62.00	59.11	59.10	50.76
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.70	9.39	2.87	4.17	12.74	12.74	0.69	4.98	5.77	5.78	2.61
50th-Percentile Queue Length [ft/ln]	42.49	234.85	71.80	104.34	318.45	318.45	17.28	124.38	144.30	144.48	65.22
95th-Percentile Queue Length [veh/ln]	3.06	14.42	5.17	7.51	18.59	18.59	1.24	8.63	9.71	9.72	4.70
95th-Percentile Queue Length [ft/ln]	76.48	360.51	129.24	187.82	464.78	464.78	31.10	215.83	242.81	243.04	117.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.40	18.24	7.09	65.09	17.19	17.19	48.17	48.17	62.00	59.10	59.10	50.76
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	17.42			21.04			60.05			57.44		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	26.08											
Intersection LOS	C											
Intersection V/C	0.691											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	522	391	0	0	1147	188	0	0	0	93	0	599
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	113	0	0	399	20	0	0	0	13	0	184
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	537	504	0	0	1546	208	0	0	0	106	0	783
Peak Hour Factor	0.9550	0.9550	0.8760	0.8760	0.9550	0.9550	0.8760	0.8760	0.8760	0.9550	0.8760	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	141	132	0	0	405	54	0	0	0	28	0	0
Total Analysis Volume [veh/h]	562	528	0	0	1619	218	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	41	99	0	0	58	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	146	146	146	146		146	146
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	48	127	75	75		11	11
g / C, Green / Cycle	0.33	0.87	0.51	0.51		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.31	0.15	0.45	0.13		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	593	3147	1863	832		136	121
d1, Uniform Delay [s]	47.80	1.44	31.04	19.82		66.41	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	8.73	0.02	1.35	0.17		11.18	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.17	0.87	0.26		0.82	0.00
d, Delay for Lane Group [s/veh]	56.53	1.47	32.39	19.99		77.58	0.00
Lane Group LOS	E	A	C	B		E	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	21.27	0.75	24.88	4.26		4.51	0.00
50th-Percentile Queue Length [ft/ln]	531.66	18.66	621.99	106.43		112.65	0.00
95th-Percentile Queue Length [veh/ln]	28.83	1.34	33.06	7.64		7.99	0.00
95th-Percentile Queue Length [ft/ln]	720.73	33.58	826.49	191.03		199.68	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.53	1.47	0.00	0.00	32.39	19.99	0.00	0.00	0.00	77.58	0.00	0.00
Movement LOS	E	A			C	B				E		A
d_A, Approach Delay [s/veh]	29.86			30.92			0.00			77.58		
Approach LOS	C			C			A			E		
d_I, Intersection Delay [s/veh]	32.24											
Intersection LOS	C											
Intersection V/C	0.893											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	85.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.149

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	766	104	514	726	0	148	0	824	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	106	10	287	125	0	21	0	19	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	872	114	801	851	0	169	0	843	0	0	1
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	230	30	212	225	0	45	0	223	0	0	0
Total Analysis Volume [veh/h]	0	922	121	847	900	0	179	0	891	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	31	0	53	84	0	36	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	27	27	49	80	32	32	
g / C, Green / Cycle	0.23	0.23	0.41	0.67	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.07	0.47	0.25	0.10	0.31	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	816	364	738	2411	483	763	
d1, Uniform Delay [s]	46.66	39.06	35.68	8.91	35.92	44.16	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	73.63	2.44	70.36	0.10	0.47	78.72	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

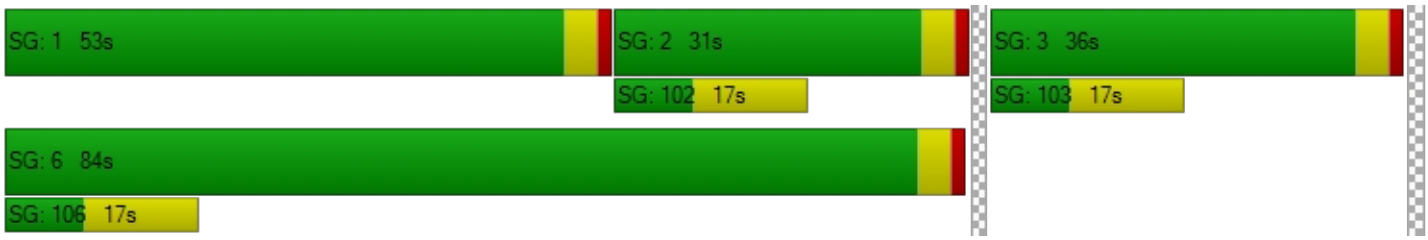
X, volume / capacity	1.13	0.33	1.15	0.37	0.37	1.17	
d, Delay for Lane Group [s/veh]	120.29	41.49	106.04	9.01	36.40	122.88	
Lane Group LOS	F	D	F	A	D	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	20.46	3.25	35.47	4.97	4.36	19.59	
50th-Percentile Queue Length [ft/ln]	511.51	81.35	886.70	124.37	108.88	489.83	
95th-Percentile Queue Length [veh/ln]	29.81	5.86	49.80	8.63	7.78	29.29	
95th-Percentile Queue Length [ft/ln]	745.28	146.43	1244.91	215.81	194.45	732.20	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	120.29	41.49	106.04	9.01	0.00	36.40	0.00	122.88	0.00	0.00	0.00
Movement LOS		F	D	F	A		D		F			
d_A, Approach Delay [s/veh]	111.14			56.05			108.42			0.00		
Approach LOS	F			E			F			A		
d_I, Intersection Delay [s/veh]	85.45											
Intersection LOS	F											
Intersection V/C	1.149											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	342	1424	0	0	1066	380	0	0	0	364	8	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	83	0	0	45	0	0	0	0	91	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	407	1507	0	0	1111	380	0	0	0	455	8	573
Peak Hour Factor	0.9740	0.9740	0.8170	0.8170	0.9740	0.9740	0.8170	0.8170	0.8170	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	387	0	0	285	98	0	0	0	117	2	147
Total Analysis Volume [veh/h]	418	1547	0	0	1141	390	0	0	0	467	8	588
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	30	80	0	0	50	0	0	0	0	0	50	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	11	36	21	21		18	18	18
g / C, Green / Cycle	0.19	0.60	0.36	0.36		0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.14	0.32	0.17	0.25		0.21	0.23	0.24
s, saturation flow rate [veh/h]	2959	4903	6538	1530		1619	1595	1530
c, Capacity [veh/h]	559	2930	2345	549		489	482	462
d1, Uniform Delay [s]	22.92	7.08	14.90	16.51		18.45	18.83	19.07
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.03	0.15	0.16	1.72		1.81	2.36	2.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

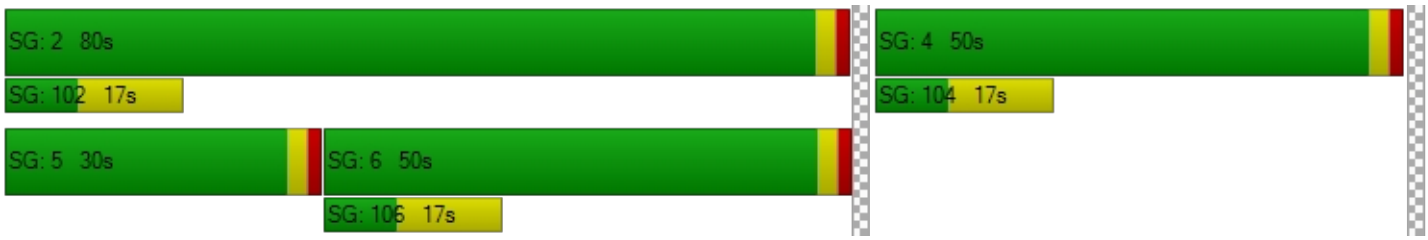
X, volume / capacity	0.75	0.53	0.49	0.71		0.70	0.75	0.78
d, Delay for Lane Group [s/veh]	24.95	7.22	15.06	18.23		20.26	21.19	21.98
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.73	2.89	2.70	4.32		4.00	4.37	4.48
50th-Percentile Queue Length [ft/ln]	68.25	72.37	67.60	107.98		99.97	109.28	112.02
95th-Percentile Queue Length [veh/ln]	4.91	5.21	4.87	7.73		7.20	7.80	7.95
95th-Percentile Queue Length [ft/ln]	122.84	130.27	121.68	193.18		179.95	195.00	198.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.95	7.22	0.00	0.00	15.06	18.23	0.00	0.00	0.00	20.49	21.19	21.67
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.99			15.87			0.00			21.16		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	15.00											
Intersection LOS	B											
Intersection V/C	0.703											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1211	525	417	1013	0	635	2	337	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	148	182	0	136	0	0	0	33	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1359	707	417	1149	0	635	2	370	0	0	0
Peak Hour Factor	0.8530	0.9720	0.9720	0.9720	0.9720	0.8530	0.9720	0.9720	0.9720	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	350	182	107	296	0	163	1	95	0	0	0
Total Analysis Volume [veh/h]	0	1398	727	429	1182	0	653	2	381	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	71	0	24	95	0	0	35	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	157	157	157	157	157	157	157	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	83	83	26	111	40	40	40	
g / C, Green / Cycle	0.53	0.53	0.16	0.71	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.41	0.48	0.14	0.34	0.21	0.21	0.23	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1619	1698	1530	
c, Capacity [veh/h]	1801	804	483	2425	412	432	389	
d1, Uniform Delay [s]	30.00	33.84	64.56	10.29	55.16	55.30	56.93	
k, delay calibration	0.11	0.16	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.74	6.10	5.74	0.15	3.78	3.79	7.96	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.78	0.90	0.89	0.49	0.81	0.81	0.90	
d, Delay for Lane Group [s/veh]	30.74	39.94	70.30	10.44	58.94	59.09	64.89	
Lane Group LOS	C	D	E	B	E	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	21.30	26.13	8.85	8.99	12.87	13.65	14.45	
50th-Percentile Queue Length [ft/ln]	532.41	653.29	221.14	224.74	321.69	341.35	361.24	
95th-Percentile Queue Length [veh/ln]	28.86	34.52	13.72	13.91	18.75	19.71	20.68	
95th-Percentile Queue Length [ft/ln]	721.61	862.88	343.08	347.67	468.76	492.85	517.09	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	30.74	39.94	70.30	10.44	0.00	59.01	59.09	64.35	0.00	0.00	0.00
Movement LOS		C	D	E	B		E	E	E			
d_A, Approach Delay [s/veh]	33.89			26.38			61.01			0.00		
Approach LOS	C			C			E			A		
d_I, Intersection Delay [s/veh]	37.24											
Intersection LOS	D											
Intersection V/C	0.884											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	37.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	1295	26	36	1072	232	390	78	152	46	19	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	284	0	0	148	21	46	7	3	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	1579	26	36	1220	253	436	85	155	46	22	35
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	420	7	10	324	67	116	23	41	12	6	9
Total Analysis Volume [veh/h]	60	1678	28	38	1296	269	463	90	165	49	23	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	61	0	10	61	0	0	49	0	0	49	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	136	136	136	136	136	136	136	136	136	136	136	136
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	69	69	5	68	68	53	53	53	53	53	53
g / C, Green / Cycle	0.05	0.51	0.51	0.04	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.04	0.47	0.48	0.02	0.44	0.45	0.34	0.05	0.11	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1790	1619	1800	1695	1364	1800	1530	1142	1800	1530
c, Capacity [veh/h]	76	912	907	63	898	846	542	698	594	395	698	594
d1, Uniform Delay [s]	64.41	31.59	31.70	64.57	30.75	31.37	42.52	26.93	28.68	35.00	25.92	26.22
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.05	5.25	5.52	8.72	3.18	4.15	3.96	0.08	0.25	0.14	0.02	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

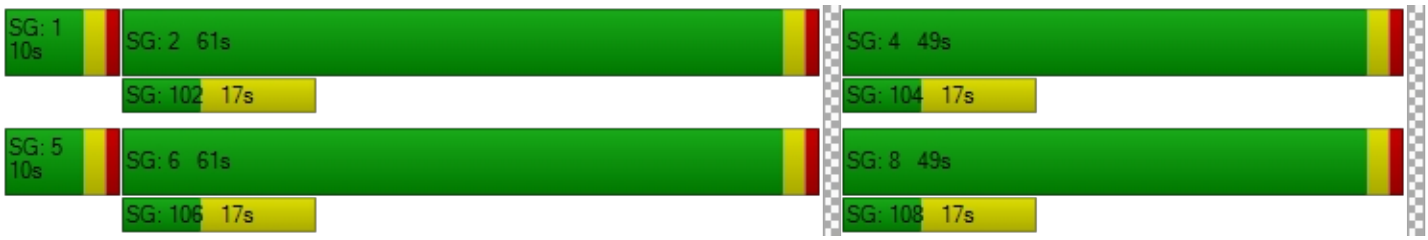
X, volume / capacity	0.79	0.94	0.94	0.60	0.89	0.91	0.85	0.13	0.28	0.12	0.03	0.06
d, Delay for Lane Group [s/veh]	80.46	36.84	37.22	73.29	33.93	35.52	46.48	27.02	28.93	35.14	25.94	26.26
Lane Group LOS	F	D	D	E	C	D	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.41	27.02	27.11	1.46	23.80	23.64	15.61	1.94	3.80	1.23	0.48	0.78
50th-Percentile Queue Length [ft/ln]	60.28	675.38	677.86	36.47	595.02	590.89	390.25	48.51	94.96	30.67	11.92	19.43
95th-Percentile Queue Length [veh/ln]	4.34	35.54	35.65	2.63	31.80	31.61	22.09	3.49	6.84	2.21	0.86	1.40
95th-Percentile Queue Length [ft/ln]	108.51	888.48	891.35	65.64	795.05	790.22	552.24	87.31	170.92	55.20	21.46	34.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	80.46	37.03	37.22	73.29	34.54	35.52	46.48	27.02	28.93	35.14	25.94	26.26
Movement LOS	F	D	D	E	C	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	38.51			35.63			40.01			30.19		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	37.45											
Intersection LOS	D											
Intersection V/C	0.878											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	85	1262	31	27	1161	91	99	2	65	37	10	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	254	0	0	135	16	38	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	1516	31	27	1296	107	137	2	75	37	10	63
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	404	8	7	346	29	37	1	20	10	3	17
Total Analysis Volume [veh/h]	105	1618	33	29	1383	114	146	2	80	39	11	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	61	0	44	94	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	27	27	2	24	24	9	9	9	9	9
g / C, Green / Cycle	0.11	0.57	0.57	0.05	0.51	0.51	0.19	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.46	0.46	0.02	0.42	0.42	0.14	0.05	0.03	0.01	0.04
s, saturation flow rate [veh/h]	1619	1800	1787	1619	1800	1752	1076	1530	1437	1800	1530
c, Capacity [veh/h]	181	1027	1020	77	911	887	357	292	161	344	292
d1, Uniform Delay [s]	19.92	8.06	8.09	21.81	9.92	9.98	19.30	16.31	23.59	15.55	16.16
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.91	1.53	1.58	2.98	2.01	2.17	0.77	0.50	0.77	0.04	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

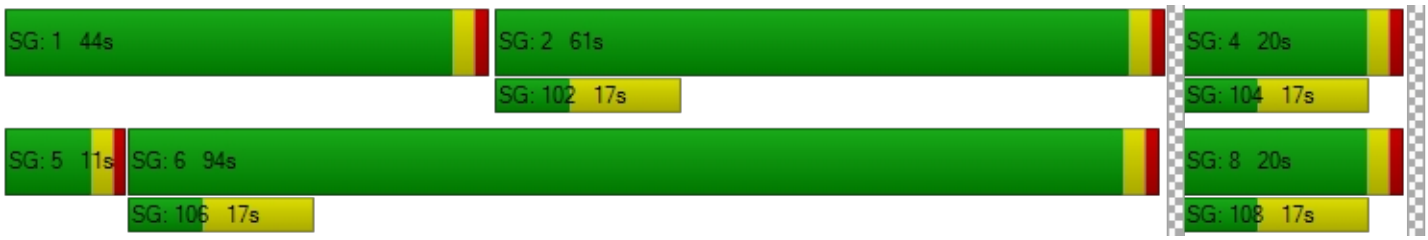
X, volume / capacity	0.58	0.80	0.81	0.37	0.83	0.84	0.41	0.27	0.24	0.03	0.23
d, Delay for Lane Group [s/veh]	22.83	9.59	9.67	24.79	11.93	12.15	20.07	16.81	24.36	15.59	16.56
Lane Group LOS	C	A	A	C	B	B	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.13	4.67	4.68	0.35	5.20	5.17	1.45	0.69	0.44	0.09	0.57
50th-Percentile Queue Length [ft/ln]	28.29	116.63	117.03	8.70	130.07	129.30	36.27	17.28	11.02	2.22	14.30
95th-Percentile Queue Length [veh/ln]	2.04	8.21	8.23	0.63	8.94	8.90	2.61	1.24	0.79	0.16	1.03
95th-Percentile Queue Length [ft/ln]	50.92	205.18	205.73	15.66	223.59	222.55	65.29	31.10	19.84	4.00	25.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.83	9.63	9.67	24.79	12.03	12.15	20.07	20.07	16.81	24.36	15.59	16.56
Movement LOS	C	A	A	C	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	10.42			12.28			18.92			19.07		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.01											
Intersection LOS	B											
Intersection V/C	0.717											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	93	1274	1165	87	37	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	239	132	13	28	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1513	1297	100	65	155
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	391	335	26	17	40
Total Analysis Volume [veh/h]	114	1565	1341	103	67	160
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	18	105	87	0	25	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	29	21	21	7	7
g / C, Green / Cycle	0.12	0.70	0.50	0.50	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.46	0.40	0.41	0.04	0.10
s, saturation flow rate [veh/h]	1619	3427	1800	1756	1619	1530
c, Capacity [veh/h]	201	2397	906	884	253	239
d1, Uniform Delay [s]	17.19	3.46	8.57	8.72	15.45	16.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.52	0.30	1.65	1.92	0.55	3.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.65	0.80	0.82	0.26	0.67
d, Delay for Lane Group [s/veh]	19.71	3.77	10.22	10.63	16.00	19.74
Lane Group LOS	B	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	0.95	3.85	3.97	0.52	1.44
50th-Percentile Queue Length [ft/ln]	25.67	23.74	96.31	99.15	12.94	35.92
95th-Percentile Queue Length [veh/ln]	1.85	1.71	6.93	7.14	0.93	2.59
95th-Percentile Queue Length [ft/ln]	46.20	42.73	173.35	178.47	23.28	64.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.71	3.77	10.41	10.63	16.00	19.74
Movement LOS	B	A	B	B	B	B
d_A, Approach Delay [s/veh]	4.85		10.43		18.64	
Approach LOS	A		B		B	
d_I, Intersection Delay [s/veh]	8.19					
Intersection LOS	A					
Intersection V/C	0.685					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.890

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	873	95	73	927	168	200	466	137	32	204	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	80	8	6	76	80	157	60	23	10	41	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	953	103	79	1003	248	357	526	160	42	245	96
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	245	26	20	257	64	92	135	41	11	63	25
Total Analysis Volume [veh/h]	151	978	106	81	1030	255	367	540	164	43	252	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	38	0	29	40	0	48	37	0	48	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	136	136	136	136	136	136	136	136	136	136	136	136
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	34	60	60	19	45	45	48	0	0	48	0	0
g / C, Green / Cycle	0.25	0.44	0.44	0.14	0.33	0.33	0.35	0.00	0.00	0.35	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.22	0.31	0.31	0.12	0.30	0.17	0.32	0.30	0.11	0.05	0.14	0.06
s, saturation flow rate [veh/h]	696	1800	1739	696	3427	1530	1146	1800	1530	879	1800	1530
c, Capacity [veh/h]	216	795	768	142	1145	511	439	0	0	349	0	0
d1, Uniform Delay [s]	50.93	30.64	30.67	58.73	43.22	36.28	44.12	0.00	0.00	31.53	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.02	1.10	1.14	3.60	2.85	0.75	4.29	0.00	0.00	0.16	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.69	0.69	0.57	0.90	0.50	0.84	0.00	0.00	0.12	0.00	0.00
d, Delay for Lane Group [s/veh]	54.96	31.74	31.82	62.33	46.08	37.03	48.41	0.00	0.00	31.68	0.00	0.00
Lane Group LOS	D	C	C	E	D	D	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	5.27	14.74	14.30	2.90	16.90	6.94	12.52	0.00	0.00	1.02	0.00	0.00
50th-Percentile Queue Length [ft/ln]	131.69	368.43	357.44	72.61	422.53	173.57	312.89	0.00	0.00	25.48	0.00	0.00
95th-Percentile Queue Length [veh/ln]	9.03	21.03	20.50	5.23	23.64	11.26	18.32	0.00	0.00	1.83	0.00	0.00
95th-Percentile Queue Length [ft/ln]	225.79	525.82	512.47	130.70	591.09	281.60	457.94	0.00	0.00	45.87	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.96	31.77	31.82	62.33	46.08	37.03	48.41	0.00	0.00	31.68	0.00	0.00
Movement LOS	D	C	C	E	D	D	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	34.61			45.35			16.59			3.46		
Approach LOS	C			D			B			A		
d_I, Intersection Delay [s/veh]	30.45											
Intersection LOS	C											
Intersection V/C	0.890											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.895

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	404	1	2	647	143	446	69	112	1	22	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	8	0	0	21	40	80	0	43	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	412	1	2	668	183	526	69	155	1	22	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	108	0	1	176	48	138	18	41	0	6	2
Total Analysis Volume [veh/h]	68	434	1	2	703	193	554	73	163	1	23	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	24	0	13	27	0	0	53	0	0	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	102	102	102	102	102	102	102	102
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	35	35	0	30	30	57	57
g / C, Green / Cycle	0.06	0.35	0.35	0.00	0.29	0.29	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.26	0.26	0.54	0.02
s, saturation flow rate [veh/h]	1619	1800	1799	1619	1800	1668	1459	1744
c, Capacity [veh/h]	95	623	623	6	524	486	879	1016
d1, Uniform Delay [s]	47.09	24.76	24.76	50.61	34.49	34.50	21.32	9.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.48	0.33	0.33	27.66	5.27	5.66	3.63	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

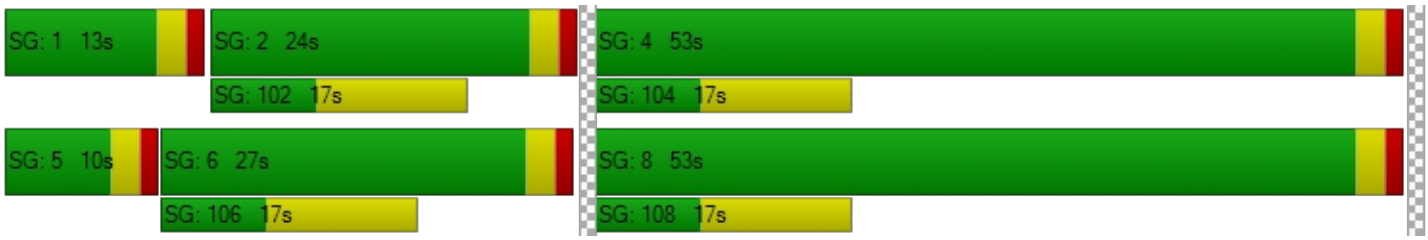
X, volume / capacity	0.71	0.35	0.35	0.32	0.89	0.89	0.90	0.03
d, Delay for Lane Group [s/veh]	56.57	25.09	25.09	78.27	39.76	40.16	24.95	9.98
Lane Group LOS	E	C	C	E	D	D	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.93	3.92	3.92	0.10	11.52	10.73	17.24	0.30
50th-Percentile Queue Length [ft/ln]	48.34	97.95	97.89	2.45	287.97	268.37	430.94	7.58
95th-Percentile Queue Length [veh/ln]	3.48	7.05	7.05	0.18	17.08	16.11	24.05	0.55
95th-Percentile Queue Length [ft/ln]	87.01	176.30	176.20	4.41	427.12	402.70	601.17	13.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.57	25.09	25.09	78.27	39.90	40.16	24.95	24.95	24.95	9.98	9.98	9.98
Movement LOS	E	C	C	E	D	D	C	C	C	A	A	A
d_A, Approach Delay [s/veh]	29.35			40.04			24.95			9.98		
Approach LOS	C			D			C			A		
d_I, Intersection Delay [s/veh]	31.83											
Intersection LOS	C											
Intersection V/C	0.895											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 11 Opening Year (2020) With Project Morning Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\AMOYW2-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.038	46.3	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.977	44.8	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.680	19.7	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.637	5.3	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.688	27.0	C
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	EB Right	0.592	11.1	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	WB Left	0.748	15.4	B
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.726	18.7	B
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.877	10.1	B
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	WB Left	0.854	33.2	C
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.499	5.8	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.871	8.5	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.698	25.1	C
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.042	20.6	C
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.781	18.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	46.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.038

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	315	1261	0	0	1081	765	0	0	0	461	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	93	58	0	0	125	14	0	0	2	131	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	408	1319	0	0	1206	779	0	0	2	592	0	532
Peak Hour Factor	0.9670	0.9670	1.0000	1.0000	0.9670	0.9670	1.0000	1.0000	1.0000	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	105	341	0	0	312	201	0	0	1	153	0	138
Total Analysis Volume [veh/h]	422	1364	0	0	1247	806	0	0	2	612	0	550
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	35	102	0	0	67	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	32	99	64	64		25	25	25
g / C, Green / Cycle	0.25	0.76	0.49	0.49		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.26	0.40	0.25	0.53		0.18	0.18	0.20
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1714	2708
c, Capacity [veh/h]	399	2609	2411	752		330	330	522
d1, Uniform Delay [s]	49.08	6.17	22.56	33.10		51.67	51.67	52.58
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	38.19	0.75	0.80	53.55		11.09	11.09	34.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.06	0.52	0.52	1.07		0.93	0.93	1.05
d, Delay for Lane Group [s/veh]	87.27	6.92	23.35	86.65		62.76	62.76	87.08
Lane Group LOS	F	A	C	F		E	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	17.13	6.78	8.81	34.11		10.82	10.82	11.00
50th-Percentile Queue Length [ft/ln]	428.18	169.42	220.13	852.71		270.39	270.39	275.07
95th-Percentile Queue Length [veh/ln]	24.71	11.05	13.67	46.10		16.21	16.21	16.88
95th-Percentile Queue Length [ft/ln]	617.76	276.16	341.79	1152.62		405.23	405.23	422.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	87.27	6.92	0.00	0.00	23.35	86.65	0.00	0.00	0.00	62.76	62.76	87.08
Movement LOS	F	A			C	F				E	E	F
d_A, Approach Delay [s/veh]	25.91			48.20			0.00			74.27		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	46.30											
Intersection LOS	D											
Intersection V/C	1.038											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.977

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1006	424	484	1054	0	564	0	376	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	145	59	8	250	0	6	0	211	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1151	483	492	1304	0	570	0	587	0	0	0
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	303	127	129	343	0	150	0	154	0	0	0
Total Analysis Volume [veh/h]	0	1210	508	517	1371	0	599	0	617	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	46	0	45	91	0	0	39	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	43	43	42	88	36	36	36	
g / C, Green / Cycle	0.33	0.33	0.32	0.68	0.28	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.33	0.32	0.40	0.25	0.27	0.28	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1523	1445	
c, Capacity [veh/h]	1622	506	523	2320	449	422	401	
d1, Uniform Delay [s]	38.81	43.68	43.93	11.36	45.48	46.46	47.17	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.17	40.97	15.75	1.11	6.96	12.87	23.87	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	1.00	0.99	0.59	0.90	0.96	1.01	
d, Delay for Lane Group [s/veh]	41.98	84.65	59.68	12.48	52.44	59.33	71.04	
Lane Group LOS	D	F	E	B	D	E	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.90	21.89	18.70	10.42	13.45	14.36	15.55	
50th-Percentile Queue Length [ft/ln]	297.48	547.21	467.53	260.57	336.32	359.10	388.87	
95th-Percentile Queue Length [veh/ln]	17.56	29.64	25.79	15.72	19.47	20.58	22.18	
95th-Percentile Queue Length [ft/ln]	438.91	741.01	644.84	392.94	486.69	514.49	554.61	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	41.98	84.65	59.68	12.48	0.00	54.67	59.33	67.02	0.00	0.00	0.00
Movement LOS		D	F	E	B		D	E	E			
d_A, Approach Delay [s/veh]	54.60			25.40			60.94			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	44.77											
Intersection LOS	D											
Intersection V/C	0.977											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	768	38	73	882	37	53	83	33	56	77	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	154	18	44	232	21	15	6	18	7	16	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	922	56	117	1114	58	68	89	51	63	93	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	260	16	33	314	16	19	25	14	18	26	47
Total Analysis Volume [veh/h]	69	1038	63	132	1255	65	77	100	57	71	105	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	25	35	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	32	32	7	34	34	17	17	17	17
g / C, Green / Cycle	0.08	0.50	0.50	0.10	0.52	0.52	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.33	0.33	0.08	0.39	0.39	0.07	0.09	0.06	0.18
s, saturation flow rate [veh/h]	1619	1700	1666	1619	1700	1671	1102	1692	1249	1617
c, Capacity [veh/h]	127	842	825	170	887	872	185	443	308	423
d1, Uniform Delay [s]	28.91	12.35	12.35	28.41	12.22	12.26	30.46	19.58	24.50	21.71
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.61	4.05	4.14	7.35	5.75	5.94	1.49	0.48	0.38	2.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

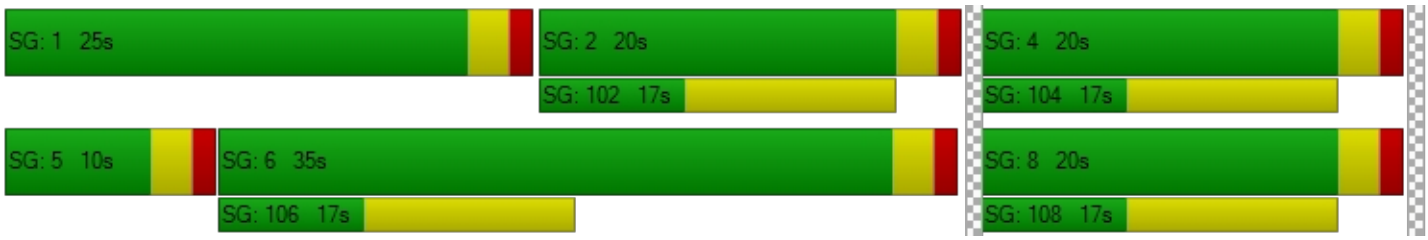
X, volume / capacity	0.54	0.66	0.66	0.78	0.75	0.75	0.42	0.35	0.23	0.69
d, Delay for Lane Group [s/veh]	32.52	16.40	16.49	35.76	17.98	18.20	31.96	20.06	24.88	23.77
Lane Group LOS	C	B	B	D	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.12	6.09	6.00	2.26	7.69	7.64	1.23	1.87	0.96	4.00
50th-Percentile Queue Length [ft/ln]	28.03	152.32	149.94	56.51	192.13	191.02	30.85	46.76	24.04	100.07
95th-Percentile Queue Length [veh/ln]	2.02	10.14	10.01	4.07	12.23	12.17	2.22	3.37	1.73	7.20
95th-Percentile Queue Length [ft/ln]	50.45	253.52	250.35	101.72	305.79	304.35	55.54	84.16	43.28	180.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.52	16.44	16.49	35.76	18.08	18.20	31.96	20.06	20.06	24.88	23.77	23.77
Movement LOS	C	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.39			19.69			23.97			23.99		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.66											
Intersection LOS	B											
Intersection V/C	0.680											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	435	1	1	194	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1121	1	1	1238	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	324	0	0	358	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1297	1	1	1433	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	22	22	0	20	20	2	2	2	2
g / C, Green / Cycle	0.04	0.61	0.61	0.00	0.58	0.58	0.04	0.04	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.36	0.00	0.00	0.40	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	74	2224	993	4	2084	930	204	71	204	83
d1, Uniform Delay [s]	16.48	4.09	2.63	17.63	5.26	3.20	17.69	16.36	17.69	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.37	0.24	0.00	35.93	0.41	0.01	0.06	2.00	0.01	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.58	0.00	0.27	0.69	0.01	0.03	0.27	0.00	0.00
d, Delay for Lane Group [s/veh]	18.86	4.33	2.63	53.56	5.67	3.21	17.74	18.36	17.70	0.00
Lane Group LOS	B	A	A	D	A	A	B	B	B	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.20	0.98	0.00	0.04	1.63	0.02	0.04	0.16	0.01	0.00
50th-Percentile Queue Length [ft/ln]	5.01	24.53	0.03	1.09	40.73	0.42	1.12	4.10	0.19	0.00
95th-Percentile Queue Length [veh/ln]	0.36	1.77	0.00	0.08	2.93	0.03	0.08	0.30	0.01	0.00
95th-Percentile Queue Length [ft/ln]	9.02	44.15	0.05	1.96	73.32	0.76	2.02	7.38	0.34	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.86	4.33	2.63	53.56	5.67	3.21	17.74	18.36	18.36	17.70	0.00	0.00
Movement LOS	B	A	A	D	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	4.59			5.68			18.21			17.70		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.28											
Intersection LOS	A											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	185	81	108	69	18	43	30	37	37	8	208
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	410	362	639	623	38	61	68	52	319	52	535
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	110	97	171	167	10	16	18	14	85	14	0
Total Analysis Volume [veh/h]	34	439	388	684	667	41	65	73	56	342	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	38	48	0	15	21	0	15	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	38	53	22	55	55	6	9	11	14	14
g / C, Green / Cycle	0.04	0.40	0.55	0.23	0.58	0.58	0.06	0.09	0.12	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.24	0.19	0.18	0.03	0.04	0.07	0.10	0.03	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1765	3514	1900	1615
c, Capacity [veh/h]	81	1428	893	805	2096	936	111	162	408	279	237
d1, Uniform Delay [s]	44.28	19.84	12.52	35.12	10.33	8.65	43.50	42.34	41.20	35.71	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.46	0.56	1.54	2.63	0.40	0.09	4.83	8.52	4.64	0.35	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

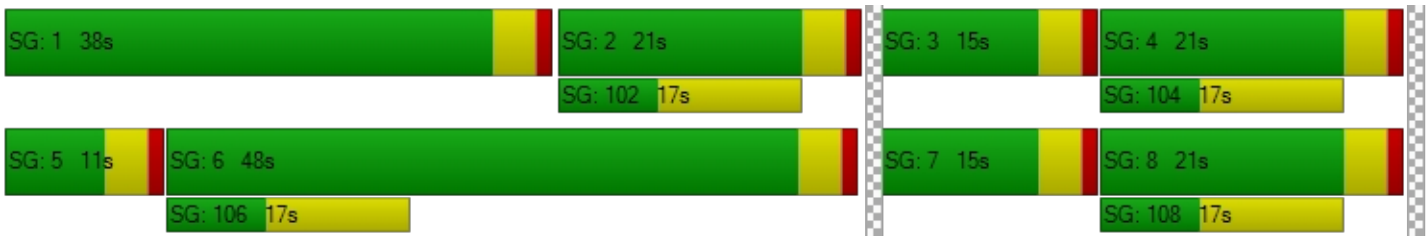
X, volume / capacity	0.42	0.31	0.43	0.85	0.32	0.04	0.59	0.80	0.84	0.20	0.00
d, Delay for Lane Group [s/veh]	47.73	20.40	14.06	37.75	10.73	8.73	48.33	50.86	45.84	36.06	0.00
Lane Group LOS	D	C	B	D	B	A	D	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.85	3.38	4.93	7.72	3.47	0.37	1.63	3.32	4.14	1.16	0.00
50th-Percentile Queue Length [ft/ln]	21.31	84.43	123.20	193.12	86.83	9.21	40.68	83.05	103.51	29.04	0.00
95th-Percentile Queue Length [veh/ln]	1.53	6.08	8.57	12.28	6.25	0.66	2.93	5.98	7.45	2.09	0.00
95th-Percentile Queue Length [ft/ln]	38.36	151.98	214.22	307.07	156.30	16.57	73.22	149.49	186.33	52.26	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.73	20.40	14.06	37.75	10.73	8.73	48.33	50.86	50.86	45.84	36.06	0.00
Movement LOS	D	C	B	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	18.62			23.95			50.01			44.46		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	26.98											
Intersection LOS	C											
Intersection V/C	0.688											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	511	34	112	777	1	2	4	24	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	282	0	0	143	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	793	34	112	920	1	2	4	24	8	3	18
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	210	9	30	244	0	1	1	6	2	1	5
Total Analysis Volume [veh/h]	27	841	36	119	976	1	2	4	25	8	3	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	58	0	20	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Cycle Length [s]	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	12	12	5	15	15	2	2
g / C, Green / Cycle	0.05	0.33	0.33	0.13	0.42	0.42	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.02	0.07	0.26	0.26	0.02	0.02
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1899	1659	1689
c, Capacity [veh/h]	85	1186	529	244	790	790	87	86
d1, Uniform Delay [s]	17.02	10.87	8.53	14.78	8.47	8.47	16.88	16.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.80	0.05	1.50	0.79	0.79	2.44	2.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.71	0.07	0.49	0.62	0.62	0.36	0.35
d, Delay for Lane Group [s/veh]	19.17	11.66	8.58	16.28	9.26	9.26	19.32	19.29
Lane Group LOS	B	B	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.24	2.32	0.15	0.86	2.21	2.20	0.27	0.27
50th-Percentile Queue Length [ft/ln]	5.96	57.94	3.87	21.52	55.13	55.11	6.85	6.63
95th-Percentile Queue Length [veh/ln]	0.43	4.17	0.28	1.55	3.97	3.97	0.49	0.48
95th-Percentile Queue Length [ft/ln]	10.73	104.29	6.97	38.73	99.24	99.21	12.33	11.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.17	11.66	8.58	16.28	9.26	9.26	19.32	19.32	19.32	19.29	19.29	19.29
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.76			10.02			19.32			19.29		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.06											
Intersection LOS	B											
Intersection V/C	0.592											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	564	18	12	798	0	0	0	3	22	2	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	282	0	0	143	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	846	18	12	941	0	0	0	3	22	2	6
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	225	5	3	250	0	0	0	1	6	1	2
Total Analysis Volume [veh/h]	9	900	19	13	1001	0	0	0	3	23	2	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	47	0	0	52	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	16	16	2	2
g / C, Green / Cycle	0.32	0.32	0.32	0.36	0.36	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.25	0.25	0.01	0.28	0.28	0.02	0.02
s, saturation flow rate [veh/h]	1898	1729	1615	1898	1729	199	1857
c, Capacity [veh/h]	617	562	525	676	616	90	234
d1, Uniform Delay [s]	13.61	13.61	10.32	12.89	12.89	20.22	20.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	2.27	0.03	2.06	2.26	0.15	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

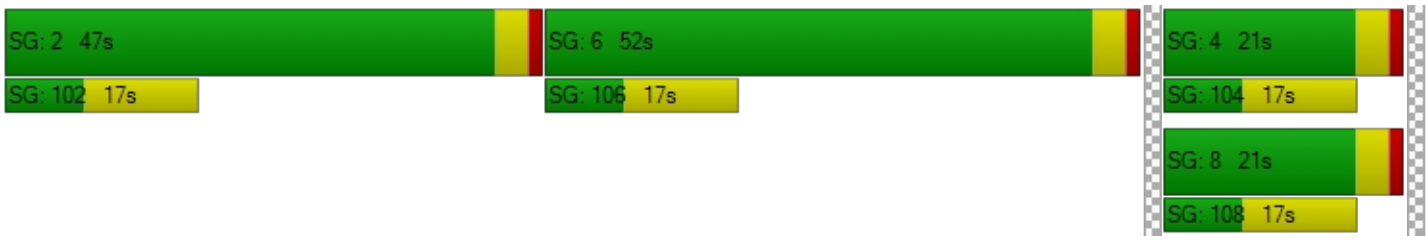
X, volume / capacity	0.77	0.77	0.04	0.79	0.79	0.03	0.13
d, Delay for Lane Group [s/veh]	15.69	15.88	10.35	14.95	15.15	20.37	20.77
Lane Group LOS	B	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.84	3.53	0.11	4.14	3.81	0.03	0.30
50th-Percentile Queue Length [ft/ln]	95.91	88.14	2.74	103.59	95.22	0.76	7.41
95th-Percentile Queue Length [veh/ln]	6.91	6.35	0.20	7.46	6.86	0.05	0.53
95th-Percentile Queue Length [ft/ln]	172.64	158.65	4.93	186.45	171.39	1.37	13.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.69	15.78	10.35	14.95	15.05	15.15	20.37	20.37	20.37	20.77	20.77	20.77
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	15.67			15.05			20.37			20.77		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.44											
Intersection LOS	B											
Intersection V/C	0.748											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	576	0	0	823	23	13	0	158	351	89	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	217	0	0	153	2	8	0	47	20	10	54
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	793	0	0	976	25	21	0	205	371	99	135
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	224	0	0	275	7	6	0	58	105	28	38
Total Analysis Volume [veh/h]	43	895	0	0	1102	28	24	0	231	419	112	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	0	0	40	0	58	0	0	0	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	27	11	11	12	12	12
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.18	0.18	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.30	0.30	0.01	0.14	0.15	0.15	0.09
s, saturation flow rate [veh/h]	506	3618	1900	1884	1810	1615	1810	1846	1615
c, Capacity [veh/h]	195	1573	826	819	324	289	356	363	318
d1, Uniform Delay [s]	24.34	13.45	14.40	14.46	21.64	24.92	23.94	23.93	22.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.33	1.01	1.05	0.10	5.04	3.03	2.94	1.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.57	0.68	0.69	0.07	0.80	0.74	0.74	0.48
d, Delay for Lane Group [s/veh]	24.90	13.77	15.41	15.50	21.74	29.96	26.97	26.87	23.70
Lane Group LOS	C	B	B	B	C	C	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.59	4.26	5.89	5.92	0.29	3.51	3.76	3.81	1.98
50th-Percentile Queue Length [ft/ln]	14.68	106.40	147.28	147.97	7.23	87.83	93.92	95.27	49.54
95th-Percentile Queue Length [veh/ln]	1.06	7.64	9.87	9.91	0.52	6.32	6.76	6.86	3.57
95th-Percentile Queue Length [ft/ln]	26.42	190.98	246.79	247.71	13.01	158.09	169.06	171.48	89.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.90	13.77	0.00	0.00	15.46	15.50	21.74	0.00	29.96	26.94	26.87	23.70
Movement LOS	C	B			B	B	C		C	C	C	C
d_A, Approach Delay [s/veh]	14.28			15.46			29.19			26.21		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.70											
Intersection LOS	B											
Intersection V/C	0.726											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.877

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	341	610	784	569	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	222	141	79	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	832	925	648	0	0
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	238	265	186	0	0
Total Analysis Volume [veh/h]	402	953	1060	742	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	37	120	83	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	63	63	63	63	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	16	59	38	38	
g / C, Green / Cycle	0.26	0.94	0.61	0.61	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.26	0.47	0.54	
s, saturation flow rate [veh/h]	1810	3618	1900	1659	
c, Capacity [veh/h]	470	3387	1164	1016	
d1, Uniform Delay [s]	22.07	0.17	8.96	10.31	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.54	0.04	1.13	2.84	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

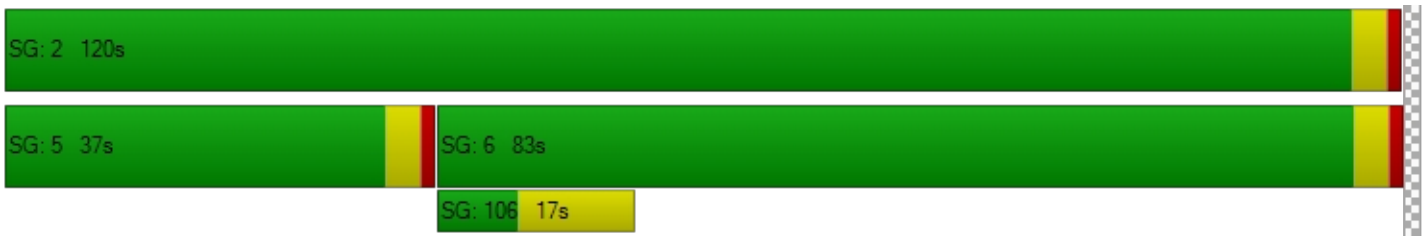
X, volume / capacity	0.85	0.28	0.77	0.89	
d, Delay for Lane Group [s/veh]	26.61	0.22	10.09	13.15	
Lane Group LOS	C	A	B	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.75	0.02	6.98	8.41	
50th-Percentile Queue Length [ft/ln]	143.84	0.53	174.42	210.24	
95th-Percentile Queue Length [veh/ln]	9.69	0.04	11.31	13.17	
95th-Percentile Queue Length [ft/ln]	242.19	0.95	282.72	329.14	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.61	0.22	10.55	13.15	0.00	0.00
Movement LOS	C	A	B	B		
d_A, Approach Delay [s/veh]	8.05		11.62		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	10.09					
Intersection LOS	B					
Intersection V/C	0.877					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	553	546	146	624	0	364	28	258	11	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	36	62	79	0	166	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	619	582	208	703	0	530	28	269	11	0	3
Peak Hour Factor	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	177	166	59	201	0	151	8	77	3	0	1
Total Analysis Volume [veh/h]	0	707	665	238	803	0	606	32	307	13	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	21	0	52	73	0	0	26	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	18	79	26	26	26	3	3
g / C, Green / Cycle	0.47	0.47	0.15	0.66	0.22	0.22	0.22	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.20	0.41	0.13	0.22	0.18	0.18	0.19	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1818	1615	1810	1615
c, Capacity [veh/h]	1710	764	273	2377	395	397	353	45	40
d1, Uniform Delay [s]	20.76	28.40	49.88	9.09	44.57	44.53	45.33	57.56	57.25
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	13.00	8.41	0.39	3.94	3.85	6.66	3.49	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

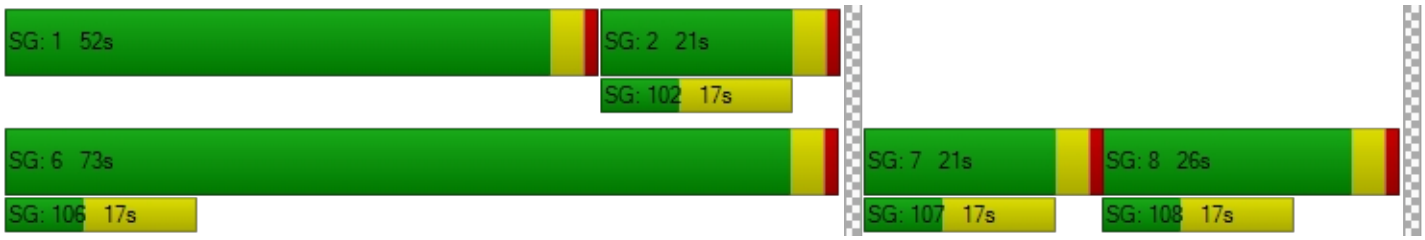
X, volume / capacity	0.41	0.87	0.87	0.34	0.81	0.80	0.87	0.29	0.07
d, Delay for Lane Group [s/veh]	21.50	41.40	58.29	9.47	48.51	48.38	52.00	61.05	58.04
Lane Group LOS	C	D	E	A	D	D	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.62	19.35	7.61	4.54	9.41	9.40	9.44	0.43	0.10
50th-Percentile Queue Length [ft/ln]	165.62	483.79	190.35	113.47	235.28	234.99	236.09	10.80	2.45
95th-Percentile Queue Length [veh/ln]	10.85	26.57	12.14	8.03	14.44	14.43	14.48	0.78	0.18
95th-Percentile Queue Length [ft/ln]	271.15	664.15	303.49	200.81	361.06	360.69	362.08	19.44	4.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.50	41.40	58.29	9.47	0.00	48.45	48.38	52.00	61.05	0.00	58.04
Movement LOS		C	D	E	A		D	D	D	E		E
d_A, Approach Delay [s/veh]	31.15			20.63			49.60			60.49		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	33.21											
Intersection LOS	C											
Intersection V/C	0.854											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	0	3	0	0	0	0	47	44	14	60	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	2	5	10	8	12	2	145	95	15	163	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	1	2	3	2	4	1	45	29	5	50	2
Total Analysis Volume [veh/h]	136	2	6	12	10	15	2	179	117	19	201	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	5	5	5	5
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.10	0.00	0.01	0.01	0.00	0.17	0.02	0.11
s, saturation flow rate [veh/h]	1408	1678	1430	1718	1194	1776	1100	1890
c, Capacity [veh/h]	562	357	575	365	576	567	503	603
d1, Uniform Delay [s]	7.66	5.32	6.86	5.37	6.48	4.75	7.45	4.45
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.03	0.01	0.08	0.00	0.75	0.03	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.02	0.02	0.07	0.00	0.52	0.04	0.34
d, Delay for Lane Group [s/veh]	7.88	5.35	6.87	5.45	6.49	5.50	7.48	4.78
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.24	0.01	0.02	0.03	0.00	0.23	0.03	0.13
50th-Percentile Queue Length [ft/ln]	6.00	0.23	0.46	0.73	0.07	5.82	0.82	3.29
95th-Percentile Queue Length [veh/ln]	0.43	0.02	0.03	0.05	0.01	0.42	0.06	0.24
95th-Percentile Queue Length [ft/ln]	10.81	0.41	0.83	1.31	0.13	10.47	1.48	5.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.88	5.35	5.35	6.87	5.45	5.45	6.49	5.50	5.50	7.48	4.78	4.78
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.74			5.91			5.51			5.01		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.83											
Intersection LOS	A											
Intersection V/C	0.499											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.871

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	380	471	72	62	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	94	95	68	31	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	474	566	140	93	30
Peak Hour Factor	0.7880	0.7880	0.7880	0.7880	0.7880	0.7880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	150	180	44	30	10
Total Analysis Volume [veh/h]	30	602	718	178	118	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	16	110	94	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	40	40	40	40	40
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	28	23	6	6
g / C, Green / Cycle	0.05	0.70	0.58	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.33	0.52	0.07	0.02
s, saturation flow rate [veh/h]	1619	1800	1739	1619	1530
c, Capacity [veh/h]	82	1266	1004	236	223
d1, Uniform Delay [s]	18.23	2.63	7.32	15.62	14.85
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	0.28	3.03	1.64	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.48	0.89	0.50	0.17
d, Delay for Lane Group [s/veh]	20.98	2.91	10.35	17.26	15.21
Lane Group LOS	C	A	B	B	B
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.29	0.44	4.11	0.94	0.28
50th-Percentile Queue Length [ft/ln]	7.33	11.11	102.81	23.38	6.89
95th-Percentile Queue Length [veh/ln]	0.53	0.80	7.40	1.68	0.50
95th-Percentile Queue Length [ft/ln]	13.19	20.00	185.06	42.09	12.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.98	2.91	10.35	10.35	17.26	15.21
Movement LOS	C	A	B	B	B	B
d_A, Approach Delay [s/veh]	3.76		10.35		16.76	
Approach LOS	A		B		B	
d_I, Intersection Delay [s/veh]	8.47					
Intersection LOS	A					
Intersection V/C	0.871					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	55	0	17	61	158	0	0	236	118
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	185	4	322	391	695	13	3	568	283
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	48	1	83	101	179	3	1	147	73
Total Analysis Volume [veh/h]	10	4	3	191	4	332	404	717	13	3	586	292
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	40	50	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	24	61	61	1	37	37
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.25	0.64	0.64	0.01	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.13	0.00	0.21	0.22	0.20	0.01	0.00	0.16	0.18
s, saturation flow rate [veh/h]	1486	1615	1435	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	409	375	365	441	375	449	2300	1027	11	1424	636
d1, Uniform Delay [s]	28.27	28.11	34.96	28.12	35.32	34.60	7.87	6.37	47.06	20.88	21.36
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.01	1.16	0.01	7.10	6.71	0.35	0.02	12.09	0.88	2.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

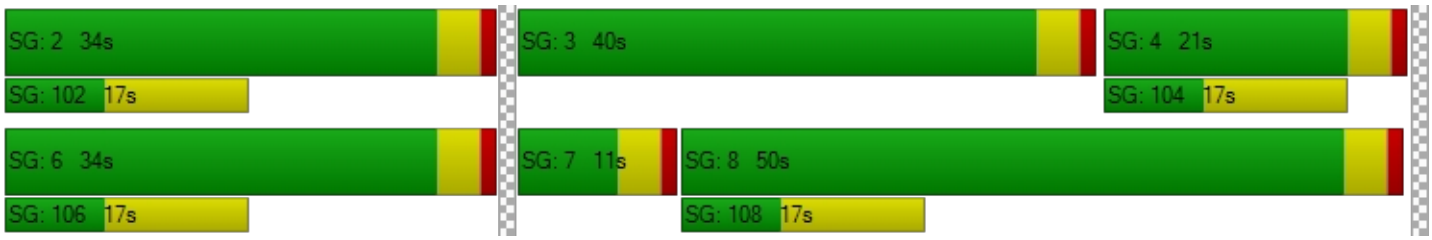
X, volume / capacity	0.03	0.01	0.52	0.01	0.89	0.90	0.31	0.01	0.27	0.41	0.46
d, Delay for Lane Group [s/veh]	28.31	28.12	36.13	28.13	42.42	41.31	8.23	6.39	59.14	21.76	23.74
Lane Group LOS	C	C	D	C	D	D	A	A	E	C	C
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.05	4.13	0.07	8.02	9.67	3.12	0.09	0.11	4.76	5.09
50th-Percentile Queue Length [ft/ln]	6.23	1.33	103.25	1.77	200.38	241.68	77.92	2.36	2.70	118.94	127.34
95th-Percentile Queue Length [veh/ln]	0.45	0.10	7.43	0.13	12.66	14.77	5.61	0.17	0.19	8.33	8.79
95th-Percentile Queue Length [ft/ln]	11.22	2.39	185.85	3.19	316.46	369.16	140.26	4.25	4.86	208.37	219.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.31	28.31	28.12	36.13	28.13	42.42	41.31	8.23	6.39	59.14	21.76	23.74
Movement LOS	C	C	C	D	C	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	28.27			40.03			19.99			22.54		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	25.05											
Intersection LOS	C											
Intersection V/C	0.698											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	20	571	669	23	9	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	354	213	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	925	882	23	9	13
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	251	239	6	2	4
Total Analysis Volume [veh/h]	22	1002	956	25	10	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.04	0.05
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	0.00	20.59	17.14
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.13	0.14
95th-Percentile Queue Length [ft/ln]	2.39	0.00	0.00	0.00	3.23	3.53
d_A, Approach Delay [s/veh]	0.22		0.00		18.58	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.33					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	388	160	460	606	0	182	0	764	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	111	10	139	82	0	20	0	12	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	499	170	599	688	0	202	0	776	0	0	3
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	135	46	162	186	0	55	0	210	0	0	1
Total Analysis Volume [veh/h]	0	540	184	648	745	0	219	0	840	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	22	43	0	32	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	61	61	61	61	61	61	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	12	12	15	31	22	22	
g / C, Green / Cycle	0.20	0.20	0.24	0.51	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.18	0.21	0.12	0.29	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	734	328	842	1837	654	1034	
d1, Uniform Delay [s]	22.86	21.95	21.70	9.34	14.19	17.66	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.46	1.51	1.52	0.14	0.30	1.60	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.74	0.56	0.77	0.41	0.33	0.81	
d, Delay for Lane Group [s/veh]	24.32	23.46	23.22	9.48	14.49	19.27	
Lane Group LOS	C	C	C	A	B	B	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.52	2.35	4.16	2.60	2.03	4.96	
50th-Percentile Queue Length [ft/ln]	88.09	58.64	103.89	65.01	50.84	123.88	
95th-Percentile Queue Length [veh/ln]	6.34	4.22	7.48	4.68	3.66	8.61	
95th-Percentile Queue Length [ft/ln]	158.56	105.55	187.00	117.01	91.52	215.15	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.32	23.46	23.22	9.48	0.00	14.49	0.00	19.27	0.00	0.00	0.00
Movement LOS		C	C	C	A		B		B			
d_A, Approach Delay [s/veh]	24.10			15.87			18.28			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	18.55											
Intersection LOS	B											
Intersection V/C	0.781											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 11 Opening Year (2020) With Project Evening Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\PMOYW2-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	1.062	49.3	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.908	39.0	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.699	19.9	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.636	6.1	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.983	42.4	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	NB Left	0.667	12.7	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	WB Right	0.832	22.8	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Signalized	HCM 2010	EB Right	0.725	26.1	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.854	6.7	A
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.752	24.4	C
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.730	7.8	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.832	11.0	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.897	38.9	D
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.190	29.7	D
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.897	37.4	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	49.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.062

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	313	1437	0	0	1037	633	0	0	0	293	4	533
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	258	157	0	0	77	15	0	0	0	79	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	571	1594	0	0	1114	648	0	0	0	372	4	545
Peak Hour Factor	0.9650	0.9650	1.0000	1.0000	0.9650	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	413	0	0	289	168	0	0	0	96	1	141
Total Analysis Volume [veh/h]	592	1652	0	0	1154	672	0	0	0	385	4	565
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	47	102	0	0	55	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	44	99	52	52		25	25	25
g / C, Green / Cycle	0.34	0.76	0.40	0.40		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.37	0.48	0.24	0.44		0.11	0.11	0.21
s, saturation flow rate [veh/h]	1619	3427	4903	1530		1714	1716	2708
c, Capacity [veh/h]	548	2609	1960	612		330	331	522
d1, Uniform Delay [s]	43.09	7.17	30.69	39.09		47.88	47.87	52.58
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	44.04	1.18	1.31	66.33		1.67	1.66	45.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.63	0.59	1.10		0.59	0.59	1.08
d, Delay for Lane Group [s/veh]	87.12	8.35	31.99	105.42		49.55	49.54	97.80
Lane Group LOS	F	A	C	F		D	D	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	24.12	9.58	9.70	30.44		5.92	5.92	11.78
50th-Percentile Queue Length [ft/ln]	602.98	239.60	242.47	760.90		148.10	148.09	294.50
95th-Percentile Queue Length [veh/ln]	33.87	14.66	14.81	42.20		9.92	9.91	18.11
95th-Percentile Queue Length [ft/ln]	846.68	366.52	370.15	1055.12		247.89	247.87	452.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	87.12	8.35	0.00	0.00	31.99	105.42	0.00	0.00	0.00	49.54	49.54	97.80
Movement LOS	F	A			C	F				D	D	F
d_A, Approach Delay [s/veh]	29.13			59.02			0.00			78.12		
Approach LOS	C			E			A			E		
d_I, Intersection Delay [s/veh]	49.30											
Intersection LOS	D											
Intersection V/C	1.062											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1091	385	395	934	0	679	2	176	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	395	151	9	147	0	20	0	131	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1486	536	404	1081	0	699	2	307	0	0	0
Peak Hour Factor	0.9510	0.9520	0.9520	0.9520	0.9520	0.9510	0.9520	0.9520	0.9520	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	390	141	106	284	0	184	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1561	563	424	1136	0	734	2	322	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	20	0	73	93	0	0	37	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	52	52	36	91	33	33	33	
g / C, Green / Cycle	0.40	0.40	0.28	0.70	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.26	0.33	0.22	0.24	0.22	
s, saturation flow rate [veh/h]	4903	1530	1619	3427	1619	1619	1445	
c, Capacity [veh/h]	1949	608	453	2401	410	410	366	
d1, Uniform Delay [s]	34.66	37.38	45.69	8.73	46.37	47.52	46.67	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.58	22.21	9.37	0.67	5.35	10.04	6.87	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

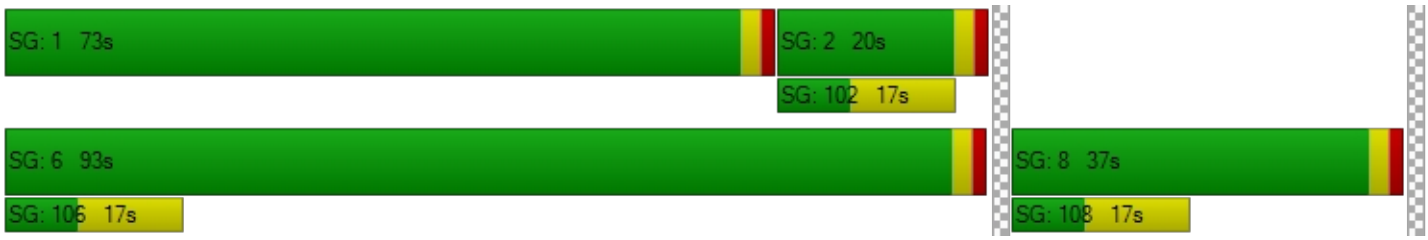
X, volume / capacity	0.80	0.93	0.94	0.47	0.86	0.93	0.88	
d, Delay for Lane Group [s/veh]	38.24	59.59	55.06	9.40	51.72	57.56	53.54	
Lane Group LOS	D	E	E	A	D	E	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	15.05	20.55	14.47	6.96	11.48	13.25	10.68	
50th-Percentile Queue Length [ft/ln]	376.14	513.87	361.82	173.97	286.91	331.21	267.12	
95th-Percentile Queue Length [veh/ln]	21.41	27.99	20.71	11.28	17.03	19.22	16.05	
95th-Percentile Queue Length [ft/ln]	535.18	699.75	517.80	282.12	425.81	480.44	401.14	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	38.24	59.59	55.06	9.40	0.00	54.75	57.56	53.54	0.00	0.00	0.00
Movement LOS		D	E	E	A		D	E	D			
d_A, Approach Delay [s/veh]	43.90			21.81			54.39			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	38.97											
Intersection LOS	D											
Intersection V/C	0.908											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	944	65	110	754	43	57	190	51	70	69	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	291	10	27	196	16	39	14	31	22	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	1235	75	137	950	59	96	204	82	92	79	101
Peak Hour Factor	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770	0.9770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	316	19	35	243	15	25	52	21	24	20	26
Total Analysis Volume [veh/h]	96	1264	77	140	972	60	98	209	84	94	81	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	25	35	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	32	32	7	33	33	17	17	17	17
g / C, Green / Cycle	0.09	0.49	0.49	0.11	0.51	0.51	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.06	0.38	0.38	0.09	0.29	0.29	0.08	0.17	0.09	0.11
s, saturation flow rate [veh/h]	1619	1800	1764	1619	1800	1763	1219	1713	1103	1638
c, Capacity [veh/h]	146	880	863	180	918	900	281	448	198	429
d1, Uniform Delay [s]	28.68	13.62	13.66	28.18	11.00	11.01	26.23	21.42	30.17	20.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.98	6.37	6.61	7.08	2.54	2.60	0.74	1.62	1.76	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

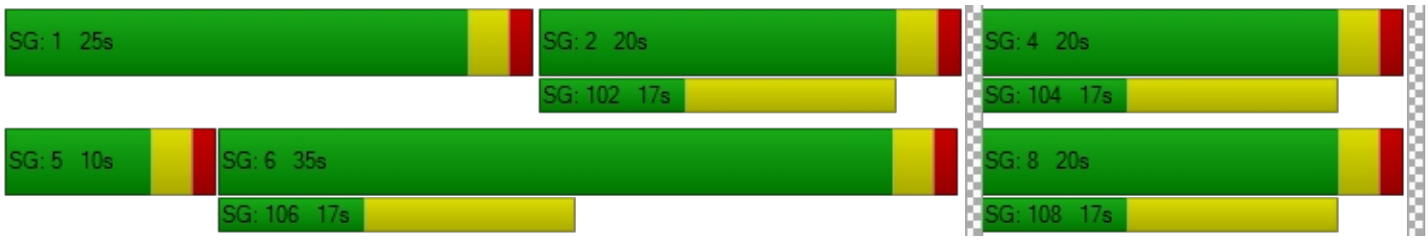
X, volume / capacity	0.66	0.77	0.77	0.78	0.57	0.57	0.35	0.65	0.47	0.43
d, Delay for Lane Group [s/veh]	33.66	19.99	20.26	35.26	13.54	13.60	26.97	23.04	31.92	20.69
Lane Group LOS	C	B	C	D	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.59	8.41	8.35	2.38	5.02	4.94	1.41	3.90	1.51	2.25
50th-Percentile Queue Length [ft/ln]	39.69	210.35	208.81	59.43	125.49	123.43	35.22	97.50	37.77	56.25
95th-Percentile Queue Length [veh/ln]	2.86	13.17	13.09	4.28	8.69	8.58	2.54	7.02	2.72	4.05
95th-Percentile Queue Length [ft/ln]	71.44	329.28	327.31	106.97	217.35	214.53	63.39	175.50	67.99	101.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.66	20.12	20.26	35.26	13.57	13.60	26.97	23.04	23.04	31.92	20.69	20.69
Movement LOS	C	C	C	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	21.03			16.16			24.03			24.48		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	19.94											
Intersection LOS	B											
Intersection V/C	0.699											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	281	0	0	477	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1517	0	0	1521	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	386	0	0	387	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1545	0	0	1549	15	24	0	37	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	28	28	0	27	27	4	4	4	4
g / C, Green / Cycle	0.03	0.64	0.64	0.00	0.61	0.61	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.43	0.00	0.00	0.43	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1393	1615
c, Capacity [veh/h]	58	2318	1035	0	2203	984	219	136	190	136
d1, Uniform Delay [s]	20.69	4.92	0.00	0.00	5.84	3.37	20.56	18.74	21.08	18.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.05	0.33	0.00	0.00	0.42	0.01	0.22	1.06	0.01	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.67	0.00	0.00	0.70	0.02	0.11	0.27	0.01	0.02
d, Delay for Lane Group [s/veh]	23.73	5.25	0.00	0.00	6.26	3.38	20.78	19.80	21.09	18.41
Lane Group LOS	C	A	A	A	A	A	C	B	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.21	2.09	0.00	0.00	2.64	0.03	0.23	0.35	0.01	0.03
50th-Percentile Queue Length [ft/ln]	5.24	52.26	0.00	0.00	65.98	0.74	5.68	8.77	0.24	0.68
95th-Percentile Queue Length [veh/ln]	0.38	3.76	0.00	0.00	4.75	0.05	0.41	0.63	0.02	0.05
95th-Percentile Queue Length [ft/ln]	9.43	94.07	0.00	0.00	118.76	1.34	10.23	15.79	0.43	1.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.73	5.25	0.00	0.00	6.26	3.38	20.78	19.80	19.80	21.09	18.41	18.41
Movement LOS	C	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	5.47			6.23			20.18			19.08		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	6.14											
Intersection LOS	A											
Intersection V/C	0.636											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	42.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.983

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	108	51	219	212	47	26	21	23	104	38	148
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	500	526	682	690	75	58	85	26	413	90	624
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	129	136	176	178	19	15	22	7	107	23	161
Total Analysis Volume [veh/h]	62	517	544	705	714	78	60	88	27	427	93	645
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	22	22	30	41	0	11	21	0	47	57	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	22	55	26	42	42	6	27	29	50	50
g / C, Green / Cycle	0.05	0.19	0.46	0.21	0.35	0.35	0.05	0.22	0.24	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.20	0.20	0.05	0.03	0.06	0.12	0.05	0.40
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1824	3514	1900	1615
c, Capacity [veh/h]	92	670	747	755	1263	564	92	406	857	790	672
d1, Uniform Delay [s]	55.96	46.48	26.15	46.28	31.68	26.72	55.96	38.71	39.06	21.53	34.09
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.11	8.37	6.15	6.03	1.84	0.51	7.69	0.38	0.45	0.07	9.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

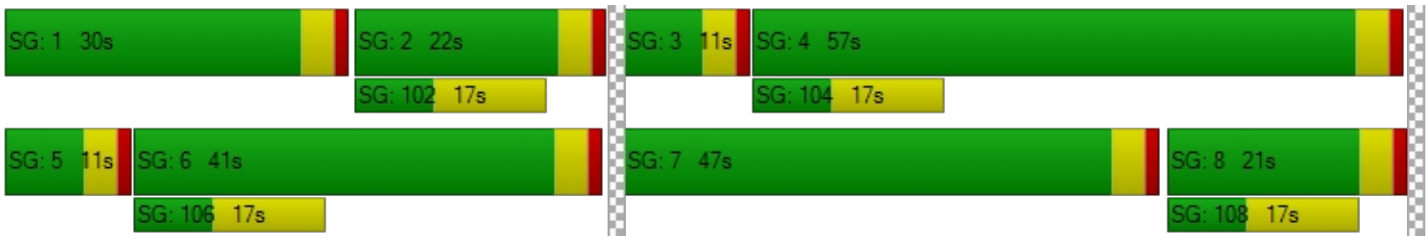
X, volume / capacity	0.67	0.77	0.73	0.93	0.57	0.14	0.66	0.28	0.50	0.12	0.96
d, Delay for Lane Group [s/veh]	64.07	54.85	32.29	52.31	33.52	27.23	63.65	39.09	39.51	21.60	43.32
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	8.10	13.62	10.90	8.69	1.62	1.98	2.87	5.48	1.64	19.54
50th-Percentile Queue Length [ft/ln]	51.36	202.47	340.52	272.60	217.21	40.54	49.53	71.69	137.11	40.92	488.49
95th-Percentile Queue Length [veh/ln]	3.70	12.77	19.67	16.32	13.52	2.92	3.57	5.16	9.33	2.95	26.79
95th-Percentile Queue Length [ft/ln]	92.45	319.15	491.84	407.99	338.06	72.98	89.15	129.04	233.13	73.66	669.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.07	54.85	32.29	52.31	33.52	27.23	63.65	39.09	39.09	39.51	21.60	43.32
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	44.43			42.04			47.51			40.19		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42.42											
Intersection LOS	D											
Intersection V/C	0.983											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	900	83	123	722	5	4	15	15	26	17	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	199	0	0	339	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1099	83	123	1061	5	4	15	15	26	17	37
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	282	21	32	273	1	1	4	4	7	4	10
Total Analysis Volume [veh/h]	18	1129	85	126	1090	5	4	15	15	27	17	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	61	0	17	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	C
C, Cycle Length [s]	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	20	20	6	24	24	3	5
g / C, Green / Cycle	0.03	0.40	0.40	0.12	0.49	0.49	0.05	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.31	0.05	0.07	0.29	0.29	0.02	0.05
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1897	1753	1730
c, Capacity [veh/h]	57	1465	654	213	934	932	94	168
d1, Uniform Delay [s]	23.19	12.60	9.15	20.47	8.90	8.90	22.36	20.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.13	0.88	0.09	2.60	0.59	0.59	2.34	2.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.77	0.13	0.59	0.59	0.59	0.36	0.49
d, Delay for Lane Group [s/veh]	26.32	13.48	9.24	23.07	9.49	9.49	24.69	23.16
Lane Group LOS	C	B	A	C	A	A	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.24	4.44	0.48	1.38	3.25	3.24	0.41	0.91
50th-Percentile Queue Length [ft/ln]	5.90	111.05	12.05	34.60	81.22	81.11	10.15	22.73
95th-Percentile Queue Length [veh/ln]	0.42	7.90	0.87	2.49	5.85	5.84	0.73	1.64
95th-Percentile Queue Length [ft/ln]	10.62	197.47	21.70	62.28	146.19	145.99	18.28	40.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.32	13.48	9.24	23.07	9.49	9.49	24.69	24.69	24.69	23.16	23.16	23.16
Movement LOS	C	B	A	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.38			10.89			24.69			23.16		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	12.66											
Intersection LOS	B											
Intersection V/C	0.667											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.832

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	978	29	21	742	3	0	0	10	18	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	199	0	0	339	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1177	29	21	1081	3	0	0	10	18	0	22
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	309	8	6	284	1	0	0	3	5	0	6
Total Analysis Volume [veh/h]	7	1235	30	22	1134	3	0	0	10	19	0	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	21	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C	C	C	C
C, Cycle Length [s]	69	69	69	69	69	69	69
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	26	26	4	4
g / C, Green / Cycle	0.40	0.40	0.40	0.37	0.37	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.34	0.34	0.02	0.32	0.32	0.01	0.02
s, saturation flow rate [veh/h]	1899	1729	1615	1897	1727	945	1735
c, Capacity [veh/h]	754	686	641	706	643	106	174
d1, Uniform Delay [s]	19.02	19.02	12.74	19.94	19.94	30.81	31.34
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.08	3.37	0.03	3.21	3.51	0.38	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

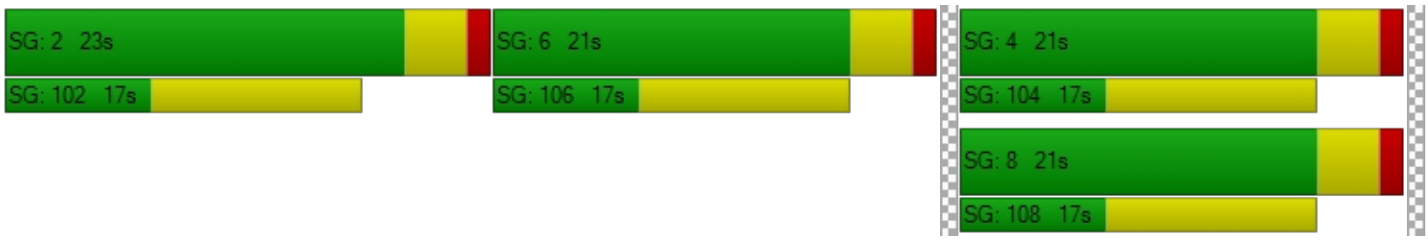
X, volume / capacity	0.86	0.86	0.05	0.86	0.86	0.09	0.24
d, Delay for Lane Group [s/veh]	22.10	22.39	12.77	23.15	23.45	31.19	32.05
Lane Group LOS	C	C	B	C	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.16	8.39	0.27	8.73	8.00	0.16	0.68
50th-Percentile Queue Length [ft/ln]	228.89	209.75	6.71	218.26	200.10	4.08	17.07
95th-Percentile Queue Length [veh/ln]	14.12	13.14	0.48	13.58	12.64	0.29	1.23
95th-Percentile Queue Length [ft/ln]	352.94	328.51	12.08	339.40	316.10	7.34	30.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.10	22.24	12.77	23.15	23.30	23.45	31.19	31.19	31.19	32.05	32.05	32.05
Movement LOS	C	C	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	22.01			23.29			31.19			32.05		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.82											
Intersection LOS	C											
Intersection V/C	0.832											

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	903	0	0	841	28	30	0	136	461	103	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	164	0	0	342	8	6	0	30	49	33	46
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	1067	0	0	1183	36	36	0	166	510	136	103
Peak Hour Factor	0.9390	0.9390	0.8860	0.8860	0.9390	0.9390	0.9390	0.8860	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	284	0	0	315	10	10	0	44	136	36	27
Total Analysis Volume [veh/h]	92	1136	0	0	1260	38	38	0	177	543	145	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	0	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	120	0	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	37	0	21	0	0	0	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	106	106	106	106	106	106	106	106	106
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	57	57	14	14	23	23	23
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.13	0.13	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.21	0.31	0.34	0.35	0.02	0.11	0.19	0.19	0.07
s, saturation flow rate [veh/h]	431	3618	1900	1881	1810	1615	1810	1846	1615
c, Capacity [veh/h]	185	1939	1018	1008	238	212	398	406	356
d1, Uniform Delay [s]	35.81	16.73	17.43	17.52	41.08	45.17	39.97	39.89	34.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.05	0.28	0.67	0.69	0.31	8.33	5.45	5.10	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

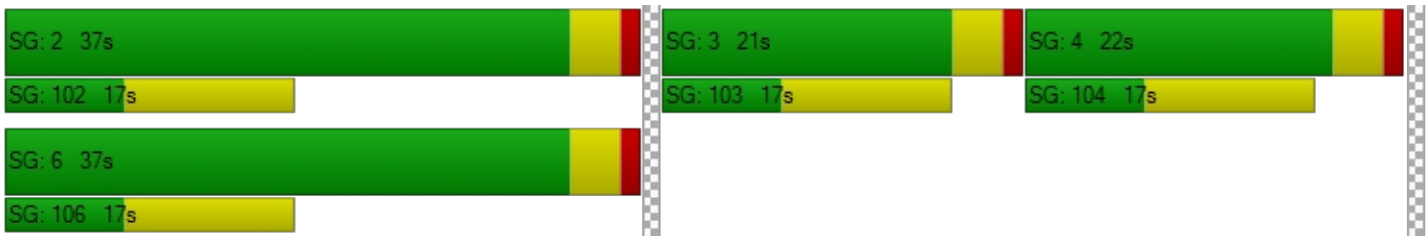
X, volume / capacity	0.50	0.59	0.64	0.64	0.16	0.83	0.86	0.85	0.31
d, Delay for Lane Group [s/veh]	37.86	17.01	18.10	18.22	41.39	53.50	45.42	44.99	35.27
Lane Group LOS	D	B	B	B	D	D	D	D	D
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.28	9.05	10.87	10.93	0.91	5.02	9.11	9.17	2.43
50th-Percentile Queue Length [ft/ln]	57.08	226.20	271.72	273.30	22.64	125.57	227.70	229.19	60.74
95th-Percentile Queue Length [veh/ln]	4.11	13.98	16.28	16.35	1.63	8.70	14.06	14.13	4.37
95th-Percentile Queue Length [ft/ln]	102.75	349.52	406.89	408.86	40.75	217.45	351.44	353.33	109.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.86	17.01	0.00	0.00	18.15	18.22	41.39	0.00	53.50	45.26	44.99	35.27
Movement LOS	D	B			B	B	D		D	D	D	D
d_A, Approach Delay [s/veh]	18.57			18.16			51.36			43.83		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.11											
Intersection LOS	C											
Intersection V/C	0.725											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	233	1000	927	485	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	181	222	199	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1181	1149	684	0	0
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	312	304	181	0	0
Total Analysis Volume [veh/h]	268	1248	1215	723	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	0
Maximum Green [s]	120	120	120	0	0	0
Amber [s]	3.0	3.0	3.0	0.0	0.0	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0
Split [s]	19	80	61	0	0	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	10	10	0	0	0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	53	53	53	53	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	10	49	35	35	
g / C, Green / Cycle	0.19	0.92	0.66	0.66	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.34	0.51	0.58	
s, saturation flow rate [veh/h]	1810	3618	1900	1679	
c, Capacity [veh/h]	340	3346	1258	1112	
d1, Uniform Delay [s]	20.63	0.23	6.21	7.20	
k, delay calibration	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.09	0.07	1.03	2.29	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

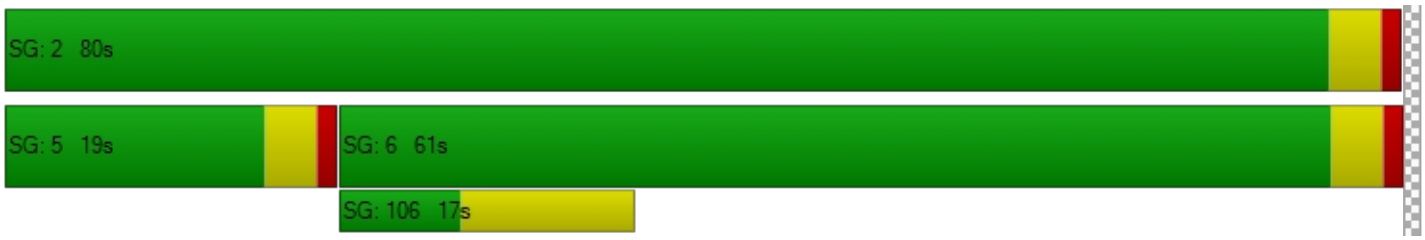
X, volume / capacity	0.79	0.37	0.77	0.87	
d, Delay for Lane Group [s/veh]	24.72	0.30	7.24	9.49	
Lane Group LOS	C	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.26	0.03	4.54	5.55	
50th-Percentile Queue Length [ft/ln]	81.40	0.80	113.45	138.74	
95th-Percentile Queue Length [veh/ln]	5.86	0.06	8.03	9.41	
95th-Percentile Queue Length [ft/ln]	146.53	1.45	200.79	235.32	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.72	0.30	7.69	9.49	0.00	0.00
Movement LOS	C	A	A	A		
d_A, Approach Delay [s/veh]	4.62		8.36		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.72					
Intersection LOS	A					
Intersection V/C	0.854					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	601	299	84	836	0	625	36	389	15	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	93	37	86	136	0	109	0	22	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	694	336	170	972	0	734	36	411	15	0	4
Peak Hour Factor	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390	0.9390	0.9390	0.9390	0.8750	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	185	89	45	259	0	195	10	109	4	0	1
Total Analysis Volume [veh/h]	0	739	358	181	1035	0	782	38	438	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	21	0	14	35	0	0	24	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26	26	10	40	25	25	25	3	3
g / C, Green / Cycle	0.33	0.33	0.12	0.50	0.32	0.32	0.32	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.20	0.22	0.10	0.29	0.23	0.23	0.27	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1818	1615	1810	1615
c, Capacity [veh/h]	1187	530	221	1809	575	578	513	59	53
d1, Uniform Delay [s]	22.75	23.26	34.36	14.05	24.13	24.10	25.61	37.86	37.62
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.46	6.76	7.38	1.32	1.66	1.63	4.15	2.43	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

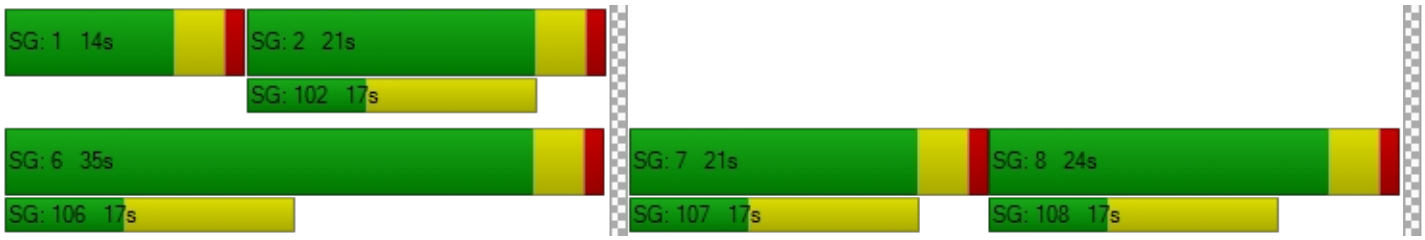
X, volume / capacity	0.62	0.68	0.82	0.57	0.71	0.71	0.85	0.27	0.08
d, Delay for Lane Group [s/veh]	25.21	30.01	41.74	15.37	25.79	25.72	29.75	40.30	38.23
Lane Group LOS	C	C	D	B	C	C	C	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.00	6.53	3.80	6.30	6.79	6.77	7.98	0.34	0.08
50th-Percentile Queue Length [ft/ln]	149.91	163.30	95.11	157.41	169.64	169.33	199.59	8.53	2.09
95th-Percentile Queue Length [veh/ln]	10.01	10.72	6.85	10.41	11.06	11.04	12.62	0.61	0.15
95th-Percentile Queue Length [ft/ln]	250.31	268.09	171.20	260.29	276.44	276.03	315.44	15.35	3.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.21	30.01	41.74	15.37	0.00	25.76	25.72	29.75	40.30	0.00	38.23
Movement LOS		C	C	D	B		C	C	C	D		D
d_A, Approach Delay [s/veh]	26.78			19.29			27.15			39.88		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	24.45											
Intersection LOS	C											
Intersection V/C	0.752											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	0	11	0	0	0	0	82	102	4	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	181	1	12	3	4	5	7	408	199	4	224	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	0	3	1	1	1	2	113	55	1	62	3
Total Analysis Volume [veh/h]	200	1	13	3	4	6	8	451	220	4	248	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	39	0	0	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	27	27	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	6	13	13	13	13
g / C, Green / Cycle	0.24	0.24	0.24	0.24	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.14	0.01	0.00	0.01	0.01	0.37	0.01	0.14
s, saturation flow rate [veh/h]	1427	1632	1422	1718	1136	1796	779	1883
c, Capacity [veh/h]	497	386	493	406	640	841	338	881
d1, Uniform Delay [s]	11.06	7.96	9.58	7.94	6.14	6.11	11.19	4.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.04	0.00	0.02	0.01	1.79	0.01	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

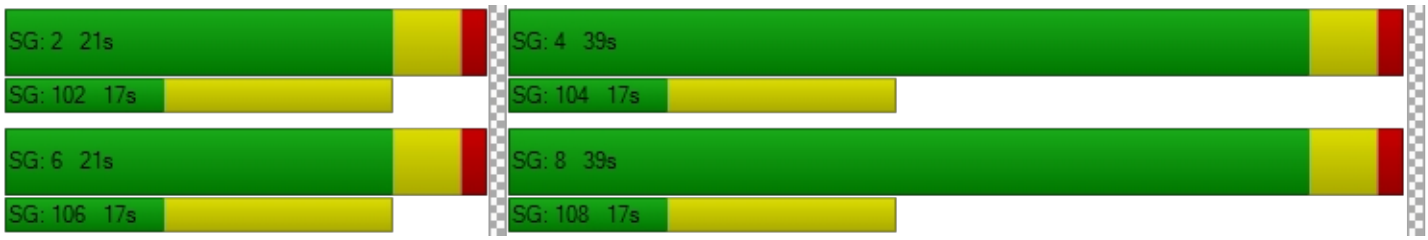
X, volume / capacity	0.40	0.04	0.01	0.02	0.01	0.80	0.01	0.30
d, Delay for Lane Group [s/veh]	11.58	8.00	9.58	7.96	6.15	7.91	11.20	4.63
Lane Group LOS	B	A	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.86	0.04	0.01	0.03	0.02	1.64	0.02	0.39
50th-Percentile Queue Length [ft/ln]	21.52	1.10	0.27	0.78	0.47	40.90	0.43	9.74
95th-Percentile Queue Length [veh/ln]	1.55	0.08	0.02	0.06	0.03	2.94	0.03	0.70
95th-Percentile Queue Length [ft/ln]	38.74	1.98	0.49	1.40	0.85	73.61	0.77	17.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.58	8.00	8.00	9.58	7.96	7.96	6.15	7.91	7.91	11.20	4.63	4.63
Movement LOS	B	A	A	A	A	A	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	11.35			8.33			7.89			4.73		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	7.81											
Intersection LOS	A											
Intersection V/C	0.730											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.832

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	40	847	443	80	93	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	120	104	42	86	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	967	547	122	179	39
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	248	141	31	46	10
Total Analysis Volume [veh/h]	42	994	562	125	184	40
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	10	30	20	0	30	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	45	39	9	9
g / C, Green / Cycle	0.06	0.75	0.64	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.55	0.39	0.11	0.03
s, saturation flow rate [veh/h]	1619	1800	1744	1619	1530
c, Capacity [veh/h]	98	1352	1118	241	228
d1, Uniform Delay [s]	27.26	4.15	6.40	24.58	22.37
k, delay calibration	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.94	3.58	2.53	4.96	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.74	0.61	0.76	0.18
d, Delay for Lane Group [s/veh]	30.20	7.74	8.93	29.54	22.74
Lane Group LOS	C	A	A	C	C
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.63	4.13	4.28	2.69	0.49
50th-Percentile Queue Length [ft/ln]	15.81	103.15	106.98	67.14	12.21
95th-Percentile Queue Length [veh/ln]	1.14	7.43	7.67	4.83	0.88
95th-Percentile Queue Length [ft/ln]	28.46	185.66	191.80	120.85	21.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.20	7.74	8.93	8.93	29.54	22.74
Movement LOS	C	A	A	A	C	C
d_A, Approach Delay [s/veh]	8.65		8.93		28.33	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	11.01					
Intersection LOS	B					
Intersection V/C	0.832					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	38.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	149	0	84	29	262	0	0	206	62
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	315	2	428	556	708	4	2	666	243
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	84	1	114	148	189	1	1	178	65
Total Analysis Volume [veh/h]	3	2	2	336	2	457	593	756	4	2	711	259
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	57	67	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	36	36	36	42	72	72	0	30	30
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.35	0.60	0.60	0.00	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.23	0.00	0.28	0.33	0.21	0.00	0.00	0.20	0.16
s, saturation flow rate [veh/h]	1584	1615	1437	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	524	485	460	571	485	629	2155	962	8	913	407
d1, Uniform Delay [s]	29.49	29.44	40.80	29.44	41.01	38.03	12.42	9.85	59.62	41.79	39.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	2.24	0.00	9.58	7.83	0.45	0.01	16.98	6.52	7.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.00	0.73	0.00	0.94	0.94	0.35	0.00	0.26	0.78	0.64
d, Delay for Lane Group [s/veh]	29.49	29.45	43.04	29.44	50.59	45.87	12.87	9.86	76.60	48.32	47.37
Lane Group LOS	C	C	D	C	D	D	B	A	E	D	D
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	0.04	9.58	0.04	14.33	18.03	5.19	0.04	0.10	10.58	7.63
50th-Percentile Queue Length [ft/ln]	2.59	1.04	239.43	1.03	358.30	450.64	129.84	1.11	2.42	264.41	190.79
95th-Percentile Queue Length [veh/ln]	0.19	0.07	14.65	0.07	20.54	24.99	8.93	0.08	0.17	15.91	12.16
95th-Percentile Queue Length [ft/ln]	4.66	1.86	366.32	1.86	513.52	624.71	223.28	2.00	4.36	397.75	304.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.49	29.49	29.45	43.04	29.44	50.59	45.87	12.87	9.86	76.60	48.32	47.37
Movement LOS	C	C	C	D	C	D	D	B	A	E	D	D
d_A, Approach Delay [s/veh]	29.48			47.34			27.32			48.12		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	38.88											
Intersection LOS	D											
Intersection V/C	0.897											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	29.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	689	861	58	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	267	409	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	956	1270	60	32	9
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	255	338	16	9	2
Total Analysis Volume [veh/h]	23	1018	1353	64	34	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.19	0.06
d_M, Delay for Movement [s/veh]	12.76	0.00	0.00	0.00	29.70	26.51
Movement LOS	B	A	A	A	D	D
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.68	0.18
95th-Percentile Queue Length [ft/ln]	3.71	0.00	0.00	0.00	16.91	4.44
d_A, Approach Delay [s/veh]	0.28		0.00		28.98	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.63					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	766	104	514	726	0	148	0	824	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	106	10	287	125	0	21	0	19	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	872	114	801	851	0	169	0	843	0	0	1
Peak Hour Factor	0.9240	0.9460	0.9460	0.9460	0.9460	0.9240	0.9460	0.9240	0.9460	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	230	30	212	225	0	45	0	223	0	0	0
Total Analysis Volume [veh/h]	0	922	121	847	900	0	179	0	891	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	41	62	0	58	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	35	35	32	71	41	41	
g / C, Green / Cycle	0.29	0.29	0.27	0.59	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.07	0.24	0.25	0.10	0.31	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	1052	470	933	2133	622	983	
d1, Uniform Delay [s]	40.55	32.66	42.68	13.47	28.70	37.58	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.26	1.33	3.75	0.13	0.25	3.54	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

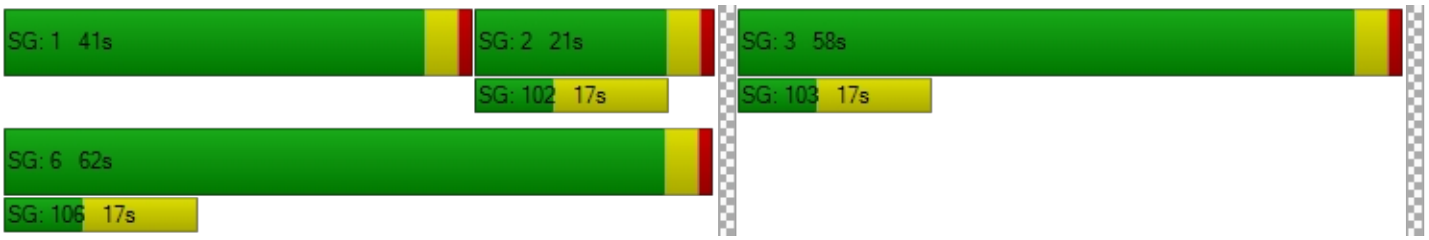
X, volume / capacity	0.88	0.26	0.91	0.42	0.29	0.91	
d, Delay for Lane Group [s/veh]	50.81	33.99	46.44	13.60	28.96	41.12	
Lane Group LOS	D	C	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	14.34	2.89	12.55	6.50	3.82	12.79	
50th-Percentile Queue Length [ft/ln]	358.39	72.17	313.77	162.61	95.51	319.73	
95th-Percentile Queue Length [veh/ln]	20.55	5.20	18.36	10.69	6.88	18.65	
95th-Percentile Queue Length [ft/ln]	513.63	129.91	459.03	267.17	171.91	466.35	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	50.81	33.99	46.44	13.60	0.00	28.96	0.00	41.12	0.00	0.00	0.00
Movement LOS		D	C	D	B		C		D			
d_A, Approach Delay [s/veh]	48.86			29.52			39.09			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	37.40											
Intersection LOS	D											
Intersection V/C	0.897											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



YEAR 2035 WITHOUT PROJECT

Viridian

Vistro File: C:\...\AME.vistro
Report File: C:\...\AM35WO.pdf

Scenario 12 Year 2035 Without Project Morning Peak Hour
10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.220	79.6	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.086	61.8	E
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.786	40.8	D
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.728	29.8	C
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	1.816	73.4	E
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.534	12.6	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	93.5	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	1.002	131.6	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	0.129	10,000.0	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.042	81.5	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	1.969	32.5	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Two-way stop	HCM 2010	EB Right	0.408	17.0	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.885	21.9	C
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.878	33.7	C
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.727	12.5	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.464	13.0	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.005	12.6	B
	Agua Mansa Rd (NS) at El						

24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.470	46.2	E
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.033	16.2	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.090	15.5	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	NB Left	0.577	10.6	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.375	3.8	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	70.811	250.7	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.223	53.8	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.592	17.0	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.761	12.4	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.889	30.6	C
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.731	21.9	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	0.780	26.9	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.957	31.6	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.730	11.9	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.724	9.7	A
39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.971	22.4	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.722	21.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	79.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.220

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	379	0	0	312	221	0	0	0	155	0	151
Total Analysis Volume [veh/h]	414	1515	0	0	1249	885	0	0	0	621	0	604
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	28	88	0	0	60	0	0	0	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	25	85	57	57		39	39
g / C, Green / Cycle	0.19	0.65	0.44	0.44		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.24	0.42	0.24	0.55		0.34	0.37
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1615
c, Capacity [veh/h]	330	2365	2269	708		543	485
d1, Uniform Delay [s]	48.33	3.90	19.15	27.00		39.00	39.00
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	137.54	1.34	0.97	123.94		84.88	127.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.26	0.64	0.55	1.25		1.14	1.25
d, Delay for Lane Group [s/veh]	185.88	5.24	20.12	150.94		123.88	166.36
Lane Group LOS	F	A	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	22.80	3.63	7.05	43.39		28.92	31.53
50th-Percentile Queue Length [ft/ln]	569.88	90.87	176.25	1084.86		723.10	788.26
95th-Percentile Queue Length [veh/ln]	34.21	6.54	11.40	62.98		41.03	46.31
95th-Percentile Queue Length [ft/ln]	855.13	163.56	285.12	1574.52		1025.74	1157.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	185.88	5.24	0.00	0.00	20.12	150.94	0.00	0.00	0.00	123.88	123.88	166.36
Movement LOS	F	A			C	F				F	F	F
d_A, Approach Delay [s/veh]	44.01			74.37			0.00			144.83		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	79.62											
Intersection LOS	E											
Intersection V/C	1.220											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	61.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.086

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	306	127	138	338	0	176	0	142	0	0	0
Total Analysis Volume [veh/h]	0	1222	507	554	1351	0	704	0	567	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	40	0	41	81	0	0	49	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	37	37	38	78	46	46	
g / C, Green / Cycle	0.28	0.28	0.29	0.60	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.37	0.36	0.40	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1638	
c, Capacity [veh/h]	1473	460	501	2171	607	580	
d1, Uniform Delay [s]	37.48	40.33	39.67	7.13	34.33	34.33	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.55	72.98	72.24	1.36	41.50	77.11	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

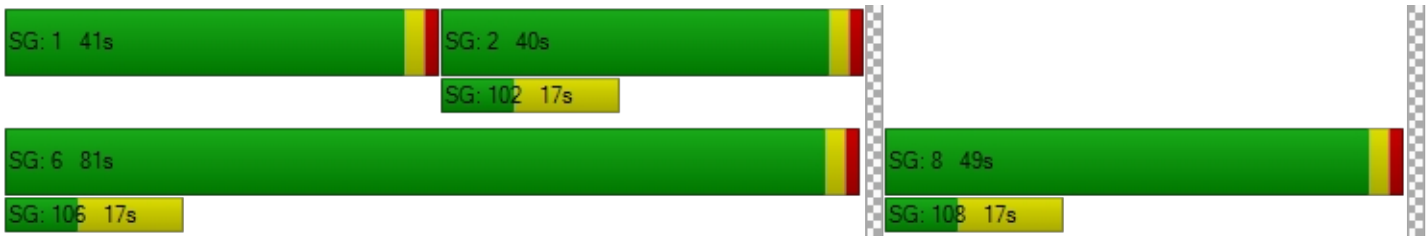
X, volume / capacity	0.83	1.10	1.11	0.62	1.02	1.13	
d, Delay for Lane Group [s/veh]	43.02	113.32	111.91	8.49	75.83	111.44	
Lane Group LOS	D	F	F	A	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.79	23.07	24.99	5.21	24.48	29.13	
50th-Percentile Queue Length [ft/ln]	294.78	576.72	624.84	130.24	612.03	728.16	
95th-Percentile Queue Length [veh/ln]	17.42	32.86	35.33	8.95	33.04	41.09	
95th-Percentile Queue Length [ft/ln]	435.57	821.56	883.36	223.83	826.03	1027.22	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	43.02	113.32	111.91	8.49	0.00	79.47	111.44	111.44	0.00	0.00	0.00
Movement LOS		D	F	F	A		E	F	F			
d_A, Approach Delay [s/veh]	63.64			38.57			94.12			0.00		
Approach LOS	E			D			F			A		
d_I, Intersection Delay [s/veh]	61.80											
Intersection LOS	E											
Intersection V/C	1.086											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	40.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.786

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	957	25	193	1100	190	265	189	79	21	216	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	957	25	193	1100	190	265	189	79	21	216	167
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	252	7	51	289	50	70	50	21	6	57	44
Total Analysis Volume [veh/h]	151	1007	26	203	1158	200	279	199	83	22	227	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	57	0	22	62	0	29	41	0	10	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	54	54	19	59	59	26	38	38	7	19	19
g / C, Green / Cycle	0.11	0.42	0.42	0.15	0.45	0.45	0.20	0.29	0.29	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.27	0.27	0.12	0.36	0.37	0.16	0.06	0.05	0.01	0.11	0.12
s, saturation flow rate [veh/h]	1714	1900	1883	1714	1900	1805	1714	3618	1615	1714	1900	1634
c, Capacity [veh/h]	185	789	782	251	862	819	343	1057	472	92	278	239
d1, Uniform Delay [s]	54.43	22.51	22.51	50.61	21.16	21.42	45.40	29.51	29.41	57.82	50.21	50.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	31.61	4.26	4.30	23.95	7.71	8.78	18.75	0.39	0.81	6.00	17.94	23.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

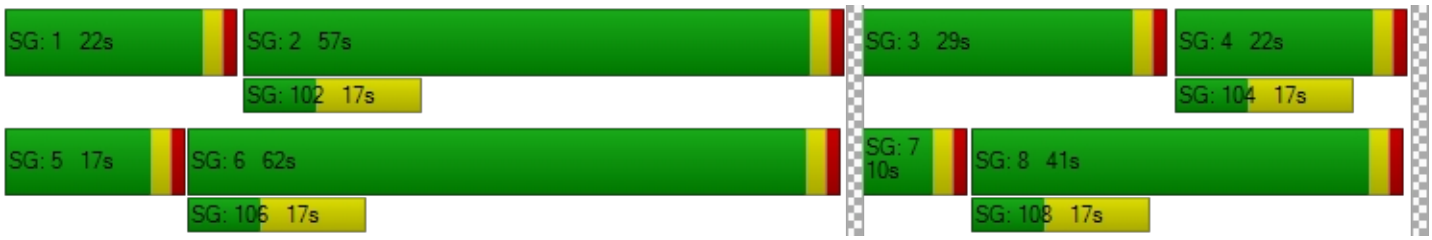
X, volume / capacity	0.82	0.66	0.66	0.81	0.80	0.82	0.81	0.19	0.18	0.24	0.76	0.80
d, Delay for Lane Group [s/veh]	86.04	26.76	26.81	74.56	28.87	30.20	64.14	29.90	30.22	63.81	68.15	74.28
Lane Group LOS	F	C	C	E	C	C	E	C	C	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.27	10.94	10.85	7.75	15.79	15.72	9.85	2.10	1.80	0.84	7.67	7.28
50th-Percentile Queue Length [ft/ln]	156.63	273.39	271.37	193.72	394.64	393.11	246.27	52.50	45.11	20.94	191.76	182.02
95th-Percentile Queue Length [veh/ln]	10.37	16.36	16.26	12.31	22.30	22.23	15.00	3.78	3.25	1.51	12.21	11.71
95th-Percentile Queue Length [ft/ln]	259.26	408.98	406.45	307.85	557.53	555.69	374.96	94.50	81.19	37.69	305.31	292.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	86.04	26.78	26.81	74.56	29.41	30.20	64.14	29.90	30.22	63.81	68.55	74.28
Movement LOS	F	C	C	E	C	C	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	34.34			35.38			46.98			70.68		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	40.81											
Intersection LOS	D											
Intersection V/C	0.786											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	986	45	91	1027	92	112	214	115	79	139	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	986	45	91	1027	92	112	214	115	79	139	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	259	12	24	270	24	29	56	30	21	37	13
Total Analysis Volume [veh/h]	111	1038	47	96	1081	97	118	225	121	83	146	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	62	0	13	60	0	0	55	0	0	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	59	59	10	57	57	52	52
g / C, Green / Cycle	0.09	0.45	0.45	0.08	0.44	0.44	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29	0.29	0.06	0.31	0.31	0.31	0.23
s, saturation flow rate [veh/h]	1714	1900	1871	1714	1900	1846	1475	1234
c, Capacity [veh/h]	158	862	849	132	833	809	625	530
d1, Uniform Delay [s]	55.28	18.75	18.75	57.01	21.22	21.25	26.68	22.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	22.84	3.54	3.60	29.45	5.24	5.44	7.80	3.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

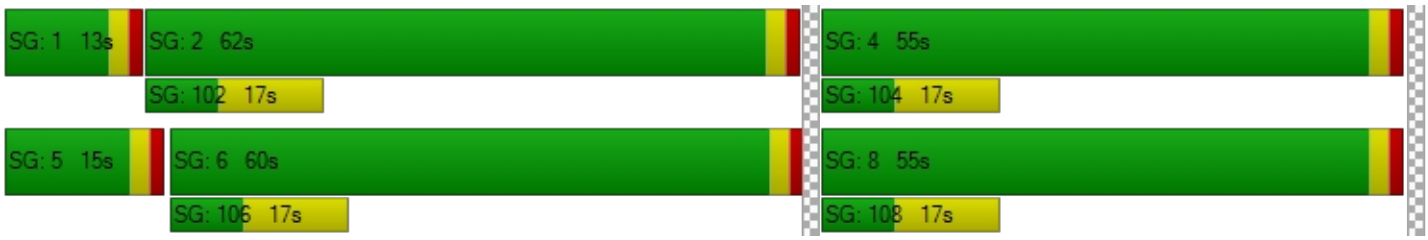
X, volume / capacity	0.70	0.63	0.63	0.73	0.72	0.72	0.74	0.53
d, Delay for Lane Group [s/veh]	78.12	22.28	22.35	86.46	26.46	26.69	34.47	25.92
Lane Group LOS	E	C	C	F	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.42	10.08	9.95	4.08	12.66	12.40	12.30	5.72
50th-Percentile Queue Length [ft/ln]	110.59	251.91	248.74	102.11	316.62	309.98	307.45	143.09
95th-Percentile Queue Length [veh/ln]	7.87	15.28	15.12	7.35	18.50	18.17	18.05	9.65
95th-Percentile Queue Length [ft/ln]	196.83	382.05	378.06	183.79	462.52	454.36	451.23	241.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	78.12	22.31	22.35	86.46	26.56	26.69	34.47	34.47	34.47	25.92	25.92	25.92
Movement LOS	E	C	C	F	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	27.49			31.09			34.47			25.92		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.79											
Intersection LOS	C											
Intersection V/C	0.728											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	73.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.816

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	233	15	31	268	15	27	38	22	19	24	44
Total Analysis Volume [veh/h]	62	934	59	123	1073	61	107	152	89	76	98	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	17	17	7	17	17	27	27	27	27
g / C, Green / Cycle	0.12	0.28	0.28	0.12	0.28	0.28	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.04	0.26	0.26	0.07	0.30	0.30	1.30	0.06	0.96	0.11
s, saturation flow rate [veh/h]	1714	1900	1861	1714	1900	1864	200	1615	181	1615
c, Capacity [veh/h]	200	538	527	200	538	528	175	727	168	727
d1, Uniform Delay [s]	23.19	18.11	18.11	24.08	18.67	18.67	15.43	6.89	14.74	7.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.99	25.14	25.52	13.35	56.41	57.32	245.22	0.35	79.47	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.93	0.93	0.62	1.06	1.06	1.48	0.12	1.04	0.24
d, Delay for Lane Group [s/veh]	27.18	43.25	43.63	37.42	75.08	75.98	260.65	7.23	94.21	8.01
Lane Group LOS	C	D	D	D	F	F	F	A	F	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.95	8.88	8.75	2.24	14.08	13.95	13.24	0.49	5.00	1.04
50th-Percentile Queue Length [ft/ln]	23.71	221.97	218.80	55.90	352.03	348.72	331.02	12.33	125.07	25.98
95th-Percentile Queue Length [veh/ln]	1.71	13.77	13.60	4.02	20.97	20.82	23.46	0.89	8.85	1.87
95th-Percentile Queue Length [ft/ln]	42.69	344.14	340.10	100.62	524.28	520.54	586.59	22.20	221.37	46.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.18	43.43	43.63	37.42	75.50	75.98	260.65	260.65	7.23	94.21	94.21	8.01
Movement LOS	C	D	D	D	F	E	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	42.48			71.80			195.84			50.74		
Approach LOS	D			E			F			D		
d_I, Intersection Delay [s/veh]	73.41											
Intersection LOS	E											
Intersection V/C	1.816											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	178	35	42	285	2	6	3	7	24	1	23
Total Analysis Volume [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	28	38	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	39	39	8	46	46	10	10	10
g / C, Green / Cycle	0.03	0.56	0.56	0.12	0.66	0.66	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.23	0.09	0.30	0.30	0.10	0.12	0.06
s, saturation flow rate [veh/h]	1810	1900	1794	1810	1900	1895	601	831	1615
c, Capacity [veh/h]	48	1067	1008	218	1246	1243	158	222	237
d1, Uniform Delay [s]	33.52	8.75	8.75	29.92	5.95	5.95	26.79	29.01	27.11
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.65	1.16	1.23	5.79	1.23	1.23	1.50	1.41	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

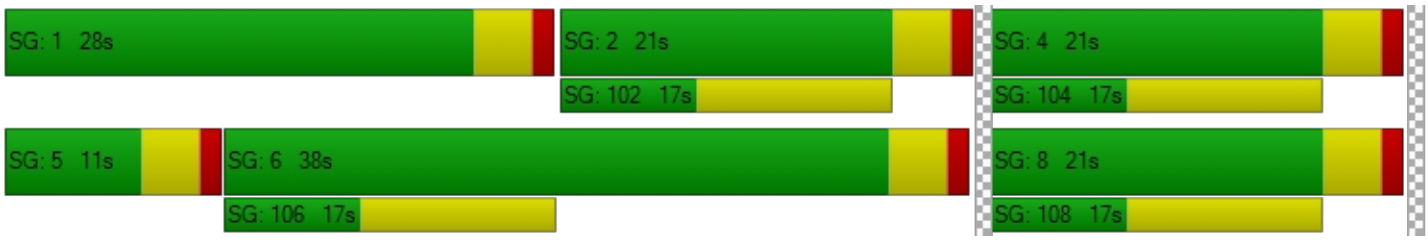
X, volume / capacity	0.31	0.41	0.41	0.77	0.46	0.46	0.38	0.45	0.39
d, Delay for Lane Group [s/veh]	37.17	9.91	9.98	35.71	7.18	7.19	28.28	30.41	28.17
Lane Group LOS	D	A	A	D	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.29	3.55	3.38	3.01	3.57	3.57	0.92	1.63	1.42
50th-Percentile Queue Length [ft/ln]	7.29	88.79	84.40	75.17	89.33	89.18	22.94	40.77	35.57
95th-Percentile Queue Length [veh/ln]	0.53	6.39	6.08	5.41	6.43	6.42	1.65	2.94	2.56
95th-Percentile Queue Length [ft/ln]	13.13	159.82	151.92	135.31	160.80	160.52	41.29	73.39	64.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.17	9.94	9.98	35.71	7.18	7.19	28.28	28.28	28.28	30.41	30.41	28.17
Movement LOS	D	A	A	D	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.42			10.84			28.28			29.33		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	12.58											
Intersection LOS	B											
Intersection V/C	0.534											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	93.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	229	0	0	314	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.11	0.00	0.04	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.71	0.00	0.00	9.79	0.00	0.00	76.34	93.48	17.58	56.96	90.00	11.49
Movement LOS	B	A	A	A	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.53	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.79	0.00	0.00	0.00	0.00	0.00	13.23	13.23	13.23	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.25			0.00			32.27			52.82		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	0.45											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	131.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.002

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	80	100	156	164	10	15	29	13	103	22	0
Total Analysis Volume [veh/h]	32	318	399	624	654	38	61	117	52	411	87	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	22	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	367	367	367	367	367	367	367	367	367	367
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	93	93	120	205	205	36	36	102	102
g / C, Green / Cycle	0.02	0.25	0.25	0.33	0.56	0.56	0.10	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.25	0.34	0.18	0.02	0.03	0.09	0.27	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1802	1825	1615
c, Capacity [veh/h]	40	914	408	593	2020	902	179	178	505	447
d1, Uniform Delay [s]	177.73	111.81	135.44	122.71	43.46	36.46	153.41	163.58	131.33	0.00
k, delay calibration	0.11	0.11	0.30	0.50	0.11	0.11	0.11	0.11	0.36	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.43	0.23	29.31	51.29	0.09	0.02	1.12	21.01	30.56	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

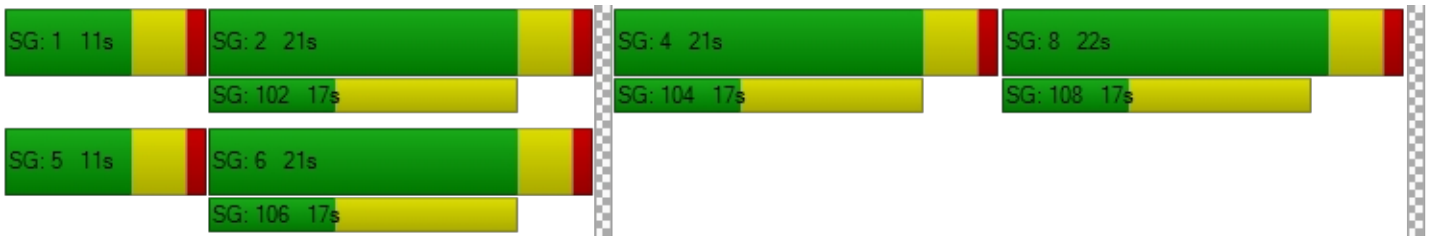
X, volume / capacity	0.80	0.35	0.98	1.05	0.32	0.04	0.34	0.95	0.99	0.00
d, Delay for Lane Group [s/veh]	207.16	112.03	164.75	174.00	43.55	36.48	154.53	184.59	161.89	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.48	12.79	42.11	66.43	16.85	1.65	5.67	17.62	52.73	0.00
50th-Percentile Queue Length [ft/ln]	86.94	319.72	1052.75	1660.82	421.35	41.13	141.67	440.39	1318.34	0.00
95th-Percentile Queue Length [veh/ln]	6.26	18.65	52.75	82.85	23.59	2.96	9.57	24.50	64.64	0.00
95th-Percentile Queue Length [ft/ln]	156.49	466.35	1318.81	2071.30	589.67	74.04	239.27	612.47	1616.07	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	207.16	112.03	164.75	174.00	43.55	36.48	154.53	184.59	184.59	161.89	161.89	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	144.18			105.20			176.61			161.89		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	131.64											
Intersection LOS	F											
Intersection V/C	1.002											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	173	24	73	221	0	1	6	16	2	1	5
Total Analysis Volume [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.35	0.01	0.00	0.16	1.18	0.11	0.00	0.13	0.03
d_M, Delay for Movement [s/veh]	9.81	0.00	0.00	11.52	0.00	0.00	468.02	503.24	332.00	10000.0	10000.0	10000.0
Movement LOS	A	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.10	0.05	0.00	1.55	0.77	0.00	7.94	7.94	7.94	5.72	5.72	5.72
95th-Percentile Queue Length [ft/ln]	2.60	1.30	0.00	38.65	19.32	0.00	198.47	198.47	198.47	142.94	142.94	142.94
d_A, Approach Delay [s/veh]	0.31			2.85			382.59			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	160.57											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	81.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	187	24	16	226	0	0	0	1	11	1	3
Total Analysis Volume [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.08	0.01	0.00	0.00	0.00	0.01	0.43	0.04	0.02
d_M, Delay for Movement [s/veh]	9.79	0.00	0.00	9.88	0.00	0.00	47.64	62.73	11.46	66.69	81.46	36.95
Movement LOS	A	A	A	A	A	A	E	F	B	F	F	E
95th-Percentile Queue Length [veh/ln]	0.04	0.02	0.00	0.26	0.13	0.00	0.02	0.02	0.02	2.27	2.27	2.27
95th-Percentile Queue Length [ft/ln]	0.90	0.45	0.00	6.38	3.19	0.00	0.40	0.40	0.40	56.83	56.83	56.83
d_A, Approach Delay [s/veh]	0.10			0.64			11.46			60.99		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	2.34											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	32.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.969

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	204	16	2	233	12	15	29	29	21	16	3
Total Analysis Volume [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	23	23	1	17	17	24	24	24	24
g / C, Green / Cycle	0.11	0.38	0.38	0.02	0.29	0.29	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.23	0.23	0.00	0.26	0.26	0.55	0.07	1.23	0.01
s, saturation flow rate [veh/h]	1810	1900	1851	1810	1900	1867	318	1615	120	1615
c, Capacity [veh/h]	208	728	709	34	545	536	207	645	142	645
d1, Uniform Delay [s]	25.94	14.99	14.99	29.18	20.71	20.71	15.33	11.71	22.60	10.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.12	3.82	3.92	4.09	21.12	21.41	8.90	0.13	56.10	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.61	0.61	0.27	0.91	0.91	0.84	0.18	1.03	0.02
d, Delay for Lane Group [s/veh]	32.06	18.81	18.91	33.26	41.83	42.12	24.23	11.85	78.69	10.96
Lane Group LOS	C	B	B	C	D	D	C	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.46	5.09	4.98	0.16	9.22	9.10	1.88	0.91	4.18	0.07
50th-Percentile Queue Length [ft/ln]	61.52	127.14	124.38	4.02	230.50	227.51	47.00	22.71	104.42	1.84
95th-Percentile Queue Length [veh/ln]	4.43	8.78	8.63	0.29	14.20	14.05	3.38	1.64	7.52	0.13
95th-Percentile Queue Length [ft/ln]	110.74	219.60	215.83	7.24	354.99	351.20	84.61	40.88	187.95	3.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.06	18.86	18.91	33.26	41.97	42.12	24.23	24.23	11.85	78.69	78.69	10.96
Movement LOS	C	B	B	C	D	D	C	C	B	E	E	B
d_A, Approach Delay [s/veh]	20.90			41.89			19.30			74.38		
Approach LOS	C			D			B			E		
d_I, Intersection Delay [s/veh]	32.49											
Intersection LOS	C											
Intersection V/C	1.969											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.408

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	137	1061	1050	35	0	205
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	1061	1050	35	0	205
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	265	263	9	0	51
Total Analysis Volume [veh/h]	137	1061	1050	35	0	205
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.01	0.01	0.00	0.00	0.41
d_M, Delay for Movement [s/veh]	12.00	0.00	0.00	0.00	0.00	17.01
Movement LOS	B	A	A	A		C
95th-Percentile Queue Length [veh/ln]	0.79	0.00	0.00	0.00	0.00	1.96
95th-Percentile Queue Length [ft/ln]	19.76	0.00	0.00	0.00	0.00	49.10
d_A, Approach Delay [s/veh]	1.37		0.00		17.01	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.06					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.885

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	371	870	0	0	534	817	0	0	0	382	0	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	371	870	0	0	534	817	0	0	0	382	0	258
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	218	0	0	134	204	0	0	0	96	0	65
Total Analysis Volume [veh/h]	371	870	0	0	534	817	0	0	0	382	0	258
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	19	93	0	0	74	0	0	0	0	27	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	94	94	94	94		94	94
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	13	67	51	51		18	18
g / C, Green / Cycle	0.14	0.72	0.54	0.54		0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.24	0.15	0.51		0.11	0.16
s, saturation flow rate [veh/h]	3514	3618	3618	1615		3514	1615
c, Capacity [veh/h]	476	2603	1959	874		686	315
d1, Uniform Delay [s]	39.19	4.86	11.57	19.96		34.09	36.16
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	2.81	0.07	0.07	5.35		0.71	5.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.33	0.27	0.93		0.56	0.82
d, Delay for Lane Group [s/veh]	42.00	4.93	11.64	25.31		34.80	41.39
Lane Group LOS	D	A	B	C		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	4.25	2.56	2.86	16.27		3.94	6.00
50th-Percentile Queue Length [ft/ln]	106.33	63.90	71.39	406.66		98.46	150.10
95th-Percentile Queue Length [veh/ln]	7.64	4.60	5.14	22.88		7.09	10.02
95th-Percentile Queue Length [ft/ln]	190.89	115.01	128.49	572.02		177.22	250.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.00	4.93	0.00	0.00	11.64	25.31	0.00	0.00	0.00	34.80	0.00	41.39
Movement LOS	D	A			B	C				C		D
d_A, Approach Delay [s/veh]	16.01			19.91			0.00			37.46		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	21.89											
Intersection LOS	C											
Intersection V/C	0.885											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	599	671	207	695	0	454	38	362	12	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	599	671	207	695	0	454	38	362	12	0	3
Peak Hour Factor	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	150	168	52	174	0	114	10	91	3	0	1
Total Analysis Volume [veh/h]	0	599	671	207	695	0	454	38	362	12	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	49	0	20	69	0	0	30	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	56	56	16	75	30	30	30	3	3
g / C, Green / Cycle	0.46	0.46	0.13	0.63	0.25	0.25	0.25	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.17	0.42	0.11	0.19	0.14	0.14	0.22	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1823	1615	1810	1615
c, Capacity [veh/h]	1676	748	235	2267	452	455	403	43	38
d1, Uniform Delay [s]	20.74	29.60	51.35	10.36	39.13	39.11	43.59	57.67	57.39
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	15.62	10.17	0.35	1.02	1.00	7.28	3.50	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

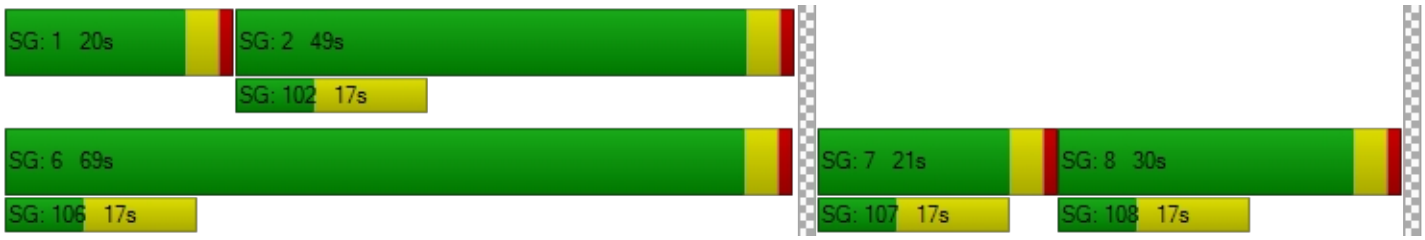
X, volume / capacity	0.36	0.90	0.88	0.31	0.54	0.54	0.90	0.28	0.08
d, Delay for Lane Group [s/veh]	21.33	45.22	61.52	10.71	40.15	40.11	50.87	61.17	58.26
Lane Group LOS	C	D	E	B	D	D	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.52	20.47	6.78	4.22	6.42	6.43	11.15	0.40	0.10
50th-Percentile Queue Length [ft/ln]	138.07	511.64	169.41	105.60	160.47	160.86	278.63	10.01	2.46
95th-Percentile Queue Length [veh/ln]	9.38	27.88	11.05	7.59	10.57	10.59	16.62	0.72	0.18
95th-Percentile Queue Length [ft/ln]	234.42	697.12	276.14	189.86	264.35	264.86	415.51	18.02	4.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.33	45.22	61.52	10.71	0.00	40.13	40.11	50.87	61.17	0.00	58.26
Movement LOS		C	D	E	B		D	D	D	E		E
d_A, Approach Delay [s/veh]	33.95			22.37			44.68			60.59		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	33.66											
Intersection LOS	C											
Intersection V/C	0.878											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	896	78	123	717	85	171	49	35	12	24	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	896	78	123	717	85	171	49	35	12	24	190
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	224	20	31	179	21	43	12	9	3	6	48
Total Analysis Volume [veh/h]	30	896	78	123	717	85	171	49	35	12	24	190
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	58	0	19	66	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	14	14	5	17	17	10	10	10
g / C, Green / Cycle	0.05	0.34	0.34	0.13	0.41	0.41	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.05	0.07	0.20	0.05	0.20	0.02	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1258	1734	1615
c, Capacity [veh/h]	91	1216	543	232	1499	669	456	546	401
d1, Uniform Delay [s]	19.18	12.25	9.68	17.04	8.94	7.57	15.57	12.03	13.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	0.89	0.12	1.87	0.24	0.08	1.07	0.05	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.74	0.14	0.53	0.48	0.13	0.56	0.07	0.47
d, Delay for Lane Group [s/veh]	21.30	13.13	9.80	18.91	9.18	7.65	16.65	12.08	14.24
Lane Group LOS	C	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	3.04	0.42	1.08	1.81	0.37	2.07	0.22	1.35
50th-Percentile Queue Length [ft/ln]	7.56	75.91	10.38	26.97	45.27	9.23	51.82	5.54	33.80
95th-Percentile Queue Length [veh/ln]	0.54	5.47	0.75	1.94	3.26	0.66	3.73	0.40	2.43
95th-Percentile Queue Length [ft/ln]	13.60	136.64	18.69	48.55	81.49	16.61	93.28	9.97	60.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.30	13.13	9.80	18.91	9.18	7.65	16.65	16.65	16.65	12.08	12.08	14.24
Movement LOS	C	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.12			10.33			16.65			13.90		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.50											
Intersection LOS	B											
Intersection V/C	0.727											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	0	23	53	29	0	0	22	29
Total Analysis Volume [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	37	0	0	37	62	0	0	25	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	0	6	6	16	16	6	6
g / C, Green / Cycle	0.00	0.00	0.18	0.18	0.47	0.47	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.11	0.12	0.03	0.00	0.05	0.07
s, saturation flow rate [veh/h]	1810	1900	1810	1810	3618	1615	1900	1615
c, Capacity [veh/h]	0	0	321	324	1709	763	336	285
d1, Uniform Delay [s]	0.00	0.00	13.08	13.07	4.92	0.00	12.18	12.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00	2.10	2.21	0.02	0.00	0.41	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

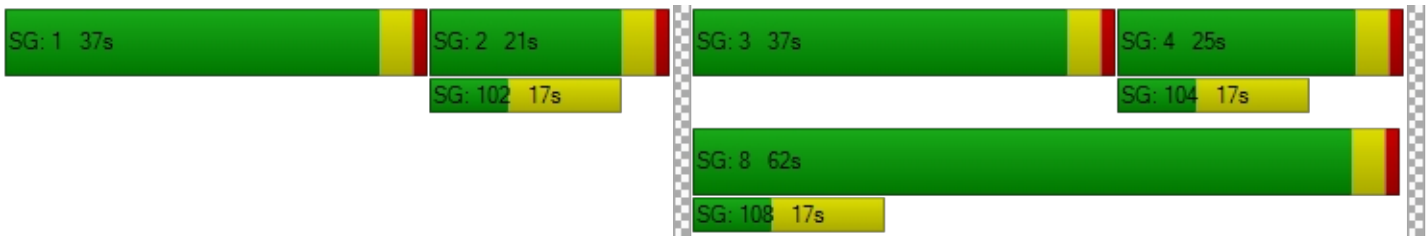
X, volume / capacity	0.00	0.00	0.64	0.65	0.07	0.00	0.26	0.41
d, Delay for Lane Group [s/veh]	0.00	0.00	15.17	15.28	4.94	0.00	12.59	13.44
Lane Group LOS	A	A	B	B	A	A	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	0.00	1.32	1.37	0.13	0.00	0.49	0.69
50th-Percentile Queue Length [ft/ln]	0.00	0.00	33.00	34.30	3.25	0.00	12.33	17.25
95th-Percentile Queue Length [veh/ln]	0.00	0.00	2.38	2.47	0.23	0.00	0.89	1.24
95th-Percentile Queue Length [ft/ln]	0.00	0.00	59.40	61.74	5.86	0.00	22.20	31.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.17	0.00	0.00	15.28	4.94	0.00	0.00	12.59	13.44
Movement LOS	A	A	A	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	0.00			15.17			11.63			13.08		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.02											
Intersection LOS	B											
Intersection V/C	0.464											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	1	1	3	3	3	1	38	37	3	31	2
Total Analysis Volume [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.01	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	12.54	12.63	10.45	11.62	12.51	9.19	7.46	0.00	0.00	7.85	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.50	0.50	0.50	0.17	0.17	0.17	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	12.46	12.46	12.46	4.14	4.14	4.14	0.15	0.15	0.15	0.65	0.65	0.65
d_A, Approach Delay [s/veh]	12.44			11.04			0.07			0.61		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.67											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	46.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	50	548	648	95	75	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	548	648	95	75	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	13	137	162	24	19	0
Total Analysis Volume [veh/h]	50	548	648	95	75	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.00	0.47	0.00
d_M, Delay for Movement [s/veh]	9.37	0.00	0.00	0.00	46.19	13.08
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.18	0.00	0.00	0.00	2.20	0.00
95th-Percentile Queue Length [ft/ln]	4.55	0.00	0.00	0.00	55.12	0.00
d_A, Approach Delay [s/veh]	0.78		0.00		46.19	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	2.78					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	591	70	116	689	11	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	591	70	116	689	11	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	18	29	172	3	12
Total Analysis Volume [veh/h]	591	70	116	689	11	49
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.12	0.01	0.03	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	9.38	0.00	16.23	13.20
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.42	0.00	0.10	0.33
95th-Percentile Queue Length [ft/ln]	0.00	0.00	10.55	0.00	2.57	8.32
d_A, Approach Delay [s/veh]	0.00		1.35		13.76	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.25					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.090

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	99	666	804	32	34	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	666	804	32	34	136
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	167	201	8	9	34
Total Analysis Volume [veh/h]	99	666	804	32	34	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.01	0.01	0.00	0.09	0.23
d_M, Delay for Movement [s/veh]	10.09	0.00	0.00	0.00	15.47	12.69
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.42	0.00	0.00	0.00	0.29	0.86
95th-Percentile Queue Length [ft/ln]	10.45	0.00	0.00	0.00	7.36	21.50
d_A, Approach Delay [s/veh]	1.31		0.00		13.25	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.84					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	181	4	29	212	1	0	1	3	8	0	17
Total Analysis Volume [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	64	0	24	77	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	10	10	5	14	14	0	1	1	2	3	3
g / C, Green / Cycle	0.03	0.29	0.29	0.14	0.40	0.40	0.00	0.04	0.04	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.01	0.06	0.23	0.00	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	57	1062	474	251	1451	648	0	82	69	102	189	160
d1, Uniform Delay [s]	16.18	10.65	8.61	13.54	8.01	6.15	0.00	15.67	15.76	15.49	0.00	14.47
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.90	0.77	0.03	1.33	0.38	0.00	0.00	0.18	1.17	1.81	0.00	1.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.68	0.04	0.46	0.58	0.01	0.00	0.04	0.17	0.32	0.00	0.42
d, Delay for Lane Group [s/veh]	19.08	11.42	8.64	14.87	8.38	6.15	0.00	15.85	16.93	17.30	0.00	16.24
Lane Group LOS	B	B	A	B	A	A	A	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.15	1.83	0.07	0.74	1.62	0.01	0.00	0.02	0.10	0.25	0.00	0.48
50th-Percentile Queue Length [ft/ln]	3.84	45.71	1.73	18.62	40.50	0.37	0.00	0.57	2.43	6.36	0.00	11.98
95th-Percentile Queue Length [veh/ln]	0.28	3.29	0.12	1.34	2.92	0.03	0.00	0.04	0.17	0.46	0.00	0.86
95th-Percentile Queue Length [ft/ln]	6.91	82.28	3.12	33.52	72.90	0.67	0.00	1.02	4.37	11.45	0.00	21.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.08	11.42	8.64	14.87	8.38	6.15	0.00	15.85	16.93	17.30	0.00	16.24
Movement LOS	B	B	A	B	A	A	A	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.53			9.15			16.72			16.59		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	10.60											
Intersection LOS	B											
Intersection V/C	0.577											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.375

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	757	86	45	882	58	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	757	86	45	882	58	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	189	22	11	221	15	14
Total Analysis Volume [veh/h]	757	86	45	882	58	54
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	22	0	0	44	38	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	0	0	9	9
g / C, Green / Cycle	0.72	0.72	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.21	0.05	0.06	0.46	0.09	0.03
s, saturation flow rate [veh/h]	3618	1615	719	1900	639	1615
c, Capacity [veh/h]	2624	1172	120	0	188	228
d1, Uniform Delay [s]	2.86	2.39	30.01	0.00	26.39	22.89
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.12	8.73	0.00	0.93	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

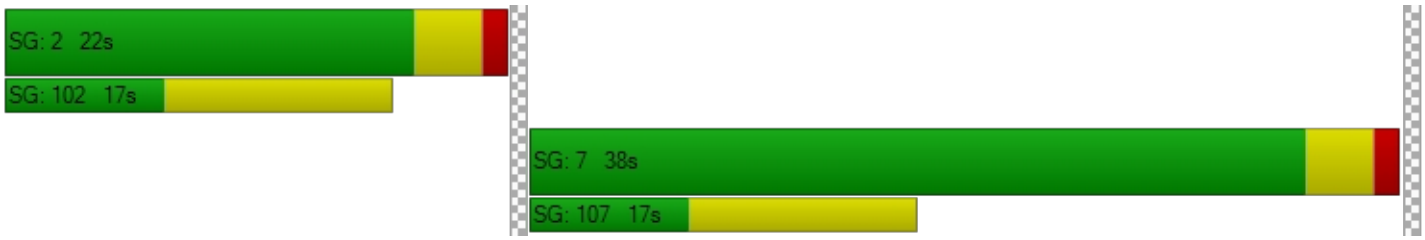
X, volume / capacity	0.29	0.07	0.38	0.00	0.31	0.24
d, Delay for Lane Group [s/veh]	3.14	2.51	38.74	0.00	27.32	23.42
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.92	0.19	0.95	0.00	0.81	0.67
50th-Percentile Queue Length [ft/ln]	22.95	4.86	23.82	0.00	20.36	16.78
95th-Percentile Queue Length [veh/ln]	1.65	0.35	1.71	0.00	1.47	1.21
95th-Percentile Queue Length [ft/ln]	41.30	8.76	42.87	0.00	36.64	30.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.14	2.51	38.74	0.00	27.32	23.42
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	3.08		1.88		25.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.82					
Intersection LOS	A					
Intersection V/C	0.375					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	250.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	70.811

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	65	2	122	127	165	4	1	114	67
Total Analysis Volume [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	38	38	8	25	25	0	17	17
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.11	0.33	0.33	0.01	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.00	59.04	0.30	0.28	0.18	0.01	0.00	0.13	0.17
s, saturation flow rate [veh/h]	55	1615	5	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	107	818	97	818	190	1186	529	11	828	370
d1, Uniform Delay [s]	18.31	9.16	37.08	13.09	33.60	20.74	17.11	37.14	25.53	26.74
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.00	810.84	0.70	755.53	1.88	0.09	12.85	2.62	11.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

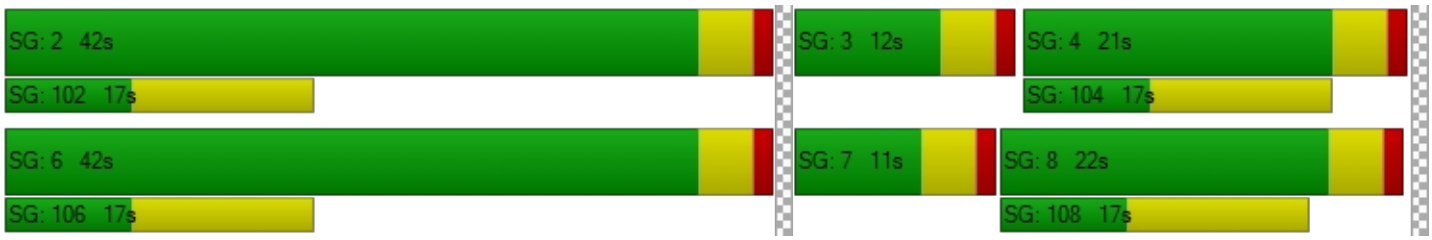
X, volume / capacity	0.16	0.00	2.74	0.60	2.67	0.56	0.03	0.27	0.55	0.72
d, Delay for Lane Group [s/veh]	18.99	9.16	847.92	13.79	789.13	22.61	17.21	50.00	28.15	38.33
Lane Group LOS	B	A	F	B	F	C	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.02	23.62	5.32	43.17	4.78	0.17	0.09	3.74	5.42
50th-Percentile Queue Length [ft/ln]	4.87	0.57	590.39	132.98	1079.16	119.61	4.27	2.32	93.46	135.38
95th-Percentile Queue Length [veh/ln]	0.35	0.04	42.51	9.10	67.34	8.37	0.31	0.17	6.73	9.23
95th-Percentile Queue Length [ft/ln]	8.76	1.02	1062.71	227.54	1683.57	209.29	7.68	4.17	168.23	230.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.99	18.99	9.16	847.92	847.92	13.79	789.13	22.61	17.21	50.00	28.15	38.33
Movement LOS	B	B	A	F	F	B	F	C	B	D	C	D
d_A, Approach Delay [s/veh]	17.52			308.45			352.17			31.99		
Approach LOS	B			F			F			C		
d_I, Intersection Delay [s/veh]	250.66											
Intersection LOS	F											
Intersection V/C	70.811											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	53.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.223

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	770	911	23	21	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	770	911	23	21	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	193	228	6	5	7
Total Analysis Volume [veh/h]	22	770	911	23	21	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.22	0.09
d_M, Delay for Movement [s/veh]	10.01	0.00	0.00	0.00	53.77	16.96
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.00	0.79	0.29
95th-Percentile Queue Length [ft/ln]	2.29	0.00	0.00	0.00	19.77	7.17
d_A, Approach Delay [s/veh]	0.28		0.00		32.42	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.04					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	1030	241	124	1111	0	3	5	87	207	6	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1030	241	124	1111	0	3	5	87	207	6	93
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	258	60	31	278	0	1	1	22	52	2	23
Total Analysis Volume [veh/h]	74	1030	241	124	1111	0	3	5	87	207	6	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	12	22	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	39	50	7	40	40	6	6	7	7	7
g / C, Green / Cycle	0.07	0.52	0.67	0.09	0.53	0.53	0.08	0.08	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.28	0.15	0.07	0.29	0.29	0.00	0.05	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1865	1615	1810	1814	1615
c, Capacity [veh/h]	133	1879	1086	158	1013	1013	150	130	180	181	161
d1, Uniform Delay [s]	33.57	12.12	4.73	33.55	11.56	11.56	31.85	33.52	32.30	32.30	32.26
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.60	1.16	0.47	8.33	0.47	0.47	0.15	5.82	3.05	3.04	3.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

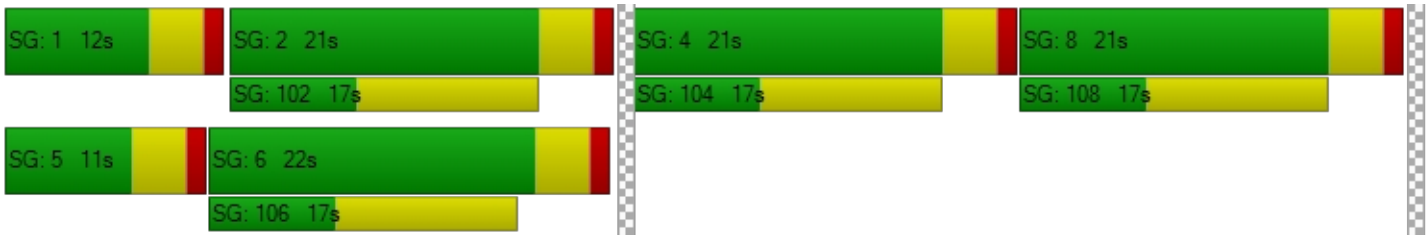
X, volume / capacity	0.56	0.55	0.22	0.79	0.55	0.55	0.05	0.67	0.59	0.59	0.58
d, Delay for Lane Group [s/veh]	37.18	13.27	5.21	41.89	12.03	12.03	31.99	39.34	35.35	35.34	35.51
Lane Group LOS	D	B	A	D	B	B	C	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.40	5.43	1.26	2.51	5.50	5.50	0.14	1.71	1.95	1.95	1.71
50th-Percentile Queue Length [ft/ln]	35.00	135.81	31.47	62.83	137.53	137.53	3.42	42.67	48.68	48.78	42.80
95th-Percentile Queue Length [veh/ln]	2.52	9.25	2.27	4.52	9.35	9.35	0.25	3.07	3.50	3.51	3.08
95th-Percentile Queue Length [ft/ln]	63.01	231.37	56.65	113.10	233.69	233.69	6.16	76.80	87.62	87.81	77.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.18	13.27	5.21	41.89	12.03	12.03	31.99	31.99	39.34	35.34	35.34	35.51
Movement LOS	D	B	A	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	13.14			15.02			38.72			35.39		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.02											
Intersection LOS	B											
Intersection V/C	0.592											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	852
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	852
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	69	118	0	0	315	43	0	0	0	38	0	0
Total Analysis Volume [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	24	54	0	0	30	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	52	52	52	52		52	52
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10	37	23	23		6	6
g / C, Green / Cycle	0.19	0.72	0.45	0.45		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.15	0.13	0.35	0.11		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	352	2624	1640	732		217	194
d1, Uniform Delay [s]	19.80	2.24	11.85	8.64		21.83	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.92	0.03	0.78	0.16		3.89	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

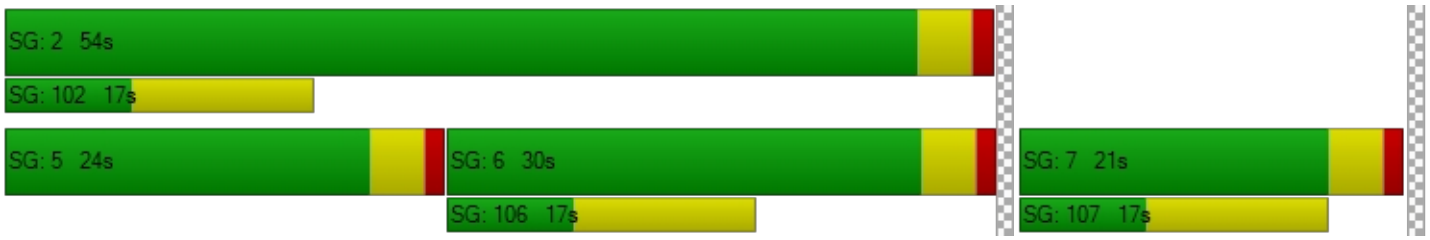
X, volume / capacity	0.79	0.18	0.77	0.23		0.69	0.00
d, Delay for Lane Group [s/veh]	23.73	2.28	12.63	8.81		25.72	0.00
Lane Group LOS	C	A	B	A		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	3.22	0.30	4.97	0.99		1.83	0.00
50th-Percentile Queue Length [ft/ln]	80.46	7.48	124.21	24.68		45.67	0.00
95th-Percentile Queue Length [veh/ln]	5.79	0.54	8.62	1.78		3.29	0.00
95th-Percentile Queue Length [ft/ln]	144.83	13.47	215.60	44.42		82.20	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.73	2.28	0.00	0.00	12.63	8.81	0.00	0.00	0.00	25.72	0.00	0.00
Movement LOS	C	A			B	A				C		A
d_A, Approach Delay [s/veh]	10.21			12.17			0.00			25.72		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	12.41											
Intersection LOS	B											
Intersection V/C	0.761											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.889

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	128	43	139	219	0	46	0	241	0	0	0
Total Analysis Volume [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	26	47	0	28	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	103	103	103	103	103	103	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	18	18	34	56	39	39	
g / C, Green / Cycle	0.17	0.17	0.33	0.54	0.38	0.38	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.31	0.24	0.10	0.34	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	622	278	600	1962	687	1086	
d1, Uniform Delay [s]	41.02	39.47	33.15	14.21	21.98	29.81	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.76	2.28	6.80	0.16	0.20	2.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

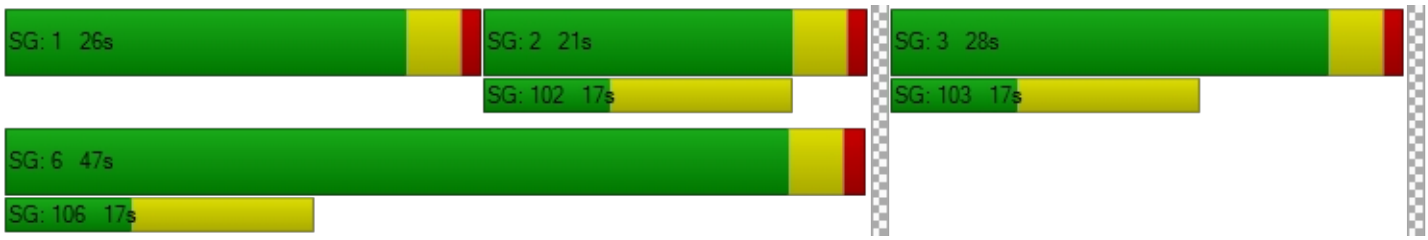
X, volume / capacity	0.82	0.62	0.93	0.45	0.26	0.89	
d, Delay for Lane Group [s/veh]	43.78	41.75	39.95	14.37	22.18	32.48	
Lane Group LOS	D	D	D	B	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.39	4.19	14.12	5.93	3.03	11.15	
50th-Percentile Queue Length [ft/ln]	159.76	104.80	352.94	148.18	75.84	278.73	
95th-Percentile Queue Length [veh/ln]	10.54	7.55	20.28	9.92	5.46	16.63	
95th-Percentile Queue Length [ft/ln]	263.41	188.64	506.99	248.00	136.52	415.63	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	43.78	41.75	39.95	14.37	0.00	22.18	0.00	32.48	0.00	0.00	0.00
Movement LOS		D	D	D	B		C		C			
d_A, Approach Delay [s/veh]	43.27			24.30			30.85			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	30.57											
Intersection LOS	C											
Intersection V/C	0.889											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	330	1059	0	0	1567	587	0	0	0	523	0	401
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	330	1059	0	0	1567	587	0	0	0	523	0	401
Peak Hour Factor	0.9500	0.9500	0.8170	0.8170	0.9500	0.9500	0.8170	0.8170	0.8170	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	87	279	0	0	412	154	0	0	0	138	0	106
Total Analysis Volume [veh/h]	347	1115	0	0	1649	618	0	0	0	551	0	422
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	22	91	0	0	69	0	0	0	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	19	88	66	66		36	36	36
g / C, Green / Cycle	0.15	0.68	0.51	0.51		0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.11	0.22	0.24	0.38		0.18	0.19	0.20
s, saturation flow rate [veh/h]	3144	5176	6901	1615		1714	1751	1615
c, Capacity [veh/h]	460	3503	3503	820		475	485	447
d1, Uniform Delay [s]	50.14	2.23	12.72	15.64		35.88	36.16	36.91
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	10.98	0.24	0.46	6.35		7.00	7.53	10.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.32	0.47	0.75		0.66	0.68	0.74
d, Delay for Lane Group [s/veh]	61.12	2.47	13.17	21.99		42.88	43.69	47.34
Lane Group LOS	E	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.83	1.13	4.89	11.32		8.75	9.36	9.89
50th-Percentile Queue Length [ft/ln]	145.83	28.26	122.24	282.89		218.69	234.07	247.16
95th-Percentile Queue Length [veh/ln]	9.79	2.04	8.52	16.83		13.60	14.38	15.04
95th-Percentile Queue Length [ft/ln]	244.86	50.88	212.90	420.81		339.95	359.52	376.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.12	2.47	0.00	0.00	13.17	21.99	0.00	0.00	0.00	43.22	43.69	46.49
Movement LOS	E	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	16.39			15.58			0.00			44.67		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	21.85											
Intersection LOS	C											
Intersection V/C	0.731											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1074	525	538	1615	0	394	3	585	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1074	525	538	1615	0	394	3	585	0	0	0
Peak Hour Factor	0.8530	0.9500	0.9500	0.9500	0.9500	0.8530	0.9500	0.9500	0.9500	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	283	138	142	425	0	104	1	154	0	0	0
Total Analysis Volume [veh/h]	0	1131	553	566	1700	0	415	3	616	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	59	0	33	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	56	56	30	89	35	35	35	
g / C, Green / Cycle	0.43	0.43	0.23	0.68	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.31	0.35	0.18	0.47	0.19	0.21	0.22	
s, saturation flow rate [veh/h]	3618	1619	3144	3618	1714	1659	1615	
c, Capacity [veh/h]	1558	697	726	2477	462	447	435	
d1, Uniform Delay [s]	21.98	23.35	41.99	2.41	37.43	38.31	38.62	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.91	9.61	8.13	1.57	9.34	13.00	14.78	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.81	0.78	0.69	0.72	0.79	0.81	
d, Delay for Lane Group [s/veh]	24.89	32.95	50.13	3.98	46.77	51.31	53.40	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.67	13.89	8.70	2.84	9.85	11.04	11.32	
50th-Percentile Queue Length [ft/ln]	291.63	347.37	217.42	70.94	246.24	276.08	282.95	
95th-Percentile Queue Length [veh/ln]	17.27	20.01	13.53	5.11	15.00	16.49	16.84	
95th-Percentile Queue Length [ft/ln]	431.66	500.20	338.33	127.70	374.91	412.33	420.88	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.95	32.95	50.13	3.98	0.00	47.58	51.31	52.48	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	27.58			15.51			50.56			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	26.86											
Intersection LOS	C											
Intersection V/C	0.780											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.957

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	323	4	11	488	77	81	5	19	11	6	19
Total Analysis Volume [veh/h]	71	1294	15	42	1953	309	325	20	76	45	24	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	84	0	10	84	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	81	81	7	81	81	33	33	33	33	33	33
g / C, Green / Cycle	0.05	0.62	0.62	0.05	0.62	0.62	0.25	0.25	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.35	0.35	0.02	0.60	0.62	0.25	0.01	0.05	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1892	1714	1900	1813	1314	1900	1615	1320	1900	1615
c, Capacity [veh/h]	92	1184	1179	92	1184	1129	325	482	410	326	482	410
d1, Uniform Delay [s]	59.54	5.34	5.34	58.50	9.52	11.00	48.46	32.39	33.51	37.69	32.45	33.53
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	1.87	1.88	15.32	17.43	27.12	50.34	0.16	1.00	0.88	0.20	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.55	0.55	0.46	0.96	1.00	1.00	0.04	0.19	0.14	0.05	0.19
d, Delay for Lane Group [s/veh]	104.80	7.21	7.22	73.83	26.94	38.12	98.80	32.55	34.51	38.57	32.65	34.55
Lane Group LOS	F	A	A	E	C	F	F	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	4.35	4.34	1.71	18.15	23.63	15.01	0.45	1.81	1.14	0.54	1.83
50th-Percentile Queue Length [ft/ln]	85.79	108.78	108.50	42.84	453.74	590.70	375.20	11.31	45.13	28.55	13.60	45.76
95th-Percentile Queue Length [veh/ln]	6.18	7.77	7.76	3.08	25.14	31.64	21.38	0.81	3.25	2.06	0.98	3.29
95th-Percentile Queue Length [ft/ln]	154.42	194.30	193.92	77.11	628.41	790.96	534.52	20.35	81.24	51.38	24.48	82.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	7.21	7.22	73.83	31.65	38.12	98.80	32.55	34.51	38.57	32.65	34.55
Movement LOS	F	A	A	E	C	D	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.23			33.28			84.04			35.47		
Approach LOS	B			C			F			D		
d_I, Intersection Delay [s/veh]	31.55											
Intersection LOS	C											
Intersection V/C	0.957											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	1168	16	85	1753	130	129	9	93	25	4	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1168	16	85	1753	130	129	9	93	25	4	53
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	307	4	22	461	34	34	2	24	7	1	14
Total Analysis Volume [veh/h]	82	1229	17	89	1845	137	136	9	98	26	4	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	95	0	15	98	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	92	92	12	95	95	17	17	17	17	17
g / C, Green / Cycle	0.07	0.71	0.71	0.09	0.73	0.73	0.13	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.33	0.33	0.05	0.52	0.53	0.11	0.06	0.02	0.00	0.03
s, saturation flow rate [veh/h]	1714	1900	1891	1714	1900	1855	1266	1615	1428	1900	1615
c, Capacity [veh/h]	119	1345	1338	158	1388	1355	219	211	57	248	211
d1, Uniform Delay [s]	57.65	1.19	1.19	54.53	0.52	0.53	53.88	49.57	62.16	46.74	48.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.19	1.15	1.16	13.67	3.16	3.51	14.63	7.17	24.48	0.12	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.46	0.46	0.56	0.71	0.73	0.66	0.46	0.46	0.02	0.27
d, Delay for Lane Group [s/veh]	85.84	2.35	2.35	68.20	3.68	4.04	68.51	56.74	86.64	46.86	51.31
Lane Group LOS	F	A	A	E	A	A	E	E	F	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.51	1.42	1.41	3.31	1.90	2.00	5.37	3.24	1.22	0.12	1.75
50th-Percentile Queue Length [ft/ln]	87.67	35.45	35.36	82.68	47.40	50.04	134.26	80.90	30.60	2.92	43.67
95th-Percentile Queue Length [veh/ln]	6.31	2.55	2.55	5.95	3.41	3.60	9.17	5.82	2.20	0.21	3.14
95th-Percentile Queue Length [ft/ln]	157.80	63.81	63.65	148.82	85.32	90.06	229.28	145.62	55.09	5.25	78.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.84	2.35	2.35	68.20	3.84	4.04	68.51	68.51	56.74	86.64	46.86	51.31
Movement LOS	F	A	A	E	A	A	E	E	E	F	D	D
d_A, Approach Delay [s/veh]	7.51			6.62			63.77			61.78		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	11.93											
Intersection LOS	B											
Intersection V/C	0.730											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.724

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	105	1230	1760	86	42	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	1230	1760	86	42	160
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	324	463	23	11	42
Total Analysis Volume [veh/h]	111	1295	1853	91	44	168
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	104	90	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	101	87	87	18	18
g / C, Green / Cycle	0.09	0.81	0.70	0.70	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.36	0.51	0.52	0.03	0.10
s, saturation flow rate [veh/h]	1714	3618	1900	1869	1714	1615
c, Capacity [veh/h]	151	2923	1322	1301	247	233
d1, Uniform Delay [s]	53.76	0.67	1.89	1.92	44.31	48.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.07	0.49	3.66	3.95	1.57	17.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.18	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.44	0.74	0.75	0.18	0.72
d, Delay for Lane Group [s/veh]	80.83	1.16	5.55	5.87	45.89	65.80
Lane Group LOS	F	A	A	A	D	E
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4.43	0.88	3.36	3.44	1.25	5.86
50th-Percentile Queue Length [ft/ln]	110.83	21.96	83.88	86.05	31.26	146.56
95th-Percentile Queue Length [veh/ln]	7.89	1.58	6.04	6.20	2.25	9.83
95th-Percentile Queue Length [ft/ln]	197.15	39.53	150.98	154.90	56.26	245.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	80.83	1.16	5.70	5.87	45.89	65.80
Movement LOS	F	A	A	A	D	E
d_A, Approach Delay [s/veh]	7.45		5.71		61.67	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	9.73					
Intersection LOS	A					
Intersection V/C	0.724					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.971

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	137	788	56	109	1321	348	346	236	109	81	301	106
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	788	56	109	1321	348	346	236	109	81	301	106
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	207	15	29	348	92	91	62	29	21	79	28
Total Analysis Volume [veh/h]	144	829	59	115	1391	366	364	248	115	85	317	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	45	0	15	45	0	35	26	0	35	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	12	42	42	12	42	42	32	0	0	32	0	0
g / C, Green / Cycle	0.13	0.44	0.44	0.13	0.44	0.44	0.34	0.00	0.00	0.34	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.17	0.24	0.24	0.13	0.38	0.23	0.34	0.13	0.07	0.07	0.17	0.07
s, saturation flow rate [veh/h]	859	1900	1856	859	3618	1615	1079	1900	1615	1150	1900	1615
c, Capacity [veh/h]	166	840	821	166	1599	714	417	0	0	439	0	0
d1, Uniform Delay [s]	42.36	13.64	13.64	41.57	17.20	13.48	28.12	0.00	0.00	19.79	0.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	41.52	2.43	2.49	21.10	6.74	2.62	21.63	0.00	0.00	0.98	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.53	0.53	0.69	0.87	0.51	0.87	0.00	0.00	0.19	0.00	0.00
d, Delay for Lane Group [s/veh]	83.88	16.08	16.14	62.67	23.93	16.10	49.75	0.00	0.00	20.77	0.00	0.00
Lane Group LOS	F	B	B	E	C	B	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	5.16	5.31	5.20	3.57	11.47	4.35	10.06	0.00	0.00	1.26	0.00	0.00
50th-Percentile Queue Length [ft/ln]	129.08	132.63	129.89	89.17	286.74	108.65	251.61	0.00	0.00	31.53	0.00	0.00
95th-Percentile Queue Length [veh/ln]	8.89	9.08	8.93	6.42	17.02	7.76	15.27	0.00	0.00	2.27	0.00	0.00
95th-Percentile Queue Length [ft/ln]	222.24	227.06	223.35	160.50	425.60	194.12	381.68	0.00	0.00	56.75	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	83.88	16.10	16.14	62.67	23.93	16.10	49.75	0.00	0.00	20.77	0.00	0.00
Movement LOS	F	B	B	E	C	B	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	25.56			24.78			24.91			3.43		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	22.35											
Intersection LOS	C											
Intersection V/C	0.971											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	89	400	16	53	1019	366	184	42	66	5	45	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	89	400	16	53	1019	366	184	42	66	5	45	34
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	105	4	14	268	96	48	11	17	1	12	9
Total Analysis Volume [veh/h]	94	421	17	56	1073	385	194	44	69	5	47	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	77	0	13	77	0	0	40	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	74	74	10	74	74	37	37
g / C, Green / Cycle	0.08	0.57	0.57	0.08	0.57	0.57	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.12	0.12	0.03	0.40	0.41	0.23	0.05
s, saturation flow rate [veh/h]	1714	1900	1874	1714	1900	1733	1351	1778
c, Capacity [veh/h]	132	1082	1067	132	1082	987	430	535
d1, Uniform Delay [s]	56.94	7.27	7.27	55.63	9.92	10.11	38.34	30.18
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.87	0.42	0.43	9.71	3.71	4.43	9.73	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.20	0.20	0.42	0.70	0.72	0.71	0.16
d, Delay for Lane Group [s/veh]	84.81	7.69	7.70	65.35	13.62	14.54	48.07	30.85
Lane Group LOS	F	A	A	E	B	B	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.96	1.80	1.78	2.07	8.86	8.71	9.51	1.93
50th-Percentile Queue Length [ft/ln]	99.01	44.93	44.49	51.70	221.47	217.75	237.67	48.22
95th-Percentile Queue Length [veh/ln]	7.13	3.23	3.20	3.72	13.74	13.55	14.56	3.47
95th-Percentile Queue Length [ft/ln]	178.22	80.87	80.09	93.05	343.50	338.76	364.08	86.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	84.81	7.70	7.70	65.35	13.90	14.54	48.07	48.07	48.07	30.85	30.85	30.85
Movement LOS	F	A	A	E	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	21.32			15.96			48.07			30.85		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	21.71											
Intersection LOS	C											
Intersection V/C	0.722											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro
Report File: C:\...\PM35WO.pdf

Scenario 12 Year 2035 Without Project Evening Peak Hour
10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.138	61.5	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	1.006	49.0	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	SB Left	0.859	48.2	D
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.788	31.2	C
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	1.774	104.2	F
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.945	27.5	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	336.7	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	1.168	188.1	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	4.533	10,000.0	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	431.4	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	3.157	78.4	E
14	Rubidoux Blvd (NS) at 30th St (EW)	Two-way stop	HCM 2010	EB Right	0.348	16.5	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.812	14.7	B
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.937	43.6	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.738	12.1	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.761	16.6	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.861	58.6	F
	Agua Mansa Rd (NS) at El						

24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	1.646	441.0	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.635	36.8	E
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.191	22.6	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.676	14.1	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.845	3.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	127.923	487.6	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	1.209	317.9	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.618	26.3	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Thru	1.010	50.5	D
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.160	91.0	F
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.758	22.2	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	1.000	40.2	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	1.023	57.3	E
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.742	12.5	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.767	9.9	A
39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	1.136	32.7	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.917	43.1	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	61.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.138

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	135	451	0	0	317	181	0	0	0	99	1	160
Total Analysis Volume [veh/h]	541	1802	0	0	1268	724	0	0	0	395	5	640
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	38	91	0	0	53	0	0	0	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	35	88	50	50		36	36
g / C, Green / Cycle	0.27	0.68	0.38	0.38		0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.32	0.50	0.24	0.45		0.30	0.32
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1761	1615
c, Capacity [veh/h]	462	2449	1991	621		488	447
d1, Uniform Delay [s]	41.67	2.96	25.10	31.67		41.00	41.00
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	98.38	2.01	1.57	91.18		59.50	95.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.17	0.74	0.64	1.17		1.07	1.16
d, Delay for Lane Group [s/veh]	140.05	4.98	26.67	122.84		100.50	136.31
Lane Group LOS	F	A	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	26.51	3.49	8.92	33.26		22.70	25.26
50th-Percentile Queue Length [ft/ln]	662.78	87.33	222.97	831.49		567.53	631.61
95th-Percentile Queue Length [veh/ln]	38.34	6.29	13.82	47.34		31.76	36.61
95th-Percentile Queue Length [ft/ln]	958.49	157.19	345.42	1183.48		793.95	915.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	140.05	4.98	0.00	0.00	26.67	122.84	0.00	0.00	0.00	100.50	100.50	129.60
Movement LOS	F	A			C	F				F	F	F
d_A, Approach Delay [s/veh]	36.16			61.63			0.00			118.40		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	61.51											
Intersection LOS	E											
Intersection V/C	1.138											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	49.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.006

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	370	140	113	302	0	214	1	74	0	0	0
Total Analysis Volume [veh/h]	0	1480	561	454	1206	0	855	2	297	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	47	0	36	83	0	0	47	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	44	44	33	80	44	44	
g / C, Green / Cycle	0.34	0.34	0.25	0.62	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.35	0.26	0.33	0.33	0.35	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1707	
c, Capacity [veh/h]	1752	547	435	2226	580	578	
d1, Uniform Delay [s]	32.64	35.67	43.00	5.74	34.97	35.67	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.21	45.37	54.87	0.95	30.17	44.18	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.84	1.03	1.04	0.54	0.97	1.03	
d, Delay for Lane Group [s/veh]	37.85	81.03	97.87	6.70	65.15	79.85	
Lane Group LOS	D	F	F	A	E	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	13.58	22.80	19.82	3.96	20.78	23.90	
50th-Percentile Queue Length [ft/ln]	339.44	569.91	495.43	99.04	519.43	597.53	
95th-Percentile Queue Length [veh/ln]	19.62	31.18	27.82	7.13	28.25	32.49	
95th-Percentile Queue Length [ft/ln]	490.52	779.47	695.60	178.26	706.32	812.19	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	37.85	81.03	97.87	6.70	0.00	70.10	79.85	79.85	0.00	0.00	0.00
Movement LOS		D	F	F	A		E	E	E			
d_A, Approach Delay [s/veh]	49.72			31.63			72.69			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	49.00											
Intersection LOS	D											
Intersection V/C	1.006											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	48.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	1175	45	126	922	263	462	397	126	31	194	147
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	1175	45	126	922	263	462	397	126	31	194	147
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	309	12	33	243	69	122	104	33	8	51	39
Total Analysis Volume [veh/h]	87	1237	47	133	971	277	486	418	133	33	204	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	52	0	14	55	0	44	54	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	49	49	11	52	52	41	51	51	7	17	17
g / C, Green / Cycle	0.06	0.38	0.38	0.08	0.40	0.40	0.32	0.39	0.39	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.34	0.34	0.08	0.34	0.34	0.28	0.12	0.08	0.02	0.10	0.10
s, saturation flow rate [veh/h]	1714	1900	1876	1714	1900	1758	1714	3618	1615	1714	1900	1638
c, Capacity [veh/h]	105	716	707	145	760	703	541	1419	634	92	248	214
d1, Uniform Delay [s]	58.98	30.13	30.17	57.21	26.96	27.17	35.74	20.86	20.21	58.19	51.71	52.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	49.37	16.68	17.07	55.26	11.30	12.94	20.43	0.53	0.75	10.47	19.27	25.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

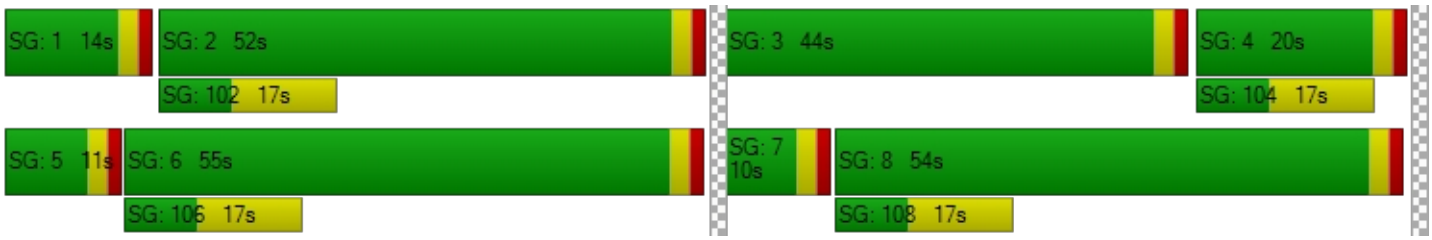
X, volume / capacity	0.82	0.90	0.90	0.92	0.85	0.86	0.90	0.29	0.21	0.36	0.76	0.80
d, Delay for Lane Group [s/veh]	108.35	46.82	47.24	112.47	38.26	40.12	56.16	21.39	20.96	68.66	70.98	77.77
Lane Group LOS	F	D	D	F	D	D	E	C	C	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.22	19.98	19.86	6.43	17.68	17.02	16.41	3.54	2.26	1.30	6.96	6.68
50th-Percentile Queue Length [ft/ln]	105.57	499.38	496.50	160.80	441.89	425.50	410.34	88.56	56.49	32.52	174.11	167.02
95th-Percentile Queue Length [veh/ln]	7.59	27.31	27.17	10.59	24.57	23.79	23.06	6.38	4.07	2.34	11.29	10.92
95th-Percentile Queue Length [ft/ln]	189.83	682.63	679.22	264.78	614.26	594.65	576.45	159.41	101.68	58.53	282.31	272.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	108.35	47.02	47.24	112.47	38.89	40.12	56.16	21.39	20.96	68.66	71.50	77.77
Movement LOS	F	D	D	F	D	D	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	50.92			46.22			37.63			73.74		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	48.21											
Intersection LOS	D											
Intersection V/C	0.859											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	142	1149	61	81	889	99	104	270	133	48	268	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	1149	61	81	889	99	104	270	133	48	268	59
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	302	16	21	234	26	27	71	35	13	71	16
Total Analysis Volume [veh/h]	149	1209	64	85	936	104	109	284	140	51	282	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	50	0	10	44	0	0	50	0	0	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	47	47	7	41	41	47	47
g / C, Green / Cycle	0.12	0.43	0.43	0.06	0.37	0.37	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.09	0.34	0.34	0.05	0.28	0.28	0.36	0.26
s, saturation flow rate [veh/h]	1714	1900	1867	1714	1900	1834	1495	1541
c, Capacity [veh/h]	203	812	798	109	708	684	678	695
d1, Uniform Delay [s]	44.69	19.80	19.84	49.58	23.52	23.52	20.89	16.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	21.00	7.69	7.94	41.16	7.06	7.32	8.93	3.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

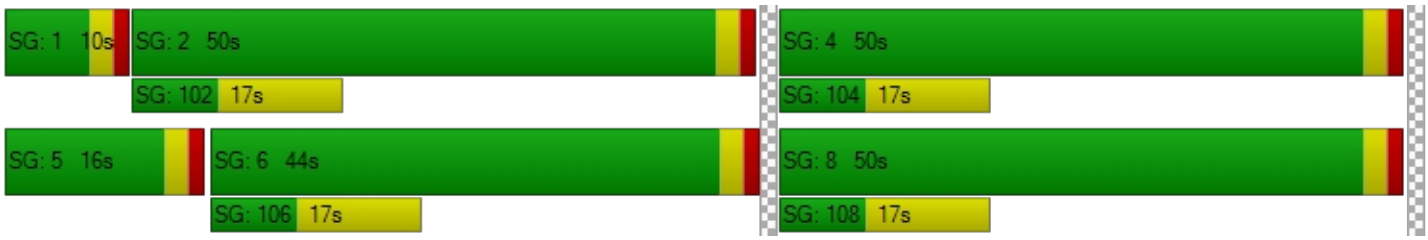
X, volume / capacity	0.74	0.79	0.79	0.78	0.75	0.75	0.79	0.57
d, Delay for Lane Group [s/veh]	65.69	27.49	27.78	90.74	30.58	30.85	29.82	19.96
Lane Group LOS	E	C	C	F	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.92	12.57	12.48	3.49	11.08	10.76	11.55	5.81
50th-Percentile Queue Length [ft/ln]	122.91	314.28	311.97	87.34	277.10	269.05	288.77	145.33
95th-Percentile Queue Length [veh/ln]	8.55	18.39	18.27	6.29	16.54	16.14	17.12	9.77
95th-Percentile Queue Length [ft/ln]	213.82	459.65	456.81	157.21	413.60	403.56	428.11	244.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.69	27.63	27.78	90.74	30.70	30.85	29.82	29.82	29.82	19.96	19.96	19.96
Movement LOS	E	C	C	F	C	C	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	31.62			35.25			29.82			19.96		
Approach LOS	C			D			C			B		
d_I, Intersection Delay [s/veh]	31.19											
Intersection LOS	C											
Intersection V/C	0.788											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	104.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.774

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	294	19	36	236	19	25	62	24	24	33	27
Total Analysis Volume [veh/h]	161	1175	78	144	943	75	101	249	98	96	132	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	17	17	7	17	17	27	27	27	27
g / C, Green / Cycle	0.12	0.28	0.28	0.12	0.28	0.28	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.09	0.33	0.33	0.08	0.27	0.27	1.02	0.06	1.18	0.07
s, saturation flow rate [veh/h]	1714	1900	1859	1714	1900	1851	343	1615	193	1615
c, Capacity [veh/h]	200	538	527	200	538	525	232	727	172	727
d1, Uniform Delay [s]	24.67	18.67	18.67	24.40	18.31	18.32	18.62	6.92	15.20	6.95
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.13	96.56	98.96	19.98	29.55	30.21	250.30	0.39	180.05	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	1.17	1.18	0.72	0.96	0.96	1.51	0.13	1.32	0.15
d, Delay for Lane Group [s/veh]	52.81	115.23	117.63	44.38	47.86	48.53	268.92	7.30	195.25	7.37
Lane Group LOS	D	F	F	D	D	D	F	A	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.56	20.08	20.00	2.88	9.72	9.57	17.72	0.55	9.94	0.59
50th-Percentile Queue Length [ft/ln]	89.12	502.12	500.00	72.04	243.04	239.37	442.99	13.66	248.58	14.85
95th-Percentile Queue Length [veh/ln]	6.42	30.06	30.02	5.19	14.84	14.65	30.50	0.98	17.57	1.07
95th-Percentile Queue Length [ft/ln]	160.41	751.61	750.47	129.68	370.88	366.23	762.52	24.58	439.32	26.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.81	116.34	117.63	44.38	48.16	48.53	268.92	268.92	7.30	195.25	195.25	7.37
Movement LOS	D	F	F	D	D	D	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	109.18			47.72			211.69			135.62		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	104.22											
Intersection LOS	F											
Intersection V/C	1.774											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	27.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	340	30	89	283	4	5	2	6	42	4	67
Total Analysis Volume [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	48	58	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	41	41	20	59	59	17	17	17
g / C, Green / Cycle	0.02	0.46	0.46	0.22	0.65	0.65	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.01	0.39	0.40	0.20	0.30	0.30	0.17	0.23	0.16
s, saturation flow rate [veh/h]	1810	1900	1847	1810	1900	1890	314	809	1615
c, Capacity [veh/h]	43	866	841	402	1242	1236	115	229	305
d1, Uniform Delay [s]	43.28	21.99	22.10	33.91	7.75	7.75	31.64	37.97	35.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.27	11.01	11.79	6.39	1.25	1.26	2.85	6.40	7.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.86	0.87	0.88	0.46	0.46	0.46	0.80	0.87
d, Delay for Lane Group [s/veh]	47.55	33.00	33.90	40.30	9.00	9.01	34.49	44.37	43.06
Lane Group LOS	D	C	C	D	A	A	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.36	15.82	15.73	8.02	5.20	5.18	1.04	4.48	6.19
50th-Percentile Queue Length [ft/ln]	8.88	395.43	393.17	200.39	129.89	129.56	26.05	112.02	154.67
95th-Percentile Queue Length [veh/ln]	0.64	22.34	22.23	12.66	8.93	8.92	1.88	7.95	10.27
95th-Percentile Queue Length [ft/ln]	15.98	558.49	555.77	316.47	223.34	222.90	46.90	198.81	256.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.55	33.41	33.90	40.30	9.00	9.01	34.49	34.49	34.49	44.37	44.37	43.06
Movement LOS	D	C	C	D	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	33.58			16.37			34.49			43.60		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	27.48											
Intersection LOS	C											
Intersection V/C	0.945											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	336.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	353	0	0	327	4	7	0	11	0	0	0
Total Analysis Volume [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.86	0.00	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.09	0.00	0.00	12.37	0.00	0.00	259.87	336.65	153.80	142.85	199.14	14.43
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	4.93	4.93	4.93	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	2.95	0.00	0.00	0.00	0.00	0.00	123.25	123.25	123.25	0.20	0.20	0.20
d_A, Approach Delay [s/veh]	0.17			0.00			195.31			14.43		
Approach LOS	A			A			F			B		
d_I, Intersection Delay [s/veh]	4.85											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	188.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.168

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	127	160	143	153	19	16	34	7	114	34	0
Total Analysis Volume [veh/h]	62	507	641	571	613	75	65	136	26	457	134	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	37	0	11	37	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	414	414	414	414	414	414	414	414	414	414
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	223	223	38	38	120	120
g / C, Green / Cycle	0.04	0.29	0.29	0.29	0.54	0.54	0.09	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.40	0.32	0.17	0.05	0.04	0.09	0.32	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1848	1829	1615
c, Capacity [veh/h]	71	1050	469	522	1952	871	168	171	531	468
d1, Uniform Delay [s]	197.66	121.08	146.69	147.11	52.76	45.95	176.50	186.51	146.74	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.77	0.35	178.52	67.69	0.09	0.04	1.46	21.24	74.16	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

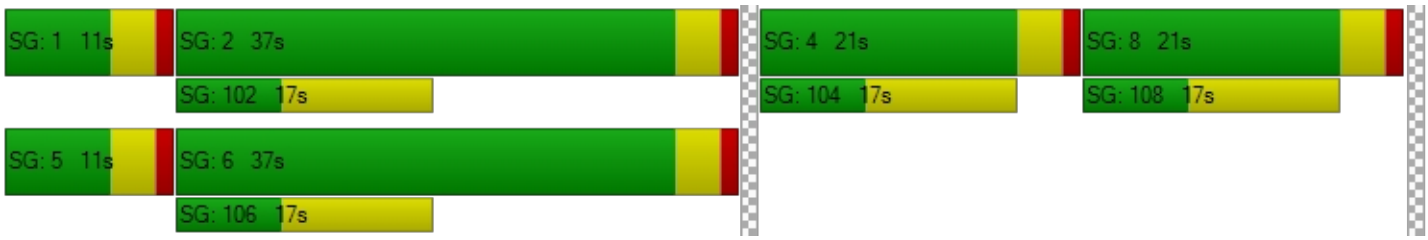
X, volume / capacity	0.88	0.48	1.37	1.09	0.31	0.09	0.39	0.95	1.11	0.00
d, Delay for Lane Group [s/veh]	224.43	121.43	325.21	214.80	52.85	46.00	177.96	207.75	220.90	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.43	23.27	75.28	67.63	18.49	3.95	6.91	19.02	69.81	0.00
50th-Percentile Queue Length [ft/ln]	185.84	581.86	1882.06	1690.72	462.36	98.67	172.67	475.54	1745.36	0.00
95th-Percentile Queue Length [veh/ln]	11.91	31.19	107.10	86.35	25.55	7.10	11.22	26.17	89.90	0.00
95th-Percentile Queue Length [ft/ln]	297.63	779.66	2677.47	2158.63	638.68	177.60	280.42	654.36	2247.47	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	224.43	121.43	325.21	214.80	52.85	46.00	177.96	207.75	207.75	220.90	220.90	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	234.66			125.89			199.22			220.90		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	188.08											
Intersection LOS	F											
Intersection V/C	1.168											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.533

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	279	28	56	234	2	1	6	4	20	14	37
Total Analysis Volume [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.39	0.01	0.00	0.00	2.10	0.03	0.00	4.53	0.31
d_M, Delay for Movement [s/veh]	10.01	0.00	0.00	15.26	0.00	0.00	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Movement LOS	B	A	A	C	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	1.86	0.93	0.00	7.66	7.66	7.66	38.16	38.16	38.16
95th-Percentile Queue Length [ft/ln]	1.88	0.94	0.00	46.38	23.19	0.00	191.38	191.38	191.38	953.91	953.91	953.91
d_A, Approach Delay [s/veh]	0.14			2.94			10000.00			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	1194.75											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	431.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	290	16	12	239	1	0	0	3	18	0	20
Total Analysis Volume [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.08	0.01	0.00	0.00	0.00	0.02	1.39	0.00	0.17
d_M, Delay for Movement [s/veh]	10.00	0.00	0.00	11.78	0.00	0.00	76.37	107.47	11.81	409.53	431.41	345.77
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	F
95th-Percentile Queue Length [veh/ln]	0.03	0.01	0.00	0.26	0.13	0.00	0.06	0.06	0.06	11.61	11.61	11.61
95th-Percentile Queue Length [ft/ln]	0.73	0.36	0.00	6.48	3.24	0.00	1.42	1.42	1.42	290.15	290.15	290.15
d_A, Approach Delay [s/veh]	0.06			0.54			11.81			375.53		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	23.83											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	78.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.157

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	249	23	10	216	16	22	22	14	39	29	7
Total Analysis Volume [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	21	21	3	17	17	24	24	24	24
g / C, Green / Cycle	0.12	0.34	0.34	0.06	0.28	0.28	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.10	0.29	0.29	0.02	0.25	0.25	1.06	0.03	2.18	0.02
s, saturation flow rate [veh/h]	1810	1900	1844	1810	1900	1855	166	1615	124	1615
c, Capacity [veh/h]	213	651	632	107	539	526	155	645	143	645
d1, Uniform Delay [s]	26.15	18.35	18.37	27.29	20.53	20.53	20.59	11.25	22.36	11.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.49	12.81	13.33	2.09	17.08	17.42	78.78	0.06	426.01	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.85	0.85	0.37	0.87	0.87	1.13	0.08	1.89	0.04
d, Delay for Lane Group [s/veh]	36.64	31.16	31.69	29.38	37.61	37.95	99.37	11.31	448.37	11.10
Lane Group LOS	D	C	C	C	D	D	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.08	8.59	8.45	0.57	8.20	8.06	5.55	0.41	18.94	0.21
50th-Percentile Queue Length [ft/ln]	77.03	214.78	211.33	14.37	205.04	201.41	138.72	10.23	473.52	5.21
95th-Percentile Queue Length [veh/ln]	5.55	13.40	13.22	1.03	12.90	12.71	9.99	0.74	33.94	0.38
95th-Percentile Queue Length [ft/ln]	138.66	334.96	330.53	25.86	322.46	317.78	249.70	18.41	848.55	9.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.64	31.40	31.69	29.38	37.76	37.95	99.37	99.37	11.31	448.37	448.37	11.10
Movement LOS	D	C	C	C	D	D	F	F	B	F	F	B
d_A, Approach Delay [s/veh]	32.18			37.44			78.69			407.43		
Approach LOS	C			D			E			F		
d_I, Intersection Delay [s/veh]	78.44											
Intersection LOS	E											
Intersection V/C	3.157											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.348

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	1119	1119	54	0	166
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1119	1119	54	0	166
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	280	280	14	0	42
Total Analysis Volume [veh/h]	230	1119	1119	54	0	166
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

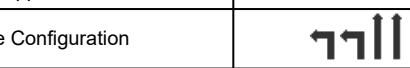
V/C, Movement V/C Ratio	0.38	0.01	0.01	0.00	0.00	0.35
d_M, Delay for Movement [s/veh]	14.61	0.00	0.00	0.00	0.00	16.52
Movement LOS	B	A	A	A		C
95th-Percentile Queue Length [veh/ln]	1.78	0.00	0.00	0.00	0.00	1.54
95th-Percentile Queue Length [ft/ln]	44.58	0.00	0.00	0.00	0.00	38.49
d_A, Approach Delay [s/veh]	2.49		0.00		16.52	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.27					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	254	1190	0	0	607	705	0	0	0	510	0	243
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1190	0	0	607	705	0	0	0	510	0	243
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	298	0	0	152	176	0	0	0	128	0	61
Total Analysis Volume [veh/h]	254	1190	0	0	607	705	0	0	0	510	0	243
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	16	91	0	0	75	0	0	0	0	29	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	64	64	64	64		64	64
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	7	42	31	31		13	13
g / C, Green / Cycle	0.11	0.67	0.49	0.49		0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.07	0.33	0.17	0.44		0.15	0.15
s, saturation flow rate [veh/h]	3514	3618	3618	1615		3514	1615
c, Capacity [veh/h]	391	2411	1782	795		732	336
d1, Uniform Delay [s]	27.19	5.30	9.89	14.60		23.42	23.57
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1.82	0.16	0.11	3.57		1.21	2.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.49	0.34	0.89		0.70	0.72
d, Delay for Lane Group [s/veh]	29.01	5.45	10.00	18.17		24.63	26.50
Lane Group LOS	C	A	B	B		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	1.86	2.74	2.26	8.43		3.45	3.46
50th-Percentile Queue Length [ft/ln]	46.47	68.40	56.40	210.79		86.15	86.53
95th-Percentile Queue Length [veh/ln]	3.35	4.92	4.06	13.19		6.20	6.23
95th-Percentile Queue Length [ft/ln]	83.65	123.12	101.51	329.84		155.07	155.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.01	5.45	0.00	0.00	10.00	18.17	0.00	0.00	0.00	24.63	0.00	26.50
Movement LOS	C	A			B	B				C		C
d_A, Approach Delay [s/veh]	9.60			14.39			0.00			25.23		
Approach LOS	A			B			A			C		
d_I, Intersection Delay [s/veh]	14.74											
Intersection LOS	B											
Intersection V/C	0.812											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	43.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.937

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	681	354	165	945	0	693	45	506	16	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	681	354	165	945	0	693	45	506	16	0	4
Peak Hour Factor	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	170	89	41	236	0	173	11	127	4	0	1
Total Analysis Volume [veh/h]	0	681	354	165	945	0	693	45	506	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	41	0	16	57	0	0	42	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	12	54	51	51	3	3
g / C, Green / Cycle	0.32	0.32	0.10	0.45	0.42	0.42	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.27	0.31	0.09	0.26	0.41	0.31	0.01	0.00
s, saturation flow rate [veh/h]	1900	1695	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	603	538	181	1630	764	680	51	46
d1, Uniform Delay [s]	38.43	40.25	53.48	24.51	33.91	29.30	57.15	56.78
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.70	30.45	15.87	1.51	9.09	1.64	3.38	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

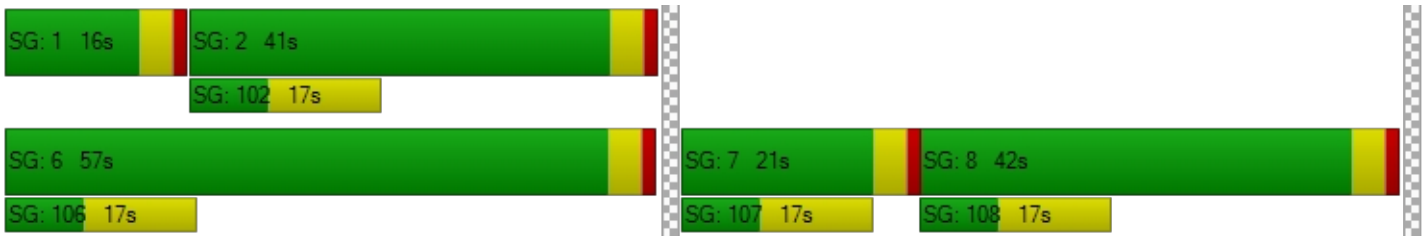
X, volume / capacity	0.86	0.96	0.91	0.58	0.97	0.74	0.31	0.09
d, Delay for Lane Group [s/veh]	53.13	70.70	69.34	26.02	43.00	30.94	60.53	57.59
Lane Group LOS	D	E	E	C	D	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	16.60	19.36	5.72	10.21	22.34	12.40	0.52	0.13
50th-Percentile Queue Length [ft/ln]	415.03	483.97	143.02	255.36	558.48	310.05	13.11	3.22
95th-Percentile Queue Length [veh/ln]	23.28	26.57	9.64	15.46	30.09	18.18	0.94	0.23
95th-Percentile Queue Length [ft/ln]	582.08	664.36	241.08	386.39	752.26	454.44	23.60	5.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	57.35	70.70	69.34	26.02	0.00	43.00	43.00	30.94	60.53	0.00	57.59
Movement LOS		E	E	E	C		D	D	C	E		E
d_A, Approach Delay [s/veh]	61.92			32.46			38.09			59.94		
Approach LOS	E			C			D			E		
d_I, Intersection Delay [s/veh]	43.62											
Intersection LOS	D											
Intersection V/C	0.937											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	639	77	296	1021	168	112	67	13	17	50	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	639	77	296	1021	168	112	67	13	17	50	141
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	160	19	74	255	42	28	17	3	4	13	35
Total Analysis Volume [veh/h]	34	639	77	296	1021	168	112	67	13	17	50	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	73	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	10	8	16	16	8	8	8
g / C, Green / Cycle	0.06	0.26	0.26	0.22	0.42	0.42	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.02	0.18	0.05	0.16	0.28	0.10	0.16	0.04	0.09
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1173	1809	1615
c, Capacity [veh/h]	102	942	420	393	1523	680	392	492	333
d1, Uniform Delay [s]	17.23	12.62	10.91	13.91	8.87	7.10	14.89	12.39	13.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.88	0.87	0.21	2.94	0.52	0.19	0.95	0.12	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.68	0.18	0.75	0.67	0.25	0.49	0.14	0.42
d, Delay for Lane Group [s/veh]	19.11	13.48	11.12	16.85	9.38	7.29	15.83	12.52	13.95
Lane Group LOS	B	B	B	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	2.01	0.42	2.22	2.39	0.64	1.41	0.40	0.92
50th-Percentile Queue Length [ft/ln]	7.43	50.33	10.50	55.38	59.80	15.93	35.37	9.91	23.06
95th-Percentile Queue Length [veh/ln]	0.54	3.62	0.76	3.99	4.31	1.15	2.55	0.71	1.66
95th-Percentile Queue Length [ft/ln]	13.38	90.59	18.90	99.68	107.64	28.67	63.66	17.83	41.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.11	13.48	11.12	16.85	9.38	7.29	15.83	15.83	15.83	12.52	12.52	13.95
Movement LOS	B	B	B	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.50			10.64			15.83			13.49		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.05											
Intersection LOS	B											
Intersection V/C	0.738											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	124	0	80	46	105	0	0	62	54
Total Analysis Volume [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	47	0	0	47	0	49	62	0	11	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	50	50	50	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	7	16	16	0	10	10
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.13	0.32	0.32	0.00	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.34	0.20	0.10	0.12	0.00	0.00	0.13	0.14
s, saturation flow rate [veh/h]	1078	1900	1440	1615	1810	3618	1615	1810	1900	1617
c, Capacity [veh/h]	422	834	714	709	241	1165	520	0	359	305
d1, Uniform Delay [s]	0.00	0.00	13.96	9.84	20.98	13.05	0.00	0.00	18.99	19.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00	1.22	0.45	4.79	0.19	0.00	0.00	2.35	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.00	0.69	0.45	0.76	0.36	0.00	0.00	0.69	0.72
d, Delay for Lane Group [s/veh]	0.00	0.00	15.18	10.28	25.77	13.24	0.00	0.00	21.34	22.26
Lane Group LOS	A	A	B	B	C	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	0.00	4.43	2.05	2.19	1.59	0.00	0.00	2.64	2.41
50th-Percentile Queue Length [ft/ln]	0.00	0.00	110.73	51.19	54.74	39.73	0.00	0.00	65.88	60.25
95th-Percentile Queue Length [veh/ln]	0.00	0.00	7.88	3.69	3.94	2.86	0.00	0.00	4.74	4.34
95th-Percentile Queue Length [ft/ln]	0.00	0.00	197.01	92.14	98.53	71.51	0.00	0.00	118.58	108.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.18	10.28	10.28	25.77	13.24	0.00	0.00	21.35	22.26
Movement LOS	A	A	A	B	B	B	C	B	A	A	C	C
d_A, Approach Delay [s/veh]	0.00			13.26			17.04			21.77		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	16.58											
Intersection LOS	B											
Intersection V/C	0.761											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	58.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.861

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	1	3	1	1	2	2	97	47	1	50	3
Total Analysis Volume [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.86	0.01	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	58.58	58.21	54.20	15.74	16.57	9.52	7.64	0.00	0.00	8.57	0.00	0.00
Movement LOS	F	F	F	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	8.51	8.51	8.51	0.09	0.09	0.09	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	212.81	212.81	212.81	2.20	2.20	2.20	0.44	0.44	0.44	0.15	0.15	0.15
d_A, Approach Delay [s/veh]	58.44			13.13			0.11			0.08		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	16.35											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	441.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.646

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	78	1010	664	95	119	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1010	664	95	119	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	20	253	166	24	30	0
Total Analysis Volume [veh/h]	78	1010	664	95	119	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.01	0.00	1.65	0.00
d_M, Delay for Movement [s/veh]	9.59	0.00	0.00	0.00	441.01	13.26
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.30	0.00	0.00	0.00	10.21	0.00
95th-Percentile Queue Length [ft/ln]	7.44	0.00	0.00	0.00	255.23	0.00
d_A, Approach Delay [s/veh]	0.69		0.00		441.01	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	27.07					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	36.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1009	23	57	670	70	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1009	23	57	670	70	184
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	252	6	14	168	18	46
Total Analysis Volume [veh/h]	1009	23	57	670	70	184
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.08	0.01	0.22	0.64
d_M, Delay for Movement [s/veh]	0.00	0.00	10.77	0.00	19.34	36.78
Movement LOS	A	A	B	A	C	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.27	0.00	0.82	4.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	6.83	0.00	20.42	100.19
d_A, Approach Delay [s/veh]	0.00		0.84		31.98	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.34					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	22.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.191

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	250	787	717	40	48	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	250	787	717	40	48	183
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	197	179	10	12	46
Total Analysis Volume [veh/h]	250	787	717	40	48	183
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.29	0.01	0.01	0.00	0.19	0.28
d_M, Delay for Movement [s/veh]	10.86	0.00	0.00	0.00	22.64	12.80
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	1.20	0.00	0.00	0.00	0.69	1.17
95th-Percentile Queue Length [ft/ln]	30.11	0.00	0.00	0.00	17.21	29.19
d_A, Approach Delay [s/veh]	2.62		0.00		14.84	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.03					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	200	44	21	204	3	3	2	5	22	2	62
Total Analysis Volume [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	53	0	15	56	0	11	37	0	15	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	13	13	4	16	16	1	5	5	5	9	9
g / C, Green / Cycle	0.03	0.31	0.31	0.10	0.38	0.38	0.02	0.11	0.11	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.11	0.05	0.23	0.01	0.01	0.00	0.01	0.05	0.00	0.15
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	52	1117	499	187	1386	619	34	211	179	193	378	322
d1, Uniform Delay [s]	20.57	13.26	11.59	18.22	10.62	8.28	20.93	17.14	17.30	18.13	13.91	16.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.26	0.87	0.42	1.65	0.40	0.01	4.76	0.06	0.27	1.67	0.02	3.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

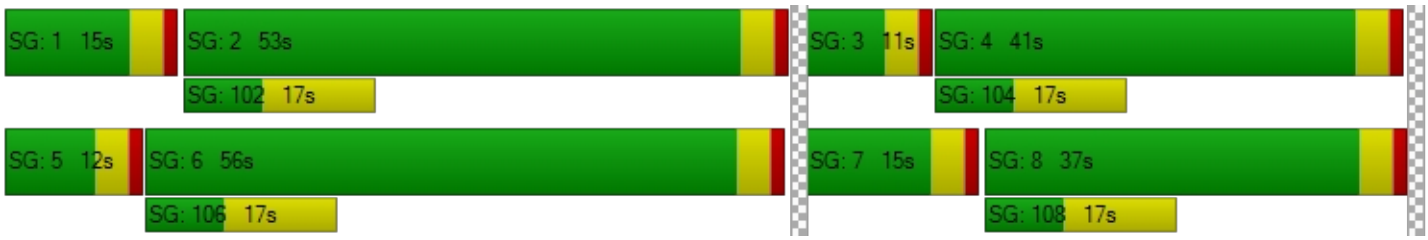
X, volume / capacity	0.31	0.72	0.35	0.44	0.59	0.02	0.30	0.03	0.11	0.46	0.02	0.76
d, Delay for Lane Group [s/veh]	23.83	14.13	12.02	19.87	11.02	8.29	25.69	17.21	17.57	19.80	13.92	20.15
Lane Group LOS	C	B	B	B	B	A	C	B	B	B	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	2.90	1.12	0.77	2.45	0.05	0.13	0.06	0.17	0.81	0.04	2.28
50th-Percentile Queue Length [ft/ln]	4.71	72.60	28.09	19.20	61.30	1.30	3.34	1.46	4.27	20.29	1.05	57.12
95th-Percentile Queue Length [veh/ln]	0.34	5.23	2.02	1.38	4.41	0.09	0.24	0.10	0.31	1.46	0.08	4.11
95th-Percentile Queue Length [ft/ln]	8.47	130.69	50.57	34.57	110.35	2.33	6.02	2.62	7.68	36.52	1.89	102.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.83	14.13	12.02	19.87	11.02	8.29	25.69	17.21	17.57	19.80	13.92	20.15
Movement LOS	C	B	B	B	B	A	C	B	B	B	B	C
d_A, Approach Delay [s/veh]	13.92			11.80			19.69			19.95		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.06											
Intersection LOS	B											
Intersection V/C	0.676											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.845

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1053	77	103	797	63	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1053	77	103	797	63	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	263	19	26	199	16	10
Total Analysis Volume [veh/h]	1053	77	103	797	63	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	99	0	0	124	21	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	0	0	3	3
g / C, Green / Cycle	0.48	0.48	0.00	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.29	0.05	0.19	0.42	0.09	0.02
s, saturation flow rate [veh/h]	3618	1615	544	1900	692	1615
c, Capacity [veh/h]	1753	782	326	0	376	247
d1, Uniform Delay [s]	4.14	3.08	11.04	0.00	10.41	8.11
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.05	2.53	0.00	0.21	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

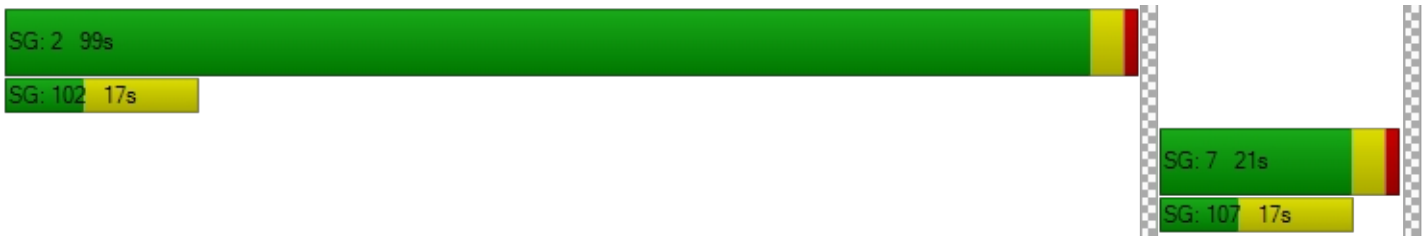
X, volume / capacity	0.60	0.10	0.32	0.00	0.17	0.16
d, Delay for Lane Group [s/veh]	4.47	3.13	13.56	0.00	10.62	8.41
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	0.03	0.64	0.00	0.21	0.11
50th-Percentile Queue Length [ft/ln]	6.84	0.82	15.89	0.00	5.36	2.78
95th-Percentile Queue Length [veh/ln]	0.49	0.06	1.14	0.00	0.39	0.20
95th-Percentile Queue Length [ft/ln]	12.31	1.47	28.60	0.00	9.65	5.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.47	3.13	13.56	0.00	10.62	8.41
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	4.38		1.55		9.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.44					
Intersection LOS	A					
Intersection V/C	0.845					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	487.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	127.923

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	82	1	140	189	149	1	1	150	91
Total Analysis Volume [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	55	0	0	55	0	14	24	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	51	51	51	51	10	27	27	0	17	17
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.11	0.30	0.30	0.00	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.18	0.00	110.23	0.35	0.42	0.17	0.00	0.00	0.17	0.22
s, saturation flow rate [veh/h]	45	1615	3	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	91	915	81	915	199	1072	478	7	689	307
d1, Uniform Delay [s]	22.28	8.48	44.86	12.95	40.08	26.71	22.37	44.71	35.37	36.46
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	0.00	1411.37	0.67	1258.31	2.09	0.04	17.99	13.97	108.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

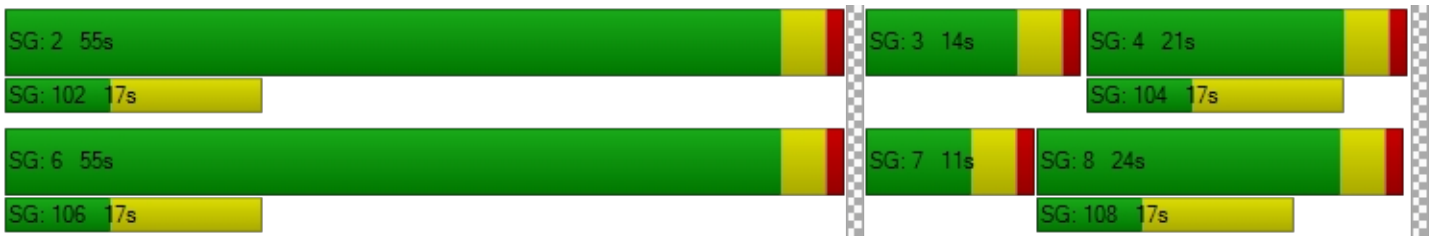
X, volume / capacity	0.09	0.00	4.07	0.61	3.79	0.56	0.01	0.27	0.87	1.18
d, Delay for Lane Group [s/veh]	22.69	8.48	1456.23	13.62	1298.38	28.80	22.41	62.71	49.33	144.99
Lane Group LOS	C	A	F	B	F	C	C	E	D	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.12	0.02	33.66	6.97	73.96	5.57	0.08	0.08	7.56	15.87
50th-Percentile Queue Length [ft/ln]	3.03	0.40	841.57	174.30	1848.91	139.30	1.98	2.04	189.05	396.65
95th-Percentile Queue Length [veh/ln]	0.22	0.03	60.59	11.30	112.13	9.44	0.14	0.15	12.07	24.25
95th-Percentile Queue Length [ft/ln]	5.45	0.73	1514.83	282.55	2803.15	236.09	3.56	3.67	301.79	606.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.69	22.69	8.48	1456.23	1456.23	13.62	1298.38	28.80	22.41	62.71	49.33	144.99
Movement LOS	C	C	A	F	F	B	F	C	C	E	D	F
d_A, Approach Delay [s/veh]	19.85			550.14			735.14			85.36		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	487.58											
Intersection LOS	F											
Intersection V/C	127.923											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	317.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.209

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	906	1094	95	64	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	906	1094	95	64	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	227	274	24	16	4
Total Analysis Volume [veh/h]	35	906	1094	95	64	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.00	1.21	0.06
d_M, Delay for Movement [s/veh]	11.44	0.00	0.00	0.00	317.87	20.62
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.19	0.00	0.00	0.00	5.64	0.21
95th-Percentile Queue Length [ft/ln]	4.68	0.00	0.00	0.00	140.95	5.17
d_A, Approach Delay [s/veh]	0.43		0.00		258.42	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	9.54					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	972	323	133	1167	0	5	24	152	354	6	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	972	323	133	1167	0	5	24	152	354	6	94
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	243	81	33	292	0	1	6	38	89	2	24
Total Analysis Volume [veh/h]	54	972	323	133	1167	0	5	24	152	354	6	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	32	32	20	36	0	0	45	0	0	23	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	65	84	11	70	70	13	13	15	15	15
g / C, Green / Cycle	0.05	0.54	0.70	0.09	0.58	0.58	0.11	0.11	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.27	0.20	0.07	0.31	0.31	0.02	0.09	0.10	0.10	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1884	1615	1810	1812	1615
c, Capacity [veh/h]	88	1960	1128	161	1106	1106	212	182	223	224	199
d1, Uniform Delay [s]	55.97	17.23	6.82	53.76	15.14	15.14	48.01	52.18	51.20	51.20	48.96
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.68	0.90	0.64	10.17	0.39	0.39	0.29	9.67	6.68	6.67	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

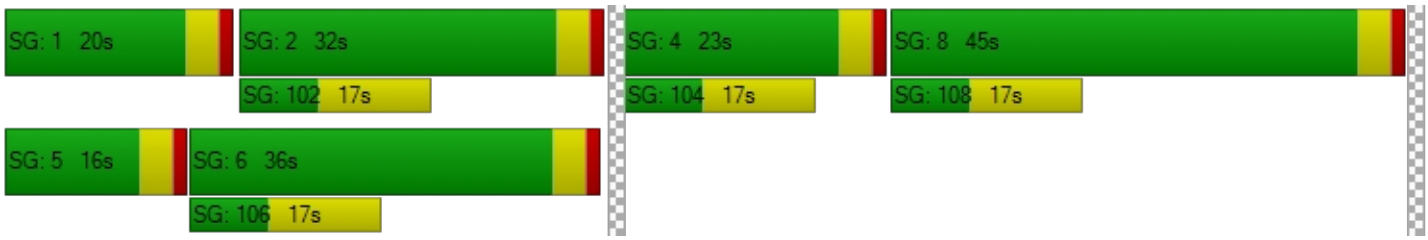
X, volume / capacity	0.61	0.50	0.29	0.83	0.53	0.53	0.14	0.84	0.81	0.81	0.47
d, Delay for Lane Group [s/veh]	62.66	18.13	7.46	63.94	15.53	15.53	48.30	61.85	57.88	57.87	50.69
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.77	8.48	3.09	4.40	9.42	9.42	0.80	4.97	5.68	5.68	2.72
50th-Percentile Queue Length [ft/ln]	44.21	211.90	77.29	110.02	235.59	235.59	20.09	124.22	141.88	142.08	68.12
95th-Percentile Queue Length [veh/ln]	3.18	13.25	5.56	7.84	14.46	14.46	1.45	8.62	9.58	9.59	4.90
95th-Percentile Queue Length [ft/ln]	79.58	331.26	139.12	196.04	361.45	361.45	36.16	215.61	239.55	239.83	122.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.66	18.13	7.46	63.94	15.53	15.53	48.30	48.30	61.85	57.88	57.87	50.69
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	17.36			20.48			59.68			56.39		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	26.32											
Intersection LOS	C											
Intersection V/C	0.618											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	50.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.010

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	716
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	716
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	209	155	0	0	350	57	0	0	0	28	0	0
Total Analysis Volume [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	58	99	0	0	41	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	54	103	45	45		9	9
g / C, Green / Cycle	0.45	0.86	0.37	0.37		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.46	0.17	0.39	0.14		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	814	3097	1350	603		140	125
d1, Uniform Delay [s]	33.09	1.50	37.69	27.46		54.52	0.00
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	21.53	0.15	34.39	1.78		9.62	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

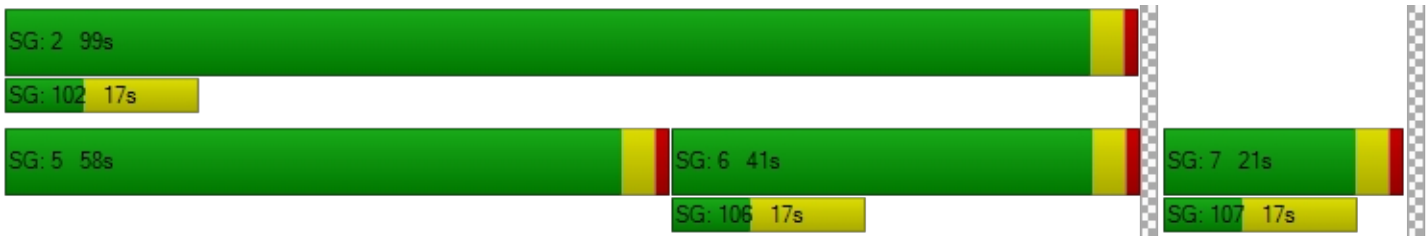
X, volume / capacity	1.03	0.20	1.04	0.37		0.79	0.00
d, Delay for Lane Group [s/veh]	54.62	1.65	72.07	29.25		64.14	0.00
Lane Group LOS	F	A	F	C		E	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	27.74	0.77	25.85	5.03		3.68	0.00
50th-Percentile Queue Length [ft/ln]	693.51	19.29	646.34	125.82		91.91	0.00
95th-Percentile Queue Length [veh/ln]	37.08	1.39	35.07	8.71		6.62	0.00
95th-Percentile Queue Length [ft/ln]	927.07	34.72	876.87	217.80		165.43	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.62	1.65	0.00	0.00	72.07	29.25	0.00	0.00	0.00	64.14	0.00	0.00
Movement LOS	F	A			F	C				E		A
d_A, Approach Delay [s/veh]	32.05			66.12			0.00			64.14		
Approach LOS	C			E			A			E		
d_I, Intersection Delay [s/veh]	50.53											
Intersection LOS	D											
Intersection V/C	1.010											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	91.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.160

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	320	43	164	216	0	43	0	234	0	0	0
Total Analysis Volume [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	40	0	42	82	0	38	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	36	36	38	78	34	34	
g / C, Green / Cycle	0.30	0.30	0.32	0.65	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.35	0.11	0.36	0.24	0.10	0.33	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	1086	485	573	2352	513	811	
d1, Uniform Delay [s]	42.16	33.03	41.17	9.69	34.17	43.16	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	89.48	2.03	70.84	0.10	0.38	73.03	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

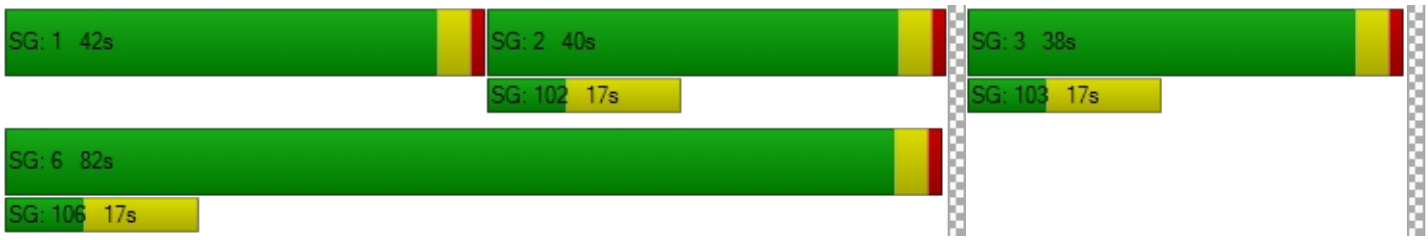
X, volume / capacity	1.18	0.35	1.15	0.37	0.34	1.15	
d, Delay for Lane Group [s/veh]	131.65	35.05	112.00	9.79	34.55	116.19	
Lane Group LOS	F	D	F	A	C	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	29.39	4.22	28.00	5.03	4.06	20.13	
50th-Percentile Queue Length [ft/ln]	734.80	105.46	700.00	125.73	101.38	503.25	
95th-Percentile Queue Length [veh/ln]	42.26	7.59	39.96	8.71	7.30	29.88	
95th-Percentile Queue Length [ft/ln]	1056.58	189.67	999.11	217.67	182.49	746.90	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	131.65	35.05	112.00	9.79	0.00	34.55	0.00	116.19	0.00	0.00	0.00
Movement LOS		F	D	F	A		C		F			
d_A, Approach Delay [s/veh]	120.19			53.94			103.52			0.00		
Approach LOS	F			D			F			A		
d_I, Intersection Delay [s/veh]	90.96											
Intersection LOS	F											
Intersection V/C	1.160											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	448	1801	0	0	1468	514	0	0	0	430	9	623
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	448	1801	0	0	1468	514	0	0	0	430	9	623
Peak Hour Factor	0.9500	0.9500	0.8170	0.8170	0.9500	0.9500	0.8170	0.8170	0.8170	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	118	474	0	0	386	135	0	0	0	113	2	164
Total Analysis Volume [veh/h]	472	1896	0	0	1545	541	0	0	0	453	9	656
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	26	81	0	0	55	0	0	0	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	23	78	52	52		36	36	36
g / C, Green / Cycle	0.19	0.65	0.43	0.43		0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.15	0.37	0.22	0.33		0.21	0.23	0.23
s, saturation flow rate [veh/h]	3144	5176	6901	1615		1714	1665	1615
c, Capacity [veh/h]	603	3364	2990	700		514	500	485
d1, Uniform Delay [s]	42.35	3.56	17.77	20.83		31.48	32.27	32.59
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	9.81	0.69	0.64	8.12		7.68	10.38	11.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.56	0.52	0.77		0.70	0.76	0.78
d, Delay for Lane Group [s/veh]	52.15	4.25	18.41	28.95		39.17	42.64	44.53
Lane Group LOS	D	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.01	2.67	5.77	11.58		9.15	10.24	10.53
50th-Percentile Queue Length [ft/ln]	175.20	66.80	144.13	289.45		228.87	256.02	263.21
95th-Percentile Queue Length [veh/ln]	11.35	4.81	9.70	17.16		14.12	15.49	15.85
95th-Percentile Queue Length [ft/ln]	283.73	120.24	242.58	428.95		352.92	387.22	396.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.15	4.25	0.00	0.00	18.41	28.95	0.00	0.00	0.00	39.81	42.64	43.71
Movement LOS	D	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	13.80			21.14			0.00			42.16		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	22.24											
Intersection LOS	C											
Intersection V/C	0.758											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1788	750	453	1492	0	690	2	468	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1788	750	453	1492	0	690	2	468	0	0	0
Peak Hour Factor	0.8530	0.9500	0.9500	0.9500	0.9500	0.8530	0.9500	0.9500	0.9500	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	471	197	119	393	0	182	1	123	0	0	0
Total Analysis Volume [veh/h]	0	1882	789	477	1571	0	726	2	493	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	66	0	21	87	0	0	33	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	63	63	18	84	30	30	30	
g / C, Green / Cycle	0.53	0.53	0.15	0.70	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.49	0.54	0.15	0.43	0.23	0.23	0.26	
s, saturation flow rate [veh/h]	3618	1643	3144	3618	1714	1769	1615	
c, Capacity [veh/h]	1899	863	472	2532	429	442	404	
d1, Uniform Delay [s]	16.28	18.00	48.00	1.48	38.79	39.08	40.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.39	39.19	44.32	1.15	26.76	29.52	51.61	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.94	1.03	1.01	0.62	0.92	0.94	1.03	
d, Delay for Lane Group [s/veh]	26.67	57.19	92.32	2.63	65.55	68.60	91.61	
Lane Group LOS	C	F	F	A	E	E	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	18.68	27.09	9.63	1.78	13.57	14.70	16.92	
50th-Percentile Queue Length [ft/ln]	467.08	677.19	240.75	44.51	339.17	367.38	422.93	
95th-Percentile Queue Length [veh/ln]	25.77	36.54	14.80	3.21	19.61	20.98	24.03	
95th-Percentile Queue Length [ft/ln]	644.30	913.61	369.94	80.13	490.19	524.55	600.75	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	28.32	57.19	92.32	2.63	0.00	66.93	68.60	87.59	0.00	0.00	0.00
Movement LOS		C	E	F	A		E	E	F			
d_A, Approach Delay [s/veh]	36.85			23.52			75.42			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	40.18											
Intersection LOS	D											
Intersection V/C	1.000											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	57.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.023

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	537	11	14	424	77	121	25	47	18	6	13
Total Analysis Volume [veh/h]	67	2146	44	58	1698	308	485	99	189	71	24	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	74	0	10	74	0	0	46	0	0	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	71	71	7	71	71	43	43	43	43	43	43
g / C, Green / Cycle	0.05	0.55	0.55	0.05	0.55	0.55	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.04	0.58	0.58	0.03	0.53	0.56	0.36	0.05	0.12	0.06	0.01	0.03
s, saturation flow rate [veh/h]	1714	1900	1887	1714	1900	1802	1343	1900	1615	1108	1900	1615
c, Capacity [veh/h]	92	1038	1030	92	1038	984	453	628	534	319	628	534
d1, Uniform Delay [s]	59.39	17.67	17.67	59.07	16.58	17.67	40.93	25.45	27.13	33.94	24.58	25.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	39.18	43.70	46.27	28.21	20.96	33.53	62.27	0.53	1.83	1.61	0.11	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	1.06	1.06	0.63	0.97	1.02	1.07	0.16	0.35	0.22	0.04	0.10
d, Delay for Lane Group [s/veh]	98.58	61.37	63.94	87.28	37.53	51.20	103.20	25.99	28.96	35.54	24.69	25.38
Lane Group LOS	F	F	F	F	D	F	F	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.14	35.39	35.87	2.56	26.26	30.79	22.46	1.93	4.00	1.76	0.45	1.02
50th-Percentile Queue Length [ft/ln]	78.57	884.66	896.84	64.11	656.45	769.68	561.56	48.33	99.89	43.95	11.28	25.59
95th-Percentile Queue Length [veh/ln]	5.66	47.19	48.04	4.62	34.66	40.52	31.61	3.48	7.19	3.16	0.81	1.84
95th-Percentile Queue Length [ft/ln]	141.43	1179.75	1200.91	115.40	866.54	1013.01	790.33	87.00	179.81	79.12	20.30	46.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	98.58	62.63	63.94	87.28	43.13	51.20	103.20	25.99	28.96	35.54	24.69	25.38
Movement LOS	F	F	E	F	D	D	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	63.72			45.57			75.16			30.14		
Approach LOS	E			D			E			C		
d_I, Intersection Delay [s/veh]	57.31											
Intersection LOS	E											
Intersection V/C	1.023											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.742

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	103	1988	42	36	1725	107	137	2	75	50	11	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	1988	42	36	1725	107	137	2	75	50	11	89
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	523	11	9	454	28	36	1	20	13	3	23
Total Analysis Volume [veh/h]	108	2093	44	38	1816	113	144	2	79	53	12	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	98	0	10	94	0	0	22	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	95	95	7	91	91	19	19	19	19	19
g / C, Green / Cycle	0.08	0.73	0.73	0.05	0.70	0.70	0.15	0.15	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.06	0.56	0.57	0.02	0.51	0.52	0.12	0.05	0.04	0.01	0.06
s, saturation flow rate [veh/h]	1714	1900	1886	1714	1900	1862	1229	1615	1437	1900	1615
c, Capacity [veh/h]	145	1388	1378	92	1330	1303	235	236	72	278	236
d1, Uniform Delay [s]	56.31	0.54	0.55	58.36	1.75	1.78	52.19	46.89	61.59	44.95	47.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.90	4.16	4.32	13.01	3.47	3.81	11.82	3.79	48.51	0.29	4.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.77	0.78	0.41	0.73	0.74	0.62	0.33	0.73	0.04	0.40
d, Delay for Lane Group [s/veh]	85.21	4.71	4.87	71.37	5.23	5.60	64.02	50.68	110.09	45.25	52.30
Lane Group LOS	F	A	A	E	A	A	E	D	F	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.53	2.34	2.39	1.53	3.20	3.30	5.20	2.43	2.69	0.34	2.95
50th-Percentile Queue Length [ft/ln]	113.20	58.51	59.72	38.14	80.09	82.62	130.04	60.78	67.13	8.52	73.65
95th-Percentile Queue Length [veh/ln]	8.02	4.21	4.30	2.75	5.77	5.95	8.94	4.38	4.83	0.61	5.30
95th-Percentile Queue Length [ft/ln]	200.44	105.32	107.49	68.65	144.17	148.72	223.54	109.40	120.84	15.33	132.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.21	4.78	4.87	71.37	5.40	5.60	64.02	64.02	50.68	110.09	45.25	52.30
Movement LOS	F	A	A	E	A	A	E	E	D	F	D	D
d_A, Approach Delay [s/veh]	8.65			6.69			59.33			71.03		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	12.45											
Intersection LOS	B											
Intersection V/C	0.742											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	125	2108	1863	100	65	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	2108	1863	100	65	155
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	555	490	26	17	41
Total Analysis Volume [veh/h]	132	2219	1961	105	68	163
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	16	110	94	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	107	91	91	17	17
g / C, Green / Cycle	0.10	0.82	0.70	0.70	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.08	0.61	0.54	0.55	0.04	0.10
s, saturation flow rate [veh/h]	1714	3618	1900	1867	1714	1615
c, Capacity [veh/h]	171	2978	1330	1307	224	211
d1, Uniform Delay [s]	54.89	0.90	1.87	1.91	48.50	51.82
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.73	1.74	4.51	4.94	3.46	23.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.15	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.75	0.78	0.79	0.30	0.77
d, Delay for Lane Group [s/veh]	82.61	2.64	6.38	6.85	51.96	75.28
Lane Group LOS	F	A	A	A	D	E
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	5.39	2.03	3.74	3.87	2.13	6.27
50th-Percentile Queue Length [ft/ln]	134.66	50.75	93.50	96.86	53.21	156.69
95th-Percentile Queue Length [veh/ln]	9.19	3.65	6.73	6.97	3.83	10.37
95th-Percentile Queue Length [ft/ln]	229.81	91.35	168.30	174.36	95.78	259.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.61	2.64	6.60	6.85	51.96	75.28
Movement LOS	F	A	A	A	D	E
d_A, Approach Delay [s/veh]	7.13		6.61		68.42	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	9.95					
Intersection LOS	A					
Intersection V/C	0.767					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.136

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	147	1381	103	124	1215	402	453	525	160	42	234	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	1381	103	124	1215	402	453	525	160	42	234	126
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	363	27	33	320	106	119	138	42	11	62	33
Total Analysis Volume [veh/h]	155	1454	108	131	1279	423	477	553	168	44	246	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	37	0	11	35	0	32	27	0	32	83	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	10	34	34	8	32	32	29	0	0	29	0	0
g / C, Green / Cycle	0.13	0.43	0.43	0.10	0.40	0.40	0.36	0.00	0.00	0.36	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.22	0.41	0.42	0.19	0.35	0.26	0.41	0.29	0.10	0.05	0.13	0.08
s, saturation flow rate [veh/h]	691	1900	1855	691	3618	1615	1152	1900	1615	869	1900	1615
c, Capacity [veh/h]	159	808	788	142	1447	646	479	0	0	383	0	0
d1, Uniform Delay [s]	36.55	16.88	17.10	37.48	17.03	14.71	24.16	0.00	0.00	14.90	0.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	64.85	25.57	28.81	57.45	8.19	5.12	40.25	0.00	0.00	0.61	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

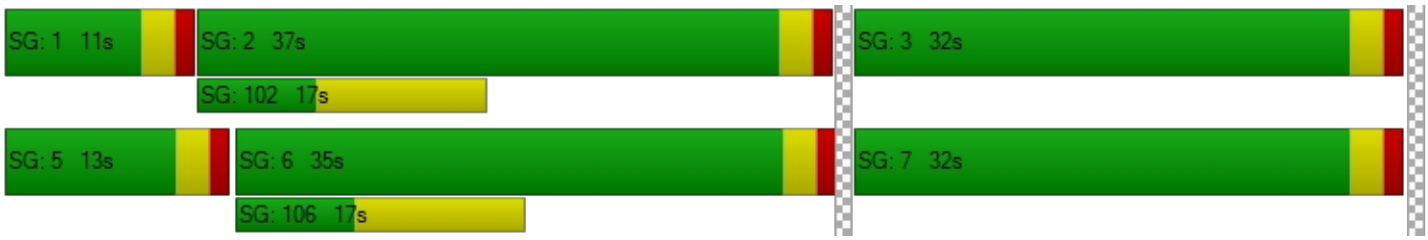
X, volume / capacity	0.97	0.97	0.99	0.92	0.88	0.65	1.00	0.00	0.00	0.11	0.00	0.00
d, Delay for Lane Group [s/veh]	101.40	42.45	45.91	94.93	25.21	19.82	64.41	0.00	0.00	15.51	0.00	0.00
Lane Group LOS	F	D	D	F	C	B	E	A	A	B	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	5.74	15.84	16.49	4.79	9.54	5.24	14.12	0.00	0.00	0.50	0.00	0.00
50th-Percentile Queue Length [ft/ln]	143.41	396.10	412.30	119.66	238.47	130.89	352.95	0.00	0.00	12.62	0.00	0.00
95th-Percentile Queue Length [veh/ln]	9.66	22.37	23.15	8.37	14.60	8.99	20.28	0.00	0.00	0.91	0.00	0.00
95th-Percentile Queue Length [ft/ln]	241.61	559.30	578.80	209.36	365.10	224.70	507.01	0.00	0.00	22.72	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	101.40	44.04	45.91	94.93	25.21	19.82	64.41	0.00	0.00	15.51	0.00	0.00
Movement LOS	F	D	D	F	C	B	E	A	A	B	A	A
d_A, Approach Delay [s/veh]	49.34			28.95			25.65			1.61		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	32.72											
Intersection LOS	C											
Intersection V/C	1.136											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	43.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.917

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	82	770	3	2	857	174	502	76	171	2	22	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	770	3	2	857	174	502	76	171	2	22	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	203	1	1	226	46	132	20	45	1	6	2
Total Analysis Volume [veh/h]	86	811	3	2	902	183	528	80	180	2	23	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	44	0	10	44	0	0	71	0	0	71	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	41	41	7	41	41	68	68
g / C, Green / Cycle	0.06	0.33	0.33	0.06	0.33	0.33	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.21	0.00	0.29	0.29	0.53	0.02
s, saturation flow rate [veh/h]	1714	1900	1898	1714	1900	1790	1490	1832
c, Capacity [veh/h]	96	623	622	96	623	587	859	1027
d1, Uniform Delay [s]	57.47	29.57	29.57	54.66	33.20	33.21	16.20	7.91
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	66.61	5.27	5.28	0.40	17.98	18.92	16.26	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

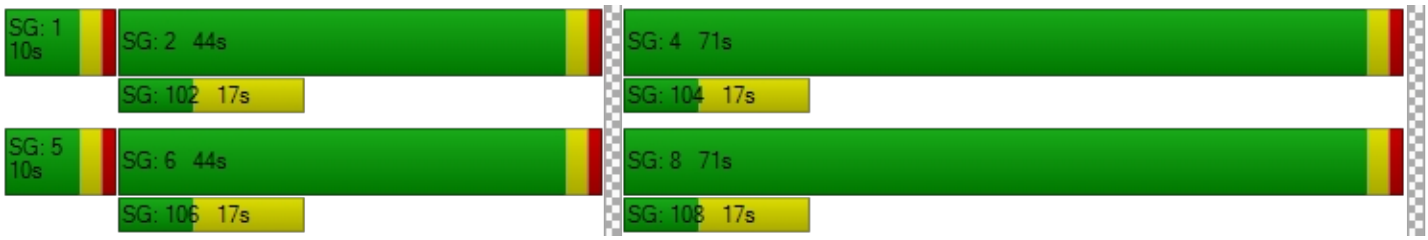
X, volume / capacity	0.90	0.65	0.65	0.02	0.90	0.90	0.92	0.03
d, Delay for Lane Group [s/veh]	124.08	34.84	34.85	55.06	51.18	52.13	32.46	7.97
Lane Group LOS	F	C	C	E	D	D	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.43	9.86	9.85	0.07	17.52	16.68	19.01	0.27
50th-Percentile Queue Length [ft/ln]	110.66	246.50	246.21	1.73	438.06	417.02	475.30	6.71
95th-Percentile Queue Length [veh/ln]	7.88	15.01	15.00	0.12	24.39	23.38	26.16	0.48
95th-Percentile Queue Length [ft/ln]	196.92	375.24	374.88	3.12	609.69	584.47	654.07	12.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	124.08	34.84	34.85	55.06	51.54	52.13	32.46	32.46	32.46	7.97	7.97	7.97
Movement LOS	F	C	C	E	D	D	C	C	C	A	A	A
d_A, Approach Delay [s/veh]	43.37			51.65			32.46			7.97		
Approach LOS	D			D			C			A		
d_I, Intersection Delay [s/veh]	43.11											
Intersection LOS	D											
Intersection V/C	0.917											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 13 Year 2035 Without Project Morning Peak Hour - With Improvements

Report File: C:\...\AM35WOI.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.049	45.0	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.958	42.6	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.523	22.4	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.399	3.7	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.981	42.1	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.680	12.9	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.576	10.3	B
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	SB Left	0.601	15.6	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.468	5.1	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.497	9.6	A
25	Agua Mansa Rd (NS) at Holly St (EW)	Signalized	HCM 2010	SB Left	0.412	8.9	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.723	32.8	C
30	Market St (NS) at Hall Ave (EW)	Signalized	HCM 2010	NB Left	0.773	7.1	A
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.787	18.8	B
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.900	22.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	45.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.049

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	379	0	0	312	221	0	0	0	155	0	151
Total Analysis Volume [veh/h]	414	1515	0	0	1249	885	0	0	0	621	0	604
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	32	101	0	0	69	0	0	0	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	29	98	66	66		26	26	26
g / C, Green / Cycle	0.22	0.75	0.51	0.51		0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.24	0.42	0.24	0.55		0.17	0.17	0.21
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1810	2859
c, Capacity [veh/h]	382	2727	2628	820		362	362	572
d1, Uniform Delay [s]	45.67	0.84	12.75	21.00		45.91	45.91	47.67
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	69.95	0.82	0.62	55.08		22.28	22.28	53.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.27	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.56	0.48	1.08		0.86	0.86	1.06
d, Delay for Lane Group [s/veh]	115.61	1.66	13.37	76.08		68.19	68.19	101.10
Lane Group LOS	F	A	B	F		E	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.15	1.22	4.99	32.39		11.35	11.35	13.07
50th-Percentile Queue Length [ft/ln]	478.66	30.42	124.64	809.82		283.83	283.83	326.65
95th-Percentile Queue Length [veh/ln]	27.52	2.19	8.65	44.30		16.88	16.88	19.55
95th-Percentile Queue Length [ft/ln]	688.08	54.75	216.18	1107.38		421.97	421.97	488.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	115.61	1.66	0.00	0.00	13.37	76.08	0.00	0.00	0.00	68.19	68.19	101.10
Movement LOS	F	A			B	F				E	E	F
d_A, Approach Delay [s/veh]	26.12			39.38			0.00			84.41		
Approach LOS	C			D			A			F		
d_I, Intersection Delay [s/veh]	44.97											
Intersection LOS	D											
Intersection V/C	1.049											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	42.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.958

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	306	127	138	338	0	176	0	142	0	0	0
Total Analysis Volume [veh/h]	0	1222	507	554	1351	0	704	0	567	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	44	0	46	90	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	41	41	43	87	37	37	37	
g / C, Green / Cycle	0.32	0.32	0.33	0.67	0.28	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.37	0.25	0.26	0.28	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1647	1530	
c, Capacity [veh/h]	1632	509	567	2421	488	469	435	
d1, Uniform Delay [s]	33.31	37.57	35.85	2.88	38.08	38.65	39.84	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.19	38.76	32.54	0.93	18.53	23.40	36.88	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

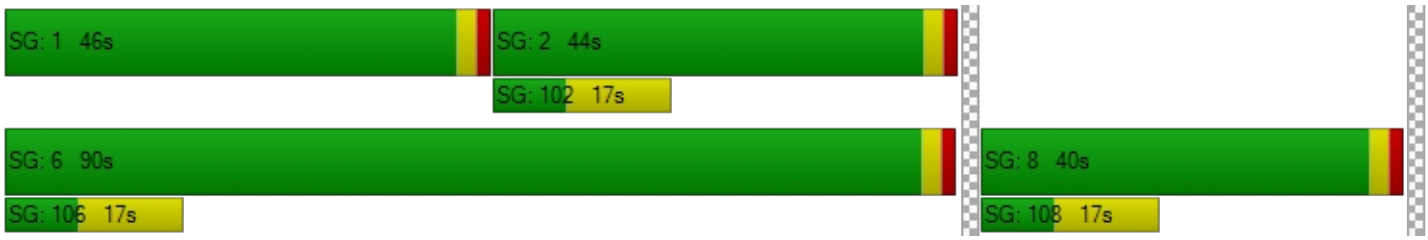
X, volume / capacity	0.75	1.00	0.98	0.56	0.87	0.90	0.97	
d, Delay for Lane Group [s/veh]	36.50	76.34	68.39	3.81	56.61	62.05	76.72	
Lane Group LOS	D	E	E	A	E	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.64	20.38	21.03	2.58	14.24	15.02	16.93	
50th-Percentile Queue Length [ft/ln]	265.92	509.46	525.79	64.57	356.02	375.39	423.20	
95th-Percentile Queue Length [veh/ln]	15.99	27.78	28.55	4.65	20.43	21.37	23.68	
95th-Percentile Queue Length [ft/ln]	399.64	694.55	713.82	116.22	510.74	534.27	591.89	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	36.50	76.34	68.39	3.81	0.00	58.78	62.05	73.01	0.00	0.00	0.00
Movement LOS		D	E	E	A		E	E	E			
d_A, Approach Delay [s/veh]	48.18			22.59			65.13			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	42.63											
Intersection LOS	D											
Intersection V/C	0.958											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	233	15	31	268	15	27	38	22	19	24	44
Total Analysis Volume [veh/h]	62	934	59	123	1073	61	107	152	89	76	98	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	67	0	21	76	0	0	42	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	64	64	18	73	73	39	39	39	39
g / C, Green / Cycle	0.07	0.49	0.49	0.14	0.56	0.56	0.30	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.04	0.26	0.26	0.07	0.30	0.30	0.10	0.14	0.07	0.16
s, saturation flow rate [veh/h]	1714	1900	1861	1714	1900	1864	1122	1784	1157	1706
c, Capacity [veh/h]	119	935	916	237	1067	1047	236	535	270	512
d1, Uniform Delay [s]	56.95	14.47	14.47	49.09	9.23	9.23	44.15	31.16	39.99	32.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.48	2.20	2.25	7.87	1.93	1.97	6.14	2.73	2.58	4.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.54	0.54	0.52	0.54	0.54	0.45	0.45	0.28	0.54
d, Delay for Lane Group [s/veh]	72.43	16.67	16.72	56.96	11.16	11.21	50.28	33.88	42.58	36.11
Lane Group LOS	E	B	B	E	B	B	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.44	7.20	7.07	4.04	5.70	5.62	3.41	5.64	2.14	6.81
50th-Percentile Queue Length [ft/ln]	60.90	180.03	176.63	101.11	142.54	140.42	85.14	141.10	53.42	170.30
95th-Percentile Queue Length [veh/ln]	4.38	11.60	11.42	7.28	9.62	9.50	6.13	9.54	3.85	11.09
95th-Percentile Queue Length [ft/ln]	109.62	290.05	285.61	181.99	240.44	237.59	153.26	238.50	96.15	277.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.43	16.69	16.72	56.96	11.18	11.21	50.28	33.88	33.88	42.58	36.11	36.11
Movement LOS	E	B	B	E	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	19.97			15.66			38.93			37.51		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.41											
Intersection LOS	C											
Intersection V/C	0.523											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.399

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	229	0	0	314	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	104	104	0	101	101	4	4
g / C, Green / Cycle	0.03	0.87	0.87	0.00	0.84	0.84	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.00	0.33	0.33	0.01	0.00
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1894	1656	1326
c, Capacity [veh/h]	54	1645	1645	2	1591	1586	93	74
d1, Uniform Delay [s]	57.25	1.43	1.43	0.00	2.39	2.39	56.97	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.42	0.42	0.00	0.75	0.75	1.46	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.28	0.28	0.00	0.40	0.40	0.26	0.00
d, Delay for Lane Group [s/veh]	61.50	1.85	1.85	0.00	3.14	3.14	58.44	0.00
Lane Group LOS	E	A	A	A	A	A	E	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.66	1.13	1.13	0.00	2.72	2.71	0.75	0.00
50th-Percentile Queue Length [ft/ln]	16.51	28.37	28.37	0.00	67.88	67.73	18.82	0.00
95th-Percentile Queue Length [veh/ln]	1.19	2.04	2.04	0.00	4.89	4.88	1.35	0.00
95th-Percentile Queue Length [ft/ln]	29.71	51.07	51.07	0.00	122.19	121.91	33.87	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	1.85	1.85	0.00	3.14	3.14	58.44	58.44	58.44	0.00	0.00	0.00
Movement LOS	E	A	A	A	A	A	E	E	E	A	A	A
d_A, Approach Delay [s/veh]	3.12			3.14			58.44			0.00		
Approach LOS	A			A			E			A		
d_I, Intersection Delay [s/veh]	3.73											
Intersection LOS	A											
Intersection V/C	0.399											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	42.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.981

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	80	100	156	164	10	15	29	13	103	22	106
Total Analysis Volume [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	51	61	0	11	28	0	20	37	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	22	42	43	60	60	6	23	16	33	33
g / C, Green / Cycle	0.04	0.18	0.35	0.36	0.50	0.50	0.05	0.19	0.13	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.25	0.34	0.18	0.02	0.03	0.09	0.12	0.05	0.26
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1802	3514	1900	1615
c, Capacity [veh/h]	69	656	562	653	1821	813	92	345	469	521	443
d1, Uniform Delay [s]	56.50	44.11	33.89	37.45	18.06	15.15	55.96	43.29	51.04	33.14	42.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	2.56	7.42	8.95	0.55	0.11	7.94	1.08	5.39	0.15	11.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.48	0.71	0.96	0.36	0.05	0.66	0.49	0.88	0.17	0.95
d, Delay for Lane Group [s/veh]	61.20	46.66	41.31	46.40	18.61	15.26	63.90	44.37	56.43	33.29	54.41
Lane Group LOS	E	D	D	D	B	B	E	D	E	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.04	4.49	11.16	19.18	5.60	0.56	2.02	4.59	6.40	1.96	13.59
50th-Percentile Queue Length [ft/ln]	26.03	112.28	278.97	479.48	140.05	13.93	50.46	114.71	160.08	49.08	339.78
95th-Percentile Queue Length [veh/ln]	1.87	7.97	16.64	26.36	9.48	1.00	3.63	8.10	10.55	3.53	19.64
95th-Percentile Queue Length [ft/ln]	46.85	199.17	415.93	659.03	237.10	25.07	90.82	202.53	263.83	88.35	490.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.20	46.66	41.31	46.40	18.61	15.26	63.90	44.37	44.37	56.43	33.29	54.41
Movement LOS	E	D	D	D	B	B	E	D	D	E	C	D
d_A, Approach Delay [s/veh]	44.43			31.69			49.55			53.32		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	42.13											
Intersection LOS	D											
Intersection V/C	0.981											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	173	24	73	221	0	1	6	16	2	1	5
Total Analysis Volume [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	57	78	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	10	27	27	5	2
g / C, Green / Cycle	0.29	0.29	0.29	0.21	0.59	0.59	0.11	0.05
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.21	0.16	0.23	0.23	0.05	0.02
s, saturation flow rate [veh/h]	638	1900	1820	1810	1900	1899	1689	1689
c, Capacity [veh/h]	235	553	529	376	1112	1111	180	84
d1, Uniform Delay [s]	18.52	14.78	14.78	17.30	5.20	5.20	19.57	21.31
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	1.86	1.94	3.36	0.23	0.23	2.25	2.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.73	0.73	0.77	0.40	0.40	0.51	0.36
d, Delay for Lane Group [s/veh]	18.73	16.63	16.73	20.67	5.43	5.43	21.82	23.88
Lane Group LOS	B	B	B	C	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.24	3.45	3.32	2.87	1.48	1.48	0.95	0.34
50th-Percentile Queue Length [ft/ln]	5.99	86.23	83.04	71.87	36.90	36.88	23.73	8.62
95th-Percentile Queue Length [veh/ln]	0.43	6.21	5.98	5.17	2.66	2.66	1.71	0.62
95th-Percentile Queue Length [ft/ln]	10.78	155.22	149.47	129.36	66.41	66.39	42.71	15.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.73	16.67	16.73	20.67	5.43	5.43	21.82	21.82	21.82	23.88	23.88	23.88
Movement LOS	B	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.74			9.19			21.82			23.88		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	12.86											
Intersection LOS	B											
Intersection V/C	0.680											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	187	24	16	226	0	0	0	1	11	1	3
Total Analysis Volume [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	31	0	47	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	11	11	3	13	13	0	3
g / C, Green / Cycle	0.02	0.32	0.32	0.09	0.40	0.40	0.01	0.09
(v / s)_i Volume / Saturation Flow Rate	0.00	0.23	0.23	0.03	0.24	0.24	0.00	0.03
s, saturation flow rate [veh/h]	1810	1900	1824	1810	1900	1900	1615	1768
c, Capacity [veh/h]	31	618	594	172	766	766	10	162
d1, Uniform Delay [s]	16.11	9.76	9.76	14.09	7.76	7.76	16.43	14.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.88	1.42	1.49	1.31	0.73	0.73	16.84	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

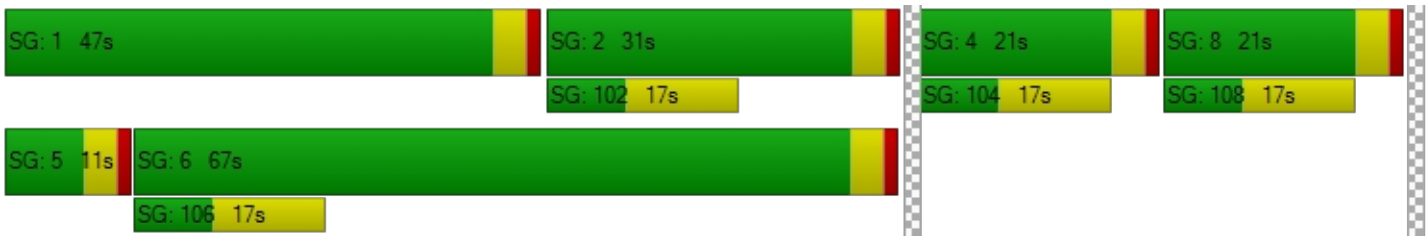
X, volume / capacity	0.29	0.70	0.70	0.37	0.59	0.59	0.31	0.37
d, Delay for Lane Group [s/veh]	20.99	11.19	11.25	15.39	8.49	8.49	33.27	15.59
Lane Group LOS	C	B	B	B	A	A	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.10	2.09	2.02	0.42	1.70	1.70	0.06	0.40
50th-Percentile Queue Length [ft/ln]	2.45	52.25	50.46	10.42	42.54	42.54	1.61	10.06
95th-Percentile Queue Length [veh/ln]	0.18	3.76	3.63	0.75	3.06	3.06	0.12	0.72
95th-Percentile Queue Length [ft/ln]	4.42	94.05	90.83	18.76	76.57	76.57	2.90	18.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.99	11.21	11.25	15.39	8.49	8.49	33.27	33.27	33.27	15.59	15.59	15.59
Movement LOS	C	B	B	B	A	A	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	11.32			8.94			33.27			15.59		
Approach LOS	B			A			C			B		
d_I, Intersection Delay [s/veh]	10.27											
Intersection LOS	B											
Intersection V/C	0.576											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	204	16	2	233	12	15	29	29	21	16	3
Total Analysis Volume [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	28	0	11	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	33	33	1	27	27	14	14	14	14
g / C, Green / Cycle	0.11	0.54	0.54	0.02	0.45	0.45	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.09	0.23	0.23	0.00	0.26	0.26	0.04	0.13	0.07	0.04
s, saturation flow rate [veh/h]	1810	1900	1851	1810	1900	1867	1349	1747	1168	1855
c, Capacity [veh/h]	208	1036	1009	30	849	834	352	416	220	442
d1, Uniform Delay [s]	25.81	8.11	8.11	29.18	12.40	12.40	21.49	20.07	27.06	18.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.06	1.30	1.34	5.45	2.90	2.95	0.22	1.16	1.11	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.43	0.43	0.30	0.58	0.58	0.16	0.56	0.39	0.16
d, Delay for Lane Group [s/veh]	31.88	9.41	9.44	34.63	15.30	15.35	21.71	21.23	28.16	18.29
Lane Group LOS	C	A	A	C	B	B	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.45	3.11	3.04	0.17	4.92	4.84	0.68	2.74	1.20	0.76
50th-Percentile Queue Length [ft/ln]	61.22	77.79	76.04	4.19	122.93	121.07	17.05	68.60	29.98	18.89
95th-Percentile Queue Length [veh/ln]	4.41	5.60	5.47	0.30	8.55	8.45	1.23	4.94	2.16	1.36
95th-Percentile Queue Length [ft/ln]	110.20	140.03	136.87	7.55	213.85	211.30	30.70	123.48	53.97	33.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.88	9.42	9.44	34.63	15.33	15.35	21.71	21.23	21.23	28.16	18.29	18.29
Movement LOS	C	A	A	C	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	12.90			15.50			21.33			23.64		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.61											
Intersection LOS	B											
Intersection V/C	0.601											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	1	1	3	3	3	1	38	37	3	31	2
Total Analysis Volume [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	39	0	0	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	15	15	15	15	15	15	15	15
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	2	2	5	5	5	5
g / C, Green / Cycle	0.14	0.14	0.14	0.14	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.05	0.00	0.01	0.01	0.00	0.17	0.01	0.07
s, saturation flow rate [veh/h]	1410	1726	1431	1740	1280	1747	1099	1885
c, Capacity [veh/h]	488	244	500	246	691	592	560	639
d1, Uniform Delay [s]	7.66	5.70	7.40	5.75	5.26	4.05	6.52	3.61
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	0.05	0.02	0.16	0.00	0.66	0.01	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

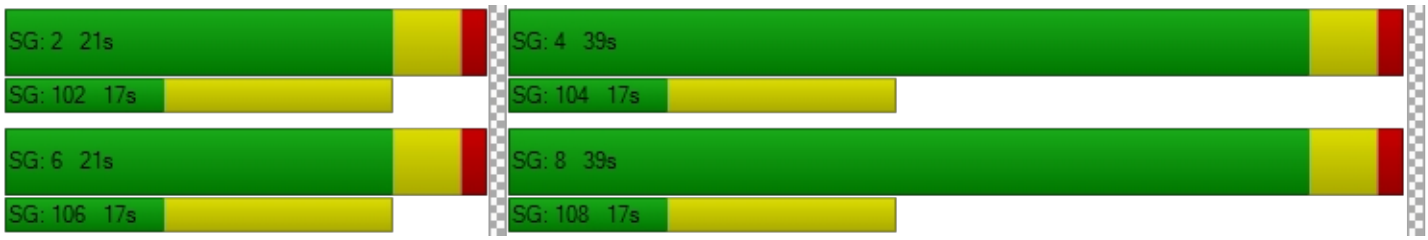
X, volume / capacity	0.15	0.03	0.02	0.09	0.00	0.50	0.02	0.20
d, Delay for Lane Group [s/veh]	7.81	5.74	7.42	5.91	5.26	4.71	6.53	3.77
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.12	0.01	0.02	0.03	0.00	0.11	0.01	0.03
50th-Percentile Queue Length [ft/ln]	3.03	0.21	0.38	0.72	0.06	2.71	0.36	0.69
95th-Percentile Queue Length [veh/ln]	0.22	0.02	0.03	0.05	0.00	0.20	0.03	0.05
95th-Percentile Queue Length [ft/ln]	5.46	0.39	0.68	1.30	0.12	4.88	0.64	1.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.81	5.74	5.74	7.42	5.91	5.91	5.26	4.71	4.71	6.53	3.77	3.77
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.63			6.37			4.72			3.98		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.05											
Intersection LOS	A											
Intersection V/C	0.468											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	50	548	648	95	75	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	548	648	95	75	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	137	162	24	19	18
Total Analysis Volume [veh/h]	50	548	648	95	75	72
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	109	98	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	105	94	17	17
g / C, Green / Cycle	0.05	0.81	0.72	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.29	0.40	0.04	0.04
s, saturation flow rate [veh/h]	1714	1900	1858	1714	1615
c, Capacity [veh/h]	92	1535	1344	224	211
d1, Uniform Delay [s]	58.78	0.67	0.72	48.71	48.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.92	0.65	1.64	3.98	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.18	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.36	0.55	0.33	0.34
d, Delay for Lane Group [s/veh]	79.71	1.32	2.36	52.69	53.09
Lane Group LOS	E	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.12	0.88	1.34	2.37	2.29
50th-Percentile Queue Length [ft/ln]	52.90	22.04	33.41	59.17	57.26
95th-Percentile Queue Length [veh/ln]	3.81	1.59	2.41	4.26	4.12
95th-Percentile Queue Length [ft/ln]	95.23	39.68	60.14	106.50	103.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.71	1.32	2.36	2.36	52.69	53.09
Movement LOS	E	A	A	A	D	D
d_A, Approach Delay [s/veh]	7.88		2.36		52.89	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	9.57					
Intersection LOS	A					
Intersection V/C	0.497					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.412

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	591	70	116	689	11	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	591	70	116	689	11	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	18	29	172	3	12
Total Analysis Volume [veh/h]	591	70	116	689	11	49
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	130	0	130	130	130	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	85	0	24	109	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	81	81	20	105	17	17
g / C, Green / Cycle	0.62	0.62	0.15	0.81	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.07	0.36	0.01	0.03
s, saturation flow rate [veh/h]	1900	1832	1714	1900	1714	1615
c, Capacity [veh/h]	1184	1141	264	1535	224	211
d1, Uniform Delay [s]	4.57	4.59	46.77	0.70	46.94	48.05
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.64	5.25	0.95	0.41	2.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.18	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.29	0.44	0.45	0.05	0.23
d, Delay for Lane Group [s/veh]	5.16	5.23	52.02	1.65	47.35	50.61
Lane Group LOS	A	A	D	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.92	1.94	3.60	1.18	0.33	1.52
50th-Percentile Queue Length [ft/ln]	48.00	48.39	90.12	29.54	8.14	37.90
95th-Percentile Queue Length [veh/ln]	3.46	3.48	6.49	2.13	0.59	2.73
95th-Percentile Queue Length [ft/ln]	86.39	87.10	162.21	53.18	14.64	68.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.19	5.23	52.02	1.65	47.35	50.61
Movement LOS	A	A	D	A	D	D
d_A, Approach Delay [s/veh]	5.19		8.91		50.01	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.92					
Intersection LOS	A					
Intersection V/C	0.412					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	65	2	122	127	165	4	1	114	67
Total Analysis Volume [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	30	0	69	79	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26	26	26	26	26	36	81	81	1	46	46
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.22	0.30	0.68	0.68	0.01	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.18	0.00	0.17	0.28	0.18	0.01	0.00	0.13	0.17
s, saturation flow rate [veh/h]	1510	1615	1432	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	375	348	323	410	616	544	2455	1096	11	1389	620
d1, Uniform Delay [s]	37.30	37.03	48.90	37.08	44.55	40.80	7.59	6.26	59.44	26.08	27.32
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.01	4.72	0.01	2.32	7.78	0.27	0.02	13.01	0.63	2.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

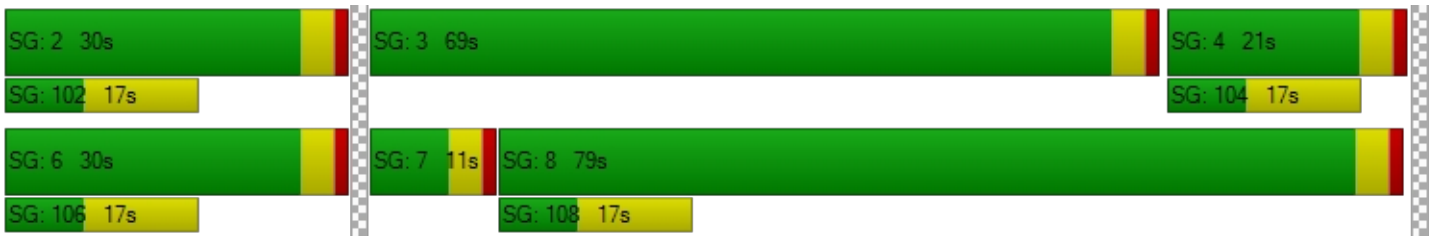
X, volume / capacity	0.05	0.01	0.80	0.01	0.79	0.93	0.27	0.01	0.28	0.33	0.43
d, Delay for Lane Group [s/veh]	37.35	37.04	53.62	37.09	46.87	48.58	7.86	6.28	72.45	26.71	29.50
Lane Group LOS	D	D	D	D	D	D	A	A	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.40	0.07	8.15	0.14	7.03	15.58	3.25	0.12	0.13	4.72	6.03
50th-Percentile Queue Length [ft/ln]	10.10	1.77	203.74	3.54	175.64	389.46	81.20	2.93	3.26	118.02	150.72
95th-Percentile Queue Length [veh/ln]	0.73	0.13	12.83	0.25	11.37	22.05	5.85	0.21	0.23	8.28	10.06
95th-Percentile Queue Length [ft/ln]	18.18	3.19	320.79	6.37	284.31	551.28	146.16	5.28	5.87	207.11	251.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.35	37.35	37.04	53.62	37.09	46.87	48.58	7.86	6.28	72.45	26.71	29.50
Movement LOS	D	D	D	D	D	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	37.30			49.12			25.35			27.93		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.82											
Intersection LOS	C											
Intersection V/C	0.723											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	770	911	23	21	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	770	911	23	21	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	193	228	6	5	7
Total Analysis Volume [veh/h]	22	770	911	23	21	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	120	120	120	0	120	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	74	63	0	46	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	26	21	3	3
g / C, Green / Cycle	0.04	0.71	0.56	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.41	0.49	0.01	0.02
s, saturation flow rate [veh/h]	1810	1900	1892	1810	1615
c, Capacity [veh/h]	70	1347	1064	139	124
d1, Uniform Delay [s]	17.43	2.66	7.04	16.07	16.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.52	0.38	2.50	0.50	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

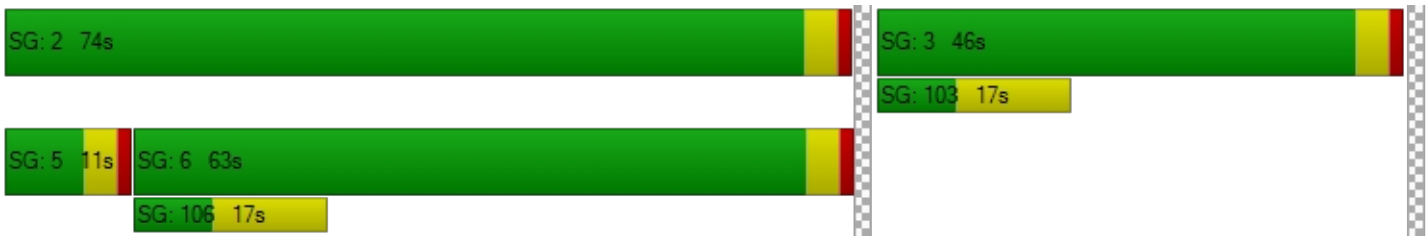
X, volume / capacity	0.31	0.57	0.88	0.15	0.23
d, Delay for Lane Group [s/veh]	19.95	3.04	9.54	16.57	17.14
Lane Group LOS	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.21	0.31	3.76	0.16	0.23
50th-Percentile Queue Length [ft/ln]	5.15	7.73	94.00	4.02	5.74
95th-Percentile Queue Length [veh/ln]	0.37	0.56	6.77	0.29	0.41
95th-Percentile Queue Length [ft/ln]	9.27	13.91	169.20	7.23	10.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.95	3.04	9.54	9.54	16.57	17.14
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.51		9.54		16.90	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.06					
Intersection LOS	A					
Intersection V/C	0.773					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.787

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	128	43	139	219	0	46	0	241	0	0	0
Total Analysis Volume [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	19	40	0	35	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	63	63	63	63	63	63	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	12	12	13	29	25	25	
g / C, Green / Cycle	0.19	0.19	0.21	0.46	0.41	0.41	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.16	0.24	0.10	0.34	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	695	310	735	1682	738	1165	
d1, Uniform Delay [s]	23.85	22.94	23.31	11.86	12.24	16.61	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.53	1.57	1.62	0.25	0.17	1.56	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.73	0.56	0.76	0.52	0.25	0.83	
d, Delay for Lane Group [s/veh]	25.38	24.52	24.93	12.11	12.42	18.16	
Lane Group LOS	C	C	C	B	B	B	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.46	2.30	3.75	3.78	1.54	5.64	
50th-Percentile Queue Length [ft/ln]	86.55	57.47	93.86	94.38	38.42	140.98	
95th-Percentile Queue Length [veh/ln]	6.23	4.14	6.76	6.80	2.77	9.53	
95th-Percentile Queue Length [ft/ln]	155.79	103.44	168.94	169.89	69.15	238.35	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.38	24.52	24.93	12.11	0.00	12.42	0.00	18.16	0.00	0.00	0.00
Movement LOS		C	C	C	B		B		B			
d_A, Approach Delay [s/veh]	25.16			17.09			17.25			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	18.83											
Intersection LOS	B											
Intersection V/C	0.787											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.900

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	323	4	11	488	77	81	5	19	11	6	19
Total Analysis Volume [veh/h]	71	1294	15	42	1953	309	325	20	76	45	24	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	82	0	10	82	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	79	79	7	79	79	35	35	35	35	35	35
g / C, Green / Cycle	0.05	0.61	0.61	0.05	0.61	0.61	0.27	0.27	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.35	0.35	0.02	0.57	0.20	0.25	0.01	0.05	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1892	1714	3427	1530	1314	1900	1615	1320	1900	1615
c, Capacity [veh/h]	92	1155	1150	92	2083	930	346	512	435	348	512	435
d1, Uniform Delay [s]	59.54	6.33	6.34	58.50	10.39	5.49	46.30	30.73	31.79	35.76	30.79	31.81
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	2.03	2.04	15.32	9.68	0.96	35.12	0.14	0.87	0.77	0.17	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.57	0.57	0.46	0.94	0.33	0.94	0.04	0.17	0.13	0.05	0.18
d, Delay for Lane Group [s/veh]	104.80	8.36	8.37	73.83	20.07	6.45	81.43	30.88	32.66	36.53	30.97	32.70
Lane Group LOS	F	A	A	E	C	A	F	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	4.94	4.93	1.71	15.02	2.12	13.86	0.44	1.74	1.10	0.52	1.76
50th-Percentile Queue Length [ft/ln]	85.79	123.61	123.29	42.84	375.51	52.92	346.43	10.91	43.50	27.51	13.12	44.11
95th-Percentile Queue Length [veh/ln]	6.18	8.59	8.57	3.08	21.38	3.81	19.96	0.79	3.13	1.98	0.94	3.18
95th-Percentile Queue Length [ft/ln]	154.42	214.77	214.34	77.11	534.41	95.26	499.06	19.64	78.30	49.52	23.62	79.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	8.37	8.37	73.83	20.07	6.45	81.43	30.88	32.66	36.53	30.97	32.70
Movement LOS	F	A	A	E	C	A	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	13.33			19.22			70.22			33.59		
Approach LOS	B			B			E			C		
d_I, Intersection Delay [s/veh]	22.85											
Intersection LOS	C											
Intersection V/C	0.900											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 13 Year 2035 Without Project Evening Peak Hour - With Improvements

Report File: C:\...\PM35WOI.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Right	1.042	40.7	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.931	37.6	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.639	27.3	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.475	5.5	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	1.015	53.8	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	NB Left	0.819	22.8	C
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.566	12.0	B
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	NB Left	0.588	17.7	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.723	9.4	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.630	9.3	A
25	Agua Mansa Rd (NS) at Holly St (EW)	Signalized	HCM 2010	SB Left	0.489	11.7	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	1.004	43.9	D
30	Market St (NS) at Hall Ave (EW)	Signalized	HCM 2010	NB Left	0.851	10.0	A
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.964	42.3	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	1.023	48.4	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.042

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	135	451	0	0	317	181	0	0	0	99	1	160
Total Analysis Volume [veh/h]	541	1802	0	0	1268	724	0	0	0	395	5	640
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	37	88	0	0	51	0	0	0	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	115	115	115	115		115	115	115
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	34	85	48	48		24	24	24
g / C, Green / Cycle	0.30	0.74	0.42	0.42		0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.32	0.50	0.24	0.45		0.11	0.11	0.22
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1812	2859
c, Capacity [veh/h]	507	2674	2160	674		378	378	597
d1, Uniform Delay [s]	34.83	0.24	18.97	25.50		36.72	36.72	41.50
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	59.17	1.38	1.18	56.26		5.24	5.22	57.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

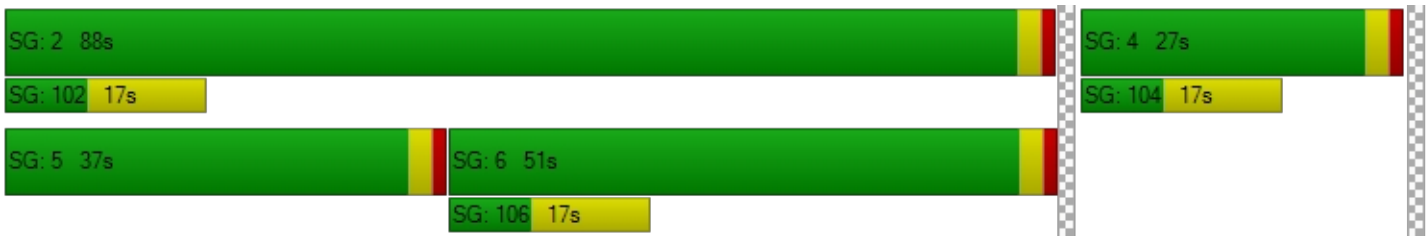
X, volume / capacity	1.07	0.67	0.59	1.07		0.53	0.53	1.07
d, Delay for Lane Group [s/veh]	94.00	1.61	20.15	81.76		41.96	41.93	99.41
Lane Group LOS	F	A	C	F		D	D	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	21.30	0.79	6.71	26.22		5.09	5.09	12.74
50th-Percentile Queue Length [ft/ln]	532.58	19.81	167.85	655.56		127.31	127.26	318.44
95th-Percentile Queue Length [veh/ln]	30.09	1.43	10.96	36.45		8.79	8.79	19.29
95th-Percentile Queue Length [ft/ln]	752.18	35.66	274.09	911.21		219.83	219.76	482.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	94.00	1.61	0.00	0.00	20.15	81.76	0.00	0.00	0.00	41.95	41.93	99.41
Movement LOS	F	A			C	F				D	D	F
d_A, Approach Delay [s/veh]	22.95			42.54			0.00			77.31		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	40.73											
Intersection LOS	D											
Intersection V/C	1.042											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.931

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	370	140	113	302	0	214	1	74	0	0	0
Total Analysis Volume [veh/h]	0	1480	561	454	1206	0	855	2	297	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	50	0	39	89	0	0	41	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	47	47	36	86	38	38	38	
g / C, Green / Cycle	0.36	0.36	0.28	0.66	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.35	0.26	0.33	0.22	0.28	0.19	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1715	1530	
c, Capacity [veh/h]	1871	584	475	2393	501	501	447	
d1, Uniform Delay [s]	29.55	32.78	40.23	3.14	35.82	38.61	34.41	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.51	28.74	31.75	0.76	10.76	28.16	7.58	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.79	0.96	0.96	0.50	0.77	0.94	0.66	
d, Delay for Lane Group [s/veh]	33.06	61.52	71.98	3.90	46.58	66.77	41.99	
Lane Group LOS	C	E	E	A	D	E	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	12.45	20.19	17.47	2.47	11.48	17.50	8.23	
50th-Percentile Queue Length [ft/ln]	311.37	504.70	436.84	61.83	287.07	437.53	205.77	
95th-Percentile Queue Length [veh/ln]	18.24	27.56	24.33	4.45	17.04	24.36	12.94	
95th-Percentile Queue Length [ft/ln]	456.07	688.92	608.23	111.30	426.00	609.06	323.40	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	33.06	61.52	71.98	3.90	0.00	57.69	66.77	41.99	0.00	0.00	0.00
Movement LOS		C	E	E	A		E	E	D			
d_A, Approach Delay [s/veh]	40.88			22.52			53.66			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	37.64											
Intersection LOS	D											
Intersection V/C	0.931											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	294	19	36	236	19	25	62	24	24	33	27
Total Analysis Volume [veh/h]	161	1175	78	144	943	75	101	249	98	96	132	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	69	0	20	67	0	0	41	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	66	66	17	64	64	38	38	38	38
g / C, Green / Cycle	0.15	0.51	0.51	0.13	0.49	0.49	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.09	0.33	0.33	0.08	0.27	0.27	0.09	0.19	0.09	0.14
s, saturation flow rate [veh/h]	1714	1900	1859	1714	1900	1851	1160	1810	1050	1762
c, Capacity [veh/h]	251	965	944	224	935	911	260	529	181	515
d1, Uniform Delay [s]	49.21	14.39	14.43	50.84	14.60	14.60	42.18	34.31	49.12	32.06
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.02	3.47	3.59	13.32	2.33	2.40	4.33	6.24	10.67	2.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.66	0.66	0.64	0.55	0.55	0.39	0.66	0.53	0.46
d, Delay for Lane Group [s/veh]	61.23	17.86	18.01	64.16	16.93	17.00	46.51	40.54	59.79	35.03
Lane Group LOS	E	B	B	E	B	B	D	D	E	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.49	9.81	9.70	5.07	7.52	7.35	3.03	9.40	3.43	5.71
50th-Percentile Queue Length [ft/ln]	137.29	245.27	242.49	126.66	187.97	183.82	75.73	234.92	85.85	142.64
95th-Percentile Queue Length [veh/ln]	9.34	14.95	14.81	8.76	12.02	11.80	5.45	14.42	6.18	9.62
95th-Percentile Queue Length [ft/ln]	233.38	373.69	370.18	218.94	300.40	295.00	136.31	360.60	154.53	240.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.23	17.93	18.01	64.16	16.97	17.00	46.51	40.54	40.54	59.79	35.03	35.03
Movement LOS	E	B	B	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	22.87			22.82			41.89			42.15		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.30											
Intersection LOS	C											
Intersection V/C	0.639											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	353	0	0	327	4	7	0	11	0	0	0
Total Analysis Volume [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	63	0	11	63	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	77	77	0	74	74	6	6
g / C, Green / Cycle	0.03	0.81	0.81	0.00	0.78	0.78	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.01	0.37	0.37	0.00	0.35	0.35	0.04	0.00
s, saturation flow rate [veh/h]	1810	1900	1900	1810	1900	1891	1610	1201
c, Capacity [veh/h]	58	1538	1538	2	1480	1473	154	114
d1, Uniform Delay [s]	45.15	2.75	2.75	0.00	3.58	3.58	43.56	41.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.54	0.99	0.99	0.00	0.99	0.99	2.02	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.46	0.46	0.00	0.45	0.45	0.45	0.01
d, Delay for Lane Group [s/veh]	48.68	3.74	3.74	0.00	4.57	4.57	45.58	41.85
Lane Group LOS	D	A	A	A	A	A	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.52	2.81	2.81	0.00	3.39	3.38	1.66	0.02
50th-Percentile Queue Length [ft/ln]	12.90	70.14	70.14	0.00	84.79	84.53	41.56	0.57
95th-Percentile Queue Length [veh/ln]	0.93	5.05	5.05	0.00	6.10	6.09	2.99	0.04
95th-Percentile Queue Length [ft/ln]	23.23	126.24	126.24	0.00	152.62	152.15	74.80	1.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.68	3.74	3.74	0.00	4.57	4.57	45.58	45.58	45.58	41.85	41.85	41.85
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.37			4.57			45.58			41.85		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	5.48											
Intersection LOS	A											
Intersection V/C	0.475											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	53.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.015

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	127	160	143	153	19	16	34	7	114	34	139
Total Analysis Volume [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	22	22	42	53	0	11	21	0	35	45	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	18	47	38	50	50	6	23	25	42	42
g / C, Green / Cycle	0.05	0.15	0.39	0.32	0.42	0.42	0.05	0.19	0.21	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.40	0.32	0.17	0.05	0.04	0.09	0.13	0.07	0.34
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1848	3514	1900	1615
c, Capacity [veh/h]	92	544	631	573	1505	672	94	356	727	661	562
d1, Uniform Delay [s]	55.96	50.38	36.57	40.94	24.64	21.46	55.97	42.86	43.38	27.44	38.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.19	25.05	39.97	16.68	0.82	0.34	8.91	0.91	0.90	0.15	15.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

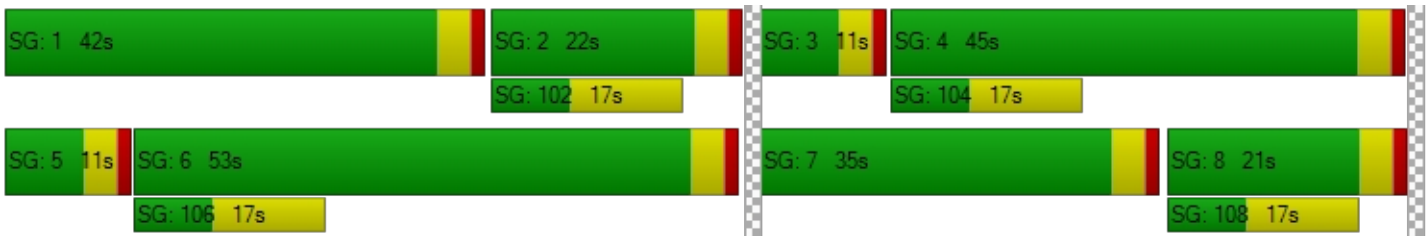
X, volume / capacity	0.67	0.93	1.02	1.00	0.41	0.11	0.70	0.45	0.63	0.20	0.99
d, Delay for Lane Group [s/veh]	64.15	75.44	76.53	57.61	25.46	21.80	64.88	43.76	44.28	27.59	54.18
Lane Group LOS	E	E	F	E	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.06	9.39	25.07	19.25	6.29	1.37	2.17	4.35	6.28	2.74	18.36
50th-Percentile Queue Length [ft/ln]	51.39	234.84	626.76	481.27	157.31	34.19	54.21	108.77	157.07	68.60	459.10
95th-Percentile Queue Length [veh/ln]	3.70	14.42	33.68	26.45	10.41	2.46	3.90	7.77	10.39	4.94	25.39
95th-Percentile Queue Length [ft/ln]	92.51	360.50	841.97	661.16	260.16	61.53	97.57	194.29	259.84	123.48	634.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.15	75.44	76.53	57.61	25.46	21.80	64.88	43.76	43.76	44.28	27.59	54.18
Movement LOS	E	E	F	E	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	75.44			39.82			49.81			47.13		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	53.81											
Intersection LOS	D											
Intersection V/C	1.015											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	279	28	56	234	2	1	6	4	20	14	37
Total Analysis Volume [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	50	0	22	61	0	0	21	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	28	28	11	37	37	4	15
g / C, Green / Cycle	0.03	0.38	0.38	0.15	0.50	0.50	0.06	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.33	0.33	0.12	0.25	0.25	0.02	0.16
s, saturation flow rate [veh/h]	1810	1900	1839	1810	1900	1895	1769	1717
c, Capacity [veh/h]	53	721	698	278	957	954	100	336
d1, Uniform Delay [s]	35.45	21.36	21.39	30.48	12.21	12.21	34.02	28.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.69	3.28	3.45	5.60	0.39	0.39	3.04	5.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

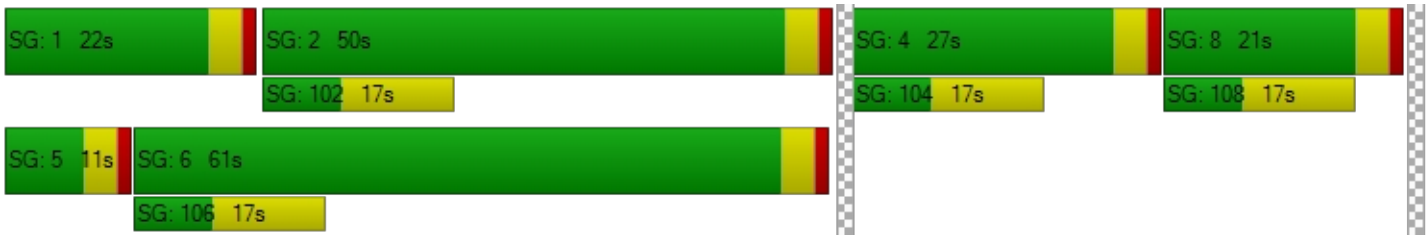
X, volume / capacity	0.34	0.87	0.87	0.81	0.49	0.49	0.44	0.84
d, Delay for Lane Group [s/veh]	39.14	24.64	24.83	36.08	12.60	12.60	37.05	34.52
Lane Group LOS	D	C	C	D	B	B	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.37	9.88	9.63	4.18	4.72	4.71	0.83	5.18
50th-Percentile Queue Length [ft/ln]	9.17	247.09	240.83	104.59	118.11	117.82	20.83	129.55
95th-Percentile Queue Length [veh/ln]	0.66	15.04	14.72	7.53	8.29	8.27	1.50	8.92
95th-Percentile Queue Length [ft/ln]	16.50	375.98	368.09	188.27	207.23	206.83	37.50	222.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.14	24.73	24.83	36.08	12.60	12.60	37.05	37.05	37.05	34.52	34.52	34.52
Movement LOS	D	C	C	D	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	24.94			17.13			37.05			34.52		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	22.80											
Intersection LOS	C											
Intersection V/C	0.819											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.566

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	290	16	12	239	1	0	0	3	18	0	20
Total Analysis Volume [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	21	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	45	45	4	48	48	1	8
g / C, Green / Cycle	0.01	0.60	0.60	0.06	0.64	0.64	0.02	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.32	0.33	0.03	0.25	0.25	0.01	0.09
s, saturation flow rate [veh/h]	1810	1900	1865	1810	1900	1898	1615	1700
c, Capacity [veh/h]	25	1135	1114	107	1221	1220	30	191
d1, Uniform Delay [s]	36.72	9.03	9.03	34.17	6.42	6.42	36.45	32.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.05	1.87	1.91	2.74	0.95	0.95	6.37	6.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

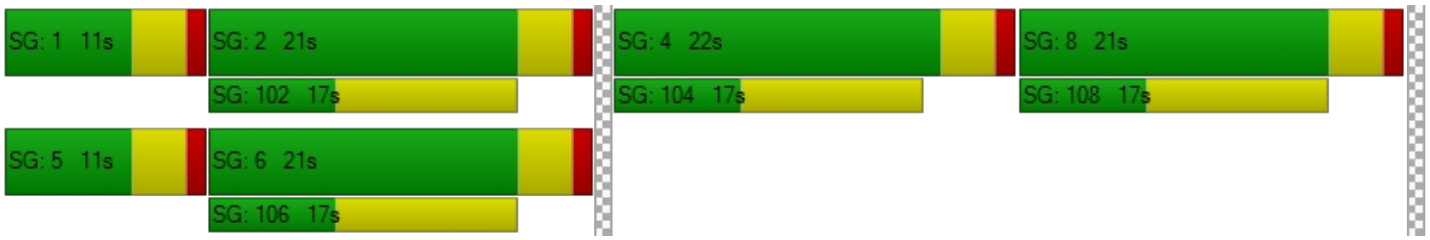
X, volume / capacity	0.28	0.54	0.54	0.43	0.39	0.39	0.33	0.78
d, Delay for Lane Group [s/veh]	42.77	10.90	10.95	36.91	7.37	7.37	42.81	39.42
Lane Group LOS	D	B	B	D	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.17	5.60	5.52	0.87	3.23	3.22	0.23	2.94
50th-Percentile Queue Length [ft/ln]	4.15	140.01	137.99	21.81	80.67	80.59	5.75	73.57
95th-Percentile Queue Length [veh/ln]	0.30	9.48	9.37	1.57	5.81	5.80	0.41	5.30
95th-Percentile Queue Length [ft/ln]	7.47	237.03	234.32	39.25	145.20	145.06	10.35	132.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.77	10.92	10.95	36.91	7.37	7.37	42.81	42.81	42.81	39.42	39.42	39.42
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.11			8.72			42.81			39.42		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	12.01											
Intersection LOS	B											
Intersection V/C	0.566											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	249	23	10	216	16	22	22	14	39	29	7
Total Analysis Volume [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	28	0	11	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	29	29	3	25	25	15	15	15	15
g / C, Green / Cycle	0.13	0.49	0.49	0.06	0.41	0.41	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.10	0.29	0.29	0.02	0.25	0.25	0.07	0.08	0.12	0.08
s, saturation flow rate [veh/h]	1810	1900	1844	1810	1900	1855	1263	1781	1265	1837
c, Capacity [veh/h]	237	931	904	103	790	771	310	451	309	466
d1, Uniform Delay [s]	25.27	10.99	11.01	27.32	13.61	13.61	23.26	18.21	24.73	18.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.62	2.76	2.86	2.31	3.26	3.33	0.49	0.40	1.24	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.59	0.59	0.38	0.59	0.59	0.28	0.32	0.50	0.31
d, Delay for Lane Group [s/veh]	30.89	13.75	13.86	29.63	16.86	16.94	23.74	18.61	25.97	18.56
Lane Group LOS	C	B	B	C	B	B	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.78	5.08	4.97	0.58	4.98	4.88	1.09	1.53	2.08	1.55
50th-Percentile Queue Length [ft/ln]	69.45	127.05	124.37	14.45	124.58	122.04	27.34	38.36	52.10	38.80
95th-Percentile Queue Length [veh/ln]	5.00	8.78	8.63	1.04	8.64	8.50	1.97	2.76	3.75	2.79
95th-Percentile Queue Length [ft/ln]	125.01	219.48	215.82	26.02	216.10	212.62	49.22	69.05	93.78	69.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.89	13.80	13.86	29.63	16.90	16.94	23.74	18.61	18.61	25.97	18.56	18.56
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.30			17.41			20.55			22.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.70											
Intersection LOS	B											
Intersection V/C	0.588											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	1	3	1	1	2	2	97	47	1	50	3
Total Analysis Volume [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	39	0	0	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	29	29	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10	10	12	12	12	12
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.21	0.01	0.00	0.01	0.01	0.32	0.00	0.11
s, saturation flow rate [veh/h]	1427	1656	1424	1718	1187	1797	854	1880
c, Capacity [veh/h]	608	545	606	566	548	714	291	747
d1, Uniform Delay [s]	10.29	6.63	8.19	6.62	8.18	7.79	13.16	5.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	0.02	0.00	0.01	0.01	2.15	0.01	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

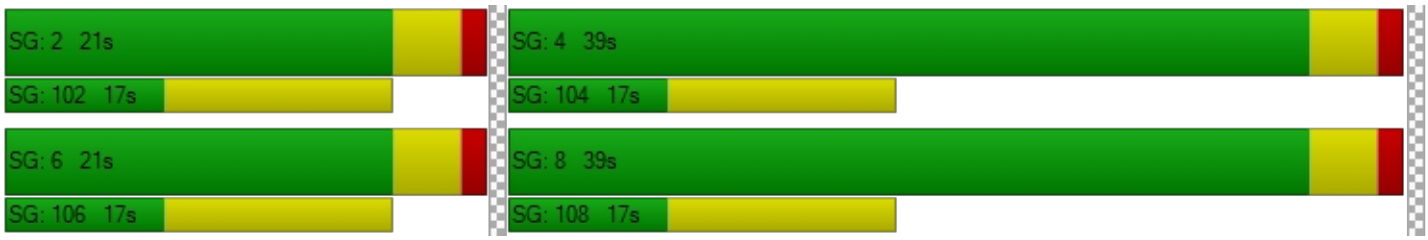
X, volume / capacity	0.49	0.02	0.00	0.02	0.01	0.80	0.01	0.29
d, Delay for Lane Group [s/veh]	10.89	6.64	8.19	6.63	8.19	9.94	13.17	6.20
Lane Group LOS	B	A	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.30	0.03	0.01	0.03	0.03	2.13	0.01	0.53
50th-Percentile Queue Length [ft/ln]	32.38	0.84	0.25	0.70	0.68	53.26	0.26	13.28
95th-Percentile Queue Length [veh/ln]	2.33	0.06	0.02	0.05	0.05	3.83	0.02	0.96
95th-Percentile Queue Length [ft/ln]	58.29	1.51	0.46	1.25	1.23	95.86	0.47	23.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.89	6.64	6.64	8.19	6.63	6.63	8.19	9.94	9.94	13.17	6.20	6.20
Movement LOS	B	A	A	A	A	A	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	10.73			6.99			9.92			6.26		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	9.40											
Intersection LOS	A											
Intersection V/C	0.723											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	78	1010	664	95	119	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1010	664	95	119	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	20	253	166	24	30	0
Total Analysis Volume [veh/h]	78	1010	664	95	119	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	15	109	94	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	105	90	17	17
g / C, Green / Cycle	0.08	0.81	0.69	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.53	0.41	0.07	0.00
s, saturation flow rate [veh/h]	1714	1900	1859	1714	1615
c, Capacity [veh/h]	145	1535	1287	224	211
d1, Uniform Delay [s]	55.27	0.82	1.88	50.04	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.55	2.23	1.99	8.72	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.18	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.66	0.59	0.53	0.00
d, Delay for Lane Group [s/veh]	68.82	3.05	3.87	58.76	0.00
Lane Group LOS	E	A	A	E	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.93	2.14	2.45	3.99	0.00
50th-Percentile Queue Length [ft/ln]	73.30	53.55	61.24	99.82	0.00
95th-Percentile Queue Length [veh/ln]	5.28	3.86	4.41	7.19	0.00
95th-Percentile Queue Length [ft/ln]	131.95	96.40	110.23	179.67	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.82	3.05	3.87	3.87	58.76	0.00
Movement LOS	E	A	A	A	E	A
d_A, Approach Delay [s/veh]	7.76		3.87		58.76	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	9.35					
Intersection LOS	A					
Intersection V/C	0.630					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1009	23	57	670	70	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1009	23	57	670	70	184
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	252	6	14	168	18	46
Total Analysis Volume [veh/h]	1009	23	57	670	70	184
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	130	0	130	130	130	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	83	0	13	96	34	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	79	79	9	92	30	30
g / C, Green / Cycle	0.61	0.61	0.07	0.71	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.03	0.35	0.04	0.11
s, saturation flow rate [veh/h]	1900	1885	1714	1900	1714	1615
c, Capacity [veh/h]	1155	1146	119	1345	396	373
d1, Uniform Delay [s]	5.83	5.85	56.78	1.21	35.96	38.80
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	1.28	13.26	1.32	0.98	4.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.45	0.48	0.50	0.18	0.49
d, Delay for Lane Group [s/veh]	7.09	7.13	70.04	2.53	36.94	43.42
Lane Group LOS	A	A	E	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	3.64	3.65	2.20	1.56	1.74	5.07
50th-Percentile Queue Length [ft/ln]	91.09	91.33	55.06	38.95	43.38	126.78
95th-Percentile Queue Length [veh/ln]	6.56	6.58	3.96	2.80	3.12	8.76
95th-Percentile Queue Length [ft/ln]	163.96	164.39	99.11	70.11	78.09	219.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.11	7.13	70.04	2.53	36.94	43.42
Movement LOS	A	A	E	A	D	D
d_A, Approach Delay [s/veh]	7.11		7.82		41.63	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.72					
Intersection LOS	B					
Intersection V/C	0.489					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	43.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.004

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	82	1	140	189	149	1	1	150	91
Total Analysis Volume [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	32	0	0	32	0	56	77	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	28	28	28	51	80	80	0	29	29
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.43	0.66	0.66	0.00	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.23	0.00	0.20	0.42	0.17	0.00	0.00	0.17	0.22
s, saturation flow rate [veh/h]	1541	1615	1436	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	408	377	346	443	667	775	2398	1071	7	863	385
d1, Uniform Delay [s]	35.42	35.31	49.59	35.32	43.84	33.68	8.17	6.84	59.62	41.67	44.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.01	13.18	0.01	2.90	10.22	0.25	0.01	22.11	4.55	32.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.01	0.95	0.01	0.84	0.97	0.25	0.00	0.29	0.69	0.94
d, Delay for Lane Group [s/veh]	35.44	35.32	62.78	35.33	46.74	43.90	8.41	6.85	81.72	46.22	77.65
Lane Group LOS	D	D	E	D	D	D	A	A	F	D	E
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.18	0.05	11.25	0.07	8.15	23.15	3.07	0.04	0.10	8.61	14.01
50th-Percentile Queue Length [ft/ln]	4.61	1.15	281.35	1.72	203.65	578.83	76.72	1.11	2.57	215.15	350.32
95th-Percentile Queue Length [veh/ln]	0.33	0.08	16.76	0.12	12.83	31.04	5.52	0.08	0.18	13.42	20.15
95th-Percentile Queue Length [ft/ln]	8.29	2.07	418.89	3.10	320.67	776.11	138.10	1.99	4.62	335.43	503.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.44	35.44	35.32	62.78	35.33	46.74	43.90	8.41	6.85	81.72	46.22	77.65
Movement LOS	D	D	D	E	D	D	D	A	A	F	D	E
d_A, Approach Delay [s/veh]	35.41			52.61			28.15			58.12		
Approach LOS	D			D			C			E		
d_I, Intersection Delay [s/veh]	43.89											
Intersection LOS	D											
Intersection V/C	1.004											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.851

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	906	1094	95	64	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	906	1094	95	64	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	227	274	24	16	4
Total Analysis Volume [veh/h]	35	906	1094	95	64	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	120	120	120	0	120	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	91	80	0	29	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	50	43	5	5
g / C, Green / Cycle	0.05	0.79	0.68	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.02	0.48	0.63	0.04	0.01
s, saturation flow rate [veh/h]	1810	1900	1874	1810	1615
c, Capacity [veh/h]	93	1500	1265	152	135
d1, Uniform Delay [s]	29.03	2.67	9.12	27.52	26.81
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.54	0.39	4.16	1.86	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.60	0.94	0.42	0.12
d, Delay for Lane Group [s/veh]	31.57	3.07	13.28	29.37	27.19
Lane Group LOS	C	A	B	C	C
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.56	1.56	10.62	0.95	0.23
50th-Percentile Queue Length [ft/ln]	13.91	39.10	265.52	23.83	5.69
95th-Percentile Queue Length [veh/ln]	1.00	2.82	15.97	1.72	0.41
95th-Percentile Queue Length [ft/ln]	25.03	70.38	399.14	42.89	10.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.57	3.07	13.28	13.28	29.37	27.19
Movement LOS	C	A	B	B	C	C
d_A, Approach Delay [s/veh]	4.13		13.28		28.94	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	9.95					
Intersection LOS	A					
Intersection V/C	0.851					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	320	43	164	216	0	43	0	234	0	0	0
Total Analysis Volume [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	48	0	27	75	0	45	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	44	44	23	71	41	41	
g / C, Green / Cycle	0.37	0.37	0.19	0.59	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.35	0.11	0.19	0.24	0.10	0.33	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	1329	593	675	2144	617	974	
d1, Uniform Delay [s]	37.20	26.93	48.27	13.10	28.88	38.86	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	17.04	1.23	11.00	0.12	0.24	7.03	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

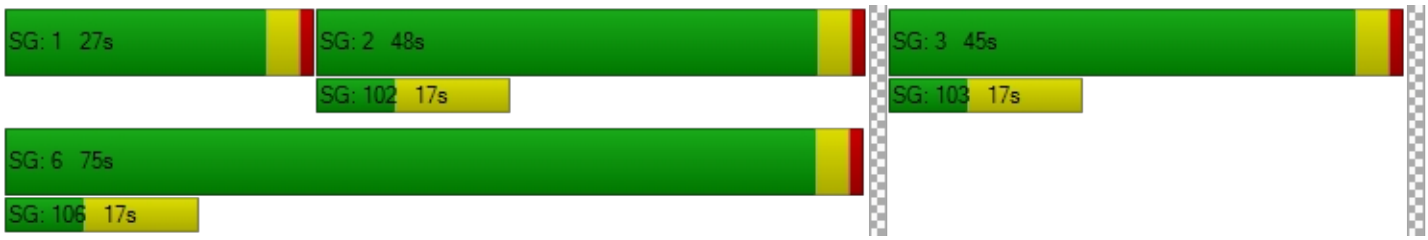
X, volume / capacity	0.96	0.29	0.97	0.40	0.28	0.96	
d, Delay for Lane Group [s/veh]	54.24	28.16	59.27	13.22	29.12	45.89	
Lane Group LOS	D	C	E	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	21.14	3.71	10.76	6.11	3.68	14.26	
50th-Percentile Queue Length [ft/ln]	528.44	92.71	269.02	152.67	91.92	356.48	
95th-Percentile Queue Length [veh/ln]	28.68	6.68	16.14	10.16	6.62	20.45	
95th-Percentile Queue Length [ft/ln]	716.95	166.89	403.51	253.99	165.46	511.31	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	54.24	28.16	59.27	13.22	0.00	29.12	0.00	45.89	0.00	0.00	0.00
Movement LOS		D	C	E	B		C		D			
d_A, Approach Delay [s/veh]	51.15			33.11			43.28			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	42.29											
Intersection LOS	D											
Intersection V/C	0.964											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	48.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.023

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	537	11	14	424	77	121	25	47	18	6	13
Total Analysis Volume [veh/h]	67	2146	44	58	1698	308	485	99	189	71	24	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	74	0	10	74	0	0	46	0	0	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	71	71	7	71	71	43	43	43	43	43	43
g / C, Green / Cycle	0.05	0.55	0.55	0.05	0.55	0.55	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.04	0.58	0.58	0.03	0.50	0.20	0.36	0.05	0.12	0.06	0.01	0.03
s, saturation flow rate [veh/h]	1714	1900	1887	1714	3427	1530	1343	1900	1615	1108	1900	1615
c, Capacity [veh/h]	92	1038	1030	92	1872	836	453	628	534	319	628	534
d1, Uniform Delay [s]	59.39	17.67	17.67	59.07	15.03	9.34	40.93	25.45	27.13	33.94	24.58	25.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	39.18	43.70	46.27	28.21	7.90	1.25	62.27	0.53	1.83	1.61	0.11	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	1.06	1.06	0.63	0.91	0.37	1.07	0.16	0.35	0.22	0.04	0.10
d, Delay for Lane Group [s/veh]	98.58	61.37	63.94	87.28	22.93	10.59	103.20	25.99	28.96	35.54	24.69	25.38
Lane Group LOS	F	F	F	F	C	B	F	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.14	35.39	35.87	2.56	16.99	3.12	22.46	1.93	4.00	1.76	0.45	1.02
50th-Percentile Queue Length [ft/ln]	78.57	884.66	896.84	64.11	424.65	78.08	561.56	48.33	99.89	43.95	11.28	25.59
95th-Percentile Queue Length [veh/ln]	5.66	47.19	48.04	4.62	23.75	5.62	31.61	3.48	7.19	3.16	0.81	1.84
95th-Percentile Queue Length [ft/ln]	141.43	1179.75	1200.91	115.40	593.63	140.54	790.33	87.00	179.81	79.12	20.30	46.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	98.58	62.63	63.94	87.28	22.93	10.59	103.20	25.99	28.96	35.54	24.69	25.38
Movement LOS	F	F	E	F	C	B	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	63.72			22.90			75.16			30.14		
Approach LOS	E			C			E			C		
d_I, Intersection Delay [s/veh]	48.38											
Intersection LOS	D											
Intersection V/C	1.023											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



YEAR 2035 WITH PROJECT – ALTERNATIVE 1

Viridian

Vistro File: C:\...\AME.vistro

Scenario 14 Year 2035 With Project Morning Peak Hour - Alternative 1

Report File: C:\...\AM35W1.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.230	81.6	F
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.110	66.2	E
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.814	41.5	D
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	NB Left	0.775	30.6	C
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	1.852	91.2	F
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.589	13.4	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.004	11.4	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.647	6.2	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	150.7	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	1.032	141.6	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	0.182	10,000.0	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.053	119.4	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	1.980	34.7	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Two-way stop	HCM 2010	EB Right	0.419	17.5	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.896	23.1	C
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.878	34.1	C
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.731	12.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.006	9.3	A
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.014	12.3	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.477	14.0	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.004	9.3	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.258	15.2	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.006	10.6	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.680	75.7	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.036	17.1	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.147	16.4	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.585	11.8	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.395	3.8	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	77.782	250.1	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.316	82.3	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.659	17.4	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.770	12.6	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.908	36.1	D
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.746	22.7	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	0.788	26.7	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	0.981	34.8	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.755	12.1	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.748	10.0	B

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	1.059	21.6	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.755	21.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	81.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.230

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	8	0	0	24	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	409	1447	0	0	1211	841	0	0	0	592	0	574
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	108	381	0	0	319	221	0	0	0	156	0	151
Total Analysis Volume [veh/h]	431	1523	0	0	1275	885	0	0	0	623	0	604
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	29	88	0	0	59	0	0	0	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	26	85	56	56		39	39
g / C, Green / Cycle	0.20	0.65	0.43	0.43		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.25	0.42	0.25	0.55		0.34	0.37
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1615
c, Capacity [veh/h]	343	2365	2229	696		543	485
d1, Uniform Delay [s]	47.67	3.91	20.07	27.67		39.00	39.00
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	137.32	1.36	1.07	133.54		86.28	127.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.26	0.64	0.57	1.27		1.15	1.25
d, Delay for Lane Group [s/veh]	184.98	5.27	21.14	161.21		125.28	166.36
Lane Group LOS	F	A	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	23.66	3.66	7.52	44.64		29.13	31.53
50th-Percentile Queue Length [ft/ln]	591.52	91.53	187.88	1116.09		728.36	788.26
95th-Percentile Queue Length [veh/ln]	35.42	6.59	12.01	65.19		41.37	46.31
95th-Percentile Queue Length [ft/ln]	885.41	164.75	300.28	1629.73		1034.23	1157.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	184.98	5.27	0.00	0.00	21.14	161.21	0.00	0.00	0.00	125.28	125.28	166.36
Movement LOS	F	A			C	F				F	F	F
d_A, Approach Delay [s/veh]	44.91			78.53			0.00			145.50		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	81.62											
Intersection LOS	F											
Intersection V/C	1.230											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	66.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.110

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	1	0	26	0	0	0	61	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1185	483	526	1309	0	669	0	600	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	312	127	138	344	0	176	0	158	0	0	0
Total Analysis Volume [veh/h]	0	1247	508	554	1378	0	704	0	632	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	39	0	40	79	0	0	51	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	36	36	37	76	48	48	
g / C, Green / Cycle	0.28	0.28	0.28	0.58	0.37	0.37	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.38	0.38	0.42	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1629	
c, Capacity [veh/h]	1433	447	488	2115	633	601	
d1, Uniform Delay [s]	38.83	41.00	40.33	8.40	33.00	33.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	7.46	85.27	83.52	1.58	42.78	82.06	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

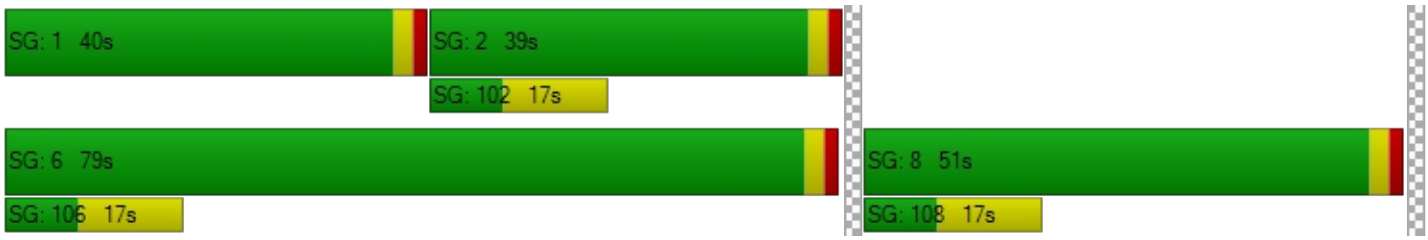
X, volume / capacity	0.87	1.14	1.14	0.65	1.03	1.14	
d, Delay for Lane Group [s/veh]	46.28	126.27	123.86	9.98	75.78	115.06	
Lane Group LOS	D	F	F	A	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	12.58	24.02	25.92	6.23	25.59	30.87	
50th-Percentile Queue Length [ft/ln]	314.59	600.42	647.88	155.69	639.63	771.78	
95th-Percentile Queue Length [veh/ln]	18.40	34.58	37.01	10.32	34.53	43.67	
95th-Percentile Queue Length [ft/ln]	460.04	864.54	925.21	258.00	863.26	1091.67	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	46.28	126.27	123.86	9.98	0.00	77.90	115.06	115.06	0.00	0.00	0.00
Movement LOS		D	F	F	A		E	F	F			
d_A, Approach Delay [s/veh]	69.44			42.63			95.95			0.00		
Approach LOS	E			D			F			A		
d_I, Intersection Delay [s/veh]	66.18											
Intersection LOS	E											
Intersection V/C	1.110											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	41.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	957	25	193	1100	190	265	189	79	21	216	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	25	0	0	87	0	0	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	982	25	193	1187	190	265	189	88	21	216	167
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	258	7	51	312	50	70	50	23	6	57	44
Total Analysis Volume [veh/h]	153	1034	26	203	1249	200	279	199	93	22	227	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	58	0	22	63	0	28	40	0	10	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	55	55	19	60	60	25	37	37	7	19	19
g / C, Green / Cycle	0.11	0.42	0.42	0.15	0.46	0.46	0.19	0.28	0.28	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.28	0.28	0.12	0.39	0.40	0.16	0.06	0.06	0.01	0.11	0.12
s, saturation flow rate [veh/h]	1714	1900	1884	1714	1900	1811	1714	3618	1615	1714	1900	1634
c, Capacity [veh/h]	185	804	797	251	877	836	330	1030	460	92	278	239
d1, Uniform Delay [s]	54.50	21.87	21.87	50.61	21.11	21.49	46.51	30.34	30.41	57.82	50.21	50.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	33.03	4.27	4.31	23.95	9.32	10.96	22.65	0.42	0.99	6.00	17.94	23.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

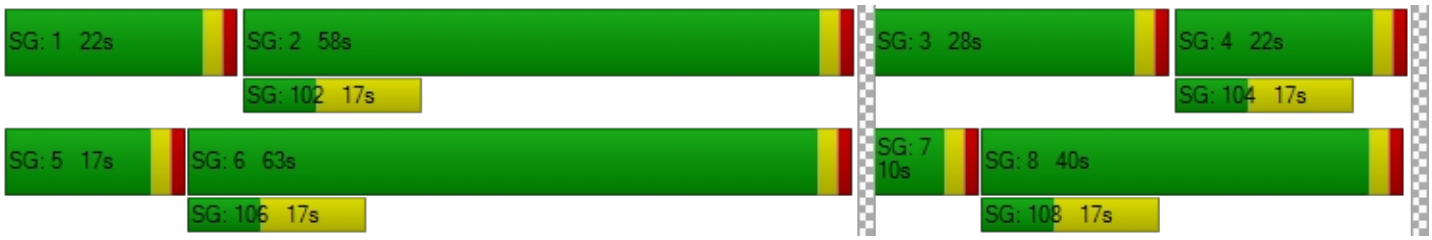
X, volume / capacity	0.83	0.66	0.66	0.81	0.84	0.86	0.85	0.19	0.20	0.24	0.76	0.80
d, Delay for Lane Group [s/veh]	87.53	26.13	26.18	74.56	30.43	32.45	69.16	30.76	31.41	63.81	68.15	74.28
Lane Group LOS	F	C	C	E	C	C	E	C	C	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.41	11.06	10.98	7.75	17.45	17.73	10.27	2.14	2.08	0.84	7.67	7.28
50th-Percentile Queue Length [ft/ln]	160.14	276.39	274.45	193.72	436.34	443.26	256.79	53.49	51.88	20.94	191.76	182.02
95th-Percentile Queue Length [veh/ln]	10.56	16.51	16.41	12.31	24.31	24.64	15.53	3.85	3.74	1.51	12.21	11.71
95th-Percentile Queue Length [ft/ln]	263.91	412.71	410.30	307.85	607.63	615.90	388.19	96.29	93.38	37.69	305.31	292.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	87.53	26.16	26.18	74.56	31.27	32.45	69.16	30.76	31.41	63.81	68.55	74.28
Movement LOS	F	C	C	E	C	C	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	33.90			36.73			49.63			70.68		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	41.48											
Intersection LOS	D											
Intersection V/C	0.814											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	986	45	91	1027	92	112	214	115	79	139	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	27	0	0	96	0	0	0	21	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1013	45	91	1123	92	112	214	136	79	139	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	267	12	24	296	24	29	56	36	21	37	13
Total Analysis Volume [veh/h]	116	1066	47	96	1182	97	118	225	143	83	146	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	59	0	13	58	0	0	53	0	0	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	56	56	10	55	55	50	50
g / C, Green / Cycle	0.09	0.45	0.45	0.08	0.44	0.44	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.07	0.29	0.30	0.06	0.34	0.34	0.33	0.24
s, saturation flow rate [veh/h]	1714	1900	1872	1714	1900	1850	1482	1195
c, Capacity [veh/h]	151	851	839	137	836	814	628	515
d1, Uniform Delay [s]	53.93	18.82	18.83	54.39	21.12	21.17	26.16	21.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	30.66	3.97	4.04	25.72	6.89	7.19	8.98	4.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

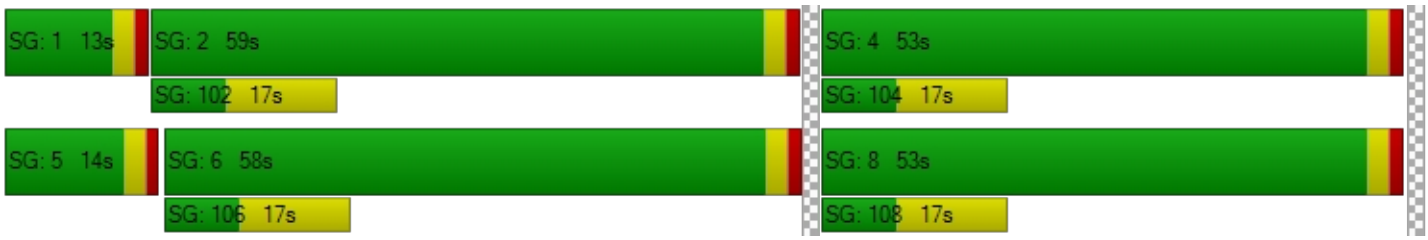
X, volume / capacity	0.77	0.66	0.66	0.70	0.77	0.78	0.77	0.55
d, Delay for Lane Group [s/veh]	84.60	22.79	22.87	80.11	28.00	28.36	35.14	25.43
Lane Group LOS	F	C	C	F	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.74	10.30	10.18	3.84	14.04	13.83	12.75	5.51
50th-Percentile Queue Length [ft/ln]	118.57	257.49	254.48	96.12	350.88	345.86	318.84	137.71
95th-Percentile Queue Length [veh/ln]	8.31	15.56	15.41	6.92	20.18	19.93	18.61	9.36
95th-Percentile Queue Length [ft/ln]	207.86	389.08	385.29	173.01	504.48	498.36	465.26	233.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	84.60	22.83	22.87	80.11	28.17	28.36	35.14	35.14	35.14	25.43	25.43	25.43
Movement LOS	F	C	C	F	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	28.66			31.81			35.14			25.43		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	30.61											
Intersection LOS	C											
Intersection V/C	0.775											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	91.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.852

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	32	0	0	117	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	919	56	117	1136	58	102	144	90	72	93	168
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	242	15	31	299	15	27	38	24	19	24	44
Total Analysis Volume [veh/h]	62	967	59	123	1196	61	107	152	95	76	98	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	17	17	7	17	17	27	27	27	27
g / C, Green / Cycle	0.12	0.28	0.28	0.12	0.28	0.28	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.27	0.07	0.33	0.33	1.30	0.06	0.96	0.11
s, saturation flow rate [veh/h]	1714	1900	1862	1714	1900	1868	200	1615	181	1615
c, Capacity [veh/h]	200	538	528	200	538	529	175	727	168	727
d1, Uniform Delay [s]	23.19	18.35	18.36	24.08	18.67	18.67	15.43	6.91	14.74	7.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.99	30.54	30.97	13.35	97.27	98.91	245.22	0.37	79.47	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.96	0.96	0.62	1.18	1.18	1.48	0.13	1.04	0.24
d, Delay for Lane Group [s/veh]	27.18	48.89	49.33	37.42	115.94	117.57	260.65	7.28	94.21	8.01
Lane Group LOS	C	D	D	D	F	F	F	A	F	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.95	9.91	9.77	2.24	20.19	20.09	13.24	0.53	5.00	1.04
50th-Percentile Queue Length [ft/ln]	23.71	247.67	244.32	55.90	504.77	502.22	331.02	13.21	125.07	25.98
95th-Percentile Queue Length [veh/ln]	1.71	15.07	14.90	4.02	30.23	30.14	23.46	0.95	8.85	1.87
95th-Percentile Queue Length [ft/ln]	42.69	376.71	372.49	100.62	755.66	753.41	586.59	23.79	221.37	46.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.18	49.09	49.33	37.42	116.71	117.57	260.65	260.65	7.28	94.21	94.21	8.01
Movement LOS	C	D	D	D	F	F	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	47.86			109.68			192.65			50.74		
Approach LOS	D			F			F			D		
d_I, Intersection Delay [s/veh]	91.22											
Intersection LOS	F											
Intersection V/C	1.852											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	19	0	58	73	0	0	0	0	2	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	731	138	227	1213	8	22	10	28	96	5	108
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	183	35	57	303	2	6	3	7	24	1	27
Total Analysis Volume [veh/h]	15	731	138	227	1213	8	22	10	28	96	5	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	33	33	10	42	42	10	10	10
g / C, Green / Cycle	0.03	0.51	0.51	0.16	0.64	0.64	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.13	0.32	0.32	0.09	0.12	0.07
s, saturation flow rate [veh/h]	1810	1900	1796	1810	1900	1896	638	845	1615
c, Capacity [veh/h]	49	969	916	283	1215	1212	171	234	242
d1, Uniform Delay [s]	31.11	10.23	10.23	26.51	6.25	6.25	24.69	26.76	25.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.53	1.58	1.67	5.26	1.49	1.50	1.22	1.25	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

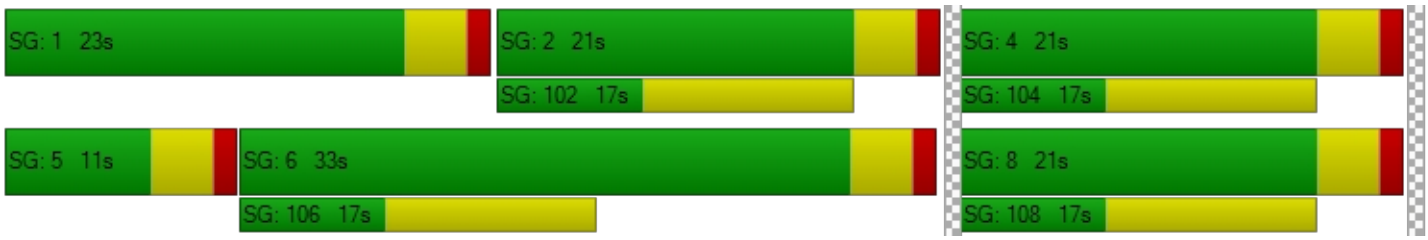
X, volume / capacity	0.31	0.46	0.46	0.80	0.50	0.50	0.35	0.43	0.45
d, Delay for Lane Group [s/veh]	34.64	11.81	11.91	31.77	7.74	7.74	25.92	28.01	26.54
Lane Group LOS	C	B	B	C	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	3.92	3.73	3.63	3.79	3.78	0.83	1.51	1.53
50th-Percentile Queue Length [ft/ln]	6.76	97.99	93.28	90.68	94.72	94.61	20.82	37.87	38.24
95th-Percentile Queue Length [veh/ln]	0.49	7.06	6.72	6.53	6.82	6.81	1.50	2.73	2.75
95th-Percentile Queue Length [ft/ln]	12.16	176.38	167.91	163.22	170.50	170.30	37.47	68.16	68.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.64	11.85	11.91	31.77	7.74	7.74	25.92	25.92	25.92	28.01	28.01	26.54
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.24			11.51			25.92			27.25		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.36											
Intersection LOS	B											
Intersection V/C	0.589											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	865	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	20	0	75	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	882	20	0	1337	0	2
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	221	5	0	334	0	1
Total Analysis Volume [veh/h]	882	20	0	1337	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.44
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.27
d_A, Approach Delay [s/veh]	0.00		0.00		11.44	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.647

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	825	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	241	74	1	68	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	845	241	74	1263	68	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	211	60	19	316	17	4
Total Analysis Volume [veh/h]	845	241	74	1263	68	17
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	31	0	13	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	3	18	4	4
g / C, Green / Cycle	0.37	0.37	0.11	0.61	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.23	0.15	0.04	0.35	0.04	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1335	596	198	2214	218	195
d1, Uniform Delay [s]	7.77	7.00	12.37	3.46	12.02	11.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.44	1.17	0.23	0.81	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.40	0.37	0.57	0.31	0.09
d, Delay for Lane Group [s/veh]	8.28	7.45	13.54	3.69	12.83	11.88
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.39	0.74	0.41	0.39	0.36	0.09
50th-Percentile Queue Length [ft/ln]	34.63	18.43	10.27	9.83	8.99	2.15
95th-Percentile Queue Length [veh/ln]	2.49	1.33	0.74	0.71	0.65	0.15
95th-Percentile Queue Length [ft/ln]	62.33	33.18	18.49	17.70	16.19	3.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.28	7.45	13.54	3.69	12.83	11.88
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.09		4.24		12.64	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.19					
Intersection LOS	A					
Intersection V/C	0.647					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	150.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	261	1	1	68	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1178	1	1	1322	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	295	0	0	331	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1178	1	1	1322	11	6	0	18	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.16	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	12.14	0.00	0.00	11.01	0.00	0.00	108.15	150.70	21.49	94.57	146.26	15.06
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.01	0.00	0.00	0.72	0.72	0.72	0.07	0.07	0.07
95th-Percentile Queue Length [ft/ln]	2.97	0.00	0.00	0.13	0.06	0.00	18.05	18.05	18.05	1.84	1.84	1.84
d_A, Approach Delay [s/veh]	0.20			0.01			43.16			94.57		
Approach LOS	A			A			E			F		
d_I, Intersection Delay [s/veh]	0.54											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	141.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.032

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	115	9	39	30	0	0	0	0	4	0	147
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	433	408	663	684	38	61	117	52	415	87	569
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	108	102	166	171	10	15	29	13	104	22	0
Total Analysis Volume [veh/h]	32	433	408	663	684	38	61	117	52	415	87	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	22	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	376	376	376	376	376	376	376	376	376	376
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	98	98	120	209	209	37	37	105	105
g / C, Green / Cycle	0.02	0.26	0.26	0.32	0.56	0.56	0.10	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.25	0.37	0.19	0.02	0.03	0.09	0.28	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1802	1825	1615
c, Capacity [veh/h]	40	937	418	579	2015	899	179	178	510	451
d1, Uniform Delay [s]	182.36	116.82	137.60	127.38	45.34	37.66	157.38	167.81	134.22	0.00
k, delay calibration	0.11	0.11	0.32	0.50	0.11	0.11	0.11	0.11	0.38	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.48	0.36	29.85	84.31	0.10	0.02	1.12	20.89	31.22	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

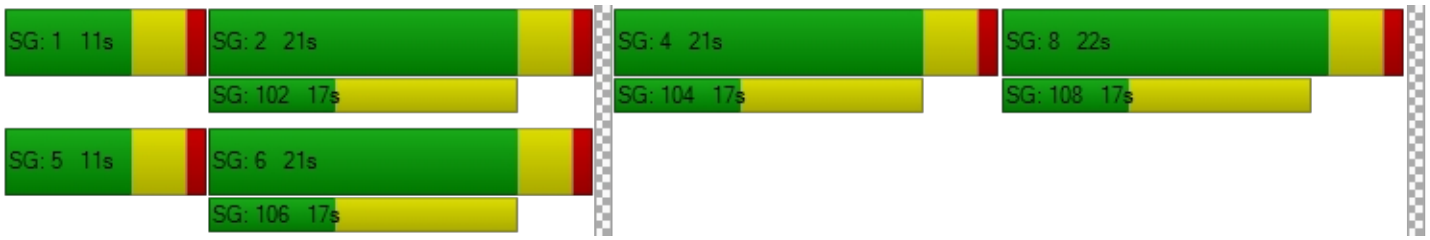
X, volume / capacity	0.80	0.46	0.98	1.15	0.34	0.04	0.34	0.95	0.99	0.00
d, Delay for Lane Group [s/veh]	211.84	117.17	167.45	211.69	45.44	37.68	158.49	188.70	165.44	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.56	18.35	44.10	71.63	18.34	1.69	5.81	18.04	54.50	0.00
50th-Percentile Queue Length [ft/ln]	88.98	458.80	1102.59	1790.74	458.57	42.37	145.27	450.92	1362.55	0.00
95th-Percentile Queue Length [veh/ln]	6.41	25.38	54.99	93.87	25.37	3.05	9.76	25.00	66.61	0.00
95th-Percentile Queue Length [ft/ln]	160.16	634.44	1374.87	2346.82	634.17	76.26	244.11	625.05	1665.24	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	211.84	117.17	167.45	211.69	45.44	37.68	158.49	188.70	188.70	165.44	165.44	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	144.14			124.81			180.69			165.44		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	141.58											
Intersection LOS	F											
Intersection V/C	1.032											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	816	96	290	917	1	4	24	64	8	3	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	204	24	73	229	0	1	6	16	2	1	5
Total Analysis Volume [veh/h]	26	816	96	290	917	1	4	24	64	8	3	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.38	0.01	0.00	0.21	1.68	0.12	0.00	0.18	0.03
d_M, Delay for Movement [s/veh]	9.96	0.00	0.00	12.70	0.00	0.00	770.04	831.52	586.39	10000.0	10000.0	10000.0
Movement LOS	A	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.11	0.05	0.00	1.81	0.91	0.00	9.42	9.42	9.42	5.72	5.72	5.72
95th-Percentile Queue Length [ft/ln]	2.68	1.34	0.00	45.32	22.66	0.00	235.58	235.58	235.58	142.94	142.94	142.94
d_A, Approach Delay [s/veh]	0.28			3.05			658.32			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	160.72											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	119.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	871	97	63	938	0	0	0	3	44	3	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	218	24	16	235	0	0	0	1	11	1	3
Total Analysis Volume [veh/h]	9	871	97	63	938	0	0	0	3	44	3	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.09	0.01	0.00	0.00	0.00	0.01	0.56	0.05	0.02
d_M, Delay for Movement [s/veh]	9.93	0.00	0.00	10.48	0.00	0.00	56.40	78.63	11.63	101.07	119.41	61.69
Movement LOS	A	A	A	B	A	A	F	F	B	F	F	F
95th-Percentile Queue Length [veh/ln]	0.04	0.02	0.00	0.29	0.14	0.00	0.02	0.02	0.02	3.05	3.05	3.05
95th-Percentile Queue Length [ft/ln]	0.92	0.46	0.00	7.17	3.58	0.00	0.41	0.41	0.41	76.22	76.22	76.22
d_A, Approach Delay [s/veh]	0.09			0.66			11.63			93.46		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	3.13											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.980

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	938	65	9	964	49	58	116	115	85	62	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	235	16	2	241	12	15	29	29	21	16	3
Total Analysis Volume [veh/h]	161	938	65	9	964	49	58	116	115	85	62	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	23	23	1	17	17	24	24	24	24
g / C, Green / Cycle	0.11	0.38	0.38	0.02	0.29	0.29	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.27	0.27	0.00	0.27	0.27	0.55	0.07	1.23	0.01
s, saturation flow rate [veh/h]	1810	1900	1857	1810	1900	1868	318	1615	120	1615
c, Capacity [veh/h]	208	728	711	34	545	536	207	645	142	645
d1, Uniform Delay [s]	25.94	15.66	15.66	29.18	20.96	20.96	15.33	11.71	22.60	10.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.12	5.47	5.60	4.09	25.67	25.98	8.90	0.13	56.10	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.70	0.70	0.27	0.94	0.94	0.84	0.18	1.03	0.02
d, Delay for Lane Group [s/veh]	32.06	21.12	21.27	33.26	46.63	46.94	24.23	11.85	78.69	10.96
Lane Group LOS	C	C	C	C	D	D	C	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.46	6.24	6.13	0.16	10.19	10.07	1.88	0.91	4.18	0.07
50th-Percentile Queue Length [ft/ln]	61.52	155.90	153.20	4.02	254.80	251.63	47.00	22.71	104.42	1.84
95th-Percentile Queue Length [veh/ln]	4.43	10.33	10.19	0.29	15.43	15.27	3.38	1.64	7.52	0.13
95th-Percentile Queue Length [ft/ln]	110.74	258.29	254.70	7.24	385.69	381.71	84.61	40.88	187.95	3.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.06	21.19	21.27	33.26	46.78	46.94	24.23	24.23	11.85	78.69	78.69	10.96
Movement LOS	C	C	C	C	D	D	C	C	B	E	E	B
d_A, Approach Delay [s/veh]	22.70			46.67			19.30			74.38		
Approach LOS	C			D			B			E		
d_I, Intersection Delay [s/veh]	34.71											
Intersection LOS	C											
Intersection V/C	1.980											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	137	1061	1050	35	0	205
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	34	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	1185	1084	35	0	205
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	296	271	9	0	51
Total Analysis Volume [veh/h]	137	1185	1084	35	0	205
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

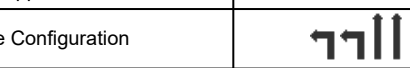
V/C, Movement V/C Ratio	0.22	0.01	0.01	0.00	0.00	0.42
d_M, Delay for Movement [s/veh]	12.27	0.00	0.00	0.00	0.00	17.54
Movement LOS	B	A	A	A		C
95th-Percentile Queue Length [veh/ln]	0.82	0.00	0.00	0.00	0.00	2.04
95th-Percentile Queue Length [ft/ln]	20.50	0.00	0.00	0.00	0.00	51.05
d_A, Approach Delay [s/veh]	1.27		0.00		17.54	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.99					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.896

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	371	870	0	0	534	817	0	0	0	382	0	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	119	0	0	7	27	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	371	989	0	0	541	844	0	0	0	382	0	263
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	247	0	0	135	211	0	0	0	96	0	66
Total Analysis Volume [veh/h]	371	989	0	0	541	844	0	0	0	382	0	263
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	19	94	0	0	75	0	0	0	0	26	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	102	102	102	102		102	102
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	14	74	57	57		20	20
g / C, Green / Cycle	0.13	0.73	0.55	0.55		0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.27	0.15	0.52		0.11	0.16
s, saturation flow rate [veh/h]	3514	3618	3618	1615		3514	1615
c, Capacity [veh/h]	467	2629	2008	896		686	315
d1, Uniform Delay [s]	43.12	5.27	11.94	21.28		37.27	39.68
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.12	0.09	0.07	5.75		0.71	5.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.38	0.27	0.94		0.56	0.83
d, Delay for Lane Group [s/veh]	46.23	5.36	12.02	27.02		37.98	45.45
Lane Group LOS	D	A	B	C		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	4.72	3.36	3.13	18.73		4.36	6.80
50th-Percentile Queue Length [ft/ln]	118.07	84.05	78.30	468.23		108.97	169.90
95th-Percentile Queue Length [veh/ln]	8.29	6.05	5.64	25.83		7.78	11.07
95th-Percentile Queue Length [ft/ln]	207.17	151.29	140.94	645.67		194.57	276.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.23	5.36	0.00	0.00	12.02	27.02	0.00	0.00	0.00	37.98	0.00	45.45
Movement LOS	D	A			B	C				D		D
d_A, Approach Delay [s/veh]	16.51			21.16			0.00			41.03		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	23.07											
Intersection LOS	C											
Intersection V/C	0.896											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	599	671	207	695	0	454	38	362	12	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	0	0	7	0	94	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	624	671	207	702	0	548	38	362	12	0	3
Peak Hour Factor	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	156	168	52	176	0	137	10	91	3	0	1
Total Analysis Volume [veh/h]	0	624	671	207	702	0	548	38	362	12	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	20	71	0	0	28	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	56	56	16	75	30	30	30	3	3
g / C, Green / Cycle	0.46	0.46	0.13	0.63	0.25	0.25	0.25	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.17	0.42	0.11	0.19	0.16	0.16	0.22	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1821	1615	1810	1615
c, Capacity [veh/h]	1676	748	235	2267	452	455	404	43	38
d1, Uniform Delay [s]	20.92	29.62	51.35	10.40	40.34	40.29	43.57	57.67	57.39
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	15.65	10.17	0.36	1.57	1.53	7.24	3.50	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

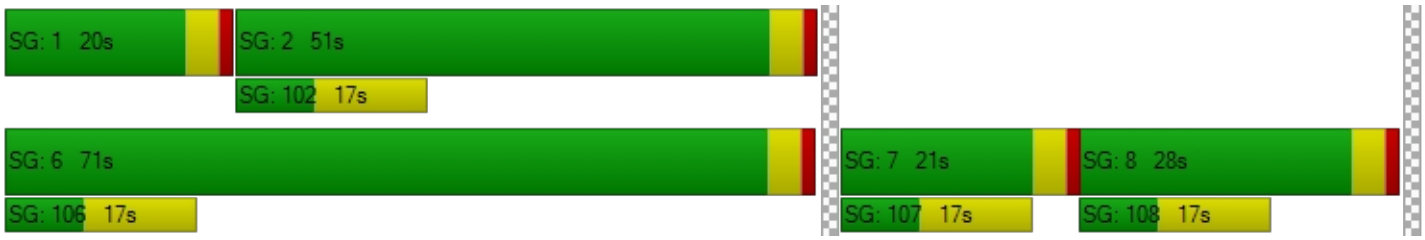
X, volume / capacity	0.37	0.90	0.88	0.31	0.65	0.64	0.90	0.28	0.08
d, Delay for Lane Group [s/veh]	21.56	45.27	61.52	10.75	41.90	41.83	50.82	61.17	58.26
Lane Group LOS	C	D	E	B	D	D	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.81	20.49	6.78	4.28	7.93	7.92	11.14	0.40	0.10
50th-Percentile Queue Length [ft/ln]	145.22	512.21	169.41	107.08	198.21	198.05	278.38	10.01	2.46
95th-Percentile Queue Length [veh/ln]	9.76	27.91	11.05	7.68	12.55	12.54	16.61	0.72	0.18
95th-Percentile Queue Length [ft/ln]	244.04	697.79	276.14	191.93	313.66	313.45	415.19	18.02	4.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.56	45.27	61.52	10.75	0.00	41.87	41.83	50.82	61.17	0.00	58.26
Movement LOS		C	D	E	B		D	D	D	E		E
d_A, Approach Delay [s/veh]	33.85			22.31			45.28			60.59		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	34.09											
Intersection LOS	C											
Intersection V/C	0.878											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	896	78	123	717	85	171	49	35	12	24	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	921	78	123	724	85	171	49	35	12	24	190
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	230	20	31	181	21	43	12	9	3	6	48
Total Analysis Volume [veh/h]	30	921	78	123	724	85	171	49	35	12	24	190
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	64	0	20	73	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	15	15	5	18	18	11	11	11
g / C, Green / Cycle	0.05	0.34	0.34	0.13	0.42	0.42	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.05	0.07	0.20	0.05	0.20	0.02	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1260	1733	1615
c, Capacity [veh/h]	90	1241	554	230	1520	679	454	542	400
d1, Uniform Delay [s]	19.53	12.31	9.65	17.39	8.94	7.55	15.87	12.27	13.64
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.13	0.89	0.11	1.93	0.23	0.08	1.10	0.05	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.74	0.14	0.54	0.48	0.13	0.56	0.07	0.47
d, Delay for Lane Group [s/veh]	21.66	13.21	9.76	19.32	9.17	7.63	16.96	12.32	14.52
Lane Group LOS	C	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.31	3.18	0.42	1.11	1.85	0.37	2.13	0.23	1.39
50th-Percentile Queue Length [ft/ln]	7.71	79.55	10.48	27.67	46.37	9.34	53.14	5.69	34.70
95th-Percentile Queue Length [veh/ln]	0.56	5.73	0.75	1.99	3.34	0.67	3.83	0.41	2.50
95th-Percentile Queue Length [ft/ln]	13.88	143.19	18.87	49.81	83.47	16.81	95.66	10.24	62.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.66	13.21	9.76	19.32	9.17	7.63	16.96	16.96	16.96	12.32	12.32	14.52
Movement LOS	C	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.19			10.37			16.96			14.17		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.60											
Intersection LOS	B											
Intersection V/C	0.731											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	46	12	35	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	363	12	35	210
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	91	3	9	53
Total Analysis Volume [veh/h]	0	5	363	12	35	210
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	9.33	0.00	0.00	8.10	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.45	0.00	0.00	2.26	0.00
d_A, Approach Delay [s/veh]	9.33		0.00		1.16	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	10	34	17	14	46
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	10	351	17	14	238
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	88	4	4	60
Total Analysis Volume [veh/h]	7	10	351	17	14	238
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.29	9.32	0.00	0.00	8.03	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	1.06	0.90	0.00	0.00	0.88	0.00
d_A, Approach Delay [s/veh]	10.54		0.00		0.45	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	15	0	6	0	1	23	20	47	54	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	15	204	6	92	212	138	20	47	142	117
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	4	51	2	23	53	35	5	12	36	29
Total Analysis Volume [veh/h]	6	3	15	204	6	92	212	138	20	47	142	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	37	0	0	36	62	0	0	26	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	6	6	17	17	7	7
g / C, Green / Cycle	0.04	0.04	0.17	0.17	0.46	0.46	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.11	0.12	0.04	0.01	0.07	0.08
s, saturation flow rate [veh/h]	1810	1656	1810	1810	3618	1615	1900	1639
c, Capacity [veh/h]	78	71	307	311	1663	743	340	293
d1, Uniform Delay [s]	16.83	16.96	14.23	14.23	5.56	5.41	13.25	13.40
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	1.84	2.47	2.64	0.02	0.01	0.70	1.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

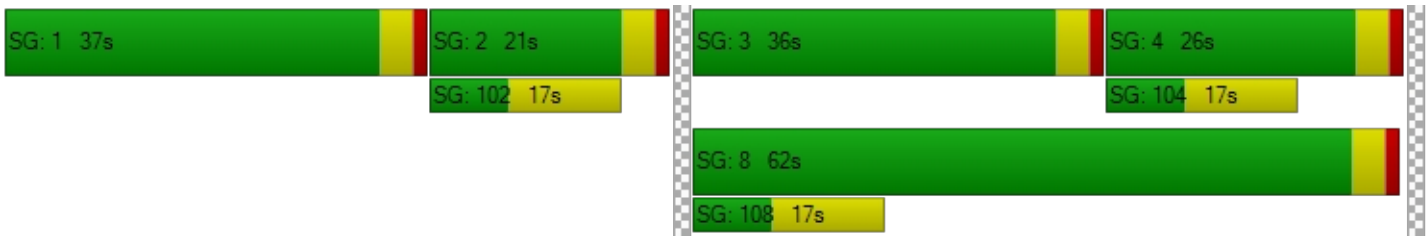
X, volume / capacity	0.08	0.25	0.66	0.68	0.08	0.03	0.38	0.44
d, Delay for Lane Group [s/veh]	17.25	18.80	16.70	16.88	5.58	5.43	13.95	14.45
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	0.16	1.48	1.55	0.19	0.06	0.82	0.85
50th-Percentile Queue Length [ft/ln]	1.25	4.01	37.08	38.81	4.77	1.39	20.54	21.23
95th-Percentile Queue Length [veh/ln]	0.09	0.29	2.67	2.79	0.34	0.10	1.48	1.53
95th-Percentile Queue Length [ft/ln]	2.25	7.22	66.74	69.86	8.58	2.50	36.97	38.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.25	18.80	18.80	16.70	0.00	0.00	16.88	5.58	5.43	0.00	13.99	14.45
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	18.41			16.70			12.04			14.20		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.98											
Intersection LOS	B											
Intersection V/C	0.477											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	319	0	0	204
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	34	4	5	101
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	353	4	5	305
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	88	1	1	76
Total Analysis Volume [veh/h]	0	3	353	4	5	305
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.29	0.00	0.00	7.98	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.27	0.00	0.00	0.31	0.00
d_A, Approach Delay [s/veh]	9.29		0.00		0.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.258

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	0	1	0	0	0	0	15	22	4	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	3	5	10	11	12	3	165	169	15	180	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	1	1	3	3	3	1	41	42	4	45	2
Total Analysis Volume [veh/h]	124	3	5	10	11	12	3	165	169	15	180	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.01	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.18	15.12	12.23	12.67	13.65	9.57	7.58	0.00	0.00	7.95	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.08	1.08	1.08	0.19	0.19	0.19	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	27.08	27.08	27.08	4.71	4.71	4.71	0.16	0.16	0.16	0.92	0.92	0.92
d_A, Approach Delay [s/veh]	15.07			11.87			0.07			0.59		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	3.59											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	81	169	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	47	17	9	4	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	128	186	9	4	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	32	47	2	1	3
Total Analysis Volume [veh/h]	14	128	186	9	4	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	0.00	10.56	9.24
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.02	0.05
95th-Percentile Queue Length [ft/ln]	0.76	0.00	0.00	0.00	0.46	1.15
d_A, Approach Delay [s/veh]	0.75		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	75.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	50	548	648	95	75	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	66	60	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	572	714	155	91	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	13	143	179	39	23	0
Total Analysis Volume [veh/h]	50	572	714	155	91	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.00	0.68	0.00
d_M, Delay for Movement [s/veh]	9.90	0.00	0.00	0.00	75.70	14.17
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.20	0.00	0.00	0.00	3.75	0.00
95th-Percentile Queue Length [ft/ln]	5.10	0.00	0.00	0.00	93.71	0.00
d_A, Approach Delay [s/veh]	0.80		0.00		75.70	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	4.67					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	591	70	116	689	11	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	0	0	66	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	615	70	116	755	11	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	18	29	189	3	12
Total Analysis Volume [veh/h]	615	70	116	755	11	49
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.13	0.01	0.04	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	9.49	0.00	17.10	13.49
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.43	0.00	0.11	0.34
95th-Percentile Queue Length [ft/ln]	0.00	0.00	10.80	0.00	2.76	8.62
d_A, Approach Delay [s/veh]	0.00		1.26		14.16	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.147

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	99	666	804	32	34	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	4	14	52	20	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	670	818	84	54	146
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	168	205	21	14	37
Total Analysis Volume [veh/h]	107	670	818	84	54	146
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.01	0.01	0.00	0.15	0.24
d_M, Delay for Movement [s/veh]	10.49	0.00	0.00	0.00	16.44	12.97
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.49	0.00	0.00	0.00	0.51	0.95
95th-Percentile Queue Length [ft/ln]	12.18	0.00	0.00	0.00	12.72	23.86
d_A, Approach Delay [s/veh]	1.45		0.00		13.90	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.08					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	8	0	0	10	14	4	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	730	17	116	858	19	4	3	21	33	0	68
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	183	4	29	215	5	1	1	5	8	0	17
Total Analysis Volume [veh/h]	60	730	17	116	858	19	4	3	21	33	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	47	0	41	77	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	10	10	5	12	12	0	2	2	2	3	3
g / C, Green / Cycle	0.09	0.29	0.29	0.14	0.34	0.34	0.01	0.05	0.05	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.01	0.06	0.24	0.01	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	164	1068	477	249	1239	553	14	96	82	102	188	160
d1, Uniform Delay [s]	14.88	10.82	8.73	13.81	9.85	7.61	17.15	15.70	15.88	15.77	0.00	14.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.78	0.03	1.35	0.70	0.03	10.07	0.13	1.64	1.81	0.00	1.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

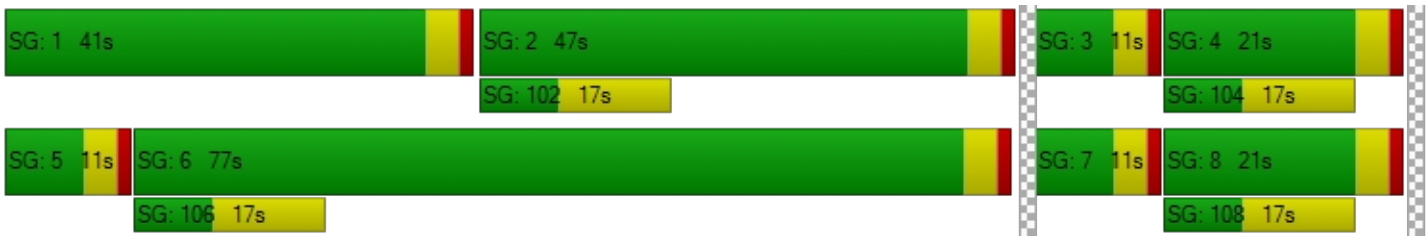
X, volume / capacity	0.37	0.68	0.04	0.47	0.69	0.03	0.28	0.03	0.26	0.32	0.00	0.43
d, Delay for Lane Group [s/veh]	16.24	11.60	8.76	15.16	10.56	7.63	27.22	15.83	17.52	17.58	0.00	16.53
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	1.90	0.07	0.76	2.06	0.07	0.07	0.02	0.17	0.26	0.00	0.49
50th-Percentile Queue Length [ft/ln]	10.66	47.51	1.78	19.11	51.48	1.75	1.67	0.56	4.26	6.49	0.00	12.26
95th-Percentile Queue Length [veh/ln]	0.77	3.42	0.13	1.38	3.71	0.13	0.12	0.04	0.31	0.47	0.00	0.88
95th-Percentile Queue Length [ft/ln]	19.19	85.52	3.20	34.40	92.66	3.15	3.01	1.00	7.66	11.68	0.00	22.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.24	11.60	8.76	15.16	10.56	7.63	27.22	15.83	17.52	17.58	0.00	16.53
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.89			11.04			18.73			16.87		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.81											
Intersection LOS	B											
Intersection V/C	0.585											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	757	86	45	882	58	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	0	0	19	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	808	86	45	901	58	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	22	11	225	15	14
Total Analysis Volume [veh/h]	808	86	45	901	58	54
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	33	0	0	64	27	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	0	0	9	9
g / C, Green / Cycle	0.72	0.72	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.22	0.05	0.07	0.47	0.09	0.03
s, saturation flow rate [veh/h]	3618	1615	685	1900	628	1615
c, Capacity [veh/h]	2618	1169	120	0	187	231
d1, Uniform Delay [s]	2.95	2.42	30.01	0.00	26.34	22.80
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.12	8.73	0.00	0.93	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.07	0.38	0.00	0.31	0.23
d, Delay for Lane Group [s/veh]	3.26	2.54	38.74	0.00	27.27	23.32
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.01	0.20	0.95	0.00	0.81	0.67
50th-Percentile Queue Length [ft/ln]	25.32	4.93	23.87	0.00	20.35	16.73
95th-Percentile Queue Length [veh/ln]	1.82	0.35	1.72	0.00	1.47	1.20
95th-Percentile Queue Length [ft/ln]	45.57	8.87	42.97	0.00	36.63	30.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.26	2.54	38.74	0.00	27.27	23.32
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	3.19		1.84		25.36	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	A					
Intersection V/C	0.395					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	250.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	77.782

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	4	9	39	0	0	147	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	275	6	491	516	697	14	3	602	309
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	69	2	123	129	174	4	1	151	77
Total Analysis Volume [veh/h]	11	6	3	275	6	491	516	697	14	3	602	309
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	38	38	8	25	25	0	17	17
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.11	0.33	0.33	0.01	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.00	64.87	0.30	0.29	0.19	0.01	0.00	0.17	0.19
s, saturation flow rate [veh/h]	55	1615	4	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	107	818	97	818	190	1186	529	11	828	370
d1, Uniform Delay [s]	18.31	9.16	37.10	13.14	33.60	21.01	17.11	37.14	26.77	27.60
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.00	880.02	0.71	776.92	2.14	0.09	12.85	5.54	19.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

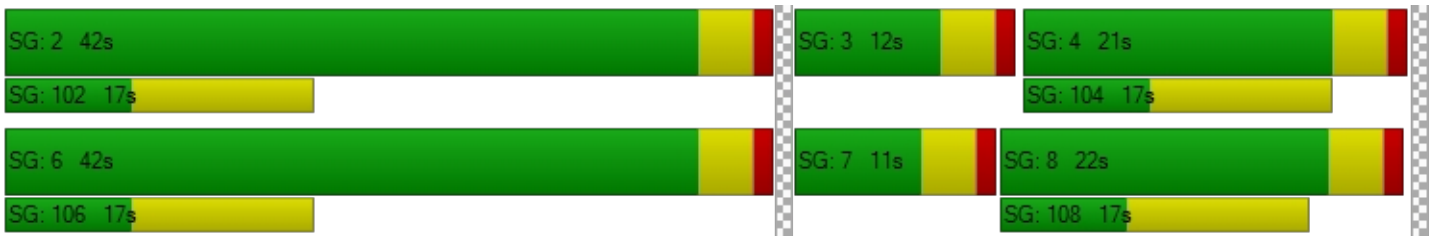
X, volume / capacity	0.16	0.00	2.89	0.60	2.72	0.59	0.03	0.27	0.73	0.84
d, Delay for Lane Group [s/veh]	18.99	9.16	917.12	13.85	810.52	23.16	17.21	50.00	32.31	47.20
Lane Group LOS	B	A	F	B	F	C	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.02	25.47	5.38	44.29	5.16	0.17	0.09	5.41	7.06
50th-Percentile Queue Length [ft/ln]	4.87	0.57	636.85	134.58	1107.28	128.92	4.27	2.32	135.17	176.49
95th-Percentile Queue Length [veh/ln]	0.35	0.04	45.85	9.19	69.00	8.88	0.31	0.17	9.22	11.42
95th-Percentile Queue Length [ft/ln]	8.76	1.02	1146.32	229.71	1725.03	222.02	7.68	4.17	230.50	285.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.99	18.99	9.16	917.12	917.12	13.85	810.52	23.16	17.21	50.00	32.31	47.20
Movement LOS	B	B	A	F	F	B	F	C	B	D	C	D
d_A, Approach Delay [s/veh]	17.52			342.63			354.20			37.40		
Approach LOS	B			F			F			D		
d_I, Intersection Delay [s/veh]	250.14											
Intersection LOS	F											
Intersection V/C	77.782											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	82.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.316

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	770	911	23	21	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	959	965	23	21	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	240	241	6	5	7
Total Analysis Volume [veh/h]	22	959	965	23	21	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.32	0.09
d_M, Delay for Movement [s/veh]	10.25	0.00	0.00	0.00	82.32	17.94
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	1.15	0.31
95th-Percentile Queue Length [ft/ln]	2.40	0.00	0.00	0.00	28.77	7.75
d_A, Approach Delay [s/veh]	0.23		0.00		44.98	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	1.23					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.659

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	1030	241	124	1111	0	3	5	87	207	6	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	0	0	54	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1219	241	124	1165	0	3	5	87	207	6	93
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	305	60	31	291	0	1	1	22	52	2	23
Total Analysis Volume [veh/h]	74	1219	241	124	1165	0	3	5	87	207	6	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	12	22	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	39	50	7	40	40	6	6	7	7	7
g / C, Green / Cycle	0.07	0.52	0.67	0.09	0.53	0.53	0.08	0.08	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.34	0.15	0.07	0.31	0.31	0.00	0.05	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1865	1615	1810	1814	1615
c, Capacity [veh/h]	133	1879	1086	158	1013	1013	150	130	180	181	161
d1, Uniform Delay [s]	33.57	13.07	4.73	33.55	11.80	11.80	31.85	33.52	32.30	32.30	32.26
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.60	1.75	0.47	8.33	0.52	0.52	0.15	5.82	3.04	3.03	3.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

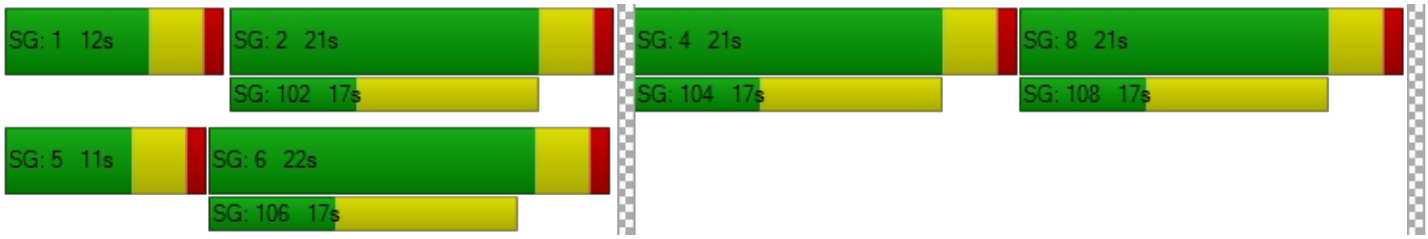
X, volume / capacity	0.56	0.65	0.22	0.79	0.58	0.58	0.05	0.67	0.59	0.59	0.58
d, Delay for Lane Group [s/veh]	37.18	14.82	5.21	41.88	12.32	12.32	32.00	39.34	35.35	35.34	35.50
Lane Group LOS	D	B	A	D	B	B	C	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.40	7.01	1.26	2.51	5.89	5.89	0.14	1.71	1.95	1.95	1.71
50th-Percentile Queue Length [ft/ln]	35.00	175.20	31.47	62.83	147.32	147.32	3.42	42.67	48.68	48.78	42.80
95th-Percentile Queue Length [veh/ln]	2.52	11.35	2.27	4.52	9.87	9.87	0.25	3.07	3.50	3.51	3.08
95th-Percentile Queue Length [ft/ln]	63.01	283.73	56.65	113.09	246.85	246.85	6.16	76.80	87.62	87.80	77.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.18	14.82	5.21	41.88	12.32	12.32	32.00	32.00	39.34	35.34	35.34	35.50
Movement LOS	D	B	A	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	14.39			15.16			38.72			35.39		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.41											
Intersection LOS	B											
Intersection V/C	0.659											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	852
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	0	0	54	0	0	0	0	0	0	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	277	506	0	0	1314	172	0	0	0	150	0	1007
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	69	127	0	0	329	43	0	0	0	38	0	0
Total Analysis Volume [veh/h]	277	506	0	0	1314	172	0	0	0	150	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	23	54	0	0	31	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	54	54	54	54		54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10	40	25	25		6	6
g / C, Green / Cycle	0.19	0.74	0.47	0.47		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.36	0.11		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	349	2665	1700	759		210	187
d1, Uniform Delay [s]	20.85	2.19	11.96	8.52		23.11	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	4.10	0.03	0.77	0.15		4.51	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

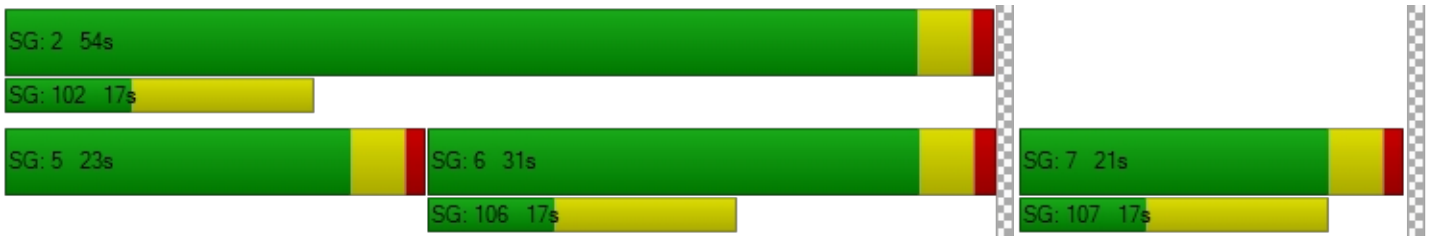
X, volume / capacity	0.79	0.19	0.77	0.23		0.72	0.00
d, Delay for Lane Group [s/veh]	24.96	2.22	12.73	8.67		27.62	0.00
Lane Group LOS	C	A	B	A		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	3.43	0.33	5.43	1.01		1.97	0.00
50th-Percentile Queue Length [ft/ln]	85.65	8.27	135.87	25.29		49.14	0.00
95th-Percentile Queue Length [veh/ln]	6.17	0.60	9.26	1.82		3.54	0.00
95th-Percentile Queue Length [ft/ln]	154.17	14.88	231.45	45.52		88.46	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.96	2.22	0.00	0.00	12.73	8.67	0.00	0.00	0.00	27.62	0.00	0.00
Movement LOS	C	A			B	A				C		A
d_A, Approach Delay [s/veh]	10.26			12.26			0.00			27.62		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	12.57											
Intersection LOS	B											
Intersection V/C	0.770											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	0	45	9	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	541	173	601	886	0	182	0	963	0	0	3
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	135	43	150	222	0	46	0	241	0	0	1
Total Analysis Volume [veh/h]	0	541	173	601	886	0	182	0	963	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	28	49	0	26	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	122	122	122	122	122	122	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	21	21	43	68	45	45	
g / C, Green / Cycle	0.18	0.18	0.35	0.56	0.37	0.37	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.33	0.24	0.10	0.34	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	637	284	638	2031	675	1066	
d1, Uniform Delay [s]	48.74	46.42	38.30	15.55	26.68	36.19	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.29	2.10	7.62	0.15	0.21	3.17	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

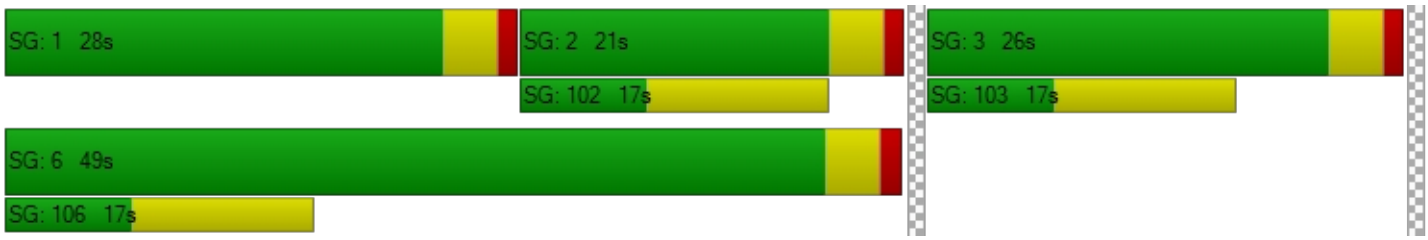
X, volume / capacity	0.85	0.61	0.94	0.44	0.27	0.90	
d, Delay for Lane Group [s/veh]	52.03	48.52	45.92	15.69	26.89	39.36	
Lane Group LOS	D	D	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.25	5.02	18.49	7.06	3.75	13.80	
50th-Percentile Queue Length [ft/ln]	206.29	125.38	462.19	176.62	93.85	344.94	
95th-Percentile Queue Length [veh/ln]	12.96	8.69	25.54	11.42	6.76	19.89	
95th-Percentile Queue Length [ft/ln]	324.06	217.20	638.47	285.60	168.93	497.24	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	52.03	48.52	45.92	15.69	0.00	26.89	0.00	39.36	0.00	0.00	0.00
Movement LOS		D	D	D	B		C		D			
d_A, Approach Delay [s/veh]	51.18			27.91			37.38			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	36.12											
Intersection LOS	D											
Intersection V/C	0.908											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.746

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	330	1059	0	0	1567	587	0	0	0	523	0	401
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	7	0	0	22	0	0	0	0	57	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	333	1066	0	0	1589	587	0	0	0	580	0	401
Peak Hour Factor	0.9500	0.9500	0.8170	0.8170	0.9500	0.9500	0.8170	0.8170	0.8170	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	88	281	0	0	418	154	0	0	0	153	0	106
Total Analysis Volume [veh/h]	351	1122	0	0	1673	618	0	0	0	611	0	422
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	22	90	0	0	68	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	19	87	65	65		37	37	37
g / C, Green / Cycle	0.15	0.67	0.50	0.50		0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.11	0.22	0.24	0.38		0.19	0.20	0.22
s, saturation flow rate [veh/h]	3144	5176	6901	1615		1714	1766	1615
c, Capacity [veh/h]	460	3464	3450	808		488	503	460
d1, Uniform Delay [s]	50.21	2.55	13.42	16.48		35.39	35.61	36.50
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	11.44	0.25	0.49	6.83		7.47	7.80	11.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.32	0.48	0.77		0.68	0.70	0.76
d, Delay for Lane Group [s/veh]	61.65	2.79	13.91	23.30		42.86	43.41	47.86
Lane Group LOS	E	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.93	1.27	5.18	11.87		9.32	9.94	10.61
50th-Percentile Queue Length [ft/ln]	148.30	31.67	129.50	296.69		233.04	248.39	265.14
95th-Percentile Queue Length [veh/ln]	9.93	2.28	8.91	17.52		14.33	15.10	15.95
95th-Percentile Queue Length [ft/ln]	248.15	57.01	222.81	437.93		358.21	377.62	398.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.65	2.79	0.00	0.00	13.91	23.30	0.00	0.00	0.00	43.11	43.41	47.04
Movement LOS	E	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	16.82			16.44			0.00			44.74		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	22.65											
Intersection LOS	C											
Intersection V/C	0.746											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1074	525	538	1615	0	394	3	585	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	17	0	79	0	0	0	4	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1084	542	538	1694	0	394	3	589	0	0	0
Peak Hour Factor	0.8530	0.9500	0.9500	0.9500	0.9500	0.8530	0.9500	0.9500	0.9500	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	285	143	142	446	0	104	1	155	0	0	0
Total Analysis Volume [veh/h]	0	1141	571	566	1783	0	415	3	620	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	32	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	57	57	29	89	35	35	35	
g / C, Green / Cycle	0.44	0.44	0.22	0.68	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.35	0.18	0.49	0.19	0.21	0.22	
s, saturation flow rate [veh/h]	3618	1615	3144	3618	1714	1658	1615	
c, Capacity [veh/h]	1586	708	701	2477	462	446	435	
d1, Uniform Delay [s]	21.27	22.66	43.08	2.50	37.47	38.36	38.66	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.84	9.54	9.65	1.84	9.46	13.22	15.01	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.81	0.81	0.72	0.72	0.79	0.81	
d, Delay for Lane Group [s/veh]	24.11	32.20	52.73	4.34	46.93	51.58	53.67	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.61	13.93	8.96	3.06	9.91	11.12	11.40	
50th-Percentile Queue Length [ft/ln]	290.21	348.15	223.90	76.49	247.74	278.07	284.94	
95th-Percentile Queue Length [veh/ln]	17.20	20.05	13.86	5.51	15.07	16.59	16.93	
95th-Percentile Queue Length [ft/ln]	429.90	501.16	346.60	137.69	376.80	414.81	423.36	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.11	32.20	52.73	4.34	0.00	47.74	51.58	52.75	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	26.81			16.00			50.79			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	26.71											
Intersection LOS	C											
Intersection V/C	0.788											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.981

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	0	83	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1256	14	40	1938	294	309	19	75	43	23	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	331	4	11	510	77	81	5	20	11	6	19
Total Analysis Volume [veh/h]	71	1322	15	42	2040	309	325	20	79	45	24	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	85	0	10	85	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	82	82	7	82	82	32	32	32	32	32	32
g / C, Green / Cycle	0.05	0.63	0.63	0.05	0.63	0.63	0.25	0.25	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.35	0.35	0.02	0.62	0.65	0.25	0.01	0.05	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1892	1714	1900	1816	1314	1900	1615	1317	1900	1615
c, Capacity [veh/h]	92	1198	1194	92	1198	1145	314	468	398	313	468	398
d1, Uniform Delay [s]	59.54	4.91	4.91	58.50	9.59	10.33	49.15	33.23	34.45	38.82	33.29	34.41
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	1.88	1.89	15.32	21.63	33.27	60.44	0.17	1.12	0.96	0.21	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.56	0.56	0.46	0.98	1.03	1.04	0.04	0.20	0.14	0.05	0.19
d, Delay for Lane Group [s/veh]	104.80	6.79	6.80	73.83	31.22	43.61	109.58	33.40	35.57	39.79	33.50	35.50
Lane Group LOS	F	A	A	E	C	F	F	C	D	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	4.18	4.17	1.71	19.86	24.24	15.39	0.46	1.92	1.17	0.55	1.86
50th-Percentile Queue Length [ft/ln]	85.79	104.45	104.21	42.84	496.55	605.97	384.73	11.51	47.88	29.15	13.84	46.60
95th-Percentile Queue Length [veh/ln]	6.18	7.52	7.50	3.08	27.17	33.01	22.28	0.83	3.45	2.10	1.00	3.36
95th-Percentile Queue Length [ft/ln]	154.42	188.02	187.58	77.11	679.28	825.32	556.93	20.71	86.18	52.47	24.91	83.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	6.80	6.80	73.83	36.48	43.61	109.58	33.40	35.57	39.79	33.50	35.50
Movement LOS	F	A	A	E	D	D	F	C	D	D	C	D
d_A, Approach Delay [s/veh]	11.74			38.05			92.20			36.49		
Approach LOS	B			D			F			D		
d_I, Intersection Delay [s/veh]	34.78											
Intersection LOS	C											
Intersection V/C	0.981											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.755

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	1168	16	85	1753	130	129	9	93	25	4	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	0	86	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1195	16	85	1839	130	129	9	96	25	4	53
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	314	4	22	484	34	34	2	25	7	1	14
Total Analysis Volume [veh/h]	82	1258	17	89	1936	137	136	9	101	26	4	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	95	0	15	98	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	92	92	12	95	95	17	17	17	17	17
g / C, Green / Cycle	0.07	0.71	0.71	0.09	0.73	0.73	0.13	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.34	0.34	0.05	0.55	0.56	0.11	0.06	0.02	0.00	0.03
s, saturation flow rate [veh/h]	1714	1900	1891	1714	1900	1857	1266	1615	1428	1900	1615
c, Capacity [veh/h]	119	1345	1338	158	1388	1357	219	211	57	248	211
d1, Uniform Delay [s]	57.65	1.20	1.20	54.53	0.53	0.54	53.88	49.67	62.16	46.74	48.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.19	1.21	1.21	13.67	3.70	4.13	14.63	7.57	24.48	0.12	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.48	0.48	0.56	0.75	0.76	0.66	0.48	0.46	0.02	0.27
d, Delay for Lane Group [s/veh]	85.84	2.40	2.41	68.20	4.23	4.67	68.51	57.24	86.64	46.86	51.31
Lane Group LOS	F	A	A	E	A	A	E	E	F	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.51	1.46	1.46	3.31	2.14	2.27	5.37	3.35	1.22	0.12	1.75
50th-Percentile Queue Length [ft/ln]	87.67	36.54	36.45	82.68	53.46	56.76	134.26	83.78	30.60	2.92	43.67
95th-Percentile Queue Length [veh/ln]	6.31	2.63	2.62	5.95	3.85	4.09	9.17	6.03	2.20	0.21	3.14
95th-Percentile Queue Length [ft/ln]	157.80	65.77	65.61	148.82	96.22	102.16	229.28	150.81	55.09	5.25	78.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.84	2.41	2.41	68.20	4.44	4.67	68.51	68.51	57.24	86.64	46.86	51.31
Movement LOS	F	A	A	E	A	A	E	E	E	F	D	D
d_A, Approach Delay [s/veh]	7.45			7.08			63.89			61.78		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	12.06											
Intersection LOS	B											
Intersection V/C	0.755											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	105	1230	1760	86	42	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	89	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	1257	1849	86	42	160
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	331	487	23	11	42
Total Analysis Volume [veh/h]	111	1323	1946	91	44	168
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	109	95	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	106	92	92	18	18
g / C, Green / Cycle	0.08	0.82	0.71	0.71	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.37	0.54	0.54	0.03	0.10
s, saturation flow rate [veh/h]	1714	3618	1900	1871	1714	1615
c, Capacity [veh/h]	145	2950	1345	1324	237	224
d1, Uniform Delay [s]	56.41	0.69	1.46	1.48	46.81	50.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	31.22	0.50	4.03	4.35	1.72	20.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.17	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.45	0.76	0.77	0.19	0.75
d, Delay for Lane Group [s/veh]	87.63	1.18	5.49	5.84	48.53	71.43
Lane Group LOS	F	A	A	A	D	E
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4.72	0.94	3.19	3.29	1.32	6.27
50th-Percentile Queue Length [ft/ln]	118.03	23.43	79.69	82.15	32.95	156.73
95th-Percentile Queue Length [veh/ln]	8.28	1.69	5.74	5.91	2.37	10.38
95th-Percentile Queue Length [ft/ln]	207.11	42.17	143.45	147.87	59.31	259.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	87.63	1.18	5.66	5.84	48.53	71.43
Movement LOS	F	A	A	A	D	E
d_A, Approach Delay [s/veh]	7.87		5.66		66.67	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	10.04					
Intersection LOS	B					
Intersection V/C	0.748					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.059

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	137	788	56	109	1321	348	346	236	109	81	301	106
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	89	27	12	0	0	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	788	56	109	1321	437	373	248	109	81	338	106
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	207	15	29	348	115	98	65	29	21	89	28
Total Analysis Volume [veh/h]	144	829	59	115	1391	460	393	261	115	85	356	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	10	32	0	27	55	0	27	73	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	8	30	30	7	29	29	24	0	0	24	0	0
g / C, Green / Cycle	0.11	0.43	0.43	0.10	0.41	0.41	0.34	0.00	0.00	0.34	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.18	0.24	0.24	0.14	0.38	0.28	0.38	0.14	0.07	0.07	0.19	0.07
s, saturation flow rate [veh/h]	819	1900	1856	819	3618	1615	1042	1900	1615	1136	1900	1615
c, Capacity [veh/h]	173	814	795	161	1499	669	430	0	0	460	0	0
d1, Uniform Delay [s]	32.20	10.79	10.79	32.56	14.71	12.40	21.84	0.00	0.00	14.59	0.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	35.19	2.68	2.75	23.44	11.45	5.69	26.35	0.00	0.00	0.89	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

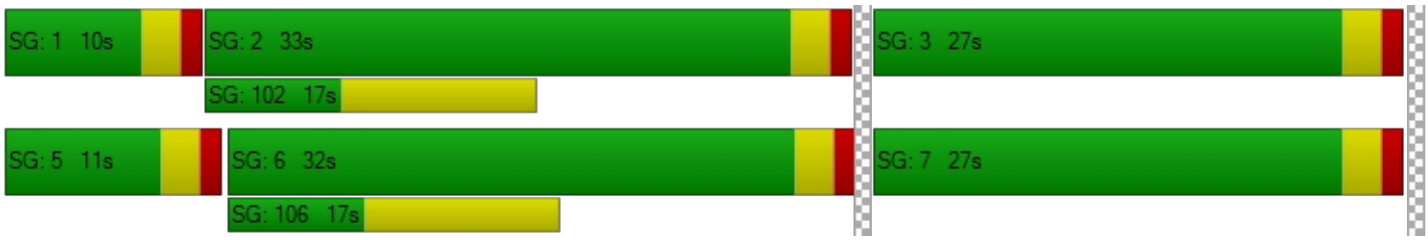
X, volume / capacity	0.83	0.55	0.55	0.71	0.93	0.69	0.91	0.00	0.00	0.18	0.00	0.00
d, Delay for Lane Group [s/veh]	67.40	13.47	13.54	56.00	26.16	18.09	48.19	0.00	0.00	15.48	0.00	0.00
Lane Group LOS	E	B	B	E	C	B	D	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.06	3.98	3.90	2.99	9.32	4.88	9.04	0.00	0.00	0.90	0.00	0.00
50th-Percentile Queue Length [ft/ln]	101.62	99.40	97.45	74.71	232.94	121.97	226.05	0.00	0.00	22.38	0.00	0.00
95th-Percentile Queue Length [veh/ln]	7.32	7.16	7.02	5.38	14.32	8.50	13.97	0.00	0.00	1.61	0.00	0.00
95th-Percentile Queue Length [ft/ln]	182.92	178.92	175.42	134.48	358.09	212.54	349.34	0.00	0.00	40.28	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.40	13.50	13.54	56.00	26.16	18.09	48.19	0.00	0.00	15.48	0.00	0.00
Movement LOS	E	B	B	E	C	B	D	A	A	B	A	A
d_A, Approach Delay [s/veh]	21.03			26.02			24.63			2.38		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	21.55											
Intersection LOS	C											
Intersection V/C	1.059											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.755

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	89	400	16	53	1019	366	184	42	66	5	45	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	0	0	0	21	7	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	400	16	53	1019	387	191	42	71	5	45	34
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	105	4	14	268	102	50	11	19	1	12	9
Total Analysis Volume [veh/h]	111	421	17	56	1073	407	201	44	75	5	47	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	68	0	12	67	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	65	65	9	64	64	32	32
g / C, Green / Cycle	0.09	0.57	0.57	0.08	0.56	0.56	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.12	0.03	0.40	0.41	0.24	0.05
s, saturation flow rate [veh/h]	1714	1900	1874	1714	1900	1727	1353	1783
c, Capacity [veh/h]	149	1074	1059	134	1057	961	428	529
d1, Uniform Delay [s]	49.60	6.64	6.64	49.04	9.89	10.13	35.04	27.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.26	0.43	0.44	9.28	4.28	5.24	11.38	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.21	0.21	0.42	0.72	0.75	0.75	0.17
d, Delay for Lane Group [s/veh]	77.86	7.07	7.08	58.33	14.18	15.37	46.43	27.99
Lane Group LOS	E	A	A	E	B	B	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.18	1.60	1.58	1.84	8.49	8.44	9.08	1.72
50th-Percentile Queue Length [ft/ln]	104.60	39.97	39.58	45.97	212.37	210.96	227.06	42.91
95th-Percentile Queue Length [veh/ln]	7.53	2.88	2.85	3.31	13.27	13.20	14.02	3.09
95th-Percentile Queue Length [ft/ln]	188.27	71.94	71.24	82.74	331.87	330.06	350.62	77.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.86	7.07	7.08	58.33	14.52	15.37	46.43	46.43	46.43	27.99	27.99	27.99
Movement LOS	E	A	A	E	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	21.39			16.34			46.43			27.99		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	21.73											
Intersection LOS	C											
Intersection V/C	0.755											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 14 Year 2035 With Project Evening Peak Hour - Alternative 1

Report File: C:\...\PM35W1.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.181	69.5	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	1.017	51.8	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.887	50.1	D
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.832	34.2	C
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	WB Left	0.679	27.3	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.974	37.1	D
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.047	16.1	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.734	9.4	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	774.6	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	1.262	209.1	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	6.842	10,000.0	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	622.1	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	3.202	85.1	F
14	Rubidoux Blvd (NS) at 30th St (EW)	Two-way stop	HCM 2010	EB Right	0.386	18.5	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.855	17.2	B
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.968	48.6	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.739	12.1	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.049	10.5	B
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.091	20.7	C
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.767	18.8	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.020	12.2	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	1.134	143.0	F
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.021	12.8	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	3.036	1,060.5	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.703	45.8	E
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.465	32.1	D
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.673	15.3	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.859	3.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	700.121	352.5	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	1.823	636.9	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.673	26.3	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.071	66.6	E
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	1.264	122.1	F
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.765	22.6	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	1.025	43.5	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	1.049	62.6	E
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.770	13.0	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.779	10.1	B

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	1.249	50.7	D
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.955	49.3	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	69.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.181

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	26	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	580	1738	0	0	1212	688	0	0	0	375	5	608
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	457	0	0	319	181	0	0	0	99	1	160
Total Analysis Volume [veh/h]	611	1829	0	0	1276	724	0	0	0	395	5	640
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	41	92	0	0	51	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	38	89	48	48		35	35
g / C, Green / Cycle	0.29	0.68	0.37	0.37		0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.36	0.51	0.25	0.45		0.30	0.32
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1761	1615
c, Capacity [veh/h]	501	2477	1911	596		474	435
d1, Uniform Delay [s]	39.67	2.55	26.97	33.00		41.67	41.67
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	115.73	2.02	1.87	111.19		70.15	108.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.22	0.74	0.67	1.21		1.10	1.20
d, Delay for Lane Group [s/veh]	155.39	4.57	28.84	144.19		111.81	150.34
Lane Group LOS	F	A	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	31.05	3.19	9.51	35.43		23.52	26.22
50th-Percentile Queue Length [ft/ln]	776.15	79.83	237.76	885.87		588.00	655.45
95th-Percentile Queue Length [veh/ln]	45.15	5.75	14.57	51.20		33.28	38.34
95th-Percentile Queue Length [ft/ln]	1128.68	143.70	364.20	1280.02		832.08	958.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	155.39	4.57	0.00	0.00	28.84	144.19	0.00	0.00	0.00	111.81	111.81	143.11
Movement LOS	F	A			C	F				F	F	F
d_A, Approach Delay [s/veh]	42.34			70.60			0.00			131.08		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	69.49											
Intersection LOS	E											
Intersection V/C	1.181											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	51.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.017

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	92	3	0	7	0	0	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1498	536	431	1153	0	812	2	307	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	394	141	113	303	0	214	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1577	564	454	1214	0	855	2	323	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	47	0	36	83	0	0	47	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	44	44	33	80	44	44	
g / C, Green / Cycle	0.34	0.34	0.25	0.62	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.35	0.26	0.34	0.33	0.36	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1701	
c, Capacity [veh/h]	1752	547	435	2226	580	576	
d1, Uniform Delay [s]	33.64	35.67	43.00	5.76	35.43	35.67	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	7.89	46.91	54.87	0.97	34.85	52.14	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.90	1.03	1.04	0.55	0.99	1.05	
d, Delay for Lane Group [s/veh]	41.53	82.57	97.87	6.72	70.29	87.81	
Lane Group LOS	D	F	F	A	E	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	15.42	23.03	19.82	3.99	22.18	25.09	
50th-Percentile Queue Length [ft/ln]	385.44	575.76	495.43	99.86	554.47	627.21	
95th-Percentile Queue Length [veh/ln]	21.86	31.57	27.82	7.19	29.90	34.49	
95th-Percentile Queue Length [ft/ln]	546.43	789.28	695.60	179.75	747.55	862.24	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	41.53	82.57	97.87	6.72	0.00	75.92	87.81	87.81	0.00	0.00	0.00
Movement LOS		D	F	F	A		E	F	F			
d_A, Approach Delay [s/veh]	52.34			31.53			79.28			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	51.76											
Intersection LOS	D											
Intersection V/C	1.017											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.887

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	1175	45	126	922	263	462	397	126	31	194	147
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	95	0	0	32	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	1270	45	126	954	263	462	397	129	31	194	147
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	334	12	33	251	69	122	104	34	8	51	39
Total Analysis Volume [veh/h]	98	1337	47	133	1004	277	486	418	136	33	204	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	54	0	14	57	0	42	52	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	51	51	11	54	54	39	49	49	7	17	17
g / C, Green / Cycle	0.06	0.39	0.39	0.08	0.42	0.42	0.30	0.38	0.38	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.06	0.37	0.37	0.08	0.35	0.35	0.28	0.12	0.08	0.02	0.10	0.10
s, saturation flow rate [veh/h]	1714	1900	1877	1714	1900	1761	1714	3618	1615	1714	1900	1638
c, Capacity [veh/h]	105	745	737	145	789	732	514	1364	609	92	248	214
d1, Uniform Delay [s]	59.38	29.40	29.46	57.21	25.32	25.56	37.97	22.34	21.67	58.19	51.71	52.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	69.97	20.07	20.69	55.26	10.22	11.78	28.14	0.58	0.85	10.47	19.27	25.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.93	0.94	0.92	0.84	0.85	0.95	0.31	0.22	0.36	0.76	0.80
d, Delay for Lane Group [s/veh]	129.35	49.47	50.15	112.47	35.55	37.34	66.11	22.93	22.52	68.66	70.98	77.77
Lane Group LOS	F	D	D	F	D	D	E	C	C	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.20	22.30	22.28	6.43	17.32	16.77	17.94	3.72	2.43	1.30	6.96	6.68
50th-Percentile Queue Length [ft/ln]	129.96	557.61	557.00	160.80	432.92	419.28	448.61	92.90	60.67	32.52	174.11	167.02
95th-Percentile Queue Length [veh/ln]	8.94	30.05	30.02	10.59	24.14	23.49	24.89	6.69	4.37	2.34	11.29	10.92
95th-Percentile Queue Length [ft/ln]	223.44	751.24	750.52	264.78	603.54	587.19	622.30	167.22	109.21	58.53	282.31	272.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	129.35	49.80	50.15	112.47	36.16	37.34	66.11	22.93	22.52	68.66	71.50	77.77
Movement LOS	F	D	D	F	D	D	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	55.07			43.57			43.05			73.74		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	50.12											
Intersection LOS	D											
Intersection V/C	0.887											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.832

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	142	1149	61	81	889	99	104	270	133	48	268	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	105	0	0	35	0	0	0	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	166	1254	61	81	924	99	104	270	141	48	268	59
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	330	16	21	243	26	27	71	37	13	71	16
Total Analysis Volume [veh/h]	175	1320	64	85	973	104	109	284	148	51	282	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	54	0	10	46	0	0	51	0	0	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	15	51	51	7	43	43	48	48
g / C, Green / Cycle	0.13	0.44	0.44	0.06	0.37	0.37	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.37	0.37	0.05	0.29	0.29	0.37	0.27
s, saturation flow rate [veh/h]	1714	1900	1869	1714	1900	1836	1458	1488
c, Capacity [veh/h]	224	843	829	104	710	687	646	657
d1, Uniform Delay [s]	45.94	19.95	20.03	52.19	24.81	24.83	23.91	18.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.39	9.06	9.46	48.08	7.90	8.19	12.29	4.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

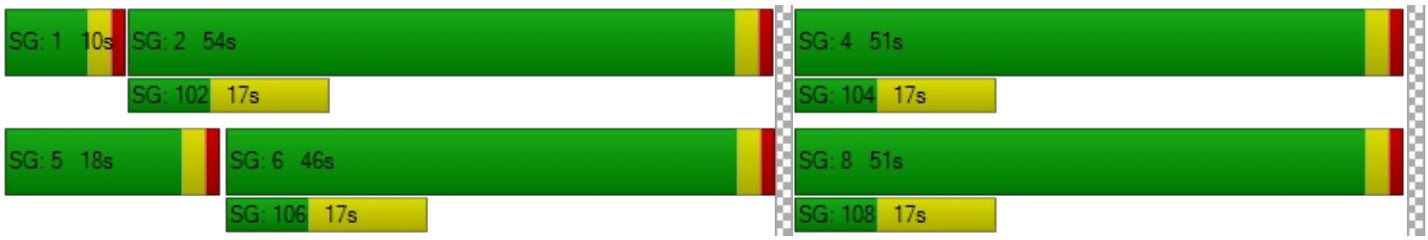
X, volume / capacity	0.78	0.83	0.83	0.81	0.77	0.77	0.84	0.60
d, Delay for Lane Group [s/veh]	69.33	29.01	29.49	100.27	32.71	33.02	36.20	22.34
Lane Group LOS	E	C	C	F	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.04	14.64	14.63	3.76	12.38	12.04	13.81	6.44
50th-Percentile Queue Length [ft/ln]	150.90	365.92	365.86	94.09	309.41	300.99	345.16	160.98
95th-Percentile Queue Length [veh/ln]	10.07	20.91	20.91	6.77	18.15	17.73	19.90	10.60
95th-Percentile Queue Length [ft/ln]	251.63	522.78	522.71	169.36	453.64	443.25	497.51	265.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.33	29.23	29.49	100.27	32.85	33.02	36.20	36.20	36.20	22.34	22.34	22.34
Movement LOS	E	C	C	F	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	33.75			37.80			36.20			22.34		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	34.16											
Intersection LOS	C											
Intersection V/C	0.832											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	129	0	0	43	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	1245	74	137	939	71	96	237	96	91	125	101
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	328	19	36	247	19	25	62	25	24	33	27
Total Analysis Volume [veh/h]	167	1311	78	144	988	75	101	249	101	96	132	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	72	0	19	69	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	69	69	16	66	66	36	36	36	36
g / C, Green / Cycle	0.15	0.53	0.53	0.12	0.51	0.51	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.10	0.37	0.37	0.08	0.28	0.28	0.09	0.19	0.09	0.14
s, saturation flow rate [veh/h]	1714	1900	1863	1714	1900	1853	1160	1808	1047	1762
c, Capacity [veh/h]	251	1008	989	211	965	941	238	501	157	488
d1, Uniform Delay [s]	49.40	12.92	12.98	51.94	13.42	13.43	44.66	36.39	52.36	33.91
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.20	3.92	4.08	16.45	2.32	2.39	5.45	7.89	16.52	3.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.69	0.70	0.68	0.56	0.56	0.42	0.70	0.61	0.49
d, Delay for Lane Group [s/veh]	62.60	16.84	17.06	68.39	15.75	15.82	50.11	44.29	68.88	37.37
Lane Group LOS	E	B	B	E	B	B	D	D	E	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.76	10.30	10.27	5.26	7.38	7.23	3.18	10.03	3.74	5.97
50th-Percentile Queue Length [ft/ln]	144.12	257.54	256.79	131.46	184.43	180.70	79.50	250.73	93.46	149.13
95th-Percentile Queue Length [veh/ln]	9.70	15.57	15.53	9.02	11.83	11.64	5.72	15.22	6.73	9.97
95th-Percentile Queue Length [ft/ln]	242.57	389.13	388.19	225.48	295.79	290.93	143.11	380.58	168.22	249.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.60	16.95	17.06	68.39	15.78	15.82	50.11	44.29	44.29	68.88	37.37	37.37
Movement LOS	E	B	B	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.85			22.06			45.59			46.43		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.25											
Intersection LOS	C											
Intersection V/C	0.679											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.974

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	4	25	24	0	0	0	0	2	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1448	123	379	1157	17	21	9	23	170	16	321
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	362	31	95	289	4	5	2	6	43	4	80
Total Analysis Volume [veh/h]	14	1448	123	379	1157	17	21	9	23	170	16	321
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	56	0	30	75	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	52	52	26	75	75	25	25	25
g / C, Green / Cycle	0.02	0.45	0.45	0.22	0.66	0.66	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.42	0.21	0.31	0.31	0.24	0.23	0.20
s, saturation flow rate [veh/h]	1810	1900	1848	1810	1900	1890	219	801	1615
c, Capacity [veh/h]	42	862	838	407	1244	1238	91	234	352
d1, Uniform Delay [s]	55.41	29.52	29.75	43.81	9.94	9.94	38.47	45.86	44.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.56	16.40	18.02	9.91	1.29	1.30	5.72	6.02	9.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.92	0.93	0.93	0.47	0.47	0.58	0.79	0.91
d, Delay for Lane Group [s/veh]	59.96	45.92	47.77	53.73	11.22	11.24	44.19	51.87	53.37
Lane Group LOS	E	D	D	D	B	B	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.45	23.72	23.82	11.63	7.37	7.35	1.35	5.76	9.78
50th-Percentile Queue Length [ft/ln]	11.34	593.03	595.41	290.79	184.18	183.79	33.87	143.98	244.58
95th-Percentile Queue Length [veh/ln]	0.82	31.71	31.82	17.23	11.82	11.80	2.44	9.70	14.91
95th-Percentile Queue Length [ft/ln]	20.41	792.72	795.50	430.63	295.46	294.95	60.96	242.38	372.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.96	46.76	47.77	53.73	11.23	11.24	44.19	44.19	44.19	51.87	51.87	53.37
Movement LOS	E	D	D	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	46.95			21.60			44.19			52.82		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	37.07											
Intersection LOS	D											
Intersection V/C	0.974											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.047

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	78	3	0	26	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1569	3	0	1350	0	16
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	392	1	0	338	0	4
Total Analysis Volume [veh/h]	1569	3	0	1350	0	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.13
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.15
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	3.70
d_A, Approach Delay [s/veh]	0.00		0.00		16.13	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	95	24	2	262	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1497	95	24	1326	262	75
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	374	24	6	332	66	19
Total Analysis Volume [veh/h]	1497	95	24	1326	262	75
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	52	0	11	63	52	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	2	36	10	10
g / C, Green / Cycle	0.55	0.55	0.04	0.66	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.41	0.06	0.01	0.37	0.14	0.05
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1990	889	71	2400	343	306
d1, Uniform Delay [s]	9.38	5.84	25.40	4.86	20.87	18.72
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.05	2.72	0.20	3.56	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.11	0.34	0.55	0.76	0.25
d, Delay for Lane Group [s/veh]	9.97	5.89	28.12	5.06	24.43	19.13
Lane Group LOS	A	A	C	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.13	0.41	0.34	2.35	3.20	0.77
50th-Percentile Queue Length [ft/ln]	128.27	10.14	8.39	58.86	79.89	19.21
95th-Percentile Queue Length [veh/ln]	8.85	0.73	0.60	4.24	5.75	1.38
95th-Percentile Queue Length [ft/ln]	221.14	18.25	15.11	105.96	143.79	34.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.97	5.89	28.12	5.06	24.43	19.13
Movement LOS	A	A	C	A	C	B
d_A, Approach Delay [s/veh]	9.72		5.47		23.25	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	9.36					
Intersection LOS	A					
Intersection V/C	0.734					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	774.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	99	0	0	264	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1512	0	0	1573	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	378	0	0	393	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1512	0	0	1573	17	27	0	42	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.00	0.00	0.02	0.00	1.52	0.00	0.13	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	14.04	0.00	0.00	13.03	0.00	0.00	641.81	774.64	450.35	223.40	348.81	19.54
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.00	0.00	7.05	7.05	7.05	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.75	0.00	0.00	0.00	0.00	0.00	176.13	176.13	176.13	5.30	5.30	5.30
d_A, Approach Delay [s/veh]	0.18			0.00			525.27			70.51		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	11.52											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	209.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.262

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	46	5	142	123	0	0	0	0	15	0	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	553	646	713	736	75	65	136	26	472	134	609
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	138	162	178	184	19	16	34	7	118	34	0
Total Analysis Volume [veh/h]	62	553	646	713	736	75	65	136	26	472	134	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	42	0	11	42	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	414	414	414	414	414	414	414	414	414	414
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	39	39	120	120
g / C, Green / Cycle	0.04	0.29	0.29	0.29	0.54	0.54	0.09	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.40	0.39	0.20	0.05	0.04	0.09	0.33	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1848	1829	1615
c, Capacity [veh/h]	71	1048	468	524	1954	872	168	172	529	467
d1, Uniform Delay [s]	198.03	123.37	147.13	147.18	55.02	45.96	176.77	186.80	147.20	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.42	0.41	184.35	174.70	0.12	0.04	1.45	20.80	85.79	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

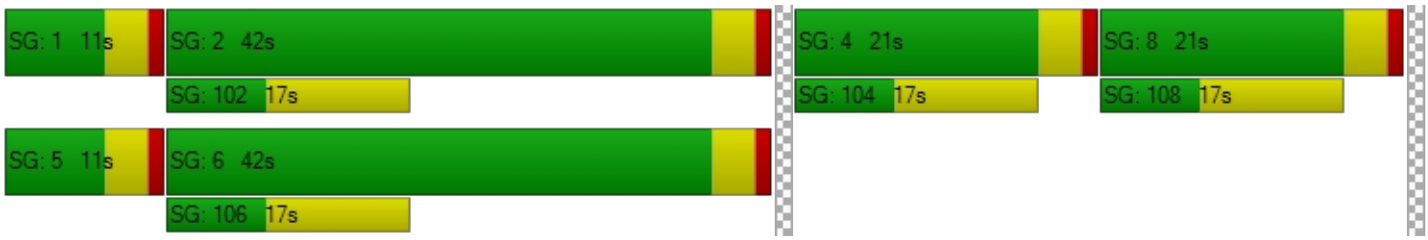
X, volume / capacity	0.88	0.53	1.38	1.36	0.38	0.09	0.39	0.94	1.15	0.00
d, Delay for Lane Group [s/veh]	224.45	123.78	331.48	321.88	55.14	46.00	178.22	207.59	232.98	0.00
Lane Group LOS	F	F	F	F	E	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.44	25.81	75.92	83.58	23.17	3.95	6.91	19.02	71.38	0.00
50th-Percentile Queue Length [ft/ln]	185.89	645.35	1898.10	2089.48	579.36	98.75	172.82	475.50	1784.39	0.00
95th-Percentile Queue Length [veh/ln]	11.91	34.15	108.38	117.88	31.07	7.11	11.22	26.17	93.30	0.00
95th-Percentile Queue Length [ft/ln]	297.69	853.66	2709.53	2946.88	776.73	177.75	280.62	654.31	2332.62	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	224.45	123.78	331.48	321.88	55.14	46.00	178.22	207.59	207.59	232.98	232.98	0.00
Movement LOS	F	F	F	F	E	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	235.13			179.48			199.18			232.98		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	209.08											
Intersection LOS	F											
Intersection V/C	1.262											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	6.842

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1167	113	225	1072	7	5	22	17	78	56	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	292	28	56	268	2	1	6	4	20	14	37
Total Analysis Volume [veh/h]	18	1167	113	225	1072	7	5	22	17	78	56	149
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.41	0.01	0.00	0.00	3.17	0.03	0.00	6.84	0.32
d_M, Delay for Movement [s/veh]	10.66	0.00	0.00	16.03	0.00	0.00	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Movement LOS	B	A	A	C	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	1.99	0.99	0.00	7.66	7.66	7.66	38.16	38.16	38.16
95th-Percentile Queue Length [ft/ln]	2.12	1.06	0.00	49.64	24.82	0.00	191.38	191.38	191.38	953.91	953.91	953.91
d_A, Approach Delay [s/veh]	0.15			2.77			10000.00			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	1117.72											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	622.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1211	64	46	1092	3	0	0	10	70	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	303	16	12	273	1	0	0	3	18	0	20
Total Analysis Volume [veh/h]	7	1211	64	46	1092	3	0	0	10	70	0	80
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.08	0.01	0.00	0.00	0.00	0.02	1.73	0.00	0.18
d_M, Delay for Movement [s/veh]	10.64	0.00	0.00	12.12	0.00	0.00	101.48	142.30	12.57	586.22	622.07	505.08
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	F
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.27	0.14	0.00	0.06	0.06	0.06	13.21	13.21	13.21
95th-Percentile Queue Length [ft/ln]	0.82	0.41	0.00	6.80	3.40	0.00	1.57	1.57	1.57	330.34	330.34	330.34
d_A, Approach Delay [s/veh]	0.06			0.49			12.57			542.95		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	31.82											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	85.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.202

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	1046	92	39	1000	63	87	89	54	154	117	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	262	23	10	250	16	22	22	14	39	29	7
Total Analysis Volume [veh/h]	186	1046	92	39	1000	63	87	89	54	154	117	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	21	21	3	17	17	24	24	24	24
g / C, Green / Cycle	0.12	0.34	0.34	0.06	0.28	0.28	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.10	0.30	0.30	0.02	0.28	0.28	1.06	0.03	2.18	0.02
s, saturation flow rate [veh/h]	1810	1900	1847	1810	1900	1861	166	1615	124	1615
c, Capacity [veh/h]	213	651	633	107	539	528	155	645	143	645
d1, Uniform Delay [s]	26.15	18.69	18.72	27.29	21.56	21.57	20.59	11.25	22.36	11.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.49	16.17	16.88	2.09	37.81	38.30	78.78	0.06	426.01	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.88	0.89	0.37	1.00	1.00	1.13	0.08	1.89	0.04
d, Delay for Lane Group [s/veh]	36.64	34.86	35.61	29.38	59.37	59.87	99.37	11.31	448.37	11.10
Lane Group LOS	D	C	D	C	E	E	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.08	9.61	9.50	0.57	12.46	12.28	5.55	0.41	18.94	0.21
50th-Percentile Queue Length [ft/ln]	77.03	240.26	237.51	14.37	311.59	307.04	138.72	10.23	473.52	5.21
95th-Percentile Queue Length [veh/ln]	5.55	14.69	14.56	1.03	18.25	18.03	9.99	0.74	33.94	0.38
95th-Percentile Queue Length [ft/ln]	138.66	367.37	363.88	25.86	456.34	450.72	249.70	18.41	848.55	9.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.64	35.20	35.61	29.38	59.60	59.87	99.37	99.37	11.31	448.37	448.37	11.10
Movement LOS	D	D	D	C	E	E	F	F	B	F	F	B
d_A, Approach Delay [s/veh]	35.43			58.55			78.69			407.43		
Approach LOS	D			E			E			F		
d_I, Intersection Delay [s/veh]	85.06											
Intersection LOS	F											
Intersection V/C	3.202											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	1119	1119	54	0	166
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	138	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1170	1257	54	0	166
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	293	314	14	0	42
Total Analysis Volume [veh/h]	230	1170	1257	54	0	166
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.43	0.01	0.01	0.00	0.00	0.39
d_M, Delay for Movement [s/veh]	16.73	0.00	0.00	0.00	0.00	18.53
Movement LOS	C	A	A	A		C
95th-Percentile Queue Length [veh/ln]	2.15	0.00	0.00	0.00	0.00	1.79
95th-Percentile Queue Length [ft/ln]	53.65	0.00	0.00	0.00	0.00	44.69
d_A, Approach Delay [s/veh]	2.75		0.00		18.53	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.41					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.855

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	254	1190	0	0	607	705	0	0	0	510	0	243
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	0	0	35	103	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1238	0	0	642	808	0	0	0	510	0	246
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	310	0	0	161	202	0	0	0	128	0	62
Total Analysis Volume [veh/h]	254	1238	0	0	642	808	0	0	0	510	0	246
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	15	93	0	0	78	0	0	0	0	27	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	79	79	79	79		79	79
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	8	55	43	43		16	16
g / C, Green / Cycle	0.10	0.70	0.55	0.55		0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.18	0.50		0.15	0.15
s, saturation flow rate [veh/h]	3514	3618	3618	1615		3514	1615
c, Capacity [veh/h]	366	2533	1973	881		699	321
d1, Uniform Delay [s]	34.26	5.41	9.95	16.38		29.74	30.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	2.36	0.15	0.10	4.38		1.49	3.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.49	0.33	0.92		0.73	0.77
d, Delay for Lane Group [s/veh]	36.62	5.56	10.05	20.76		31.23	33.82
Lane Group LOS	D	A	B	C		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	2.42	3.54	2.80	12.57		4.54	4.61
50th-Percentile Queue Length [ft/ln]	60.51	88.51	70.02	314.21		113.41	115.36
95th-Percentile Queue Length [veh/ln]	4.36	6.37	5.04	18.38		8.03	8.14
95th-Percentile Queue Length [ft/ln]	108.91	159.32	126.03	459.56		200.74	203.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.62	5.56	0.00	0.00	10.05	20.76	0.00	0.00	0.00	31.23	0.00	33.82
Movement LOS	D	A			B	C				C		C
d_A, Approach Delay [s/veh]	10.85			16.02			0.00			32.07		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	17.21											
Intersection LOS	B											
Intersection V/C	0.855											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	48.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.968

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	681	354	165	945	0	693	45	506	16	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	6	29	0	38	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	691	354	171	974	0	731	45	506	16	0	4
Peak Hour Factor	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	173	89	43	244	0	183	11	127	4	0	1
Total Analysis Volume [veh/h]	0	691	354	171	974	0	731	45	506	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	37	0	15	52	0	0	47	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	11	51	54	54	3	3
g / C, Green / Cycle	0.30	0.30	0.09	0.42	0.45	0.45	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.28	0.31	0.09	0.27	0.43	0.31	0.01	0.00
s, saturation flow rate [veh/h]	1900	1697	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	571	510	166	1539	809	720	52	46
d1, Uniform Delay [s]	40.51	41.98	54.51	27.11	32.17	26.81	57.15	56.78
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	21.73	46.35	40.53	1.99	7.84	1.26	3.36	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

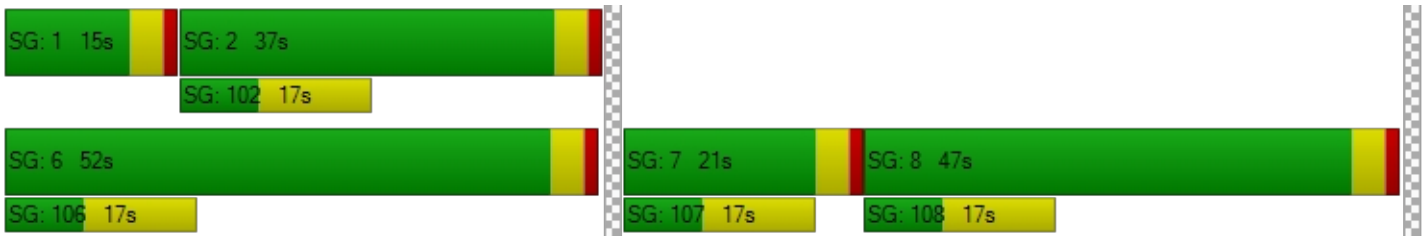
X, volume / capacity	0.92	1.02	1.03	0.63	0.96	0.70	0.31	0.09
d, Delay for Lane Group [s/veh]	62.25	88.33	95.04	29.10	40.00	28.07	60.51	57.59
Lane Group LOS	E	F	F	C	D	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	18.19	21.47	6.87	11.28	22.85	11.72	0.52	0.13
50th-Percentile Queue Length [ft/ln]	454.80	536.83	171.83	282.11	571.33	292.88	13.11	3.21
95th-Percentile Queue Length [veh/ln]	25.19	29.55	11.30	16.79	30.69	17.33	0.94	0.23
95th-Percentile Queue Length [ft/ln]	629.67	738.67	282.45	419.84	767.33	433.21	23.60	5.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	68.61	88.33	95.04	29.10	0.00	40.00	40.00	28.07	60.51	0.00	57.59
Movement LOS		E	F	F	C		D	D	C	E		E
d_A, Approach Delay [s/veh]	75.29			38.95			35.30			59.92		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	48.60											
Intersection LOS	D											
Intersection V/C	0.968											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	639	77	296	1021	168	112	67	13	17	50	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	0	29	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	649	77	296	1050	168	112	67	13	17	50	141
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	162	19	74	263	42	28	17	3	4	13	35
Total Analysis Volume [veh/h]	34	649	77	296	1050	168	112	67	13	17	50	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	73	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	10	8	16	16	8	8	8
g / C, Green / Cycle	0.06	0.26	0.26	0.22	0.42	0.42	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.02	0.18	0.05	0.16	0.29	0.10	0.16	0.04	0.09
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1175	1809	1615
c, Capacity [veh/h]	102	952	425	393	1533	684	391	491	333
d1, Uniform Delay [s]	17.36	12.66	10.91	14.02	8.95	7.09	15.00	12.49	13.21
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	0.87	0.20	2.95	0.55	0.18	0.95	0.13	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.68	0.18	0.75	0.69	0.25	0.49	0.14	0.42
d, Delay for Lane Group [s/veh]	19.24	13.53	11.11	16.97	9.50	7.28	15.95	12.62	14.06
Lane Group LOS	B	B	B	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	2.06	0.42	2.24	2.50	0.64	1.43	0.40	0.93
50th-Percentile Queue Length [ft/ln]	7.50	51.55	10.55	55.95	62.59	16.00	35.72	10.02	23.31
95th-Percentile Queue Length [veh/ln]	0.54	3.71	0.76	4.03	4.51	1.15	2.57	0.72	1.68
95th-Percentile Queue Length [ft/ln]	13.50	92.79	18.99	100.70	112.66	28.80	64.30	18.03	41.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.24	13.53	11.11	16.97	9.50	7.28	15.95	15.95	15.95	12.62	12.62	14.06
Movement LOS	B	B	B	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.54			10.72			15.95			13.60		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.12											
Intersection LOS	B											
Intersection V/C	0.739											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	28	1	4	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	34	628	1	4	623
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	157	0	1	156
Total Analysis Volume [veh/h]	0	34	628	1	4	623
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	10.51	0.00	0.00	8.75	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.89	0.00	0.00	0.31	0.00
d_A, Approach Delay [s/veh]	10.51		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.091

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	27	53	9	8	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	27	653	9	8	604
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	163	2	2	151
Total Analysis Volume [veh/h]	23	27	653	9	8	604
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.04	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	20.73	10.55	0.00	0.00	8.88	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.30	0.12	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	7.46	3.12	0.00	0.00	0.65	0.00
d_A, Approach Delay [s/veh]	15.24		0.00		0.12	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.63					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	6	53	0	3	0	4	64	12	23	19	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	6	53	495	3	318	186	482	12	23	268	219
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	13	124	1	80	47	121	3	6	67	55
Total Analysis Volume [veh/h]	26	6	53	495	3	318	186	482	12	23	268	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	58	0	0	58	0	34	51	0	11	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	57	57	57	57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	27	8	16	16	2	11	11
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.13	0.28	0.28	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.36	0.20	0.10	0.13	0.01	0.01	0.14	0.14
s, saturation flow rate [veh/h]	1075	1640	1365	1617	1810	3618	1615	1810	1900	1625
c, Capacity [veh/h]	445	766	684	756	242	1030	460	68	358	306
d1, Uniform Delay [s]	14.47	8.39	15.63	10.09	23.82	16.82	14.68	26.74	21.72	21.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.04	1.47	0.38	5.07	0.33	0.02	2.93	2.77	3.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

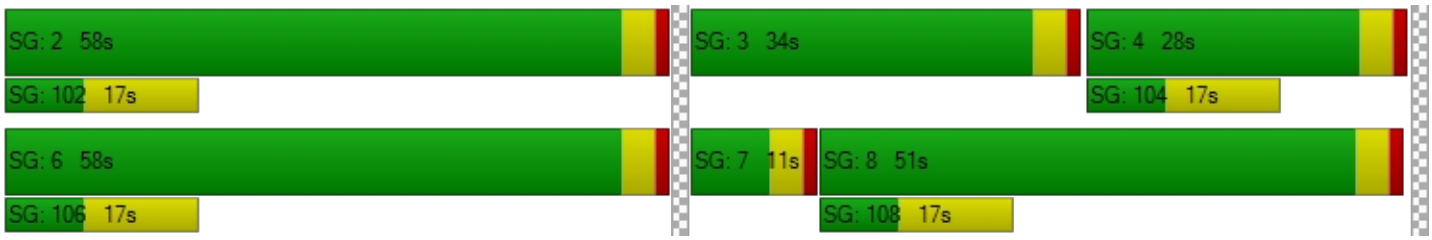
X, volume / capacity	0.06	0.08	0.72	0.42	0.77	0.47	0.03	0.34	0.72	0.75
d, Delay for Lane Group [s/veh]	14.53	8.43	17.10	10.47	28.89	17.15	14.71	29.67	24.49	25.48
Lane Group LOS	B	A	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	0.35	5.32	2.31	2.59	2.40	0.11	0.34	3.26	2.97
50th-Percentile Queue Length [ft/ln]	5.68	8.73	132.89	57.64	64.80	60.02	2.63	8.59	81.62	74.17
95th-Percentile Queue Length [veh/ln]	0.41	0.63	9.10	4.15	4.67	4.32	0.19	0.62	5.88	5.34
95th-Percentile Queue Length [ft/ln]	10.22	15.71	227.42	103.75	116.64	108.04	4.74	15.46	146.91	133.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.53	8.43	8.43	17.10	10.47	10.47	28.89	17.15	14.71	29.67	24.53	25.48
Movement LOS	B	A	A	B	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	10.29			14.49			20.32			25.17		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.82											
Intersection LOS	B											
Intersection V/C	0.767											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	913	0	0	466
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	115	2	2	44
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	1028	2	2	510
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	257	1	1	128
Total Analysis Volume [veh/h]	0	10	1028	2	2	510
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.19	0.00	0.00	10.29	0.00
Movement LOS		B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.06	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.50	0.00	0.00	0.22	0.00
d_A, Approach Delay [s/veh]	12.19		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	143.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.134

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	0	2	0	0	0	0	65	60	2	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	324	2	12	3	4	6	8	451	246	4	217	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	1	3	1	1	2	2	113	62	1	54	3
Total Analysis Volume [veh/h]	324	2	12	3	4	6	8	451	246	4	217	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.13	0.01	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	143.04	142.28	137.33	18.02	19.16	9.70	7.68	0.00	0.00	8.98	0.00	0.00
Movement LOS	F	F	F	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	14.62	14.62	14.62	0.10	0.10	0.10	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	365.41	365.41	365.41	2.58	2.58	2.58	0.45	0.45	0.45	0.33	0.33	0.33
d_A, Approach Delay [s/veh]	142.83			14.53			0.09			0.15		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	37.65											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	308	192	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	20	58	4	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	328	250	4	10	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	82	63	1	3	12
Total Analysis Volume [veh/h]	6	328	250	4	10	49
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	0.00	12.80	9.83
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.06	0.20
95th-Percentile Queue Length [ft/ln]	0.34	0.00	0.00	0.00	1.62	4.92
d_A, Approach Delay [s/veh]	0.14		0.00		10.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,060.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.036

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	78	1010	664	95	119	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	76	27	19	67	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1086	691	114	186	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	20	272	173	29	47	0
Total Analysis Volume [veh/h]	78	1086	691	114	186	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.01	0.00	3.04	0.00
d_M, Delay for Movement [s/veh]	9.80	0.00	0.00	0.00	1060.46	13.66
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.31	0.00	0.00	0.00	19.22	0.00
95th-Percentile Queue Length [ft/ln]	7.77	0.00	0.00	0.00	480.52	0.00
d_A, Approach Delay [s/veh]	0.66		0.00		1060.46	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	91.88					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	45.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1009	23	57	670	70	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	0	0	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1085	23	57	697	70	184
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	271	6	14	174	18	46
Total Analysis Volume [veh/h]	1085	23	57	697	70	184
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.09	0.01	0.23	0.70
d_M, Delay for Movement [s/veh]	0.00	0.00	11.20	0.00	20.74	45.84
Movement LOS	A	A	B	A	C	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.29	0.00	0.89	4.77
95th-Percentile Queue Length [ft/ln]	0.00	0.00	7.33	0.00	22.32	119.15
d_A, Approach Delay [s/veh]	0.00		0.85		38.93	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	4.97					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	32.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	250	787	717	40	48	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	11	6	21	65	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	255	798	723	61	113	226
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	200	181	15	28	57
Total Analysis Volume [veh/h]	255	798	723	61	113	226
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.01	0.01	0.00	0.47	0.35
d_M, Delay for Movement [s/veh]	11.11	0.00	0.00	0.00	32.07	13.64
Movement LOS	B	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	1.28	0.00	0.00	0.00	2.29	1.59
95th-Percentile Queue Length [ft/ln]	31.95	0.00	0.00	0.00	57.16	39.63
d_A, Approach Delay [s/veh]	2.69		0.00		19.79	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.38					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	5	0	0	43	6	11	0	30	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	805	176	83	860	17	21	7	50	88	6	246
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	201	44	21	215	4	5	2	13	22	2	62
Total Analysis Volume [veh/h]	36	805	176	83	860	17	21	7	50	88	6	246
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	55	0	15	59	0	11	35	0	15	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	14	14	5	16	16	2	6	6	5	9	9
g / C, Green / Cycle	0.06	0.31	0.31	0.10	0.35	0.35	0.04	0.13	0.13	0.10	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.11	0.05	0.24	0.01	0.01	0.00	0.03	0.05	0.00	0.15
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	104	1112	496	184	1272	568	66	247	210	190	377	320
d1, Uniform Delay [s]	20.37	13.86	12.10	19.00	12.39	9.54	21.10	17.07	17.55	18.92	14.49	17.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.98	0.91	0.43	1.73	0.63	0.02	2.70	0.05	0.58	1.75	0.02	3.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.72	0.35	0.45	0.68	0.03	0.32	0.03	0.24	0.46	0.02	0.77
d, Delay for Lane Group [s/veh]	22.35	14.77	12.53	20.73	13.02	9.56	23.80	17.12	18.13	20.67	14.50	20.91
Lane Group LOS	C	B	B	C	B	A	C	B	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	3.11	1.19	0.81	3.03	0.09	0.24	0.06	0.44	0.85	0.04	2.40
50th-Percentile Queue Length [ft/ln]	9.54	77.69	29.78	20.22	75.85	2.31	6.07	1.47	11.09	21.37	1.11	60.05
95th-Percentile Queue Length [veh/ln]	0.69	5.59	2.14	1.46	5.46	0.17	0.44	0.11	0.80	1.54	0.08	4.32
95th-Percentile Queue Length [ft/ln]	17.17	139.85	53.61	36.40	136.52	4.15	10.93	2.65	19.95	38.47	2.00	108.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.35	14.77	12.53	20.73	13.02	9.56	23.80	17.12	18.13	20.67	14.50	20.91
Movement LOS	C	B	B	C	B	A	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	14.65			13.63			19.57			20.74		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.27											
Intersection LOS	B											
Intersection V/C	0.673											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1053	77	103	797	63	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	73	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1078	77	103	870	63	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	270	19	26	218	16	10
Total Analysis Volume [veh/h]	1078	77	103	870	63	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	99	0	0	124	21	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	0	0	3	3
g / C, Green / Cycle	0.49	0.49	0.00	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.30	0.05	0.19	0.46	0.10	0.02
s, saturation flow rate [veh/h]	3618	1615	532	1900	647	1615
c, Capacity [veh/h]	1777	793	322	0	366	243
d1, Uniform Delay [s]	4.12	3.04	11.17	0.00	10.65	8.26
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.05	2.60	0.00	0.22	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

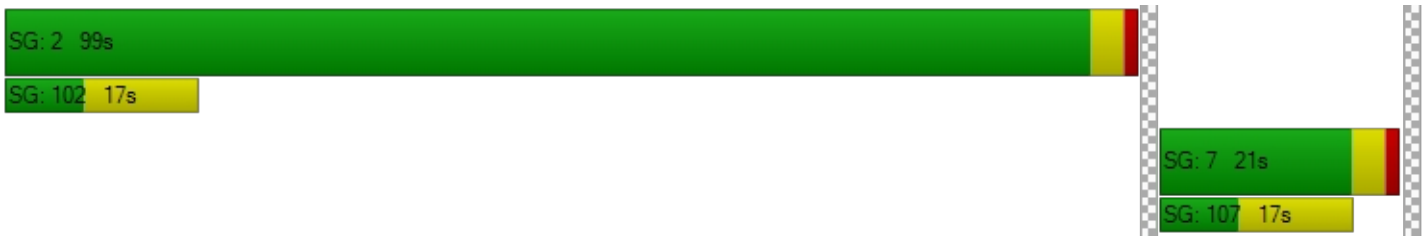
X, volume / capacity	0.61	0.10	0.32	0.00	0.17	0.16
d, Delay for Lane Group [s/veh]	4.45	3.09	13.77	0.00	10.87	8.56
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.28	0.03	0.65	0.00	0.22	0.12
50th-Percentile Queue Length [ft/ln]	7.09	0.82	16.33	0.00	5.60	2.88
95th-Percentile Queue Length [veh/ln]	0.51	0.06	1.18	0.00	0.40	0.21
95th-Percentile Queue Length [ft/ln]	12.76	1.47	29.39	0.00	10.07	5.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.45	3.09	13.77	0.00	10.87	8.56
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	4.36		1.46		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.35					
Intersection LOS	A					
Intersection V/C	0.859					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	352.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	700.121

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	58	0	15	5	142	0	0	53	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	386	3	574	760	739	5	2	651	383
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	97	1	144	190	185	1	1	163	96
Total Analysis Volume [veh/h]	5	3	2	386	3	574	760	739	5	2	651	383
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	27	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	8	25	25	0	17	17
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.13	0.41	0.41	0.00	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.08	0.00	559.48	0.36	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	100	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	136	619	120	619	238	1493	667	7	1032	461
d1, Uniform Delay [s]	15.43	11.43	30.02	17.71	26.07	13.01	10.38	29.81	18.69	20.10
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.00	1033.34	6.66	990.03	1.18	0.02	18.52	2.92	15.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

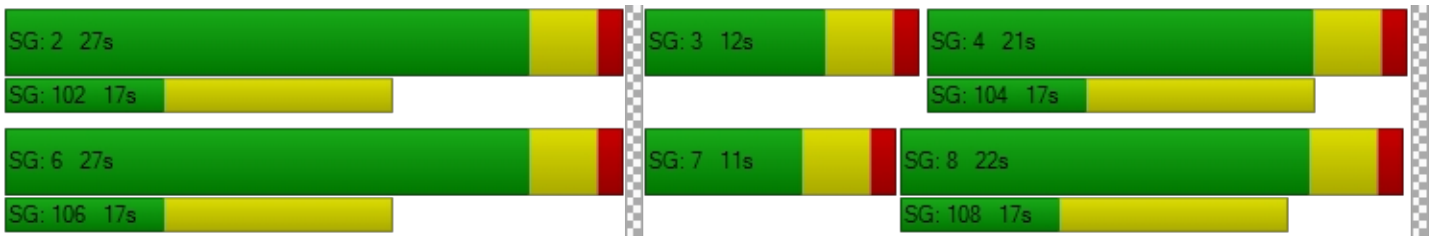
X, volume / capacity	0.06	0.00	3.25	0.93	3.19	0.49	0.01	0.27	0.63	0.83
d, Delay for Lane Group [s/veh]	15.61	11.43	1063.36	24.37	1016.10	14.18	10.40	48.33	21.62	35.98
Lane Group LOS	B	B	F	C	F	B	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	0.02	36.02	7.73	68.59	3.45	0.04	0.07	4.01	6.58
50th-Percentile Queue Length [ft/ln]	1.65	0.38	900.43	193.30	1714.83	86.26	0.96	1.64	100.24	164.38
95th-Percentile Queue Length [veh/ln]	0.12	0.03	63.40	12.29	105.66	6.21	0.07	0.12	7.22	10.78
95th-Percentile Queue Length [ft/ln]	2.98	0.68	1584.89	307.31	2641.39	155.27	1.73	2.95	180.44	269.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.61	15.61	11.43	1063.36	1063.36	24.37	1016.10	14.18	10.40	48.33	21.62	35.98
Movement LOS	B	B	B	F	F	C	F	B	B	D	C	D
d_A, Approach Delay [s/veh]	14.77			444.06			520.46			26.98		
Approach LOS	B			F			F			C		
d_I, Intersection Delay [s/veh]	352.55											
Intersection LOS	F											
Intersection V/C	700.121											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	636.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.823

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	906	1094	95	64	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	200	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	980	1294	95	64	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	245	324	24	16	4
Total Analysis Volume [veh/h]	35	980	1294	95	64	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.01	0.00	1.82	0.09
d_M, Delay for Movement [s/veh]	12.76	0.00	0.00	0.00	636.91	25.91
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh/ln]	0.23	0.00	0.00	0.00	7.03	0.28
95th-Percentile Queue Length [ft/ln]	5.63	0.00	0.00	0.00	175.68	6.88
d_A, Approach Delay [s/veh]	0.44		0.00		514.71	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	16.76					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	972	323	133	1167	0	5	24	152	354	6	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	0	0	200	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	1046	323	133	1367	0	5	24	152	354	6	94
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	262	81	33	342	0	1	6	38	89	2	24
Total Analysis Volume [veh/h]	54	1046	323	133	1367	0	5	24	152	354	6	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	37	37	19	45	0	0	43	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	65	84	11	70	70	13	13	15	15	15
g / C, Green / Cycle	0.05	0.54	0.70	0.09	0.58	0.58	0.11	0.11	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.29	0.20	0.07	0.36	0.36	0.02	0.09	0.10	0.10	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1884	1615	1810	1812	1615
c, Capacity [veh/h]	88	1970	1129	161	1111	1111	212	182	219	219	195
d1, Uniform Delay [s]	55.97	17.50	6.80	53.78	16.17	16.17	48.01	52.19	51.50	51.50	49.24
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.70	1.03	0.64	10.30	0.56	0.56	0.29	9.73	7.52	7.51	1.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.53	0.29	0.83	0.62	0.62	0.14	0.84	0.82	0.82	0.48
d, Delay for Lane Group [s/veh]	62.68	18.53	7.44	64.08	16.73	16.73	48.31	61.92	59.02	59.01	51.08
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.77	9.32	3.09	4.41	11.87	11.87	0.80	4.97	5.73	5.74	2.74
50th-Percentile Queue Length [ft/ln]	44.22	233.12	77.19	110.15	296.76	296.76	20.09	124.30	143.35	143.56	68.42
95th-Percentile Queue Length [veh/ln]	3.18	14.33	5.56	7.85	17.52	17.52	1.45	8.63	9.66	9.67	4.93
95th-Percentile Queue Length [ft/ln]	79.60	358.32	138.95	196.21	438.01	438.01	36.17	215.72	241.52	241.80	123.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.68	18.53	7.44	64.08	16.73	16.73	48.31	48.31	61.92	59.01	59.01	51.08
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	17.69			20.92			59.74			57.37		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	26.26											
Intersection LOS	C											
Intersection V/C	0.673											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	66.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.071

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	716
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	200	0	0	0	0	0	0	63
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	834	630	0	0	1599	226	0	0	0	111	0	779
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	209	158	0	0	400	57	0	0	0	28	0	0
Total Analysis Volume [veh/h]	834	630	0	0	1599	226	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	54	99	0	0	45	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	50	103	49	49		9	9
g / C, Green / Cycle	0.42	0.86	0.41	0.41		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.46	0.17	0.44	0.14		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	753	3097	1470	656		140	125
d1, Uniform Delay [s]	35.09	1.51	35.69	24.63		54.52	0.00
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	52.96	0.15	51.11	1.43		9.62	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

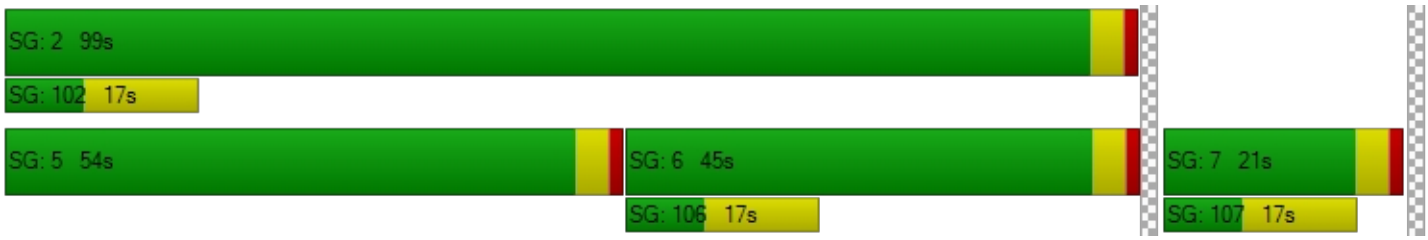
X, volume / capacity	1.11	0.20	1.09	0.34		0.79	0.00
d, Delay for Lane Group [s/veh]	88.05	1.66	86.80	26.06		64.14	0.00
Lane Group LOS	F	A	F	C		E	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	32.50	0.79	31.38	4.70		3.68	0.00
50th-Percentile Queue Length [ft/ln]	812.39	19.70	784.47	117.61		91.91	0.00
95th-Percentile Queue Length [veh/ln]	45.01	1.42	43.10	8.26		6.62	0.00
95th-Percentile Queue Length [ft/ln]	1125.25	35.47	1077.41	206.54		165.43	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	88.05	1.66	0.00	0.00	86.80	26.06	0.00	0.00	0.00	64.14	0.00	0.00
Movement LOS	F	A			F	C				E		A
d_A, Approach Delay [s/veh]	50.87			79.28			0.00			64.14		
Approach LOS	D			E			A			E		
d_I, Intersection Delay [s/veh]	66.55											
Intersection LOS	E											
Intersection V/C	1.071											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	122.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.264

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	165	35	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1288	172	822	899	0	172	0	936	0	0	1
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	322	43	206	225	0	43	0	234	0	0	0
Total Analysis Volume [veh/h]	0	1288	172	822	899	0	172	0	936	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	47	85	0	35	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	34	34	43	81	31	31	
g / C, Green / Cycle	0.28	0.28	0.36	0.67	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.36	0.11	0.45	0.25	0.10	0.33	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	1026	458	648	2441	468	740	
d1, Uniform Delay [s]	43.16	34.61	38.67	8.47	36.58	44.66	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	123.06	2.34	123.59	0.09	0.48	121.98	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

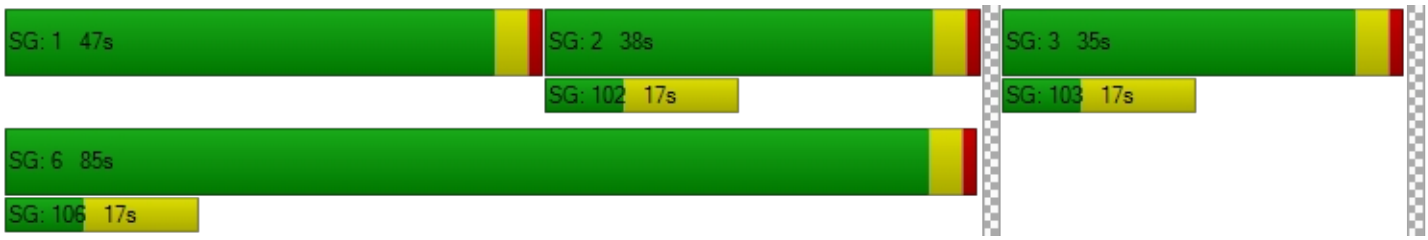
X, volume / capacity	1.26	0.38	1.27	0.37	0.37	1.27	
d, Delay for Lane Group [s/veh]	166.22	36.95	162.26	8.57	37.06	166.64	
Lane Group LOS	F	D	F	A	D	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	32.60	4.35	40.98	4.80	4.22	23.45	
50th-Percentile Queue Length [ft/ln]	815.08	108.76	1024.39	120.02	105.54	586.13	
95th-Percentile Queue Length [veh/ln]	47.78	7.77	59.67	8.39	7.59	35.56	
95th-Percentile Queue Length [ft/ln]	1194.55	194.27	1491.77	209.85	189.78	889.09	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	166.22	36.95	162.26	8.57	0.00	37.06	0.00	166.64	0.00	0.00	0.00
Movement LOS		F	D	F	A		D		F			
d_A, Approach Delay [s/veh]	150.99			81.97			146.52			0.00		
Approach LOS	F			F			F			A		
d_I, Intersection Delay [s/veh]	122.14											
Intersection LOS	F											
Intersection V/C	1.264											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	448	1801	0	0	1468	514	0	0	0	430	9	623
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	24	0	0	7	0	0	0	0	23	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	454	1825	0	0	1475	514	0	0	0	453	9	623
Peak Hour Factor	0.9500	0.9500	0.8170	0.8170	0.9500	0.9500	0.8170	0.8170	0.8170	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	480	0	0	388	135	0	0	0	119	2	164
Total Analysis Volume [veh/h]	478	1921	0	0	1553	541	0	0	0	477	9	656
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	26	80	0	0	54	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	23	77	51	51		37	37	37
g / C, Green / Cycle	0.19	0.64	0.43	0.43		0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.15	0.37	0.23	0.33		0.21	0.23	0.24
s, saturation flow rate [veh/h]	3144	5176	6901	1615		1714	1672	1615
c, Capacity [veh/h]	603	3321	2933	686		529	515	498
d1, Uniform Delay [s]	42.45	4.03	18.57	21.77		30.67	31.42	31.78
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	10.31	0.74	0.69	8.92		7.35	9.72	11.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.58	0.53	0.79		0.69	0.75	0.78
d, Delay for Lane Group [s/veh]	52.76	4.77	19.26	30.69		38.02	41.14	43.16
Lane Group LOS	D	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.15	2.98	6.02	12.06		9.19	10.24	10.57
50th-Percentile Queue Length [ft/ln]	178.72	74.45	150.48	301.59		229.69	256.08	264.16
95th-Percentile Queue Length [veh/ln]	11.53	5.36	10.04	17.76		14.16	15.49	15.90
95th-Percentile Queue Length [ft/ln]	288.35	134.00	251.07	444.00		353.97	387.30	397.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.76	4.77	0.00	0.00	19.26	30.69	0.00	0.00	0.00	38.68	41.14	42.31
Movement LOS	D	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	14.33			22.21			0.00			40.82		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	22.63											
Intersection LOS	C											
Intersection V/C	0.765											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.025

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1788	750	453	1492	0	690	2	468	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	62	0	30	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1818	812	453	1522	0	690	2	470	0	0	0
Peak Hour Factor	0.8530	0.9500	0.9500	0.9500	0.9500	0.8530	0.9500	0.9500	0.9500	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	478	214	119	401	0	182	1	124	0	0	0
Total Analysis Volume [veh/h]	0	1914	855	477	1602	0	726	2	495	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	67	0	21	88	0	0	32	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	64	64	18	85	29	29	29	
g / C, Green / Cycle	0.53	0.53	0.15	0.71	0.24	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.51	0.57	0.15	0.44	0.23	0.23	0.26	
s, saturation flow rate [veh/h]	3618	1633	3144	3618	1714	1769	1615	
c, Capacity [veh/h]	1929	871	472	2562	414	427	390	
d1, Uniform Delay [s]	16.08	17.33	48.00	1.17	39.94	40.25	40.67	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	12.55	47.60	44.32	1.16	33.08	36.80	63.29	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.96	1.06	1.01	0.63	0.95	0.97	1.06	
d, Delay for Lane Group [s/veh]	28.64	64.93	92.32	2.34	73.02	77.05	103.96	
Lane Group LOS	C	F	F	A	E	E	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	20.07	28.95	9.63	1.55	14.42	15.69	17.66	
50th-Percentile Queue Length [ft/ln]	501.67	723.83	240.75	38.84	360.55	392.24	441.42	
95th-Percentile Queue Length [veh/ln]	27.41	39.57	14.80	2.80	20.65	22.19	25.43	
95th-Percentile Queue Length [ft/ln]	685.33	989.21	369.94	69.91	516.25	554.64	635.85	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	29.92	64.93	92.32	2.34	0.00	74.84	77.05	99.21	0.00	0.00	0.00
Movement LOS		C	E	F	A		E	E	F			
d_A, Approach Delay [s/veh]	40.73			22.98			84.88			0.00		
Approach LOS	D			C			F			A		
d_I, Intersection Delay [s/veh]	43.55											
Intersection LOS	D											
Intersection V/C	1.025											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	62.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.049

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	92	0	0	32	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	2131	42	55	1645	293	461	94	180	67	23	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	561	11	14	433	77	121	25	47	18	6	13
Total Analysis Volume [veh/h]	72	2243	44	58	1732	308	485	99	189	71	24	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	75	0	10	75	0	0	45	0	0	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	72	72	7	72	72	42	42	42	42	42	42
g / C, Green / Cycle	0.05	0.55	0.55	0.05	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.04	0.60	0.61	0.03	0.54	0.57	0.36	0.05	0.12	0.06	0.01	0.03
s, saturation flow rate [veh/h]	1714	1900	1887	1714	1900	1804	1343	1900	1615	1108	1900	1615
c, Capacity [veh/h]	92	1052	1045	92	1052	999	442	614	522	309	614	522
d1, Uniform Delay [s]	59.58	17.00	17.00	59.07	15.98	17.00	41.61	26.23	27.97	35.00	25.32	25.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	46.91	54.38	57.15	28.21	21.27	33.87	71.41	0.56	1.95	1.73	0.12	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	1.09	1.09	0.63	0.97	1.02	1.10	0.16	0.36	0.23	0.04	0.10
d, Delay for Lane Group [s/veh]	106.49	71.38	74.15	87.28	37.25	50.87	113.03	26.79	29.91	36.72	25.44	26.16
Lane Group LOS	F	F	F	F	D	F	F	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.51	38.42	38.97	2.56	26.31	30.79	23.05	1.97	4.08	1.80	0.46	1.04
50th-Percentile Queue Length [ft/ln]	87.68	960.56	974.21	64.11	657.75	769.66	576.28	49.33	102.07	44.95	11.50	26.12
95th-Percentile Queue Length [veh/ln]	6.31	51.99	52.92	4.62	34.72	40.59	32.80	3.55	7.35	3.24	0.83	1.88
95th-Percentile Queue Length [ft/ln]	157.83	1299.68	1323.01	115.40	868.06	1014.71	820.09	88.79	183.72	80.92	20.71	47.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	106.49	72.74	74.15	87.28	42.85	50.87	113.03	26.79	29.91	36.72	25.44	26.16
Movement LOS	F	F	E	F	D	D	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	73.79			45.25			81.66			31.11		
Approach LOS	E			D			F			C		
d_I, Intersection Delay [s/veh]	62.62											
Intersection LOS	E											
Intersection V/C	1.049											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	103	1988	42	36	1725	107	137	2	75	50	11	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	96	0	0	32	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	2084	42	36	1757	107	137	2	75	50	11	89
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	548	11	9	462	28	36	1	20	13	3	23
Total Analysis Volume [veh/h]	113	2194	44	38	1849	113	144	2	79	53	12	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	98	0	10	94	0	0	22	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	95	95	7	91	91	19	19	19	19	19
g / C, Green / Cycle	0.08	0.73	0.73	0.05	0.70	0.70	0.15	0.15	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.07	0.59	0.59	0.02	0.52	0.53	0.12	0.05	0.04	0.01	0.06
s, saturation flow rate [veh/h]	1714	1900	1887	1714	1900	1862	1229	1615	1437	1900	1615
c, Capacity [veh/h]	145	1388	1379	92	1330	1304	235	236	72	278	236
d1, Uniform Delay [s]	56.48	0.57	0.57	58.36	1.78	1.81	52.19	46.89	61.59	44.95	47.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	32.88	5.09	5.29	13.01	3.69	4.05	11.82	3.79	48.51	0.29	4.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.81	0.81	0.41	0.74	0.75	0.62	0.33	0.73	0.04	0.40
d, Delay for Lane Group [s/veh]	89.36	5.65	5.86	71.37	5.47	5.86	64.02	50.68	110.09	45.25	52.30
Lane Group LOS	F	A	A	E	A	A	E	D	F	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.85	2.73	2.80	1.53	3.32	3.43	5.20	2.43	2.69	0.34	2.95
50th-Percentile Queue Length [ft/ln]	121.36	68.35	69.97	38.14	83.01	85.75	130.04	60.78	67.13	8.52	73.65
95th-Percentile Queue Length [veh/ln]	8.47	4.92	5.04	2.75	5.98	6.17	8.94	4.38	4.83	0.61	5.30
95th-Percentile Queue Length [ft/ln]	211.70	123.04	125.94	68.65	149.42	154.36	223.54	109.40	120.84	15.33	132.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	89.36	5.75	5.86	71.37	5.65	5.86	64.02	64.02	50.68	110.09	45.25	52.30
Movement LOS	F	A	A	E	A	A	E	E	D	F	D	D
d_A, Approach Delay [s/veh]	9.78			6.91			59.33			71.03		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	12.98											
Intersection LOS	B											
Intersection V/C	0.770											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	125	2108	1863	100	65	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	32	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	2208	1895	100	65	155
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	581	499	26	17	41
Total Analysis Volume [veh/h]	132	2324	1995	105	68	163
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	16	110	94	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	107	91	91	17	17
g / C, Green / Cycle	0.10	0.82	0.70	0.70	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.08	0.64	0.55	0.56	0.04	0.10
s, saturation flow rate [veh/h]	1714	3618	1900	1867	1714	1615
c, Capacity [veh/h]	171	2978	1330	1307	224	211
d1, Uniform Delay [s]	54.89	0.96	1.91	1.95	48.50	51.82
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.73	2.10	4.83	5.31	3.46	23.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.15	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.78	0.79	0.80	0.30	0.77
d, Delay for Lane Group [s/veh]	82.61	3.07	6.74	7.26	51.96	75.28
Lane Group LOS	F	A	A	A	D	E
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.39	2.26	3.90	4.05	2.13	6.27
50th-Percentile Queue Length [ft/ln]	134.66	56.39	97.46	101.18	53.21	156.69
95th-Percentile Queue Length [veh/ln]	9.19	4.06	7.02	7.29	3.83	10.37
95th-Percentile Queue Length [ft/ln]	229.81	101.50	175.43	182.13	95.78	259.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.61	3.07	6.98	7.26	51.96	75.28
Movement LOS	F	A	A	A	D	E
d_A, Approach Delay [s/veh]	7.34		7.00		68.42	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	10.14					
Intersection LOS	B					
Intersection V/C	0.779					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	50.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.249

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	147	1381	103	124	1215	402	453	525	160	42	234	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	32	100	42	0	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	1381	103	124	1215	434	553	567	160	42	248	126
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	363	27	33	320	114	146	149	42	11	65	33
Total Analysis Volume [veh/h]	155	1454	108	131	1279	457	582	597	168	44	261	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	36	0	11	34	0	38	28	0	38	88	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	10	33	33	8	31	31	35	0	0	35	0	0
g / C, Green / Cycle	0.12	0.39	0.39	0.09	0.36	0.36	0.41	0.00	0.00	0.41	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.24	0.41	0.42	0.20	0.35	0.28	0.51	0.31	0.10	0.05	0.14	0.08
s, saturation flow rate [veh/h]	654	1900	1855	654	3618	1615	1136	1900	1615	834	1900	1615
c, Capacity [veh/h]	146	738	720	131	1319	589	526	0	0	409	0	0
d1, Uniform Delay [s]	39.15	20.50	20.50	40.11	21.37	18.97	22.82	0.00	0.00	12.77	0.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	91.23	51.54	56.97	78.94	18.47	9.66	71.83	0.00	0.00	0.53	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.06	1.06	1.08	1.00	0.97	0.78	1.11	0.00	0.00	0.11	0.00	0.00
d, Delay for Lane Group [s/veh]	130.38	72.04	77.47	119.05	39.84	28.62	94.66	0.00	0.00	13.30	0.00	0.00
Lane Group LOS	F	F	F	F	D	C	F	A	A	B	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	6.62	22.10	22.65	5.57	13.41	7.66	20.85	0.00	0.00	0.47	0.00	0.00
50th-Percentile Queue Length [ft/ln]	165.45	552.39	566.34	139.29	335.14	191.49	521.23	0.00	0.00	11.67	0.00	0.00
95th-Percentile Queue Length [veh/ln]	11.09	31.12	32.10	9.45	19.41	12.20	30.36	0.00	0.00	0.84	0.00	0.00
95th-Percentile Queue Length [ft/ln]	277.15	777.99	802.53	236.16	485.26	304.96	759.01	0.00	0.00	21.00	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	130.38	74.54	77.47	119.05	39.84	28.62	94.66	0.00	0.00	13.30	0.00	0.00
Movement LOS	F	E	E	F	D	C	F	A	A	B	A	A
d_A, Approach Delay [s/veh]	79.76			42.65			40.90			1.34		
Approach LOS	E			D			D			A		
d_I, Intersection Delay [s/veh]	50.71											
Intersection LOS	D											
Intersection V/C	1.249											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	49.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.955

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	82	770	3	2	857	174	502	76	171	2	22	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	8	25	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	770	3	2	857	182	527	76	188	2	22	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	203	1	1	226	48	139	20	49	1	6	2
Total Analysis Volume [veh/h]	93	811	3	2	902	192	555	80	198	2	23	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	45	0	10	44	0	0	75	0	0	75	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	42	42	7	41	41	72	72
g / C, Green / Cycle	0.06	0.32	0.32	0.05	0.32	0.32	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.21	0.00	0.30	0.30	0.56	0.02
s, saturation flow rate [veh/h]	1714	1900	1898	1714	1900	1786	1489	1837
c, Capacity [veh/h]	105	614	613	92	599	563	871	1047
d1, Uniform Delay [s]	59.20	31.37	31.37	57.15	36.50	36.52	17.26	7.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	59.83	5.58	5.58	0.43	24.72	25.93	21.57	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

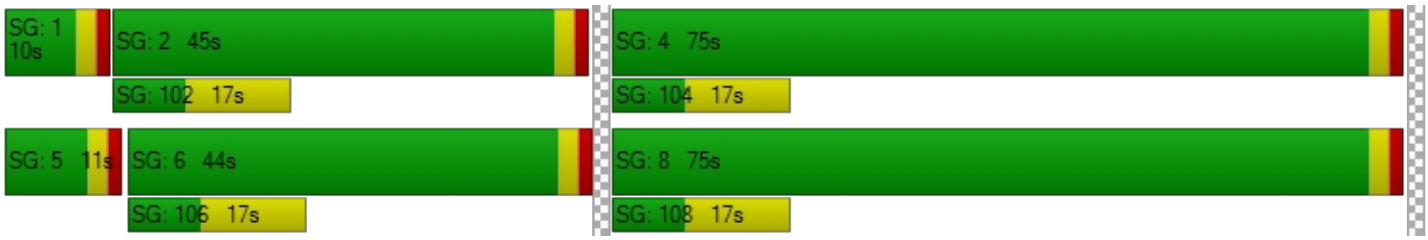
X, volume / capacity	0.88	0.66	0.66	0.02	0.94	0.94	0.96	0.03
d, Delay for Lane Group [s/veh]	119.03	36.94	36.95	57.58	61.22	62.44	38.83	7.72
Lane Group LOS	F	D	D	E	E	E	D	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.73	10.48	10.47	0.07	20.04	19.05	23.47	0.27
50th-Percentile Queue Length [ft/ln]	118.29	261.98	261.68	1.81	501.09	476.30	586.81	6.66
95th-Percentile Queue Length [veh/ln]	8.30	15.79	15.77	0.13	27.39	26.21	31.42	0.48
95th-Percentile Queue Length [ft/ln]	207.48	394.71	394.32	3.26	684.65	655.26	785.45	11.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	119.03	36.95	36.95	57.58	61.68	62.44	38.83	38.83	38.83	7.72	7.72	7.72
Movement LOS	F	D	D	E	E	E	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	45.36			61.81			38.83			7.72		
Approach LOS	D			E			D			A		
d_I, Intersection Delay [s/veh]	49.33											
Intersection LOS	D											
Intersection V/C	0.955											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 15 Year 2035 With Project Morning Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\AM35W1-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.060	46.4	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.974	44.6	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.558	21.1	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.431	3.6	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.898	36.9	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.711	13.4	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.607	10.3	B
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	SB Left	0.613	15.7	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.527	5.8	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.581	9.9	A
25	Agua Mansa Rd (NS) at Holly St (EW)	Signalized	HCM 2010	SB Left	0.448	8.6	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.782	30.8	C
30	Market St (NS) at Hall Ave (EW)	Signalized	HCM 2010	NB Left	0.789	7.3	A
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.706	11.5	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.801	20.1	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.927	24.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	46.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.060

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	8	0	0	24	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	409	1447	0	0	1211	841	0	0	0	592	0	574
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	108	381	0	0	319	221	0	0	0	156	0	151
Total Analysis Volume [veh/h]	431	1523	0	0	1275	885	0	0	0	623	0	604
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	33	101	0	0	68	0	0	0	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	30	98	65	65		26	26	26
g / C, Green / Cycle	0.23	0.75	0.50	0.50		0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.25	0.42	0.25	0.55		0.17	0.17	0.21
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1810	2859
c, Capacity [veh/h]	396	2727	2588	808		362	362	572
d1, Uniform Delay [s]	45.00	0.84	13.48	21.67		45.94	45.94	47.67
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	71.47	0.83	0.67	61.16		22.59	22.59	53.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.27	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.09	0.56	0.49	1.10		0.86	0.86	1.06
d, Delay for Lane Group [s/veh]	116.47	1.67	14.16	82.83		68.54	68.54	101.10
Lane Group LOS	F	A	B	F		E	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.94	1.23	5.35	33.56		11.42	11.42	13.07
50th-Percentile Queue Length [ft/ln]	498.56	30.64	133.64	839.08		285.57	285.57	326.65
95th-Percentile Queue Length [veh/ln]	28.63	2.21	9.14	46.21		16.97	16.97	19.55
95th-Percentile Queue Length [ft/ln]	715.67	55.15	228.43	1155.37		424.14	424.14	488.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	116.47	1.67	0.00	0.00	14.16	82.83	0.00	0.00	0.00	68.54	68.54	101.10
Movement LOS	F	A			B	F				E	E	F
d_A, Approach Delay [s/veh]	27.00			42.29			0.00			84.56		
Approach LOS	C			D			A			F		
d_I, Intersection Delay [s/veh]	46.41											
Intersection LOS	D											
Intersection V/C	1.060											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.974

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	1	0	26	0	0	0	61	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1185	483	526	1309	0	669	0	600	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	312	127	138	344	0	176	0	158	0	0	0
Total Analysis Volume [veh/h]	0	1247	508	554	1378	0	704	0	632	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	44	0	45	89	0	0	41	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	41	41	42	86	38	38	38	
g / C, Green / Cycle	0.32	0.32	0.32	0.66	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.38	0.26	0.27	0.29	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1632	1530	
c, Capacity [veh/h]	1632	509	554	2393	501	477	447	
d1, Uniform Delay [s]	33.54	37.61	37.00	3.29	37.69	38.46	39.59	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.46	39.24	38.31	1.02	20.39	27.58	41.52	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.76	1.00	1.00	0.58	0.89	0.93	1.00	
d, Delay for Lane Group [s/veh]	36.99	76.85	75.31	4.31	58.08	66.04	81.11	
Lane Group LOS	D	E	F	A	E	E	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.98	20.50	22.15	2.92	15.23	16.39	18.40	
50th-Percentile Queue Length [ft/ln]	274.56	512.40	553.81	73.07	380.80	409.75	459.94	
95th-Percentile Queue Length [veh/ln]	16.42	27.92	29.88	5.26	21.63	23.03	25.43	
95th-Percentile Queue Length [ft/ln]	410.43	698.01	746.92	131.53	540.81	575.73	635.80	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	36.99	76.85	75.31	4.31	0.00	61.00	66.04	76.66	0.00	0.00	0.00
Movement LOS		D	E	F	A		E	E	E			
d_A, Approach Delay [s/veh]	48.53			24.67			68.41			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	44.64											
Intersection LOS	D											
Intersection V/C	0.974											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.558

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	32	0	0	117	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	919	56	117	1136	58	102	144	90	72	93	168
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	242	15	31	299	15	27	38	24	19	24	44
Total Analysis Volume [veh/h]	62	967	59	123	1196	61	107	152	95	76	98	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	68	0	19	76	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	65	65	16	73	73	35	35	35	35
g / C, Green / Cycle	0.06	0.52	0.52	0.13	0.58	0.58	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.27	0.07	0.33	0.33	0.10	0.14	0.07	0.16
s, saturation flow rate [veh/h]	1714	1900	1862	1714	1900	1868	1122	1779	1151	1706
c, Capacity [veh/h]	110	988	968	219	1110	1091	209	498	239	478
d1, Uniform Delay [s]	55.49	11.72	11.72	48.61	7.59	7.60	45.86	32.38	41.90	33.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.40	1.99	2.03	9.96	2.13	2.18	8.64	3.50	3.49	4.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.52	0.52	0.56	0.57	0.57	0.51	0.50	0.32	0.58
d, Delay for Lane Group [s/veh]	74.89	13.71	13.75	58.57	9.72	9.78	54.50	35.88	45.39	38.22
Lane Group LOS	E	B	B	E	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.45	6.08	5.98	4.05	5.39	5.33	3.52	5.91	2.20	6.94
50th-Percentile Queue Length [ft/ln]	61.28	152.12	149.40	101.16	134.71	133.23	87.99	147.85	54.94	173.39
95th-Percentile Queue Length [veh/ln]	4.41	10.13	9.99	7.28	9.20	9.12	6.34	9.90	3.96	11.25
95th-Percentile Queue Length [ft/ln]	110.30	253.25	249.63	182.09	229.88	227.88	158.38	247.55	98.90	281.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.89	13.73	13.75	58.57	9.75	9.78	54.50	35.88	35.88	45.39	38.22	38.22
Movement LOS	E	B	B	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.22			14.10			41.51			39.77		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	21.07											
Intersection LOS	C											
Intersection V/C	0.558											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	261	1	1	68	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1178	1	1	1322	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	295	0	0	331	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1178	1	1	1322	11	6	0	18	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	104	104	0	101	101	4	4	4	4
g / C, Green / Cycle	0.03	0.86	0.86	0.00	0.84	0.84	0.03	0.03	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.33	0.00	0.00	0.37	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1417	1900
c, Capacity [veh/h]	54	3125	1395	5	3028	1352	90	54	74	64
d1, Uniform Delay [s]	57.25	1.66	1.12	59.81	2.52	1.61	57.91	56.79	58.95	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.35	0.00	16.49	0.46	0.01	0.31	3.53	0.07	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.38	0.00	0.19	0.44	0.01	0.07	0.33	0.01	0.00
d, Delay for Lane Group [s/veh]	61.50	2.00	1.12	76.30	2.98	1.62	58.22	60.32	59.02	0.00
Lane Group LOS	E	A	A	E	A	A	E	E	E	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	1.57	0.00	0.05	2.81	0.03	0.19	0.59	0.03	0.00
50th-Percentile Queue Length [ft/ln]	16.51	39.28	0.05	1.36	70.30	0.80	4.69	14.70	0.79	0.00
95th-Percentile Queue Length [veh/ln]	1.19	2.83	0.00	0.10	5.06	0.06	0.34	1.06	0.06	0.00
95th-Percentile Queue Length [ft/ln]	29.71	70.71	0.09	2.46	126.53	1.44	8.43	26.46	1.42	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	2.00	1.12	76.30	2.98	1.62	58.22	60.32	60.32	59.02	0.00	0.00
Movement LOS	E	A	A	E	A	A	E	E	E	E	A	A
d_A, Approach Delay [s/veh]	3.00			3.02			59.80			59.02		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.56											
Intersection LOS	A											
Intersection V/C	0.431											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	36.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	115	9	39	30	0	0	0	0	4	0	147
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	433	408	663	684	38	61	117	52	415	87	569
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	108	102	166	171	10	15	29	13	104	22	142
Total Analysis Volume [veh/h]	32	433	408	663	684	38	61	117	52	415	87	569
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	28	38	0	11	21	0	40	50	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	24	52	23	43	43	6	23	24	41	41
g / C, Green / Cycle	0.04	0.22	0.47	0.21	0.39	0.39	0.05	0.21	0.22	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.25	0.19	0.19	0.02	0.03	0.09	0.12	0.05	0.35
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1802	3514	1900	1615
c, Capacity [veh/h]	73	795	765	730	1401	625	99	377	765	708	602
d1, Uniform Delay [s]	51.64	38.09	20.40	42.62	25.51	21.19	50.98	38.00	38.23	22.72	33.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.05	2.67	2.65	4.72	1.22	0.19	6.20	0.83	0.60	0.08	8.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.54	0.53	0.91	0.49	0.06	0.62	0.45	0.54	0.12	0.95
d, Delay for Lane Group [s/veh]	55.69	40.76	23.06	47.33	26.73	21.37	57.17	38.83	38.83	22.80	41.83
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.94	5.45	7.77	9.20	6.91	0.65	1.81	4.06	5.02	1.50	15.72
50th-Percentile Queue Length [ft/ln]	23.62	136.14	194.13	230.12	172.85	16.21	45.34	101.47	125.45	37.55	393.10
95th-Percentile Queue Length [veh/ln]	1.70	9.27	12.34	14.18	11.23	1.17	3.26	7.31	8.69	2.70	22.23
95th-Percentile Queue Length [ft/ln]	42.51	231.82	308.38	354.51	280.65	29.18	81.61	182.64	217.30	67.59	555.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.69	40.76	23.06	47.33	26.73	21.37	57.17	38.83	38.83	38.83	22.80	41.83
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	33.03			36.45			43.70			39.12		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	36.88											
Intersection LOS	D											
Intersection V/C	0.898											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	816	96	290	917	1	4	24	64	8	3	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	204	24	73	229	0	1	6	16	2	1	5
Total Analysis Volume [veh/h]	26	816	96	290	917	1	4	24	64	8	3	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	57	78	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	10	29	29	5	2
g / C, Green / Cycle	0.32	0.32	0.32	0.20	0.60	0.60	0.10	0.05
(v / s)_i Volume / Saturation Flow Rate	0.04	0.24	0.24	0.16	0.24	0.24	0.05	0.02
s, saturation flow rate [veh/h]	618	1900	1831	1810	1900	1899	1689	1689
c, Capacity [veh/h]	241	601	579	370	1145	1145	174	82
d1, Uniform Delay [s]	18.38	15.10	15.10	18.38	5.07	5.07	20.77	22.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	2.16	2.24	3.66	0.23	0.23	2.49	2.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.77	0.77	0.78	0.40	0.40	0.53	0.37
d, Delay for Lane Group [s/veh]	18.57	17.26	17.34	22.04	5.30	5.30	23.26	25.22
Lane Group LOS	B	B	B	C	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.25	4.27	4.13	3.10	1.58	1.58	1.02	0.37
50th-Percentile Queue Length [ft/ln]	6.17	106.83	103.26	77.38	39.51	39.50	25.50	9.17
95th-Percentile Queue Length [veh/ln]	0.44	7.66	7.43	5.57	2.84	2.84	1.84	0.66
95th-Percentile Queue Length [ft/ln]	11.10	191.58	185.86	139.29	71.12	71.10	45.90	16.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.57	17.29	17.34	22.04	5.30	5.30	23.26	23.26	23.26	25.22	25.22	25.22
Movement LOS	B	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.33			9.32			23.26			25.22		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	13.41											
Intersection LOS	B											
Intersection V/C	0.711											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	871	97	63	938	0	0	0	3	44	3	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	218	24	16	235	0	0	0	1	11	1	3
Total Analysis Volume [veh/h]	9	871	97	63	938	0	0	0	3	44	3	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	35	0	43	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	12	12	3	15	15	0	3
g / C, Green / Cycle	0.02	0.36	0.36	0.09	0.43	0.43	0.01	0.09
(v / s)_i Volume / Saturation Flow Rate	0.00	0.26	0.26	0.03	0.25	0.25	0.00	0.03
s, saturation flow rate [veh/h]	1810	1900	1834	1810	1900	1900	1615	1768
c, Capacity [veh/h]	31	677	653	168	821	821	10	158
d1, Uniform Delay [s]	17.06	9.83	9.83	14.98	7.53	7.53	17.39	15.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.05	1.52	1.57	1.38	0.63	0.63	17.62	1.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

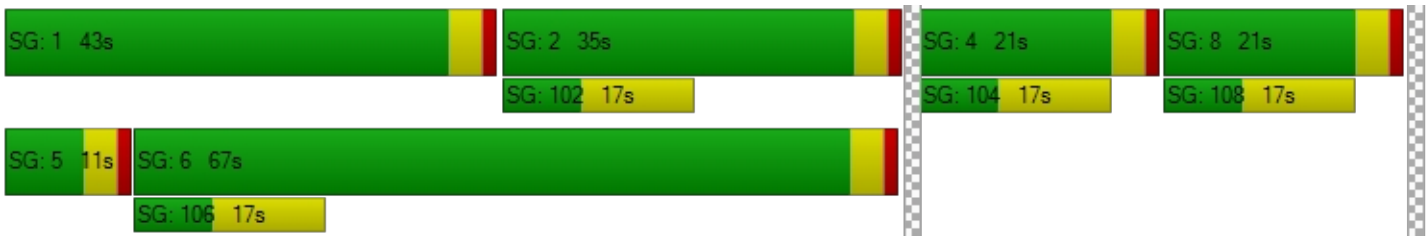
X, volume / capacity	0.29	0.73	0.73	0.38	0.57	0.57	0.31	0.38
d, Delay for Lane Group [s/veh]	22.11	11.34	11.40	16.36	8.16	8.16	35.01	16.56
Lane Group LOS	C	B	B	B	A	A	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.10	2.54	2.46	0.45	1.79	1.79	0.07	0.44
50th-Percentile Queue Length [ft/ln]	2.60	63.39	61.44	11.32	44.85	44.85	1.68	10.92
95th-Percentile Queue Length [veh/ln]	0.19	4.56	4.42	0.81	3.23	3.23	0.12	0.79
95th-Percentile Queue Length [ft/ln]	4.68	114.11	110.59	20.37	80.74	80.74	3.02	19.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.11	11.37	11.40	16.36	8.16	8.16	35.01	35.01	35.01	16.56	16.56	16.56
Movement LOS	C	B	B	B	A	A	D	D	D	B	B	B
d_A, Approach Delay [s/veh]	11.47			8.67			35.01			16.56		
Approach LOS	B			A			D			B		
d_I, Intersection Delay [s/veh]	10.28											
Intersection LOS	B											
Intersection V/C	0.607											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.613

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	124	0	0	34	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	938	65	9	964	49	58	116	115	85	62	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	235	16	2	241	12	15	29	29	21	16	3
Total Analysis Volume [veh/h]	161	938	65	9	964	49	58	116	115	85	62	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	28	0	11	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	33	33	1	27	27	14	14	14	14
g / C, Green / Cycle	0.11	0.54	0.54	0.02	0.45	0.45	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.09	0.27	0.27	0.00	0.27	0.27	0.04	0.13	0.07	0.04
s, saturation flow rate [veh/h]	1810	1900	1857	1810	1900	1868	1349	1747	1168	1855
c, Capacity [veh/h]	208	1036	1013	30	849	835	352	416	220	442
d1, Uniform Delay [s]	25.81	8.47	8.47	29.18	12.56	12.56	21.49	20.07	27.06	18.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.06	1.65	1.69	5.45	3.14	3.20	0.22	1.16	1.11	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.49	0.49	0.30	0.60	0.60	0.16	0.56	0.39	0.16
d, Delay for Lane Group [s/veh]	31.88	10.12	10.16	34.63	15.70	15.75	21.71	21.23	28.16	18.29
Lane Group LOS	C	B	B	C	B	B	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.45	3.73	3.66	0.17	5.17	5.10	0.68	2.74	1.20	0.76
50th-Percentile Queue Length [ft/ln]	61.22	93.27	91.54	4.19	129.35	127.48	17.05	68.60	29.98	18.89
95th-Percentile Queue Length [veh/ln]	4.41	6.72	6.59	0.30	8.90	8.80	1.23	4.94	2.16	1.36
95th-Percentile Queue Length [ft/ln]	110.20	167.89	164.78	7.55	222.61	220.06	30.70	123.48	53.97	33.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.88	10.14	10.16	34.63	15.72	15.75	21.71	21.23	21.23	28.16	18.29	18.29
Movement LOS	C	B	B	C	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	13.15			15.89			21.33			23.64		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.74											
Intersection LOS	B											
Intersection V/C	0.613											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	0	1	0	0	0	0	15	22	4	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	3	5	10	11	12	3	165	169	15	180	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	1	1	3	3	3	1	41	42	4	45	2
Total Analysis Volume [veh/h]	124	3	5	10	11	12	3	165	169	15	180	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	3	3	6	6	6	6
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.00	0.01	0.01	0.00	0.19	0.01	0.10
s, saturation flow rate [veh/h]	1410	1711	1430	1740	1217	1744	1063	1889
c, Capacity [veh/h]	544	342	556	348	611	584	492	632
d1, Uniform Delay [s]	7.83	5.53	7.08	5.57	6.11	4.71	7.56	4.22
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.03	0.01	0.08	0.00	0.89	0.02	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.02	0.02	0.07	0.00	0.57	0.03	0.29
d, Delay for Lane Group [s/veh]	8.04	5.55	7.09	5.65	6.11	5.59	7.58	4.48
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	0.01	0.02	0.03	0.00	0.26	0.03	0.10
50th-Percentile Queue Length [ft/ln]	5.71	0.25	0.41	0.72	0.10	6.39	0.67	2.52
95th-Percentile Queue Length [veh/ln]	0.41	0.02	0.03	0.05	0.01	0.46	0.05	0.18
95th-Percentile Queue Length [ft/ln]	10.28	0.45	0.73	1.30	0.17	11.50	1.21	4.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.04	5.55	5.55	7.09	5.65	5.65	6.11	5.59	5.59	7.58	4.48	4.48
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.89			6.09			5.60			4.71		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.80											
Intersection LOS	A											
Intersection V/C	0.527											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	50	548	648	95	75	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	66	60	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	572	714	155	91	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	143	179	39	23	18
Total Analysis Volume [veh/h]	50	572	714	155	91	72
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	109	98	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	105	94	17	17
g / C, Green / Cycle	0.05	0.81	0.72	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.30	0.47	0.05	0.04
s, saturation flow rate [veh/h]	1714	1900	1842	1714	1615
c, Capacity [veh/h]	92	1535	1332	224	211
d1, Uniform Delay [s]	58.78	0.68	0.75	49.18	48.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.92	0.70	2.50	5.38	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.18	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.37	0.65	0.41	0.34
d, Delay for Lane Group [s/veh]	79.71	1.37	3.25	54.56	53.09
Lane Group LOS	E	A	A	D	D
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.12	0.93	1.78	2.93	2.29
50th-Percentile Queue Length [ft/ln]	52.90	23.24	44.44	73.24	57.26
95th-Percentile Queue Length [veh/ln]	3.81	1.67	3.20	5.27	4.12
95th-Percentile Queue Length [ft/ln]	95.23	41.84	79.99	131.83	103.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.71	1.37	3.25	3.25	54.56	53.09
Movement LOS	E	A	A	A	D	D
d_A, Approach Delay [s/veh]	7.67		3.25		53.91	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	9.90					
Intersection LOS	A					
Intersection V/C	0.581					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	591	70	116	689	11	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	0	0	66	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	615	70	116	755	11	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	18	29	189	3	12
Total Analysis Volume [veh/h]	615	70	116	755	11	49
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	130	0	130	130	130	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	87	0	22	109	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	83	83	18	105	17	17
g / C, Green / Cycle	0.64	0.64	0.14	0.81	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.18	0.19	0.07	0.40	0.01	0.03
s, saturation flow rate [veh/h]	1900	1834	1714	1900	1714	1615
c, Capacity [veh/h]	1213	1171	237	1535	224	211
d1, Uniform Delay [s]	3.84	3.85	48.88	0.72	46.94	48.05
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	0.63	7.03	1.13	0.41	2.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.18	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.29	0.49	0.49	0.05	0.23
d, Delay for Lane Group [s/veh]	4.42	4.49	55.91	1.85	47.35	50.61
Lane Group LOS	A	A	E	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.74	1.76	3.77	1.34	0.33	1.52
50th-Percentile Queue Length [ft/ln]	43.60	43.96	94.37	33.51	8.14	37.90
95th-Percentile Queue Length [veh/ln]	3.14	3.17	6.79	2.41	0.59	2.73
95th-Percentile Queue Length [ft/ln]	78.49	79.14	169.86	60.31	14.64	68.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.45	4.49	55.91	1.85	47.35	50.61
Movement LOS	A	A	E	A	D	D
d_A, Approach Delay [s/veh]	4.45		9.05		50.01	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.62					
Intersection LOS	A					
Intersection V/C	0.448					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.782

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	4	9	39	0	0	147	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	275	6	491	516	697	14	3	602	309
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	69	2	123	129	174	4	1	151	77
Total Analysis Volume [veh/h]	11	6	3	275	6	491	516	697	14	3	602	309
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	28	0	0	28	0	54	71	0	11	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	24	34	73	73	1	40	40
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.22	0.31	0.67	0.67	0.01	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.19	0.00	0.17	0.29	0.19	0.01	0.00	0.17	0.19
s, saturation flow rate [veh/h]	1526	1615	1432	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	387	353	338	415	625	556	2409	1076	12	1321	590
d1, Uniform Delay [s]	33.97	33.73	44.75	33.77	40.65	36.98	7.62	6.20	54.49	26.66	27.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.01	4.78	0.01	2.24	7.29	0.30	0.02	10.55	1.14	3.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.01	0.81	0.01	0.79	0.93	0.29	0.01	0.25	0.46	0.52
d, Delay for Lane Group [s/veh]	34.02	33.74	49.53	33.79	42.88	44.27	7.92	6.22	65.04	27.79	30.79
Lane Group LOS	C	C	D	C	D	D	A	A	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.37	0.06	7.90	0.13	6.43	14.35	3.26	0.11	0.12	6.17	6.85
50th-Percentile Queue Length [ft/ln]	9.14	1.60	197.52	3.20	160.67	358.69	81.49	2.75	2.94	154.34	171.36
95th-Percentile Queue Length [veh/ln]	0.66	0.12	12.51	0.23	10.58	20.56	5.87	0.20	0.21	10.25	11.15
95th-Percentile Queue Length [ft/ln]	16.45	2.89	312.77	5.77	264.61	513.99	146.68	4.95	5.30	256.21	278.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.02	34.02	33.74	49.53	33.79	42.88	44.27	7.92	6.22	65.04	27.79	30.79
Movement LOS	C	C	C	D	C	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	33.98			45.18			23.19			28.93		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	30.84											
Intersection LOS	C											
Intersection V/C	0.782											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.789

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	770	911	23	21	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	189	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	959	965	23	21	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	240	241	6	5	7
Total Analysis Volume [veh/h]	22	959	965	23	21	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	120	120	120	0	120	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	78	67	0	42	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	40	40	40	40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	29	23	3	3
g / C, Green / Cycle	0.04	0.72	0.59	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.50	0.52	0.01	0.02
s, saturation flow rate [veh/h]	1810	1900	1892	1810	1615
c, Capacity [veh/h]	69	1377	1110	136	122
d1, Uniform Delay [s]	18.75	3.06	7.16	17.33	17.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.57	0.64	2.69	0.52	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.70	0.89	0.15	0.24
d, Delay for Lane Group [s/veh]	21.32	3.70	9.85	17.84	18.44
Lane Group LOS	C	A	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	0.58	4.36	0.18	0.25
50th-Percentile Queue Length [ft/ln]	5.58	14.48	108.98	4.41	6.29
95th-Percentile Queue Length [veh/ln]	0.40	1.04	7.78	0.32	0.45
95th-Percentile Queue Length [ft/ln]	10.04	26.06	194.59	7.94	11.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.32	3.70	9.85	9.85	17.84	18.44
Movement LOS	C	A	A	A	B	B
d_A, Approach Delay [s/veh]	4.10		9.85		18.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.26					
Intersection LOS	A					
Intersection V/C	0.789					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	852
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	0	0	54	0	0	0	0	0	0	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	277	506	0	0	1314	172	0	0	0	150	0	1007
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	69	127	0	0	329	43	0	0	0	38	0	0
Total Analysis Volume [veh/h]	277	506	0	0	1314	172	0	0	0	150	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	29	54	0	0	25	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		L	R
C, Cycle Length [s]	44	44	44	44		44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	9	30	17	17		6	6
g / C, Green / Cycle	0.20	0.68	0.39	0.39		0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.27	0.28		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1790		1810	1615
c, Capacity [veh/h]	362	2471	1418	702		243	217
d1, Uniform Delay [s]	16.58	2.56	11.16	11.21		17.91	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.41	0.04	0.63	1.32		2.53	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

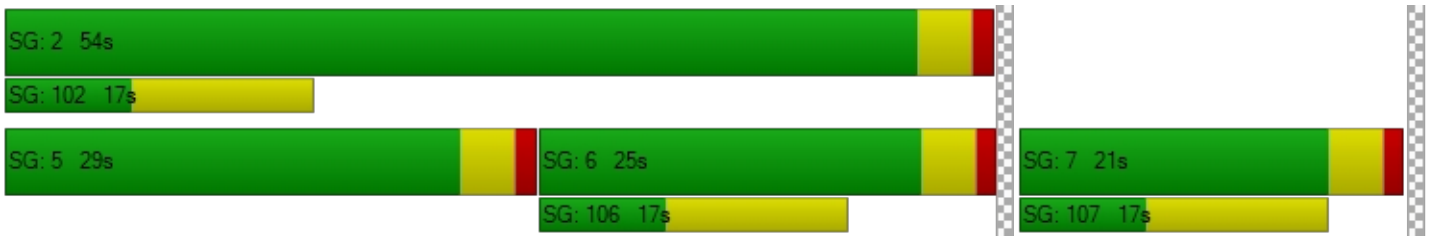
X, volume / capacity	0.77	0.20	0.70	0.71		0.62	0.00
d, Delay for Lane Group [s/veh]	19.98	2.60	11.80	12.52		20.44	0.00
Lane Group LOS	B	A	B	B		C	A
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	2.58	0.30	3.20	3.34		1.42	0.00
50th-Percentile Queue Length [ft/ln]	64.54	7.50	80.02	83.62		35.51	0.00
95th-Percentile Queue Length [veh/ln]	4.65	0.54	5.76	6.02		2.56	0.00
95th-Percentile Queue Length [ft/ln]	116.18	13.51	144.04	150.52		63.91	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.98	2.60	0.00	0.00	11.97	12.52	0.00	0.00	0.00	20.44	0.00	0.00
Movement LOS	B	A			B	B				C		A
d_A, Approach Delay [s/veh]	8.75			12.04			0.00			20.44		
Approach LOS	A			B			A			C		
d_I, Intersection Delay [s/veh]	11.50											
Intersection LOS	B											
Intersection V/C	0.706											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	0	45	9	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	541	173	601	886	0	182	0	963	0	0	3
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	135	43	150	222	0	46	0	241	0	0	1
Total Analysis Volume [veh/h]	0	541	173	601	886	0	182	0	963	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	20	41	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	67	67	67	67	67	67	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	13	13	15	32	27	27	
g / C, Green / Cycle	0.20	0.20	0.22	0.48	0.40	0.40	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.17	0.24	0.10	0.34	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	716	320	773	1728	729	1152	
d1, Uniform Delay [s]	25.36	24.15	24.61	12.12	13.28	18.02	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.65	1.42	1.73	0.24	0.18	1.68	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.76	0.54	0.78	0.51	0.25	0.84	
d, Delay for Lane Group [s/veh]	27.01	25.58	26.34	12.35	13.46	19.70	
Lane Group LOS	C	C	C	B	B	B	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.99	2.46	4.39	4.06	1.70	6.23	
50th-Percentile Queue Length [ft/ln]	99.68	61.38	109.86	101.49	42.44	155.79	
95th-Percentile Queue Length [veh/ln]	7.18	4.42	7.83	7.31	3.06	10.33	
95th-Percentile Queue Length [ft/ln]	179.42	110.48	195.81	182.69	76.39	258.13	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	27.01	25.58	26.34	12.35	0.00	13.46	0.00	19.70	0.00	0.00	0.00
Movement LOS		C	C	C	B		B		B			
d_A, Approach Delay [s/veh]	26.66			18.00			18.71			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	20.09											
Intersection LOS	C											
Intersection V/C	0.801											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.927

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	0	83	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1256	14	40	1938	294	309	19	75	43	23	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	331	4	11	510	77	81	5	20	11	6	19
Total Analysis Volume [veh/h]	71	1322	15	42	2040	309	325	20	79	45	24	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	83	0	10	83	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	80	80	7	80	80	34	34	34	34	34	34
g / C, Green / Cycle	0.05	0.62	0.62	0.05	0.62	0.62	0.26	0.26	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.35	0.35	0.02	0.60	0.20	0.25	0.01	0.05	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1892	1714	3427	1530	1314	1900	1615	1317	1900	1615
c, Capacity [veh/h]	92	1169	1165	92	2109	942	335	497	422	335	497	422
d1, Uniform Delay [s]	59.54	5.88	5.88	58.50	10.53	5.07	47.41	31.56	32.70	36.86	31.62	32.67
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	2.04	2.05	15.32	13.27	0.93	41.96	0.15	0.98	0.83	0.18	0.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.57	0.57	0.46	0.97	0.33	0.97	0.04	0.19	0.13	0.05	0.18
d, Delay for Lane Group [s/veh]	104.80	7.92	7.93	73.83	23.80	6.00	89.37	31.71	33.68	37.69	31.80	33.61
Lane Group LOS	F	A	A	E	C	A	F	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	4.78	4.77	1.71	16.92	2.00	14.39	0.44	1.85	1.12	0.53	1.80
50th-Percentile Queue Length [ft/ln]	85.79	119.46	119.18	42.84	422.89	49.89	359.87	11.11	46.16	28.10	13.36	44.93
95th-Percentile Queue Length [veh/ln]	6.18	8.36	8.35	3.08	23.66	3.59	20.62	0.80	3.32	2.02	0.96	3.23
95th-Percentile Queue Length [ft/ln]	154.42	209.08	208.69	77.11	591.52	89.80	515.42	20.00	83.09	50.57	24.05	80.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	7.93	7.93	73.83	23.80	6.00	89.37	31.71	33.68	37.69	31.80	33.61
Movement LOS	F	A	A	E	C	A	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.81			22.37			76.28			34.57		
Approach LOS	B			C			E			C		
d_I, Intersection Delay [s/veh]	24.93											
Intersection LOS	C											
Intersection V/C	0.927											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 15 Year 2035 With Project Evening Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\PM35W1-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Right	1.080	48.2	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.927	38.0	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	WB Left	0.679	27.3	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.524	5.3	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.983	41.7	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	NB Left	0.827	23.2	C
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.583	12.2	B
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	NB Left	0.634	18.6	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.783	11.3	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.713	12.2	B
25	Agua Mansa Rd (NS) at Holly St (EW)	Signalized	HCM 2010	SB Left	0.504	11.4	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Right	1.068	49.9	D
30	Market St (NS) at Hall Ave (EW)	Signalized	HCM 2010	NB Left	0.908	13.3	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	0.959	44.5	D
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.019	51.4	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	1.049	53.8	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	48.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.080

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	26	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	580	1738	0	0	1212	688	0	0	0	375	5	608
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	457	0	0	319	181	0	0	0	99	1	160
Total Analysis Volume [veh/h]	611	1829	0	0	1276	724	0	0	0	395	5	640
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	43	97	0	0	54	0	0	0	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	125	125	125	125		125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	40	94	51	51		25	25	25
g / C, Green / Cycle	0.32	0.75	0.41	0.41		0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.36	0.51	0.25	0.45		0.11	0.11	0.22
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1812	2859
c, Capacity [veh/h]	549	2720	2112	659		362	362	572
d1, Uniform Delay [s]	35.83	0.88	21.65	28.50		41.02	41.02	45.83
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	73.57	1.35	1.29	65.17		5.97	5.95	74.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.27	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

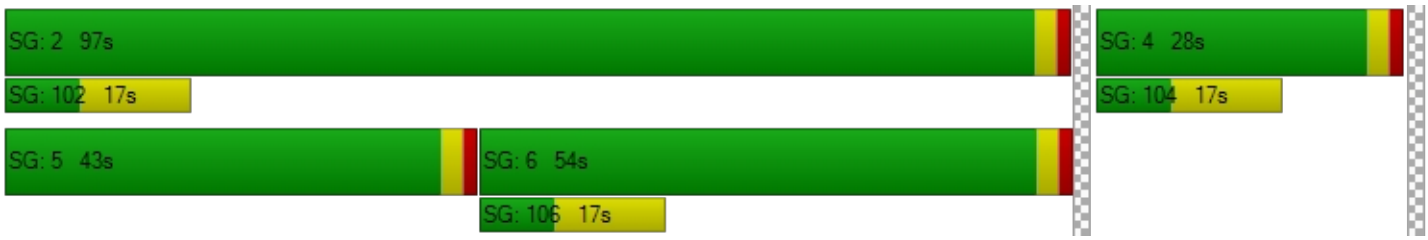
X, volume / capacity	1.11	0.67	0.60	1.10		0.55	0.55	1.12
d, Delay for Lane Group [s/veh]	109.40	2.22	22.94	93.67		46.99	46.96	120.75
Lane Group LOS	F	A	C	F		D	D	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	26.58	1.56	7.85	29.25		5.68	5.68	14.38
50th-Percentile Queue Length [ft/ln]	664.46	38.94	196.21	731.27		141.96	141.90	359.39
95th-Percentile Queue Length [veh/ln]	37.54	2.80	12.44	40.76		9.59	9.58	21.81
95th-Percentile Queue Length [ft/ln]	938.57	70.10	311.07	1018.89		239.65	239.58	545.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	109.40	2.22	0.00	0.00	22.94	93.67	0.00	0.00	0.00	46.98	46.96	120.75
Movement LOS	F	A			C	F				D	D	F
d_A, Approach Delay [s/veh]	29.06			48.54			0.00			92.38		
Approach LOS	C			D			A			F		
d_I, Intersection Delay [s/veh]	48.19											
Intersection LOS	D											
Intersection V/C	1.080											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	38.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.927

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	92	3	0	7	0	0	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1498	536	431	1153	0	812	2	307	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	394	141	113	303	0	214	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1577	564	454	1214	0	855	2	323	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	51	0	39	90	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	48	48	36	87	37	37	37	
g / C, Green / Cycle	0.37	0.37	0.28	0.67	0.28	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.35	0.26	0.34	0.23	0.27	0.21	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1715	1530	
c, Capacity [veh/h]	1911	596	475	2421	488	488	435	
d1, Uniform Delay [s]	29.41	31.76	40.23	2.77	37.13	39.44	36.21	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.22	25.67	31.75	0.75	13.31	30.04	10.86	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.83	0.95	0.96	0.50	0.81	0.95	0.74	
d, Delay for Lane Group [s/veh]	33.63	57.43	71.98	3.52	50.44	69.48	47.06	
Lane Group LOS	C	E	E	A	D	E	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	13.57	19.54	17.47	2.26	12.32	17.53	9.66	
50th-Percentile Queue Length [ft/ln]	339.34	488.58	436.84	56.52	308.08	438.30	241.44	
95th-Percentile Queue Length [veh/ln]	19.62	26.79	24.33	4.07	18.08	24.40	14.75	
95th-Percentile Queue Length [ft/ln]	490.40	669.83	608.23	101.74	452.01	609.97	368.85	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	33.63	57.43	71.98	3.52	0.00	60.72	69.48	47.06	0.00	0.00	0.00
Movement LOS		C	E	E	A		E	E	D			
d_A, Approach Delay [s/veh]	39.90			22.15			57.00			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	38.01											
Intersection LOS	D											
Intersection V/C	0.927											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	129	0	0	43	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	1245	74	137	939	71	96	237	96	91	125	101
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	328	19	36	247	19	25	62	25	24	33	27
Total Analysis Volume [veh/h]	167	1311	78	144	988	75	101	249	101	96	132	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	72	0	19	69	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	69	69	16	66	66	36	36	36	36
g / C, Green / Cycle	0.15	0.53	0.53	0.12	0.51	0.51	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.10	0.37	0.37	0.08	0.28	0.28	0.09	0.19	0.09	0.14
s, saturation flow rate [veh/h]	1714	1900	1863	1714	1900	1853	1160	1808	1047	1762
c, Capacity [veh/h]	251	1008	989	211	965	941	238	501	157	488
d1, Uniform Delay [s]	49.40	12.92	12.98	51.94	13.42	13.43	44.66	36.39	52.36	33.91
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.20	3.92	4.08	16.45	2.32	2.39	5.45	7.89	16.52	3.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.69	0.70	0.68	0.56	0.56	0.42	0.70	0.61	0.49
d, Delay for Lane Group [s/veh]	62.60	16.84	17.06	68.39	15.75	15.82	50.11	44.29	68.88	37.37
Lane Group LOS	E	B	B	E	B	B	D	D	E	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.76	10.30	10.27	5.26	7.38	7.23	3.18	10.03	3.74	5.97
50th-Percentile Queue Length [ft/ln]	144.12	257.54	256.79	131.46	184.43	180.70	79.50	250.73	93.46	149.13
95th-Percentile Queue Length [veh/ln]	9.70	15.57	15.53	9.02	11.83	11.64	5.72	15.22	6.73	9.97
95th-Percentile Queue Length [ft/ln]	242.57	389.13	388.19	225.48	295.79	290.93	143.11	380.58	168.22	249.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.60	16.95	17.06	68.39	15.78	15.82	50.11	44.29	44.29	68.88	37.37	37.37
Movement LOS	E	B	B	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.85			22.06			45.59			46.43		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.25											
Intersection LOS	C											
Intersection V/C	0.679											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	99	0	0	264	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1512	0	0	1573	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	378	0	0	393	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1512	0	0	1573	17	27	0	42	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	102	102	0	98	98	6	6	6	6
g / C, Green / Cycle	0.03	0.85	0.85	0.00	0.82	0.82	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.43	0.01	0.02	0.03	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1386	1615
c, Capacity [veh/h]	54	3059	1366	2	2955	1319	116	87	82	87
d1, Uniform Delay [s]	57.25	2.46	0.00	0.00	3.57	2.04	56.61	55.28	58.28	53.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.57	0.00	0.00	0.69	0.02	1.02	4.14	0.06	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.49	0.00	0.00	0.53	0.01	0.23	0.48	0.01	0.03
d, Delay for Lane Group [s/veh]	61.50	3.04	0.00	0.00	4.26	2.05	57.63	59.42	58.33	54.10
Lane Group LOS	E	A	A	A	A	A	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	3.15	0.00	0.00	4.72	0.06	0.84	1.34	0.03	0.09
50th-Percentile Queue Length [ft/ln]	16.51	78.73	0.00	0.00	118.04	1.53	20.91	33.45	0.78	2.25
95th-Percentile Queue Length [veh/ln]	1.19	5.67	0.00	0.00	8.28	0.11	1.51	2.41	0.06	0.16
95th-Percentile Queue Length [ft/ln]	29.71	141.72	0.00	0.00	207.12	2.76	37.64	60.20	1.41	4.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	3.04	0.00	0.00	4.26	2.05	57.63	59.42	59.42	58.33	54.10	54.10
Movement LOS	E	A	A	A	A	A	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	3.80			4.23			58.72			55.16		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	5.27											
Intersection LOS	A											
Intersection V/C	0.524											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	41.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.983

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	46	5	142	123	0	0	0	0	15	0	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	553	646	713	736	75	65	136	26	472	134	609
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	138	162	178	184	19	16	34	7	118	34	152
Total Analysis Volume [veh/h]	62	553	646	713	736	75	65	136	26	472	134	609
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	23	23	30	42	0	11	21	0	46	56	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	24	60	26	44	44	6	22	32	47	47
g / C, Green / Cycle	0.05	0.20	0.50	0.22	0.37	0.37	0.05	0.18	0.26	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.40	0.20	0.20	0.05	0.04	0.09	0.13	0.07	0.38
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1848	3514	1900	1615
c, Capacity [veh/h]	93	734	808	761	1332	595	94	339	928	751	639
d1, Uniform Delay [s]	55.97	45.05	25.00	46.23	30.10	25.14	55.98	43.90	37.57	23.61	35.23
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.03	7.06	8.16	6.22	1.66	0.44	8.72	1.05	0.43	0.11	8.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.75	0.80	0.94	0.55	0.13	0.69	0.48	0.51	0.18	0.95
d, Delay for Lane Group [s/veh]	63.99	52.10	33.16	52.45	31.75	25.58	64.70	44.94	38.00	23.73	44.04
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	8.45	16.67	11.05	8.70	1.50	2.17	4.42	5.96	2.51	18.46
50th-Percentile Queue Length [ft/ln]	51.32	211.26	416.83	276.31	217.54	37.53	54.13	110.54	149.10	62.87	461.46
95th-Percentile Queue Length [veh/ln]	3.70	13.22	23.37	16.50	13.54	2.70	3.90	7.87	9.97	4.53	25.50
95th-Percentile Queue Length [ft/ln]	92.38	330.44	584.24	412.62	338.48	67.56	97.43	196.75	249.23	113.17	637.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.99	52.10	33.16	52.45	31.75	25.58	64.70	44.94	44.94	38.00	23.73	44.04
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	42.99			41.13			50.60			39.45		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.71											
Intersection LOS	D											
Intersection V/C	0.983											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1167	113	225	1072	7	5	22	17	78	56	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	292	28	56	268	2	1	6	4	20	14	37
Total Analysis Volume [veh/h]	18	1167	113	225	1072	7	5	22	17	78	56	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	51	0	21	61	0	0	21	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	30	30	12	40	40	4	15
g / C, Green / Cycle	0.03	0.39	0.39	0.15	0.51	0.51	0.06	0.19
(v / s)_i Volume / Saturation Flow Rate	0.01	0.34	0.34	0.12	0.28	0.28	0.02	0.16
s, saturation flow rate [veh/h]	1810	1900	1842	1810	1900	1896	1769	1717
c, Capacity [veh/h]	53	744	721	276	978	976	98	334
d1, Uniform Delay [s]	36.99	21.84	21.88	31.87	12.77	12.77	35.55	30.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.77	3.36	3.55	5.83	0.49	0.49	3.18	5.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

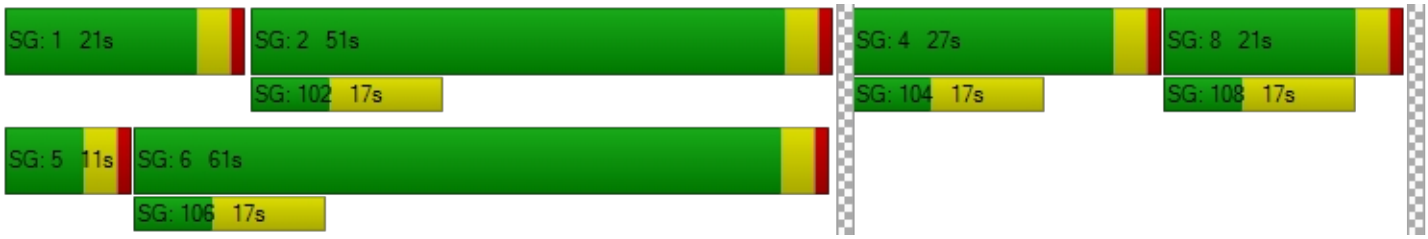
X, volume / capacity	0.34	0.87	0.88	0.82	0.55	0.55	0.45	0.85
d, Delay for Lane Group [s/veh]	40.76	25.20	25.43	37.71	13.26	13.26	38.73	36.11
Lane Group LOS	D	C	C	D	B	B	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.38	10.77	10.53	4.40	5.85	5.84	0.87	5.45
50th-Percentile Queue Length [ft/ln]	9.58	269.32	263.27	109.97	146.16	145.89	21.87	136.36
95th-Percentile Queue Length [veh/ln]	0.69	16.16	15.85	7.84	9.81	9.80	1.57	9.28
95th-Percentile Queue Length [ft/ln]	17.24	403.89	396.32	195.96	245.29	244.93	39.37	232.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.76	25.30	25.43	37.71	13.26	13.26	38.73	38.73	38.73	36.11	36.11	36.11
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	25.53			17.48			38.73			36.11		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	23.17											
Intersection LOS	C											
Intersection V/C	0.827											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1211	64	46	1092	3	0	0	10	70	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	303	16	12	273	1	0	0	3	18	0	20
Total Analysis Volume [veh/h]	7	1211	64	46	1092	3	0	0	10	70	0	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	21	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	45	45	4	48	48	1	8
g / C, Green / Cycle	0.01	0.60	0.60	0.06	0.64	0.64	0.02	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.34	0.34	0.03	0.29	0.29	0.01	0.09
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1898	1615	1700
c, Capacity [veh/h]	25	1135	1115	107	1221	1220	30	191
d1, Uniform Delay [s]	36.72	9.21	9.22	34.17	6.75	6.75	36.45	32.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.05	2.05	2.09	2.74	1.19	1.20	6.37	6.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

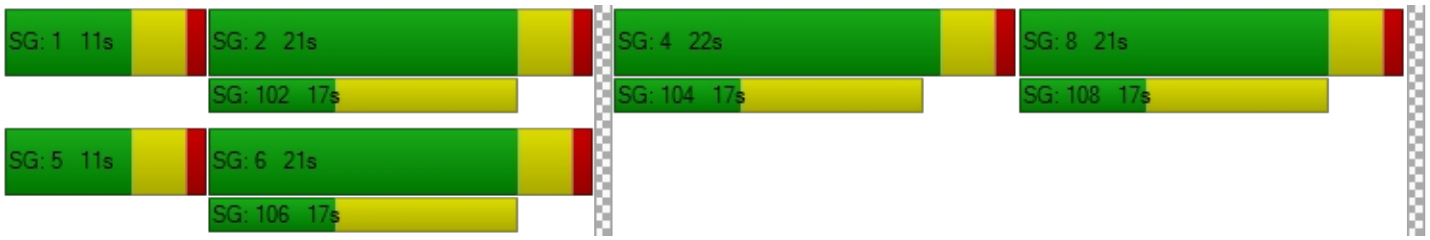
X, volume / capacity	0.28	0.57	0.57	0.43	0.45	0.45	0.33	0.78
d, Delay for Lane Group [s/veh]	42.77	11.26	11.31	36.91	7.94	7.94	42.81	39.42
Lane Group LOS	D	B	B	D	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.17	5.97	5.89	0.87	3.90	3.90	0.23	2.94
50th-Percentile Queue Length [ft/ln]	4.15	149.15	147.22	21.81	97.46	97.38	5.75	73.57
95th-Percentile Queue Length [veh/ln]	0.30	9.97	9.87	1.57	7.02	7.01	0.41	5.30
95th-Percentile Queue Length [ft/ln]	7.47	249.29	246.72	39.25	175.43	175.28	10.35	132.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.77	11.28	11.31	36.91	7.94	7.94	42.81	42.81	42.81	39.42	39.42	39.42
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.46			9.11			42.81			39.42		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	12.17											
Intersection LOS	B											
Intersection V/C	0.583											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	138	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	1046	92	39	1000	63	87	89	54	154	117	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	262	23	10	250	16	22	22	14	39	29	7
Total Analysis Volume [veh/h]	186	1046	92	39	1000	63	87	89	54	154	117	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	23	0	16	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	29	29	3	25	25	15	15	15	15
g / C, Green / Cycle	0.13	0.49	0.49	0.06	0.41	0.41	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.10	0.30	0.30	0.02	0.28	0.28	0.07	0.08	0.12	0.08
s, saturation flow rate [veh/h]	1810	1900	1847	1810	1900	1861	1263	1781	1265	1837
c, Capacity [veh/h]	237	931	905	103	790	774	310	451	309	466
d1, Uniform Delay [s]	25.27	11.20	11.22	27.32	14.29	14.30	23.26	18.21	24.73	18.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.62	3.08	3.19	2.31	4.68	4.79	0.49	0.40	1.24	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

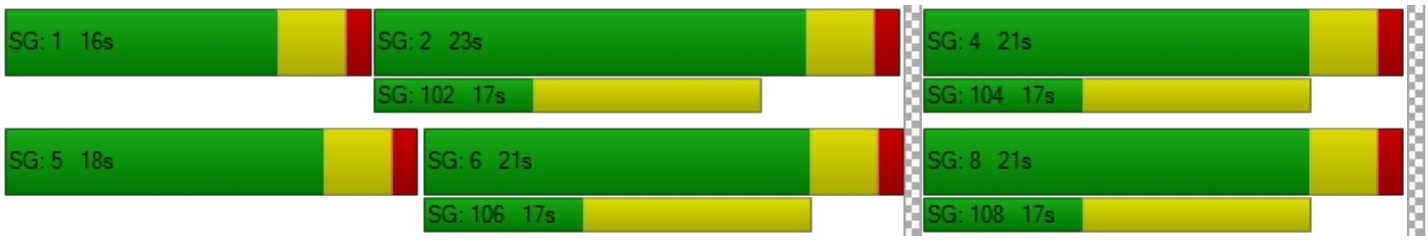
X, volume / capacity	0.78	0.62	0.62	0.38	0.68	0.68	0.28	0.32	0.50	0.31
d, Delay for Lane Group [s/veh]	30.89	14.28	14.41	29.63	18.98	19.08	23.74	18.61	25.97	18.56
Lane Group LOS	C	B	B	C	B	B	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.78	5.45	5.35	0.58	6.17	6.07	1.09	1.53	2.08	1.55
50th-Percentile Queue Length [ft/ln]	69.45	136.31	133.82	14.45	154.32	151.73	27.34	38.36	52.10	38.80
95th-Percentile Queue Length [veh/ln]	5.00	9.28	9.15	1.04	10.25	10.11	1.97	2.76	3.75	2.79
95th-Percentile Queue Length [ft/ln]	125.01	232.05	228.67	26.02	256.18	252.74	49.22	69.05	93.78	69.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.89	14.34	14.41	29.63	19.03	19.08	23.74	18.61	18.61	25.97	18.56	18.56
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.67			19.40			20.55			22.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.57											
Intersection LOS	B											
Intersection V/C	0.634											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	0	2	0	0	0	0	65	60	2	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	324	2	12	3	4	6	8	451	246	4	217	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	1	3	1	1	2	2	113	62	1	54	3
Total Analysis Volume [veh/h]	324	2	12	3	4	6	8	451	246	4	217	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	44	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	17	17	17	17
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.23	0.01	0.00	0.01	0.01	0.39	0.01	0.12
s, saturation flow rate [veh/h]	1427	1650	1422	1718	1169	1789	760	1881
c, Capacity [veh/h]	582	549	578	572	574	812	235	854
d1, Uniform Delay [s]	12.82	8.42	9.98	8.40	8.55	9.17	16.77	6.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	0.02	0.00	0.01	0.01	2.78	0.03	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

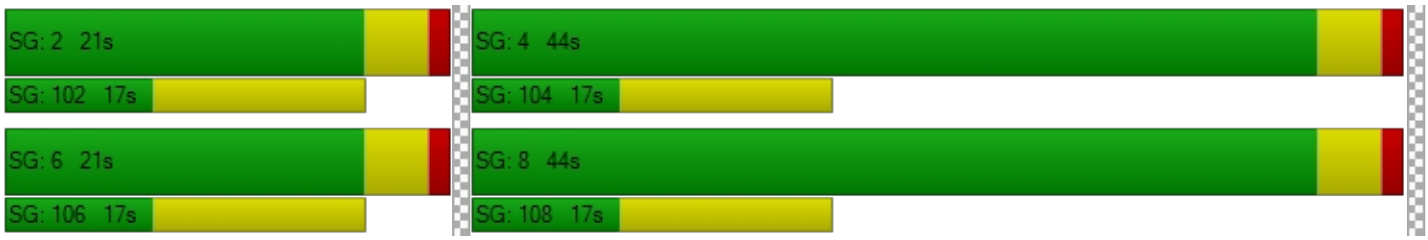
X, volume / capacity	0.56	0.03	0.01	0.02	0.01	0.86	0.02	0.27
d, Delay for Lane Group [s/veh]	13.66	8.44	9.99	8.41	8.56	11.95	16.80	6.54
Lane Group LOS	B	A	A	A	A	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.11	0.06	0.01	0.04	0.03	3.86	0.03	0.78
50th-Percentile Queue Length [ft/ln]	52.73	1.51	0.37	1.08	0.87	96.51	0.75	19.54
95th-Percentile Queue Length [veh/ln]	3.80	0.11	0.03	0.08	0.06	6.95	0.05	1.41
95th-Percentile Queue Length [ft/ln]	94.91	2.72	0.66	1.94	1.57	173.71	1.34	35.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.66	8.44	8.44	9.99	8.41	8.41	8.56	11.95	11.95	16.80	6.54	6.54
Movement LOS	B	A	A	A	A	A	A	B	B	B	A	A
d_A, Approach Delay [s/veh]	13.45			8.78			11.91			6.72		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	11.34											
Intersection LOS	B											
Intersection V/C	0.783											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	78	1010	664	95	119	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	76	27	19	67	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1086	691	114	186	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	20	272	173	29	47	0
Total Analysis Volume [veh/h]	78	1086	691	114	186	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	15	106	91	0	24	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	102	87	20	20
g / C, Green / Cycle	0.08	0.78	0.67	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.05	0.57	0.43	0.11	0.00
s, saturation flow rate [veh/h]	1714	1900	1854	1714	1615
c, Capacity [veh/h]	145	1491	1241	264	248
d1, Uniform Delay [s]	55.27	0.93	3.09	48.93	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.55	3.16	2.64	14.70	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.21	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.73	0.65	0.71	0.00
d, Delay for Lane Group [s/veh]	68.82	4.09	5.73	63.63	0.00
Lane Group LOS	E	A	A	E	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.93	2.64	3.67	6.48	0.00
50th-Percentile Queue Length [ft/ln]	73.30	65.88	91.87	162.07	0.00
95th-Percentile Queue Length [veh/ln]	5.28	4.74	6.61	10.66	0.00
95th-Percentile Queue Length [ft/ln]	131.95	118.58	165.36	266.46	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.82	4.09	5.73	5.73	63.63	0.00
Movement LOS	E	A	A	A	E	A
d_A, Approach Delay [s/veh]	8.42		5.73		63.63	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	12.18					
Intersection LOS	B					
Intersection V/C	0.713					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1009	23	57	670	70	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	0	0	27	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1085	23	57	697	70	184
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	271	6	14	174	18	46
Total Analysis Volume [veh/h]	1085	23	57	697	70	184
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	130	0	130	130	130	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	84	0	13	97	33	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	80	80	9	93	29	29
g / C, Green / Cycle	0.62	0.62	0.07	0.72	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.29	0.29	0.03	0.37	0.04	0.11
s, saturation flow rate [veh/h]	1900	1886	1714	1900	1714	1615
c, Capacity [veh/h]	1169	1161	119	1359	382	360
d1, Uniform Delay [s]	5.49	5.50	56.78	0.95	36.87	39.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	1.41	13.26	1.39	1.05	5.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.48	0.48	0.51	0.18	0.51
d, Delay for Lane Group [s/veh]	6.86	6.91	70.04	2.34	37.92	44.89
Lane Group LOS	A	A	E	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	3.74	3.75	2.20	1.41	1.77	5.18
50th-Percentile Queue Length [ft/ln]	93.52	93.77	55.06	35.29	44.15	129.50
95th-Percentile Queue Length [veh/ln]	6.73	6.75	3.96	2.54	3.18	8.91
95th-Percentile Queue Length [ft/ln]	168.34	168.79	99.11	63.52	79.48	222.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.88	6.91	70.04	2.34	37.92	44.89
Movement LOS	A	A	E	A	D	D
d_A, Approach Delay [s/veh]	6.89		7.46		42.97	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.42					
Intersection LOS	B					
Intersection V/C	0.504					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	49.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.068

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	58	0	15	5	142	0	0	53	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	386	3	574	760	739	5	2	651	383
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	97	1	144	190	185	1	1	163	96
Total Analysis Volume [veh/h]	5	3	2	386	3	574	760	739	5	2	651	383
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	53	74	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	31	31	31	49	77	77	0	28	28
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.26	0.41	0.64	0.64	0.00	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.27	0.00	0.20	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	1545	1615	1436	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	448	417	382	491	738	736	2308	1030	7	850	379
d1, Uniform Delay [s]	33.15	33.05	48.67	33.06	41.30	35.59	9.89	7.89	59.62	42.84	45.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	24.15	0.00	1.81	24.56	0.37	0.01	22.11	6.54	48.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

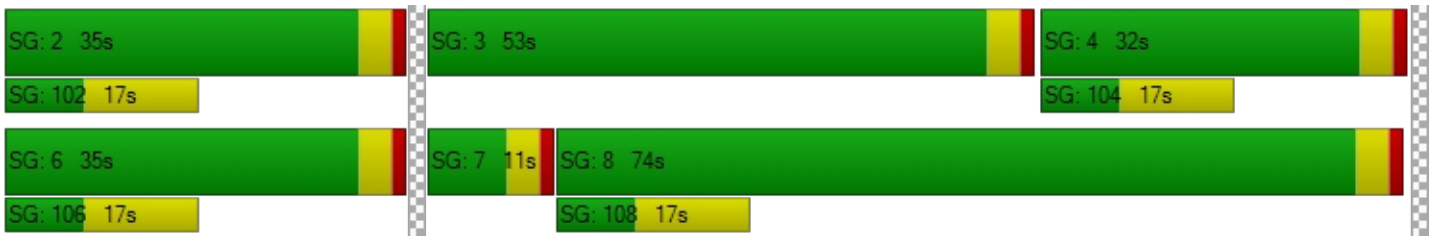
X, volume / capacity	0.02	0.00	1.01	0.01	0.78	1.03	0.32	0.00	0.29	0.77	1.01
d, Delay for Lane Group [s/veh]	33.16	33.05	72.82	33.06	43.10	60.15	10.25	7.90	81.72	49.38	94.63
Lane Group LOS	C	C	F	C	D	F	B	A	F	D	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.18	0.04	14.19	0.07	8.03	25.95	4.38	0.05	0.10	9.76	16.36
50th-Percentile Queue Length [ft/ln]	4.44	1.11	354.66	1.66	200.69	648.76	109.58	1.21	2.57	244.02	408.93
95th-Percentile Queue Length [veh/ln]	0.32	0.08	20.50	0.12	12.67	35.12	7.82	0.09	0.18	14.88	23.12
95th-Percentile Queue Length [ft/ln]	7.98	1.99	512.43	2.98	316.85	878.05	195.42	2.18	4.62	372.11	578.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.16	33.16	33.05	72.82	33.06	43.10	60.15	10.25	7.90	81.72	49.38	94.63
Movement LOS	C	C	C	F	C	D	F	B	A	F	D	F
d_A, Approach Delay [s/veh]	33.14			54.98			35.46			66.17		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	49.86											
Intersection LOS	D											
Intersection V/C	1.068											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	906	1094	95	64	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	200	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	980	1294	95	64	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	245	324	24	16	4
Total Analysis Volume [veh/h]	35	980	1294	95	64	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	120	120	120	0	120	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	99	88	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	96	96	96	96	96
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	82	73	6	6
g / C, Green / Cycle	0.04	0.85	0.77	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.52	0.74	0.04	0.01
s, saturation flow rate [veh/h]	1810	1900	1877	1810	1615
c, Capacity [veh/h]	80	1619	1438	117	104
d1, Uniform Delay [s]	44.63	2.17	10.09	43.49	42.38
k, delay calibration	0.11	0.11	0.17	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.68	0.37	8.01	3.98	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.61	0.97	0.55	0.15
d, Delay for Lane Group [s/veh]	48.31	2.53	18.10	47.47	43.05
Lane Group LOS	D	A	B	D	D
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.89	2.30	21.06	1.59	0.38
50th-Percentile Queue Length [ft/ln]	22.16	57.40	526.50	39.72	9.38
95th-Percentile Queue Length [veh/ln]	1.60	4.13	28.59	2.86	0.68
95th-Percentile Queue Length [ft/ln]	39.89	103.33	714.65	71.49	16.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.31	2.53	18.10	18.10	47.47	43.05
Movement LOS	D	A	B	B	D	D
d_A, Approach Delay [s/veh]	4.11		18.10		46.59	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	13.30					
Intersection LOS	B					
Intersection V/C	0.908					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.959

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	716
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	200	0	0	0	0	0	0	63
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	834	630	0	0	1599	226	0	0	0	111	0	779
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	209	158	0	0	400	57	0	0	0	28	0	0
Total Analysis Volume [veh/h]	834	630	0	0	1599	226	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	62	99	0	0	37	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		L	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	57	103	42	42		9	9
g / C, Green / Cycle	0.47	0.86	0.35	0.35		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.46	0.17	0.34	0.34		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1783		1810	1615
c, Capacity [veh/h]	856	3099	1266	624		139	124
d1, Uniform Delay [s]	30.91	1.49	38.23	38.51		54.54	0.00
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	9.40	0.15	17.48	30.29		10.03	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

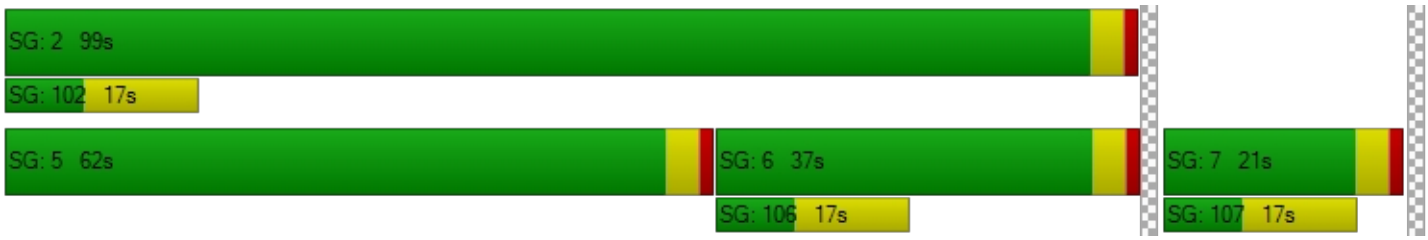
X, volume / capacity	0.97	0.20	0.96	0.97		0.80	0.00
d, Delay for Lane Group [s/veh]	40.31	1.64	55.70	68.80		64.58	0.00
Lane Group LOS	D	A	E	E		E	A
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	24.96	0.78	20.28	22.59		3.69	0.00
50th-Percentile Queue Length [ft/ln]	624.07	19.58	507.04	564.67		92.21	0.00
95th-Percentile Queue Length [veh/ln]	33.16	1.41	27.67	30.38		6.64	0.00
95th-Percentile Queue Length [ft/ln]	828.92	35.25	691.68	759.52		165.98	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.31	1.64	0.00	0.00	58.84	68.80	0.00	0.00	0.00	64.58	0.00	0.00
Movement LOS	D	A			E	E				E		A
d_A, Approach Delay [s/veh]	23.67			60.07			0.00			64.58		
Approach LOS	C			E			A			E		
d_I, Intersection Delay [s/veh]	44.54											
Intersection LOS	D											
Intersection V/C	0.959											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	51.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.019

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	165	35	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1288	172	822	899	0	172	0	936	0	0	1
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	322	43	206	225	0	43	0	234	0	0	0
Total Analysis Volume [veh/h]	0	1288	172	822	899	0	172	0	936	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	46	0	32	78	0	42	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	42	42	28	74	38	38	
g / C, Green / Cycle	0.35	0.35	0.23	0.62	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.36	0.11	0.23	0.25	0.10	0.33	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	1266	565	821	2231	573	905	
d1, Uniform Delay [s]	39.08	28.44	46.08	11.75	31.02	41.08	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	29.75	1.39	14.91	0.12	0.29	23.71	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.02	0.30	1.00	0.40	0.30	1.03	
d, Delay for Lane Group [s/veh]	68.84	29.82	60.99	11.87	31.31	64.79	
Lane Group LOS	F	C	F	B	C	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	23.54	3.84	13.85	5.96	3.83	16.17	
50th-Percentile Queue Length [ft/ln]	588.52	95.95	346.35	149.02	95.79	404.35	
95th-Percentile Queue Length [veh/ln]	31.88	6.91	19.97	9.96	6.90	23.26	
95th-Percentile Queue Length [ft/ln]	797.12	172.71	499.34	249.12	172.43	581.52	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	68.84	29.82	60.99	11.87	0.00	31.31	0.00	64.79	0.00	0.00	0.00
Movement LOS		F	C	F	B		C		F			
d_A, Approach Delay [s/veh]	64.24			35.33			59.60			0.00		
Approach LOS	E			D			E			A		
d_I, Intersection Delay [s/veh]	51.44											
Intersection LOS	D											
Intersection V/C	1.019											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	53.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.049

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	92	0	0	32	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	2131	42	55	1645	293	461	94	180	67	23	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	561	11	14	433	77	121	25	47	18	6	13
Total Analysis Volume [veh/h]	72	2243	44	58	1732	308	485	99	189	71	24	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	75	0	10	75	0	0	45	0	0	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	72	72	7	72	72	42	42	42	42	42	42
g / C, Green / Cycle	0.05	0.55	0.55	0.05	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.04	0.60	0.61	0.03	0.51	0.20	0.36	0.05	0.12	0.06	0.01	0.03
s, saturation flow rate [veh/h]	1714	1900	1887	1714	3427	1530	1343	1900	1615	1108	1900	1615
c, Capacity [veh/h]	92	1052	1045	92	1898	847	442	614	522	309	614	522
d1, Uniform Delay [s]	59.58	17.00	17.00	59.07	14.47	8.81	41.61	26.23	27.97	35.00	25.32	25.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	46.91	54.38	57.15	28.21	8.18	1.21	71.41	0.56	1.95	1.73	0.12	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	1.09	1.09	0.63	0.91	0.36	1.10	0.16	0.36	0.23	0.04	0.10
d, Delay for Lane Group [s/veh]	106.49	71.38	74.15	87.28	22.66	10.02	113.03	26.79	29.91	36.72	25.44	26.16
Lane Group LOS	F	F	F	F	C	B	F	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.51	38.42	38.97	2.56	17.02	2.99	23.05	1.97	4.08	1.80	0.46	1.04
50th-Percentile Queue Length [ft/ln]	87.68	960.56	974.21	64.11	425.57	74.80	576.28	49.33	102.07	44.95	11.50	26.12
95th-Percentile Queue Length [veh/ln]	6.31	51.99	52.92	4.62	23.79	5.39	32.80	3.55	7.35	3.24	0.83	1.88
95th-Percentile Queue Length [ft/ln]	157.83	1299.68	1323.01	115.40	594.73	134.64	820.09	88.79	183.72	80.92	20.71	47.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	106.49	72.74	74.15	87.28	22.66	10.02	113.03	26.79	29.91	36.72	25.44	26.16
Movement LOS	F	F	E	F	C	B	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	73.79			22.59			81.66			31.11		
Approach LOS	E			C			F			C		
d_I, Intersection Delay [s/veh]	53.77											
Intersection LOS	D											
Intersection V/C	1.049											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



YEAR 2035 WITH PROJECT – ALTERNATIVE 2

Viridian

Vistro File: C:\...\AME.vistro

Scenario 16 Year 2035 With Project Morning Peak Hour - Alternative 2

Report File: C:\...\AM35W2.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.229	81.4	F
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	1.105	65.1	E
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.810	41.3	D
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.768	31.2	C
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	EB Thru	1.846	88.0	F
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.587	13.3	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.018	11.5	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.668	5.9	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	138.7	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	1.032	141.9	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	0.173	10,000.0	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.052	112.6	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	1.982	34.9	C
14	Rubidoux Blvd (NS) at 30th St (EW)	Two-way stop	HCM 2010	EB Right	0.419	17.6	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.896	23.1	C
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.878	34.0	C
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.730	12.6	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.014	9.4	A
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.014	12.2	B
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.469	13.8	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.004	9.3	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.231	14.7	B
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.006	10.5	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	0.682	74.3	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.035	17.0	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.144	16.4	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.587	11.8	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.395	3.8	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	78.722	253.8	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.301	77.3	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.646	17.3	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.770	12.6	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.906	35.6	D
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.743	22.5	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	0.789	26.8	C
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	0.978	34.8	C
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.750	12.0	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.742	10.0	A

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	1.055	21.4	C
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.747	23.5	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	81.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.229

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	8	0	0	19	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	408	1447	0	0	1206	841	0	0	0	592	0	574
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	381	0	0	317	221	0	0	0	156	0	151
Total Analysis Volume [veh/h]	429	1523	0	0	1269	885	0	0	0	623	0	604
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	29	88	0	0	59	0	0	0	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	26	85	56	56		39	39
g / C, Green / Cycle	0.20	0.65	0.43	0.43		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.25	0.42	0.25	0.55		0.34	0.37
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1615
c, Capacity [veh/h]	343	2365	2229	696		543	485
d1, Uniform Delay [s]	47.67	3.91	20.04	27.67		39.00	39.00
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	134.97	1.36	1.06	133.54		86.28	127.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.25	0.64	0.57	1.27		1.15	1.25
d, Delay for Lane Group [s/veh]	182.63	5.27	21.10	161.21		125.28	166.36
Lane Group LOS	F	A	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	23.44	3.66	7.46	44.64		29.13	31.53
50th-Percentile Queue Length [ft/ln]	585.92	91.53	186.54	1116.09		728.36	788.26
95th-Percentile Queue Length [veh/ln]	35.05	6.59	11.94	65.19		41.37	46.31
95th-Percentile Queue Length [ft/ln]	876.34	164.75	298.54	1629.73		1034.23	1157.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	182.63	5.27	0.00	0.00	21.10	161.21	0.00	0.00	0.00	125.28	125.28	166.36
Movement LOS	F	A			C	F				F	F	F
d_A, Approach Delay [s/veh]	44.25			78.67			0.00			145.50		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	81.45											
Intersection LOS	F											
Intersection V/C	1.229											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	65.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.105

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	1	0	21	0	0	0	48	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1184	483	526	1304	0	669	0	587	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	312	127	138	343	0	176	0	154	0	0	0
Total Analysis Volume [veh/h]	0	1246	508	554	1373	0	704	0	618	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	39	0	40	79	0	0	51	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	36	36	37	76	48	48	
g / C, Green / Cycle	0.28	0.28	0.28	0.58	0.37	0.37	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.38	0.38	0.42	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1631	
c, Capacity [veh/h]	1433	447	488	2115	633	602	
d1, Uniform Delay [s]	38.82	41.00	40.33	8.38	33.00	33.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	7.42	85.27	83.52	1.56	39.85	77.05	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

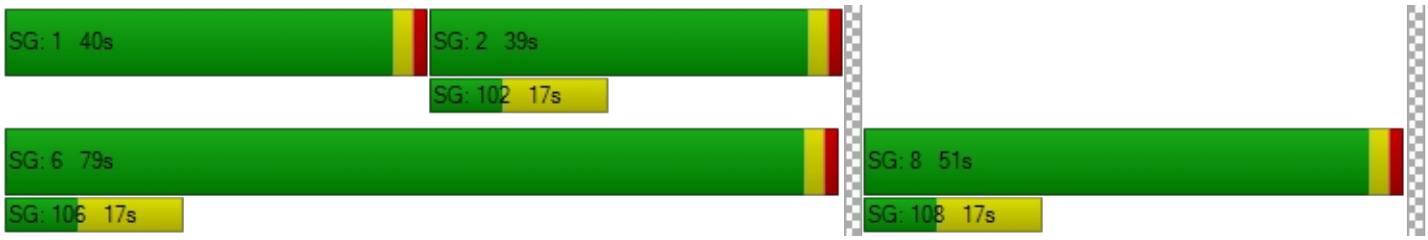
X, volume / capacity	0.87	1.14	1.14	0.65	1.02	1.13	
d, Delay for Lane Group [s/veh]	46.24	126.27	123.86	9.94	72.85	110.05	
Lane Group LOS	D	F	F	A	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	12.57	24.02	25.92	6.18	25.07	30.07	
50th-Percentile Queue Length [ft/ln]	314.13	600.42	647.88	154.51	626.75	751.72	
95th-Percentile Queue Length [veh/ln]	18.38	34.58	37.01	10.26	33.67	42.35	
95th-Percentile Queue Length [ft/ln]	459.46	864.54	925.21	256.44	841.67	1058.82	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	46.24	126.27	123.86	9.94	0.00	75.24	110.05	110.05	0.00	0.00	0.00
Movement LOS		D	F	F	A		E	F	F			
d_A, Approach Delay [s/veh]	69.42			42.69			91.95			0.00		
Approach LOS	E			D			F			A		
d_I, Intersection Delay [s/veh]	65.08											
Intersection LOS	E											
Intersection V/C	1.105											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	41.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	957	25	193	1100	190	265	189	79	21	216	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	24	0	0	69	0	0	0	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	981	25	193	1169	190	265	189	87	21	216	167
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	258	7	51	308	50	70	50	23	6	57	44
Total Analysis Volume [veh/h]	155	1033	26	203	1231	200	279	199	92	22	227	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	58	0	22	63	0	28	40	0	10	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	55	55	19	60	60	25	37	37	7	19	19
g / C, Green / Cycle	0.11	0.42	0.42	0.15	0.46	0.46	0.19	0.28	0.28	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.28	0.28	0.12	0.38	0.39	0.16	0.06	0.06	0.01	0.11	0.12
s, saturation flow rate [veh/h]	1714	1900	1884	1714	1900	1810	1714	3618	1615	1714	1900	1634
c, Capacity [veh/h]	185	804	797	251	877	835	330	1030	460	92	278	239
d1, Uniform Delay [s]	54.57	21.86	21.86	50.61	20.93	21.28	46.51	30.34	30.40	57.82	50.21	50.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.52	4.25	4.30	23.95	8.80	10.27	22.65	0.42	0.98	6.00	17.94	23.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

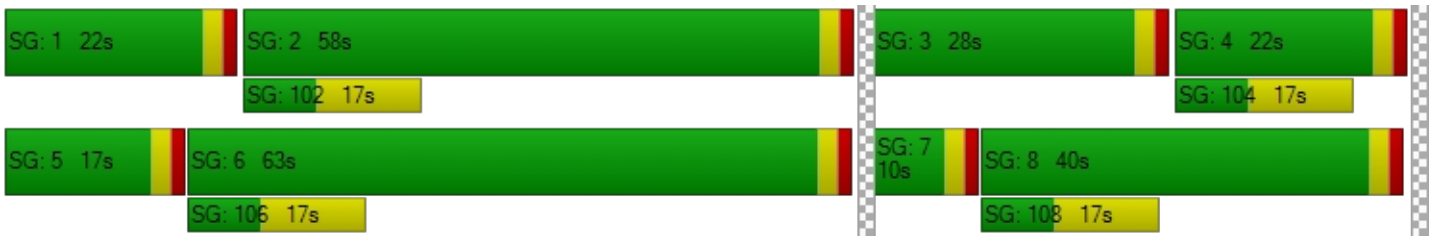
X, volume / capacity	0.84	0.66	0.66	0.81	0.83	0.85	0.85	0.19	0.20	0.24	0.76	0.80
d, Delay for Lane Group [s/veh]	89.09	26.11	26.16	74.56	29.73	31.55	69.16	30.76	31.37	63.81	68.15	74.28
Lane Group LOS	F	C	C	E	C	C	E	C	C	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.55	11.04	10.96	7.75	16.97	17.16	10.27	2.14	2.05	0.84	7.67	7.28
50th-Percentile Queue Length [ft/ln]	163.74	275.95	274.01	193.72	424.17	429.00	256.79	53.49	51.28	20.94	191.76	182.02
95th-Percentile Queue Length [veh/ln]	10.75	16.49	16.39	12.31	23.72	23.95	15.53	3.85	3.69	1.51	12.21	11.71
95th-Percentile Queue Length [ft/ln]	268.66	412.16	409.75	307.85	593.06	598.84	388.19	96.29	92.31	37.69	305.31	292.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	89.09	26.14	26.16	74.56	30.48	31.55	69.16	30.76	31.37	63.81	68.55	74.28
Movement LOS	F	C	C	E	C	C	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	34.18			36.09			49.65			70.68		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	41.32											
Intersection LOS	D											
Intersection V/C	0.810											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	986	45	91	1027	92	112	214	115	79	139	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	28	0	0	77	0	0	0	18	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	1014	45	91	1104	92	112	214	133	79	139	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	267	12	24	291	24	29	56	35	21	37	13
Total Analysis Volume [veh/h]	118	1067	47	96	1162	97	118	225	140	83	146	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	62	0	13	60	0	0	55	0	0	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	59	59	10	57	57	52	52
g / C, Green / Cycle	0.09	0.45	0.45	0.08	0.44	0.44	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.07	0.30	0.30	0.06	0.34	0.34	0.33	0.24
s, saturation flow rate [veh/h]	1714	1900	1872	1714	1900	1849	1475	1195
c, Capacity [veh/h]	158	862	850	132	833	811	625	514
d1, Uniform Delay [s]	55.53	18.95	18.96	57.01	21.96	22.01	27.24	22.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.99	3.79	3.86	29.45	6.60	6.88	9.03	4.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

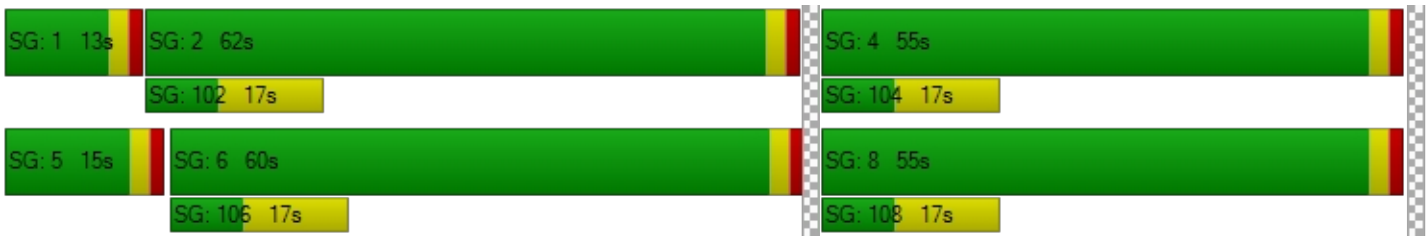
X, volume / capacity	0.75	0.65	0.65	0.73	0.76	0.77	0.77	0.55
d, Delay for Lane Group [s/veh]	82.52	22.74	22.82	86.46	28.55	28.88	36.28	26.38
Lane Group LOS	F	C	C	F	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.84	10.54	10.42	4.08	14.37	14.14	13.27	5.80
50th-Percentile Queue Length [ft/ln]	120.92	263.49	260.40	102.11	359.16	353.46	331.64	145.03
95th-Percentile Queue Length [veh/ln]	8.44	15.86	15.71	7.35	20.58	20.31	19.24	9.75
95th-Percentile Queue Length [ft/ln]	211.10	396.59	392.72	183.79	514.56	507.63	480.96	243.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.52	22.78	22.82	86.46	28.70	28.88	36.28	36.28	36.28	26.38	26.38	26.38
Movement LOS	F	C	C	F	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	28.50			32.81			36.28			26.38		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.18											
Intersection LOS	C											
Intersection V/C	0.768											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	88.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.846

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	35	0	0	95	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	922	56	117	1114	58	102	144	90	72	93	168
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	243	15	31	293	15	27	38	24	19	24	44
Total Analysis Volume [veh/h]	64	971	59	123	1173	61	107	152	95	76	98	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	20	0	10	20	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	17	17	7	17	17	27	27	27	27
g / C, Green / Cycle	0.12	0.28	0.28	0.12	0.28	0.28	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.27	0.07	0.33	0.33	1.30	0.06	0.96	0.11
s, saturation flow rate [veh/h]	1714	1900	1862	1714	1900	1867	200	1615	181	1615
c, Capacity [veh/h]	200	538	528	200	538	529	175	727	168	727
d1, Uniform Delay [s]	23.22	18.38	18.39	24.08	18.67	18.67	15.43	6.91	14.74	7.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.18	31.27	31.71	13.35	89.06	90.54	245.22	0.37	79.47	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.97	0.97	0.62	1.15	1.16	1.48	0.13	1.04	0.24
d, Delay for Lane Group [s/veh]	27.40	49.65	50.10	37.42	107.73	109.20	260.65	7.28	94.21	8.01
Lane Group LOS	C	D	D	D	F	F	F	A	F	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.98	10.04	9.91	2.24	18.96	18.85	13.24	0.53	5.00	1.04
50th-Percentile Queue Length [ft/ln]	24.58	251.08	247.72	55.90	474.08	471.31	331.02	13.21	125.07	25.98
95th-Percentile Queue Length [veh/ln]	1.77	15.24	15.07	4.02	28.35	28.25	23.46	0.95	8.85	1.87
95th-Percentile Queue Length [ft/ln]	44.24	381.01	376.78	100.62	708.80	706.14	586.59	23.79	221.37	46.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.40	49.86	50.10	37.42	108.42	109.20	260.65	260.65	7.28	94.21	94.21	8.01
Movement LOS	C	D	D	D	F	F	F	F	A	F	F	A
d_A, Approach Delay [s/veh]	48.56			102.02			192.65			50.74		
Approach LOS	D			F			F			D		
d_I, Intersection Delay [s/veh]	87.95											
Intersection LOS	F											
Intersection V/C	1.846											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	52	56	0	0	0	0	2	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	738	138	221	1196	8	22	10	28	96	5	108
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	185	35	55	299	2	6	3	7	24	1	27
Total Analysis Volume [veh/h]	15	738	138	221	1196	8	22	10	28	96	5	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	33	33	10	42	42	10	10	10
g / C, Green / Cycle	0.03	0.51	0.51	0.15	0.64	0.64	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.12	0.32	0.32	0.09	0.12	0.07
s, saturation flow rate [veh/h]	1810	1900	1797	1810	1900	1896	638	845	1615
c, Capacity [veh/h]	49	975	923	277	1215	1212	171	234	242
d1, Uniform Delay [s]	31.11	10.11	10.11	26.63	6.21	6.21	24.69	26.76	25.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.53	1.57	1.66	5.28	1.45	1.45	1.22	1.25	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

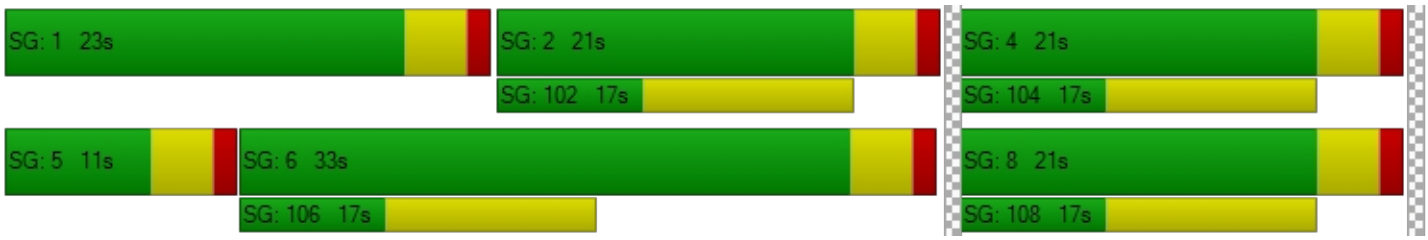
X, volume / capacity	0.31	0.46	0.46	0.80	0.50	0.50	0.35	0.43	0.45
d, Delay for Lane Group [s/veh]	34.64	11.68	11.77	31.91	7.66	7.66	25.92	28.01	26.54
Lane Group LOS	C	B	B	C	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	3.92	3.73	3.54	3.71	3.70	0.83	1.51	1.53
50th-Percentile Queue Length [ft/ln]	6.76	97.97	93.29	88.46	92.71	92.59	20.82	37.87	38.24
95th-Percentile Queue Length [veh/ln]	0.49	7.05	6.72	6.37	6.68	6.67	1.50	2.73	2.75
95th-Percentile Queue Length [ft/ln]	12.16	176.35	167.93	159.23	166.88	166.67	37.47	68.16	68.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.64	11.72	11.77	31.91	7.66	7.66	25.92	25.92	25.92	28.01	28.01	26.54
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.11			11.42			25.92			27.25		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.28											
Intersection LOS	B											
Intersection V/C	0.587											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	865	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	15	0	58	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	881	15	0	1320	0	10
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	220	4	0	330	0	3
Total Analysis Volume [veh/h]	881	15	0	1320	0	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.50
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.35
d_A, Approach Delay [s/veh]	0.00		0.00		11.50	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	825	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	189	57	1	67	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	840	189	57	1263	67	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	210	47	14	316	17	4
Total Analysis Volume [veh/h]	840	189	57	1263	67	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	31	0	13	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	3	17	3	3
g / C, Green / Cycle	0.37	0.37	0.09	0.60	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.23	0.12	0.03	0.35	0.04	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1333	595	165	2169	218	194
d1, Uniform Delay [s]	7.42	6.45	12.18	3.52	11.48	11.16
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.30	1.24	0.25	0.79	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.32	0.35	0.58	0.31	0.08
d, Delay for Lane Group [s/veh]	7.91	6.76	13.43	3.77	12.27	11.34
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.25	0.50	0.31	0.35	0.33	0.08
50th-Percentile Queue Length [ft/ln]	31.16	12.55	7.75	8.79	8.28	1.89
95th-Percentile Queue Length [veh/ln]	2.24	0.90	0.56	0.63	0.60	0.14
95th-Percentile Queue Length [ft/ln]	56.09	22.59	13.96	15.81	14.90	3.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.91	6.76	13.43	3.77	12.27	11.34
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.70		4.19		12.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.94					
Intersection LOS	A					
Intersection V/C	0.668					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	138.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	204	1	1	67	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1121	1	1	1321	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	280	0	0	330	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1121	1	1	1321	11	6	0	18	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.15	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	12.13	0.00	0.00	10.72	0.00	0.00	102.71	138.67	20.84	85.86	134.39	14.33
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.69	0.07	0.07	0.07
95th-Percentile Queue Length [ft/ln]	2.97	0.00	0.00	0.12	0.06	0.00	17.26	17.26	17.26	1.66	1.66	1.66
d_A, Approach Delay [s/veh]	0.21			0.01			41.31			85.86		
Approach LOS	A			A			E			F		
d_I, Intersection Delay [s/veh]	0.53											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	141.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.032

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	92	9	37	31	0	0	0	0	6	0	113
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	410	408	661	685	38	61	117	52	417	87	535
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	103	102	165	171	10	15	29	13	104	22	0
Total Analysis Volume [veh/h]	32	410	408	661	685	38	61	117	52	417	87	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	22	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	377	377	377	377	377	377	377	377	377	377
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	98	98	120	209	209	37	37	106	106
g / C, Green / Cycle	0.02	0.26	0.26	0.32	0.56	0.56	0.10	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.25	0.37	0.19	0.02	0.03	0.09	0.28	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1802	1825	1615
c, Capacity [veh/h]	40	937	418	578	2011	898	179	178	511	453
d1, Uniform Delay [s]	182.77	116.30	137.97	127.81	45.65	37.90	157.74	168.20	134.34	0.00
k, delay calibration	0.11	0.11	0.33	0.50	0.11	0.11	0.11	0.11	0.38	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.53	0.32	30.08	84.03	0.10	0.02	1.12	20.93	31.41	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

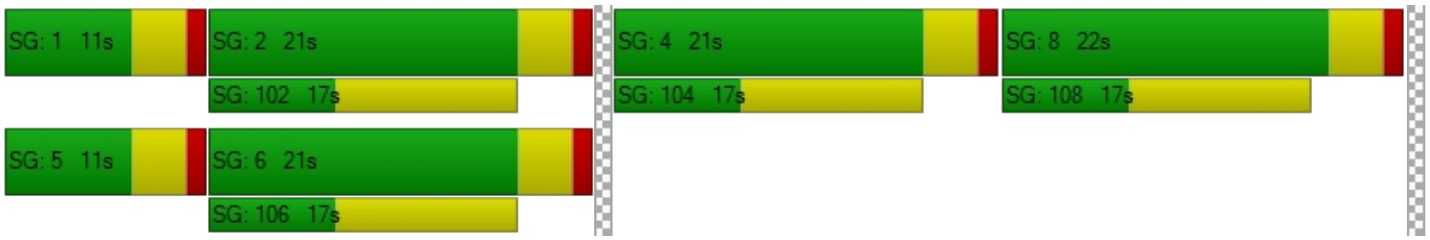
X, volume / capacity	0.80	0.44	0.98	1.14	0.34	0.04	0.34	0.95	0.99	0.00
d, Delay for Lane Group [s/veh]	212.30	116.62	168.05	211.84	45.75	37.92	158.86	189.13	165.75	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.57	17.30	44.23	71.56	18.46	1.70	5.82	18.08	54.87	0.00
50th-Percentile Queue Length [ft/ln]	89.18	432.42	1105.87	1789.08	461.53	42.57	145.62	452.00	1371.67	0.00
95th-Percentile Queue Length [veh/ln]	6.42	24.12	55.14	93.74	25.51	3.06	9.78	25.05	67.01	0.00
95th-Percentile Queue Length [ft/ln]	160.52	602.93	1378.56	2343.62	637.70	76.62	244.57	626.33	1675.37	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	212.30	116.62	168.05	211.84	45.75	37.92	158.86	189.13	189.13	165.75	165.75	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	144.91			124.86			181.10			165.75		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	141.90											
Intersection LOS	F											
Intersection V/C	1.032											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.173

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	793	96	290	920	1	4	24	64	8	3	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	198	24	73	230	0	1	6	16	2	1	5
Total Analysis Volume [veh/h]	26	793	96	290	920	1	4	24	64	8	3	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.38	0.01	0.00	0.20	1.60	0.12	0.00	0.17	0.03
d_M, Delay for Movement [s/veh]	9.97	0.00	0.00	12.46	0.00	0.00	722.10	778.09	545.08	10000.0	10000.0	10000.0
Movement LOS	A	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.11	0.05	0.00	1.76	0.88	0.00	9.23	9.23	9.23	5.72	5.72	5.72
95th-Percentile Queue Length [ft/ln]	2.69	1.35	0.00	43.97	21.99	0.00	230.87	230.87	230.87	142.94	142.94	142.94
d_A, Approach Delay [s/veh]	0.28			2.98			613.56			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	160.29											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	112.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	848	97	63	941	0	0	0	3	44	3	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	212	24	16	235	0	0	0	1	11	1	3
Total Analysis Volume [veh/h]	9	848	97	63	941	0	0	0	3	44	3	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.09	0.01	0.00	0.00	0.00	0.01	0.54	0.05	0.02
d_M, Delay for Movement [s/veh]	9.95	0.00	0.00	10.36	0.00	0.00	55.48	76.35	11.64	94.53	112.63	56.77
Movement LOS	A	A	A	B	A	A	F	F	B	F	F	F
95th-Percentile Queue Length [veh/ln]	0.04	0.02	0.00	0.28	0.14	0.00	0.02	0.02	0.02	2.92	2.92	2.92
95th-Percentile Queue Length [ft/ln]	0.93	0.46	0.00	7.02	3.51	0.00	0.41	0.41	0.41	73.03	73.03	73.03
d_A, Approach Delay [s/veh]	0.09			0.65			11.64			87.25		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	2.97											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.982

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	0	0	36	1	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	914	65	9	966	50	59	116	115	85	62	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	229	16	2	242	13	15	29	29	21	16	3
Total Analysis Volume [veh/h]	161	914	65	9	966	50	59	116	115	85	62	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	23	23	1	17	17	24	24	24	24
g / C, Green / Cycle	0.11	0.38	0.38	0.02	0.29	0.29	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.26	0.26	0.00	0.27	0.27	0.56	0.07	1.23	0.01
s, saturation flow rate [veh/h]	1810	1900	1856	1810	1900	1867	313	1615	120	1615
c, Capacity [veh/h]	208	728	711	34	545	536	205	645	142	645
d1, Uniform Delay [s]	25.94	15.53	15.53	29.18	20.99	20.99	15.36	11.71	22.60	10.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.12	5.09	5.21	4.09	26.15	26.46	9.70	0.13	56.10	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.68	0.68	0.27	0.94	0.94	0.85	0.18	1.03	0.02
d, Delay for Lane Group [s/veh]	32.06	20.61	20.74	33.26	47.14	47.45	25.06	11.85	78.69	10.96
Lane Group LOS	C	C	C	C	D	D	C	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.46	6.00	5.89	0.16	10.29	10.16	1.93	0.91	4.18	0.07
50th-Percentile Queue Length [ft/ln]	61.52	149.90	147.16	4.02	257.28	254.03	48.23	22.71	104.42	1.84
95th-Percentile Queue Length [veh/ln]	4.43	10.01	9.87	0.29	15.55	15.39	3.47	1.64	7.52	0.13
95th-Percentile Queue Length [ft/ln]	110.74	250.29	246.64	7.24	388.81	384.73	86.82	40.88	187.95	3.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.06	20.67	20.74	33.26	47.28	47.45	25.06	25.06	11.85	78.69	78.69	10.96
Movement LOS	C	C	C	C	D	D	C	C	B	E	E	B
d_A, Approach Delay [s/veh]	22.28			47.17			19.82			74.38		
Approach LOS	C			D			B			E		
d_I, Intersection Delay [s/veh]	34.91											
Intersection LOS	C											
Intersection V/C	1.982											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	137	1061	1050	35	0	205
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	36	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	1161	1086	35	0	205
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	290	272	9	0	51
Total Analysis Volume [veh/h]	137	1161	1086	35	0	205
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.01	0.01	0.00	0.00	0.42
d_M, Delay for Movement [s/veh]	12.29	0.00	0.00	0.00	0.00	17.57
Movement LOS	B	A	A	A		C
95th-Percentile Queue Length [veh/ln]	0.82	0.00	0.00	0.00	0.00	2.05
95th-Percentile Queue Length [ft/ln]	20.55	0.00	0.00	0.00	0.00	51.17
d_A, Approach Delay [s/veh]	1.30		0.00		17.57	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.01					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.896

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	371	870	0	0	534	817	0	0	0	382	0	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	96	0	0	9	27	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	371	966	0	0	543	844	0	0	0	382	0	262
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	242	0	0	136	211	0	0	0	96	0	66
Total Analysis Volume [veh/h]	371	966	0	0	543	844	0	0	0	382	0	262
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	19	94	0	0	75	0	0	0	0	26	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	102	102	102	102		102	102
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	14	74	57	57		20	20
g / C, Green / Cycle	0.13	0.73	0.56	0.56		0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.27	0.15	0.52		0.11	0.16
s, saturation flow rate [veh/h]	3514	3618	3618	1615		3514	1615
c, Capacity [veh/h]	467	2631	2008	896		684	314
d1, Uniform Delay [s]	42.99	5.19	11.91	21.20		37.22	39.59
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.11	0.09	0.07	5.73		0.72	5.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.37	0.27	0.94		0.56	0.83
d, Delay for Lane Group [s/veh]	46.09	5.28	11.98	26.94		37.93	45.35
Lane Group LOS	D	A	B	C		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	4.71	3.23	3.13	18.66		4.35	6.75
50th-Percentile Queue Length [ft/ln]	117.68	80.87	78.33	466.39		108.71	168.72
95th-Percentile Queue Length [veh/ln]	8.27	5.82	5.64	25.74		7.77	11.01
95th-Percentile Queue Length [ft/ln]	206.63	145.56	140.99	643.47		194.21	275.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.09	5.28	0.00	0.00	11.98	26.94	0.00	0.00	0.00	37.93	0.00	45.35
Movement LOS	D	A			B	C				D		D
d_A, Approach Delay [s/veh]	16.60			21.08			0.00			40.95		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	23.10											
Intersection LOS	C											
Intersection V/C	0.896											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	34.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	599	671	207	695	0	454	38	362	12	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	1	8	0	76	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	619	671	208	703	0	530	38	362	12	0	3
Peak Hour Factor	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	155	168	52	176	0	133	10	91	3	0	1
Total Analysis Volume [veh/h]	0	619	671	208	703	0	530	38	362	12	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	20	71	0	0	28	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	56	56	16	75	30	30	30	3	3
g / C, Green / Cycle	0.46	0.46	0.13	0.63	0.25	0.25	0.25	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.17	0.42	0.11	0.19	0.16	0.16	0.22	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1821	1615	1810	1615
c, Capacity [veh/h]	1675	748	236	2268	452	455	403	43	38
d1, Uniform Delay [s]	20.90	29.64	51.32	10.38	40.13	40.09	43.61	57.67	57.39
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.63	15.70	10.19	0.36	1.44	1.41	7.32	3.50	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

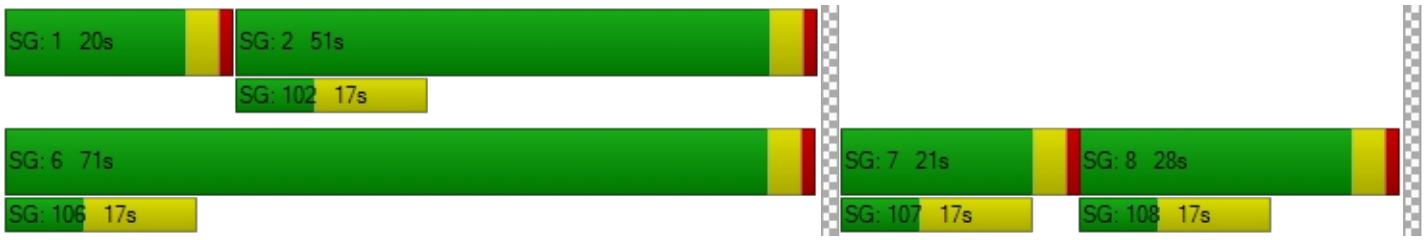
X, volume / capacity	0.37	0.90	0.88	0.31	0.63	0.63	0.90	0.28	0.08
d, Delay for Lane Group [s/veh]	21.53	45.35	61.51	10.74	41.57	41.50	50.92	61.17	58.26
Lane Group LOS	C	D	E	B	D	D	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.76	20.51	6.81	4.29	7.63	7.63	11.15	0.40	0.10
50th-Percentile Queue Length [ft/ln]	143.88	512.66	170.25	107.16	190.81	190.77	278.66	10.01	2.46
95th-Percentile Queue Length [veh/ln]	9.69	27.93	11.09	7.68	12.16	12.16	16.62	0.72	0.18
95th-Percentile Queue Length [ft/ln]	242.24	698.32	277.24	192.05	304.07	304.03	415.54	18.02	4.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.53	45.35	61.51	10.74	0.00	41.54	41.50	50.92	61.17	0.00	58.26
Movement LOS		C	D	E	B		D	D	D	E		E
d_A, Approach Delay [s/veh]	33.92			22.33			45.19			60.59		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	34.02											
Intersection LOS	C											
Intersection V/C	0.878											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	896	78	123	717	85	171	49	35	12	24	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	0	8	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	916	78	123	725	85	171	49	35	12	24	190
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	229	20	31	181	21	43	12	9	3	6	48
Total Analysis Volume [veh/h]	30	916	78	123	725	85	171	49	35	12	24	190
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	62	0	19	70	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	14	14	5	18	18	11	11	11
g / C, Green / Cycle	0.05	0.34	0.34	0.13	0.42	0.42	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.05	0.07	0.20	0.05	0.20	0.02	0.12
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1259	1733	1615
c, Capacity [veh/h]	90	1236	552	230	1516	677	454	543	400
d1, Uniform Delay [s]	19.46	12.30	9.65	17.32	8.95	7.55	15.81	12.22	13.59
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.13	0.89	0.12	1.92	0.23	0.08	1.09	0.05	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.74	0.14	0.53	0.48	0.13	0.56	0.07	0.47
d, Delay for Lane Group [s/veh]	21.58	13.19	9.77	19.24	9.18	7.63	16.90	12.27	14.46
Lane Group LOS	C	B	A	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.31	3.15	0.42	1.10	1.85	0.37	2.12	0.23	1.38
50th-Percentile Queue Length [ft/ln]	7.68	78.81	10.46	27.53	46.34	9.31	52.88	5.66	34.52
95th-Percentile Queue Length [veh/ln]	0.55	5.67	0.75	1.98	3.34	0.67	3.81	0.41	2.49
95th-Percentile Queue Length [ft/ln]	13.83	141.85	18.83	49.55	83.42	16.77	95.18	10.19	62.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.58	13.19	9.77	19.24	9.18	7.63	16.90	16.90	16.90	12.27	12.27	14.46
Movement LOS	C	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.18			10.37			16.90			14.11		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.58											
Intersection LOS	B											
Intersection V/C	0.730											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	46	6	12	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	363	6	12	210
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	91	2	3	53
Total Analysis Volume [veh/h]	0	12	363	6	12	210
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	9.37	0.00	0.00	8.03	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.04	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.09	0.00	0.00	0.76	0.00
d_A, Approach Delay [s/veh]	9.37		0.00		0.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.35					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	10	41	17	14	23
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	10	358	17	14	215
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	90	4	4	54
Total Analysis Volume [veh/h]	7	10	358	17	14	215
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.25	9.34	0.00	0.00	8.05	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	1.06	0.90	0.00	0.00	0.89	0.00
d_A, Approach Delay [s/veh]	10.54		0.00		0.49	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	15	0	6	3	2	29	20	47	28	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	15	204	6	95	213	144	20	47	116	117
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	4	51	2	24	53	36	5	12	29	29
Total Analysis Volume [veh/h]	6	3	15	204	6	95	213	144	20	47	116	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	37	0	0	37	62	0	0	25	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	6	6	17	17	6	6
g / C, Green / Cycle	0.04	0.04	0.17	0.17	0.46	0.46	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.11	0.12	0.04	0.01	0.06	0.07
s, saturation flow rate [veh/h]	1810	1656	1810	1810	3618	1615	1900	1615
c, Capacity [veh/h]	78	71	308	312	1656	739	333	283
d1, Uniform Delay [s]	16.75	16.87	14.14	14.15	5.58	5.43	13.19	13.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	1.84	2.44	2.63	0.02	0.01	0.62	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

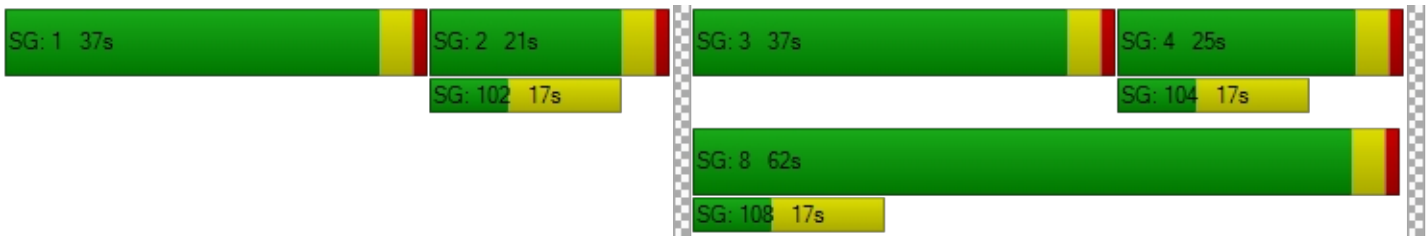
X, volume / capacity	0.08	0.25	0.66	0.68	0.09	0.03	0.35	0.41
d, Delay for Lane Group [s/veh]	17.17	18.72	16.58	16.78	5.60	5.44	13.81	14.32
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	0.16	1.47	1.55	0.20	0.06	0.73	0.76
50th-Percentile Queue Length [ft/ln]	1.24	3.99	36.77	38.70	4.98	1.38	18.21	19.01
95th-Percentile Queue Length [veh/ln]	0.09	0.29	2.65	2.79	0.36	0.10	1.31	1.37
95th-Percentile Queue Length [ft/ln]	2.24	7.18	66.18	69.66	8.96	2.49	32.77	34.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.17	18.72	18.72	16.58	0.00	0.00	16.78	5.60	5.44	0.00	13.81	14.32
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	18.33			16.58			11.91			14.07		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.83											
Intersection LOS	B											
Intersection V/C	0.469											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	319	0	0	204
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	40	4	5	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	359	4	5	279
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	90	1	1	70
Total Analysis Volume [veh/h]	0	3	359	4	5	279
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.31	0.00	0.00	8.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.27	0.00	0.00	0.31	0.00
d_A, Approach Delay [s/veh]	9.31		0.00		0.14	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.231

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	39	0	1	0	0	0	0	18	25	4	41	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	3	5	10	11	12	3	168	172	15	165	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	1	1	3	3	3	1	42	43	4	41	2
Total Analysis Volume [veh/h]	113	3	5	10	11	12	3	168	172	15	165	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.23	0.01	0.01	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	14.66	14.62	11.87	12.55	13.54	9.48	7.54	0.00	0.00	7.96	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.95	0.95	0.95	0.19	0.19	0.19	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	23.63	23.63	23.63	4.64	4.64	4.64	0.16	0.16	0.16	0.93	0.93	0.93
d_A, Approach Delay [s/veh]	14.55			11.76			0.07			0.64		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.35											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	81	169	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	36	20	9	4	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	117	189	9	4	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	29	47	2	1	3
Total Analysis Volume [veh/h]	14	117	189	9	4	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	0.00	10.50	9.26
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.02	0.05
95th-Percentile Queue Length [ft/ln]	0.76	0.00	0.00	0.00	0.46	1.15
d_A, Approach Delay [s/veh]	0.81		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.78					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	74.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	50	548	648	95	75	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	55	45	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	571	703	140	94	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	13	143	176	35	24	0
Total Analysis Volume [veh/h]	50	571	703	140	94	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.00	0.68	0.00
d_M, Delay for Movement [s/veh]	9.79	0.00	0.00	0.00	74.25	13.95
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.20	0.00	0.00	0.00	3.80	0.00
95th-Percentile Queue Length [ft/ln]	4.98	0.00	0.00	0.00	95.04	0.00
d_A, Approach Delay [s/veh]	0.79		0.00		74.25	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	4.79					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	591	70	116	689	11	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	55	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	614	70	116	744	11	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	18	29	186	3	12
Total Analysis Volume [veh/h]	614	70	116	744	11	49
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.13	0.01	0.04	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	9.48	0.00	16.96	13.48
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.43	0.00	0.11	0.34
95th-Percentile Queue Length [ft/ln]	0.00	0.00	10.79	0.00	2.73	8.60
d_A, Approach Delay [s/veh]	0.00		1.28		14.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	99	666	804	32	34	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	4	14	41	19	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	670	818	73	53	150
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	168	205	18	13	38
Total Analysis Volume [veh/h]	107	670	818	73	53	150
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.01	0.01	0.00	0.14	0.25
d_M, Delay for Movement [s/veh]	10.43	0.00	0.00	0.00	16.40	13.04
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.48	0.00	0.00	0.00	0.50	0.99
95th-Percentile Queue Length [ft/ln]	12.05	0.00	0.00	0.00	12.44	24.71
d_A, Approach Delay [s/veh]	1.44		0.00		13.91	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.11					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	8	0	0	14	14	4	0	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	730	17	116	862	19	4	3	21	33	0	68
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	183	4	29	216	5	1	1	5	8	0	17
Total Analysis Volume [veh/h]	60	730	17	116	862	19	4	3	21	33	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	47	0	41	77	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	10	10	5	12	12	0	2	2	2	3	3
g / C, Green / Cycle	0.09	0.29	0.29	0.14	0.34	0.34	0.01	0.05	0.05	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.01	0.06	0.24	0.01	0.00	0.00	0.01	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	164	1068	477	249	1239	553	14	96	82	102	188	160
d1, Uniform Delay [s]	14.88	10.82	8.73	13.81	9.87	7.61	17.15	15.70	15.88	15.77	0.00	14.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.78	0.03	1.35	0.71	0.03	10.06	0.13	1.64	1.81	0.00	1.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

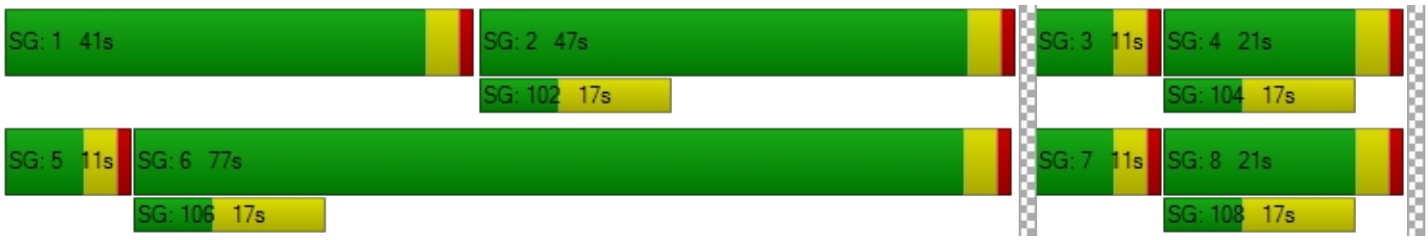
X, volume / capacity	0.37	0.68	0.04	0.47	0.70	0.03	0.28	0.03	0.26	0.32	0.00	0.43
d, Delay for Lane Group [s/veh]	16.25	11.60	8.76	15.16	10.58	7.63	27.22	15.83	17.52	17.58	0.00	16.53
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	1.90	0.07	0.76	2.07	0.07	0.07	0.02	0.17	0.26	0.00	0.49
50th-Percentile Queue Length [ft/ln]	10.66	47.51	1.78	19.11	51.82	1.75	1.67	0.56	4.26	6.49	0.00	12.26
95th-Percentile Queue Length [veh/ln]	0.77	3.42	0.13	1.38	3.73	0.13	0.12	0.04	0.31	0.47	0.00	0.88
95th-Percentile Queue Length [ft/ln]	19.19	85.52	3.20	34.40	93.28	3.15	3.01	1.00	7.66	11.68	0.00	22.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.25	11.60	8.76	15.16	10.58	7.63	27.22	15.83	17.52	17.58	0.00	16.53
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.89			11.06			18.73			16.87		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.82											
Intersection LOS	B											
Intersection V/C	0.587											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	757	86	45	882	58	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	0	0	23	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	808	86	45	905	58	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	22	11	226	15	14
Total Analysis Volume [veh/h]	808	86	45	905	58	54
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	31	0	0	62	29	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	0	0	9	9
g / C, Green / Cycle	0.72	0.72	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.22	0.05	0.07	0.48	0.09	0.03
s, saturation flow rate [veh/h]	3618	1615	685	1900	626	1615
c, Capacity [veh/h]	2617	1168	120	0	187	231
d1, Uniform Delay [s]	2.96	2.42	30.01	0.00	26.33	22.79
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.12	8.73	0.00	0.93	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

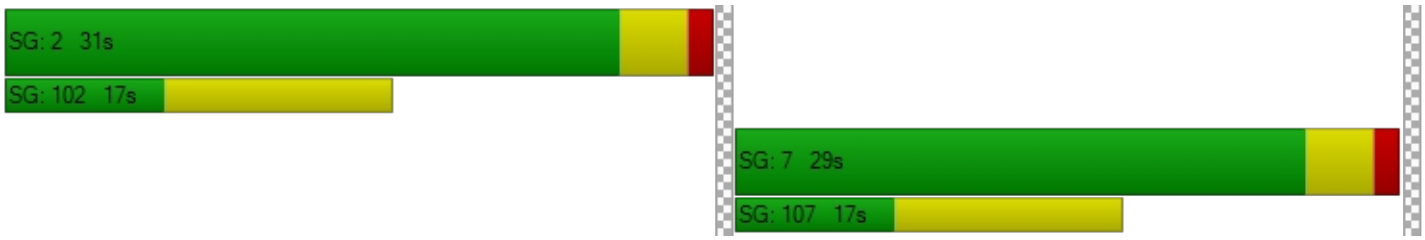
X, volume / capacity	0.31	0.07	0.38	0.00	0.31	0.23
d, Delay for Lane Group [s/veh]	3.26	2.55	38.74	0.00	27.26	23.30
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.02	0.20	0.95	0.00	0.81	0.67
50th-Percentile Queue Length [ft/ln]	25.39	4.94	23.87	0.00	20.35	16.72
95th-Percentile Queue Length [veh/ln]	1.83	0.36	1.72	0.00	1.47	1.20
95th-Percentile Queue Length [ft/ln]	45.70	8.89	42.97	0.00	36.63	30.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.26	2.55	38.74	0.00	27.26	23.30
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	3.19		1.84		25.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.80					
Intersection LOS	A					
Intersection V/C	0.395					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	253.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	78.722

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	17	0	6	9	37	0	0	113	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	277	6	493	516	695	14	3	568	309
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	69	2	123	129	174	4	1	142	77
Total Analysis Volume [veh/h]	11	6	3	277	6	493	516	695	14	3	568	309
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	38	38	8	25	25	0	17	17
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.11	0.33	0.33	0.01	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.00	65.66	0.31	0.29	0.19	0.01	0.00	0.16	0.19
s, saturation flow rate [veh/h]	55	1615	4	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	107	818	97	818	190	1186	529	11	828	370
d1, Uniform Delay [s]	18.31	9.16	37.11	13.16	33.60	21.00	17.11	37.14	26.48	27.60
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.00	889.25	0.72	776.95	2.13	0.09	12.85	4.60	19.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

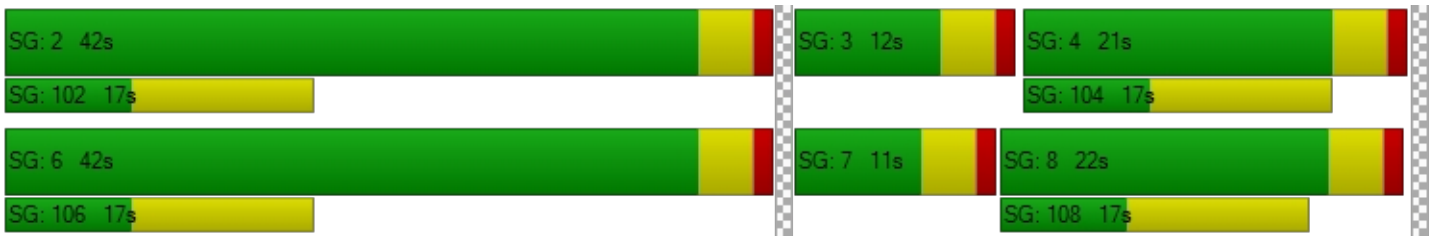
X, volume / capacity	0.16	0.00	2.92	0.60	2.72	0.59	0.03	0.27	0.69	0.84
d, Delay for Lane Group [s/veh]	18.99	9.16	926.36	13.88	810.55	23.13	17.21	50.00	31.07	47.19
Lane Group LOS	B	A	F	B	F	C	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.02	25.72	5.42	44.29	5.14	0.17	0.09	4.98	7.06
50th-Percentile Queue Length [ft/ln]	4.87	0.57	643.05	135.39	1107.29	128.43	4.27	2.32	124.47	176.49
95th-Percentile Queue Length [veh/ln]	0.35	0.04	46.30	9.23	69.00	8.85	0.31	0.17	8.64	11.42
95th-Percentile Queue Length [ft/ln]	8.76	1.02	1157.48	230.80	1725.05	221.36	7.68	4.17	215.96	285.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.99	18.99	9.16	926.36	926.36	13.88	810.55	23.13	17.21	50.00	31.07	47.19
Movement LOS	B	B	A	F	F	B	F	C	B	D	C	D
d_A, Approach Delay [s/veh]	17.52			346.65			354.74			36.80		
Approach LOS	B			F			F			D		
d_I, Intersection Delay [s/veh]	253.81											
Intersection LOS	F											
Intersection V/C	78.722											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	77.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.301

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	770	911	23	21	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	155	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	925	965	23	21	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	231	241	6	5	7
Total Analysis Volume [veh/h]	22	925	965	23	21	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.30	0.09
d_M, Delay for Movement [s/veh]	10.25	0.00	0.00	0.00	77.30	17.94
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	1.09	0.31
95th-Percentile Queue Length [ft/ln]	2.40	0.00	0.00	0.00	27.34	7.75
d_A, Approach Delay [s/veh]	0.24		0.00		42.87	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	1.19					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	1030	241	124	1111	0	3	5	87	207	6	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	154	0	0	54	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1184	241	124	1165	0	3	5	87	207	6	94
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	296	60	31	291	0	1	1	22	52	2	24
Total Analysis Volume [veh/h]	74	1184	241	124	1165	0	3	5	87	207	6	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	21	12	22	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	39	50	7	40	40	6	6	7	7	7
g / C, Green / Cycle	0.07	0.52	0.67	0.09	0.53	0.53	0.08	0.08	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.33	0.15	0.07	0.31	0.31	0.00	0.05	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1865	1615	1810	1814	1615
c, Capacity [veh/h]	133	1878	1086	158	1013	1013	150	130	181	181	161
d1, Uniform Delay [s]	33.57	12.89	4.73	33.55	11.80	11.80	31.85	33.52	32.30	32.30	32.28
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.60	1.62	0.47	8.33	0.52	0.52	0.15	5.82	3.04	3.03	3.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

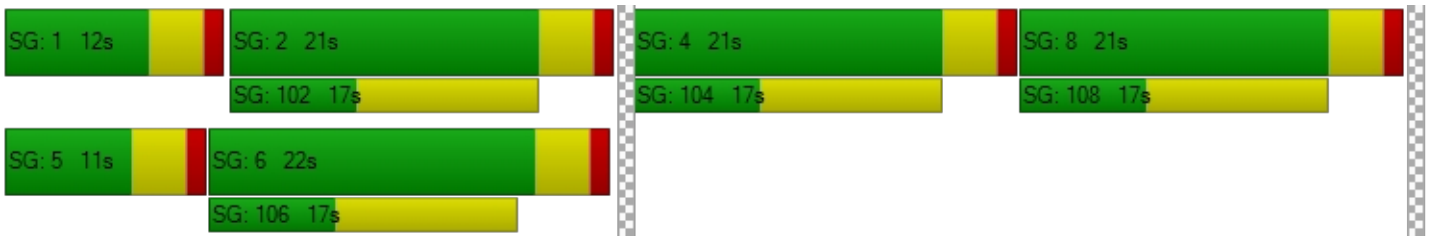
X, volume / capacity	0.56	0.63	0.22	0.79	0.58	0.58	0.05	0.67	0.59	0.59	0.58
d, Delay for Lane Group [s/veh]	37.18	14.51	5.21	41.88	12.32	12.32	32.00	39.34	35.34	35.33	35.60
Lane Group LOS	D	B	A	D	B	B	C	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.40	6.69	1.26	2.51	5.89	5.89	0.14	1.71	1.95	1.95	1.73
50th-Percentile Queue Length [ft/ln]	35.00	167.35	31.47	62.83	147.33	147.33	3.42	42.67	48.67	48.77	43.34
95th-Percentile Queue Length [veh/ln]	2.52	10.94	2.27	4.52	9.87	9.87	0.25	3.07	3.50	3.51	3.12
95th-Percentile Queue Length [ft/ln]	63.01	273.43	56.65	113.09	246.87	246.87	6.16	76.80	87.61	87.79	78.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.18	14.51	5.21	41.88	12.32	12.32	32.00	32.00	39.34	35.34	35.33	35.60
Movement LOS	D	B	A	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	14.13			15.16			38.72			35.42		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.33											
Intersection LOS	B											
Intersection V/C	0.646											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	852
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	54	0	0	0	0	0	0	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	277	501	0	0	1314	172	0	0	0	150	0	977
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	69	125	0	0	329	43	0	0	0	38	0	0
Total Analysis Volume [veh/h]	277	501	0	0	1314	172	0	0	0	150	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	23	54	0	0	31	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	54	54	54	54		54	54
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10	40	25	25		6	6
g / C, Green / Cycle	0.19	0.74	0.47	0.47		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.36	0.11		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	349	2665	1700	759		210	187
d1, Uniform Delay [s]	20.85	2.18	11.96	8.52		23.11	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	4.10	0.03	0.77	0.15		4.51	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

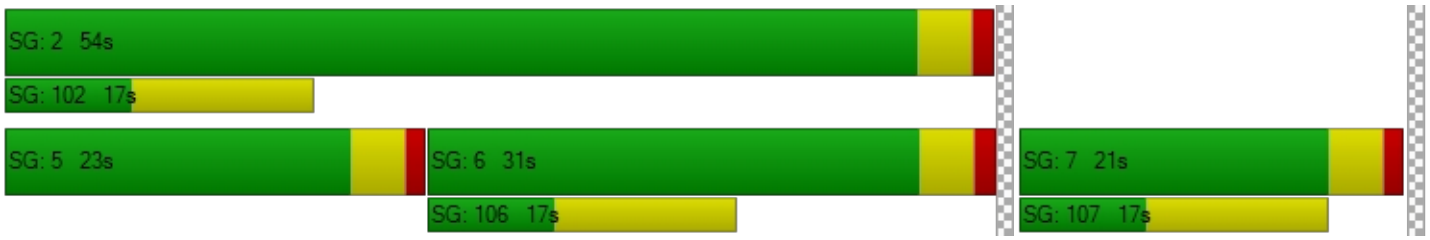
X, volume / capacity	0.79	0.19	0.77	0.23		0.72	0.00
d, Delay for Lane Group [s/veh]	24.96	2.22	12.73	8.67		27.62	0.00
Lane Group LOS	C	A	B	A		C	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	3.43	0.33	5.43	1.01		1.97	0.00
50th-Percentile Queue Length [ft/ln]	85.65	8.17	135.87	25.29		49.14	0.00
95th-Percentile Queue Length [veh/ln]	6.17	0.59	9.26	1.82		3.54	0.00
95th-Percentile Queue Length [ft/ln]	154.17	14.71	231.45	45.52		88.46	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.96	2.22	0.00	0.00	12.73	8.67	0.00	0.00	0.00	27.62	0.00	0.00
Movement LOS	C	A			B	A				C		A
d_A, Approach Delay [s/veh]	10.31			12.26			0.00			27.62		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	12.59											
Intersection LOS	B											
Intersection V/C	0.770											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.906

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	43	11	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	536	173	599	888	0	182	0	963	0	0	3
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	134	43	150	222	0	46	0	241	0	0	1
Total Analysis Volume [veh/h]	0	536	173	599	888	0	182	0	963	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	28	49	0	26	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	21	21	42	67	45	45	
g / C, Green / Cycle	0.17	0.17	0.35	0.56	0.37	0.37	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.33	0.25	0.10	0.34	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	633	283	637	2026	676	1068	
d1, Uniform Delay [s]	48.16	45.94	37.83	15.46	26.29	35.66	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.25	2.15	7.54	0.15	0.21	3.13	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

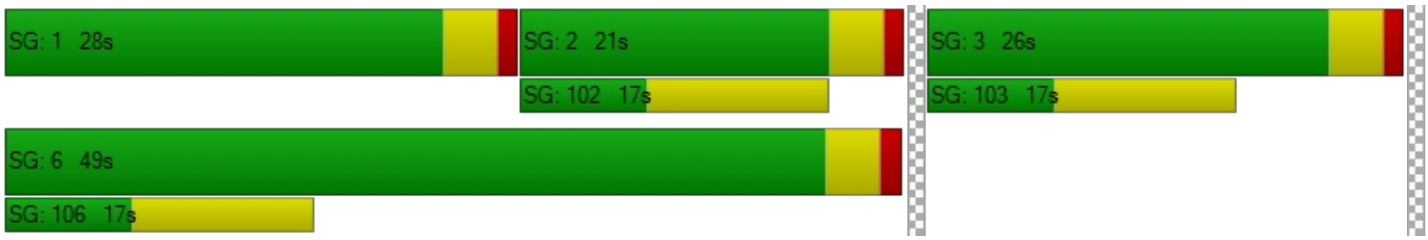
X, volume / capacity	0.85	0.61	0.94	0.44	0.27	0.90	
d, Delay for Lane Group [s/veh]	51.40	48.09	45.37	15.61	26.51	38.79	
Lane Group LOS	D	D	D	B	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.06	4.95	18.15	7.00	3.69	13.58	
50th-Percentile Queue Length [ft/ln]	201.41	123.86	453.81	175.01	92.36	339.45	
95th-Percentile Queue Length [veh/ln]	12.71	8.60	25.14	11.34	6.65	19.62	
95th-Percentile Queue Length [ft/ln]	317.78	215.11	628.50	283.49	166.25	490.52	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	51.40	48.09	45.37	15.61	0.00	26.51	0.00	38.79	0.00	0.00	0.00
Movement LOS		D	D	D	B		C		D			
d_A, Approach Delay [s/veh]	50.59			27.60			36.84			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	35.64											
Intersection LOS	D											
Intersection V/C	0.906											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	330	1059	0	0	1567	587	0	0	0	523	0	401
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	7	0	0	17	0	0	0	0	45	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	333	1066	0	0	1584	587	0	0	0	568	0	401
Peak Hour Factor	0.9500	0.9500	0.8170	0.8170	0.9500	0.9500	0.8170	0.8170	0.8170	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	88	281	0	0	417	154	0	0	0	149	0	106
Total Analysis Volume [veh/h]	351	1122	0	0	1667	618	0	0	0	598	0	422
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	22	90	0	0	68	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	19	87	65	65		37	37	37
g / C, Green / Cycle	0.15	0.67	0.50	0.50		0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.11	0.22	0.24	0.38		0.19	0.20	0.21
s, saturation flow rate [veh/h]	3144	5176	6901	1615		1714	1763	1615
c, Capacity [veh/h]	460	3464	3450	808		488	502	460
d1, Uniform Delay [s]	50.21	2.55	13.41	16.48		35.28	35.51	36.36
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	11.44	0.25	0.49	6.83		7.21	7.56	10.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.32	0.48	0.77		0.67	0.69	0.75
d, Delay for Lane Group [s/veh]	61.65	2.79	13.89	23.30		42.48	43.07	47.23
Lane Group LOS	E	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.93	1.27	5.15	11.87		9.15	9.76	10.38
50th-Percentile Queue Length [ft/ln]	148.30	31.67	128.81	296.69		228.63	243.89	259.52
95th-Percentile Queue Length [veh/ln]	9.93	2.28	8.87	17.52		14.10	14.88	15.66
95th-Percentile Queue Length [ft/ln]	248.15	57.01	221.87	437.93		352.62	371.94	391.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.65	2.79	0.00	0.00	13.89	23.30	0.00	0.00	0.00	42.75	43.07	46.42
Movement LOS	E	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	16.82			16.44			0.00			44.29		
Approach LOS	B			B			A			D		
d_I, Intersection Delay [s/veh]	22.50											
Intersection LOS	C											
Intersection V/C	0.743											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.789

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1074	525	538	1615	0	394	3	585	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	18	0	62	0	0	0	4	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1084	543	538	1677	0	394	3	589	0	0	0
Peak Hour Factor	0.8530	0.9500	0.9500	0.9500	0.9500	0.8530	0.9500	0.9500	0.9500	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	285	143	142	441	0	104	1	155	0	0	0
Total Analysis Volume [veh/h]	0	1141	572	566	1765	0	415	3	620	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	32	92	0	0	38	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	57	57	29	89	35	35	35	
g / C, Green / Cycle	0.44	0.44	0.22	0.68	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.35	0.18	0.49	0.19	0.21	0.22	
s, saturation flow rate [veh/h]	3618	1615	3144	3618	1714	1658	1615	
c, Capacity [veh/h]	1586	708	701	2477	462	446	435	
d1, Uniform Delay [s]	21.27	22.69	43.08	2.48	37.47	38.36	38.66	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.84	9.61	9.65	1.78	9.46	13.22	15.01	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.81	0.81	0.71	0.72	0.79	0.81	
d, Delay for Lane Group [s/veh]	24.11	32.30	52.73	4.25	46.93	51.58	53.67	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.61	13.98	8.96	3.01	9.91	11.12	11.40	
50th-Percentile Queue Length [ft/ln]	290.21	349.51	223.90	75.24	247.74	278.07	284.94	
95th-Percentile Queue Length [veh/ln]	17.20	20.11	13.86	5.42	15.07	16.59	16.93	
95th-Percentile Queue Length [ft/ln]	429.90	502.81	346.60	135.44	376.80	414.81	423.36	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.11	32.30	52.73	4.25	0.00	47.74	51.58	52.75	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	26.85			16.03			50.79			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	26.77											
Intersection LOS	C											
Intersection V/C	0.789											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.978

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	66	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1257	14	40	1921	294	309	19	74	43	23	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	331	4	11	506	77	81	5	19	11	6	19
Total Analysis Volume [veh/h]	71	1323	15	42	2022	309	325	20	78	45	24	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	81	0	10	81	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	78	78	7	78	78	31	31	31	31	31	31
g / C, Green / Cycle	0.06	0.62	0.62	0.06	0.62	0.62	0.25	0.25	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.35	0.35	0.02	0.61	0.64	0.25	0.01	0.05	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1893	1714	1900	1815	1314	1900	1615	1318	1900	1615
c, Capacity [veh/h]	96	1186	1181	96	1186	1133	318	471	401	318	471	401
d1, Uniform Delay [s]	56.94	5.12	5.12	55.95	9.89	10.50	47.21	31.76	32.90	37.11	31.82	32.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	39.76	1.95	1.96	13.83	22.38	34.44	56.49	0.17	1.08	0.93	0.20	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.57	0.57	0.44	0.98	1.03	1.02	0.04	0.19	0.14	0.05	0.19
d, Delay for Lane Group [s/veh]	96.70	7.08	7.09	69.78	32.27	44.94	103.69	31.93	33.99	38.05	32.02	33.95
Lane Group LOS	F	A	A	E	C	F	F	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.23	4.26	4.25	1.63	20.09	24.24	14.80	0.44	1.81	1.11	0.53	1.78
50th-Percentile Queue Length [ft/ln]	80.72	106.45	106.21	40.74	502.31	605.88	369.88	10.99	45.14	27.86	13.22	44.53
95th-Percentile Queue Length [veh/ln]	5.81	7.64	7.63	2.93	27.44	33.10	21.39	0.79	3.25	2.01	0.95	3.21
95th-Percentile Queue Length [ft/ln]	145.30	191.06	190.72	73.34	686.09	827.49	534.65	19.78	81.25	50.14	23.79	80.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	96.70	7.08	7.09	69.78	37.64	44.94	103.69	31.93	33.99	38.05	32.02	33.95
Movement LOS	F	A	A	E	D	D	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	11.60			39.16			87.45			34.90		
Approach LOS	B			D			F			C		
d_I, Intersection Delay [s/veh]	34.78											
Intersection LOS	C											
Intersection V/C	0.978											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	1168	16	85	1753	130	129	9	93	25	4	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	68	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1196	16	85	1821	130	129	9	95	25	4	53
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	315	4	22	479	34	34	2	25	7	1	14
Total Analysis Volume [veh/h]	82	1259	17	89	1917	137	136	9	100	26	4	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	95	0	15	98	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	92	92	12	95	95	17	17	17	17	17
g / C, Green / Cycle	0.07	0.71	0.71	0.09	0.73	0.73	0.13	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.34	0.34	0.05	0.54	0.55	0.11	0.06	0.02	0.00	0.03
s, saturation flow rate [veh/h]	1714	1900	1891	1714	1900	1856	1266	1615	1428	1900	1615
c, Capacity [veh/h]	119	1345	1338	158	1388	1357	219	211	57	248	211
d1, Uniform Delay [s]	57.65	1.20	1.20	54.53	0.53	0.54	53.88	49.64	62.16	46.74	48.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.19	1.21	1.21	13.67	3.57	3.99	14.63	7.43	24.48	0.12	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.48	0.48	0.56	0.74	0.76	0.66	0.47	0.46	0.02	0.27
d, Delay for Lane Group [s/veh]	85.84	2.41	2.41	68.20	4.11	4.53	68.51	57.07	86.64	46.86	51.31
Lane Group LOS	F	A	A	E	A	A	E	E	F	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.51	1.46	1.46	3.31	2.08	2.21	5.37	3.31	1.22	0.12	1.75
50th-Percentile Queue Length [ft/ln]	87.67	36.57	36.49	82.68	52.09	55.24	134.26	82.82	30.60	2.92	43.67
95th-Percentile Queue Length [veh/ln]	6.31	2.63	2.63	5.95	3.75	3.98	9.17	5.96	2.20	0.21	3.14
95th-Percentile Queue Length [ft/ln]	157.80	65.83	65.68	148.82	93.77	99.42	229.28	149.07	55.09	5.25	78.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.84	2.41	2.41	68.20	4.30	4.53	68.51	68.51	57.07	86.64	46.86	51.31
Movement LOS	F	A	A	E	A	A	E	E	E	F	D	D
d_A, Approach Delay [s/veh]	7.45			6.97			63.84			61.78		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	12.01											
Intersection LOS	B											
Intersection V/C	0.750											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.742

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	105	1230	1760	86	42	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	70	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	1258	1830	86	42	160
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	331	482	23	11	42
Total Analysis Volume [veh/h]	111	1324	1926	91	44	168
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	109	95	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	106	92	92	18	18
g / C, Green / Cycle	0.08	0.82	0.71	0.71	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.37	0.53	0.54	0.03	0.10
s, saturation flow rate [veh/h]	1714	3618	1900	1870	1714	1615
c, Capacity [veh/h]	145	2950	1345	1324	237	224
d1, Uniform Delay [s]	56.41	0.69	1.45	1.47	46.81	50.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	31.22	0.50	3.88	4.19	1.72	20.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.17	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.45	0.75	0.76	0.19	0.75
d, Delay for Lane Group [s/veh]	87.63	1.18	5.33	5.66	48.53	71.43
Lane Group LOS	F	A	A	A	D	E
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4.72	0.94	3.11	3.21	1.32	6.27
50th-Percentile Queue Length [ft/ln]	118.03	23.45	77.84	80.17	32.95	156.73
95th-Percentile Queue Length [veh/ln]	8.28	1.69	5.60	5.77	2.37	10.38
95th-Percentile Queue Length [ft/ln]	207.11	42.21	140.11	144.31	59.31	259.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	87.63	1.18	5.49	5.66	48.53	71.43
Movement LOS	F	A	A	A	D	E
d_A, Approach Delay [s/veh]	7.87		5.49		66.67	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	9.96					
Intersection LOS	A					
Intersection V/C	0.742					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.055

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	137	788	56	109	1321	348	346	236	109	81	301	106
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	70	28	13	0	0	30	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	788	56	109	1321	418	374	249	109	81	331	106
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	207	15	29	348	110	98	66	29	21	87	28
Total Analysis Volume [veh/h]	144	829	59	115	1391	440	394	262	115	85	348	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	10	32	0	27	56	0	27	73	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	8	30	30	7	29	29	24	0	0	24	0	0
g / C, Green / Cycle	0.11	0.43	0.43	0.10	0.41	0.41	0.34	0.00	0.00	0.34	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.17	0.24	0.24	0.14	0.38	0.27	0.38	0.14	0.07	0.07	0.18	0.07
s, saturation flow rate [veh/h]	824	1900	1856	824	3618	1615	1049	1900	1615	1135	1900	1615
c, Capacity [veh/h]	173	814	795	162	1499	669	433	0	0	460	0	0
d1, Uniform Delay [s]	32.20	10.79	10.79	32.55	14.71	12.18	21.79	0.00	0.00	14.59	0.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.82	2.68	2.75	23.24	11.45	5.00	25.84	0.00	0.00	0.89	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

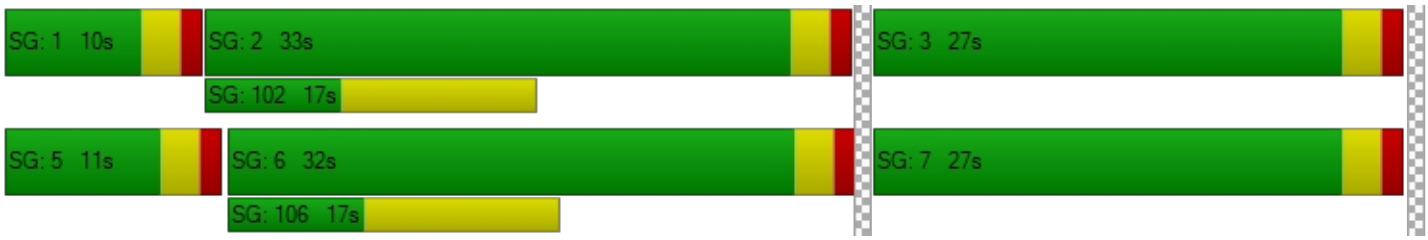
X, volume / capacity	0.83	0.55	0.55	0.71	0.93	0.66	0.91	0.00	0.00	0.18	0.00	0.00
d, Delay for Lane Group [s/veh]	67.01	13.47	13.54	55.80	26.16	17.18	47.63	0.00	0.00	15.48	0.00	0.00
Lane Group LOS	E	B	B	E	C	B	D	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.05	3.98	3.90	2.98	9.32	4.54	8.98	0.00	0.00	0.90	0.00	0.00
50th-Percentile Queue Length [ft/ln]	101.28	99.40	97.45	74.55	232.94	113.55	224.60	0.00	0.00	22.38	0.00	0.00
95th-Percentile Queue Length [veh/ln]	7.29	7.16	7.02	5.37	14.32	8.04	13.90	0.00	0.00	1.61	0.00	0.00
95th-Percentile Queue Length [ft/ln]	182.30	178.92	175.42	134.19	358.09	200.93	347.49	0.00	0.00	40.29	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.01	13.50	13.54	55.80	26.16	17.18	47.63	0.00	0.00	15.48	0.00	0.00
Movement LOS	E	B	B	E	C	B	D	A	A	B	A	A
d_A, Approach Delay [s/veh]	20.97			25.88			24.34			2.41		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	21.45											
Intersection LOS	C											
Intersection V/C	1.055											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.747

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	89	400	16	53	1019	366	184	42	66	5	45	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	17	7	0	6	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	400	16	53	1019	383	191	42	72	5	45	34
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	105	4	14	268	101	50	11	19	1	12	9
Total Analysis Volume [veh/h]	107	421	17	56	1073	403	201	44	76	5	47	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	76	0	13	75	0	0	41	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	73	73	10	72	72	38	38
g / C, Green / Cycle	0.08	0.56	0.56	0.08	0.55	0.55	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.12	0.03	0.40	0.41	0.24	0.05
s, saturation flow rate [veh/h]	1714	1900	1874	1714	1900	1728	1357	1778
c, Capacity [veh/h]	145	1067	1052	132	1052	957	442	549
d1, Uniform Delay [s]	56.27	7.72	7.73	55.63	11.42	11.68	37.72	29.36
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.17	0.44	0.45	9.71	4.33	5.29	10.01	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.21	0.21	0.42	0.72	0.75	0.73	0.16
d, Delay for Lane Group [s/veh]	84.44	8.16	8.17	65.35	15.75	16.97	47.73	29.98
Lane Group LOS	F	A	A	E	B	B	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.47	1.88	1.86	2.07	10.43	10.31	9.93	1.89
50th-Percentile Queue Length [ft/ln]	111.63	47.01	46.55	51.70	260.80	257.82	248.25	47.32
95th-Percentile Queue Length [veh/ln]	7.93	3.38	3.35	3.72	15.73	15.58	15.10	3.41
95th-Percentile Queue Length [ft/ln]	198.27	84.62	83.78	93.05	393.23	389.48	377.45	85.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	84.44	8.17	8.17	65.35	16.10	16.97	47.73	47.73	47.73	29.98	29.98	29.98
Movement LOS	F	A	A	E	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	23.14			18.13			47.73			29.98		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	23.47											
Intersection LOS	C											
Intersection V/C	0.747											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 16 Year 2035 With Project Evening Peak Hour - Alternative 2

Report File: C:\...\PM35W2.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.175	68.5	E
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	1.017	51.6	D
3	Cedar Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.883	49.7	D
4	Cedar Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	SB Left	0.833	37.4	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.681	26.8	C
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.991	38.8	D
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.083	16.6	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.715	8.3	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	708.3	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	1.250	205.3	F
11	Rubidoux Blvd (NS) at 24th St (EW)	Two-way stop	HCM 2010	WB Thru	6.873	10,000.0	F
12	Rubidoux Blvd (NS) at 26th St (EW)	Two-way stop	HCM 2010	WB Thru	0.000	629.0	F
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	WB Left	3.199	85.4	F
14	Rubidoux Blvd (NS) at 30th St (EW)	Two-way stop	HCM 2010	EB Right	0.382	18.3	C
15	Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)	Signalized	HCM 2010	NB Left	0.850	16.9	B
16	Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.970	48.3	D
17	Rubidoux Blvd (NS) at 34th St (EW)	Signalized	HCM 2010	NB Left	0.739	12.1	B

18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.058	10.6	B
19	Project Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.093	21.0	C
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.769	19.0	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.020	12.2	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	1.143	146.5	F
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.021	12.9	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	EB Left	2.910	1,003.9	F
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.694	44.5	E
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.424	30.3	D
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.673	15.3	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.863	3.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	208.473	624.2	F
30	Market St (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	1.822	632.9	F
31	Market St (NS) at Rivera St (EW)	Signalized	HCM 2010	SB Left	0.665	26.3	C
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Thru	1.063	65.0	E
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.253	119.0	F
34	Riverside Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	0.766	22.7	C
35	Riverside Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	EB Right	1.022	43.1	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	1.046	61.9	E
37	Riverside Ave (NS) at Santa Ana Ave (EW)	Signalized	HCM 2010	WB Left	0.766	12.9	B
38	Riverside Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.777	10.1	B

39	Riverside Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	SB Left	1.224	52.7	D
40	Rancho Ave (NS) at Agua Mansa Rd (EW)	Signalized	HCM 2010	NB Left	0.954	49.4	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	68.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.175

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	57	23	0	0	9	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	571	1735	0	0	1214	688	0	0	0	375	5	608
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	150	457	0	0	319	181	0	0	0	99	1	160
Total Analysis Volume [veh/h]	601	1826	0	0	1278	724	0	0	0	395	5	640
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	41	92	0	0	51	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	130	130	130	130		130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	38	89	48	48		35	35
g / C, Green / Cycle	0.29	0.68	0.37	0.37		0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.35	0.50	0.25	0.45		0.30	0.32
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1761	1615
c, Capacity [veh/h]	501	2477	1911	596		474	435
d1, Uniform Delay [s]	39.67	2.55	26.98	33.00		41.67	41.67
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	107.71	2.01	1.88	111.19		70.15	108.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.20	0.74	0.67	1.21		1.10	1.20
d, Delay for Lane Group [s/veh]	147.38	4.56	28.86	144.19		111.81	150.34
Lane Group LOS	F	A	C	F		F	F
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	29.93	3.18	9.53	35.43		23.52	26.22
50th-Percentile Queue Length [ft/ln]	748.26	79.61	238.34	885.87		588.00	655.45
95th-Percentile Queue Length [veh/ln]	43.33	5.73	14.60	51.20		33.28	38.34
95th-Percentile Queue Length [ft/ln]	1083.35	143.29	364.93	1280.02		832.08	958.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	147.38	4.56	0.00	0.00	28.86	144.19	0.00	0.00	0.00	111.81	111.81	143.11
Movement LOS	F	A			C	F				F	F	F
d_A, Approach Delay [s/veh]	39.92			70.57			0.00			131.08		
Approach LOS	D			E			A			F		
d_I, Intersection Delay [s/veh]	68.48											
Intersection LOS	E											
Intersection V/C	1.175											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	51.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.017

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	3	0	9	0	0	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1486	536	431	1155	0	812	2	307	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	391	141	113	304	0	214	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1564	564	454	1216	0	855	2	323	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	47	0	36	83	0	0	47	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	44	44	33	80	44	44	
g / C, Green / Cycle	0.34	0.34	0.25	0.62	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.35	0.26	0.34	0.33	0.36	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1701	
c, Capacity [veh/h]	1752	547	435	2226	580	576	
d1, Uniform Delay [s]	33.50	35.67	43.00	5.76	35.43	35.67	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	7.42	46.91	54.87	0.97	34.85	52.14	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.89	1.03	1.04	0.55	0.99	1.05	
d, Delay for Lane Group [s/veh]	40.92	82.57	97.87	6.73	70.29	87.81	
Lane Group LOS	D	F	F	A	E	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	15.15	23.03	19.82	4.00	22.18	25.09	
50th-Percentile Queue Length [ft/ln]	378.66	575.76	495.43	100.07	554.47	627.21	
95th-Percentile Queue Length [veh/ln]	21.53	31.57	27.82	7.21	29.90	34.49	
95th-Percentile Queue Length [ft/ln]	538.23	789.28	695.60	180.13	747.55	862.24	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	40.92	82.57	97.87	6.73	0.00	75.92	87.81	87.81	0.00	0.00	0.00
Movement LOS		D	F	F	A		E	F	F			
d_A, Approach Delay [s/veh]	51.96			31.51			79.28			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	51.58											
Intersection LOS	D											
Intersection V/C	1.017											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Cedar Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	49.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.883

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	1175	45	126	922	263	462	397	126	31	194	147
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	83	0	0	34	0	0	0	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	1258	45	126	956	263	462	397	133	31	194	147
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	331	12	33	252	69	122	104	35	8	51	39
Total Analysis Volume [veh/h]	99	1324	47	133	1006	277	486	418	140	33	204	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	54	0	14	57	0	42	52	0	10	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	51	51	11	54	54	39	49	49	7	17	17
g / C, Green / Cycle	0.06	0.39	0.39	0.08	0.42	0.42	0.30	0.38	0.38	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.06	0.36	0.36	0.08	0.35	0.35	0.28	0.12	0.09	0.02	0.10	0.10
s, saturation flow rate [veh/h]	1714	1900	1877	1714	1900	1762	1714	3618	1615	1714	1900	1638
c, Capacity [veh/h]	105	745	736	145	789	732	514	1364	609	92	248	214
d1, Uniform Delay [s]	59.42	29.21	29.27	57.21	25.35	25.59	37.97	22.34	21.72	58.19	51.71	52.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	72.16	18.88	19.44	55.26	10.29	11.87	28.14	0.58	0.88	10.47	19.27	25.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.92	0.93	0.92	0.84	0.85	0.95	0.31	0.23	0.36	0.76	0.80
d, Delay for Lane Group [s/veh]	131.58	48.08	48.71	112.47	35.64	37.46	66.11	22.93	22.60	68.66	70.98	77.77
Lane Group LOS	F	D	D	F	D	D	E	C	C	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.30	21.73	21.69	6.43	17.37	16.83	17.94	3.72	2.50	1.30	6.96	6.68
50th-Percentile Queue Length [ft/ln]	132.41	543.28	542.31	160.80	434.34	420.86	448.61	92.90	62.61	32.52	174.11	167.02
95th-Percentile Queue Length [veh/ln]	9.07	29.38	29.33	10.59	24.21	23.56	24.89	6.69	4.51	2.34	11.29	10.92
95th-Percentile Queue Length [ft/ln]	226.77	734.40	733.27	264.78	605.23	589.09	622.30	167.22	112.70	58.53	282.31	272.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	131.58	48.38	48.71	112.47	36.27	37.46	66.11	22.93	22.60	68.66	71.50	77.77
Movement LOS	F	D	D	F	D	D	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	54.00			43.66			42.98			73.74		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	49.74											
Intersection LOS	D											
Intersection V/C	0.883											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Cedar Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	37.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	142	1149	61	81	889	99	104	270	133	48	268	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	94	1	0	41	0	0	0	12	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	166	1243	62	81	930	99	104	270	145	49	268	59
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	327	16	21	245	26	27	71	38	13	71	16
Total Analysis Volume [veh/h]	175	1308	65	85	979	104	109	284	153	52	282	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	19	60	0	11	52	0	0	59	0	0	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	16	57	57	8	49	49	56	56
g / C, Green / Cycle	0.12	0.44	0.44	0.06	0.38	0.38	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.10	0.36	0.37	0.05	0.29	0.29	0.38	0.27
s, saturation flow rate [veh/h]	1714	1900	1869	1714	1900	1837	1438	1459
c, Capacity [veh/h]	211	833	819	105	716	692	653	660
d1, Uniform Delay [s]	53.01	23.06	23.15	58.90	27.74	27.75	25.99	19.41
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.86	9.32	9.72	46.27	7.76	8.05	12.11	4.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

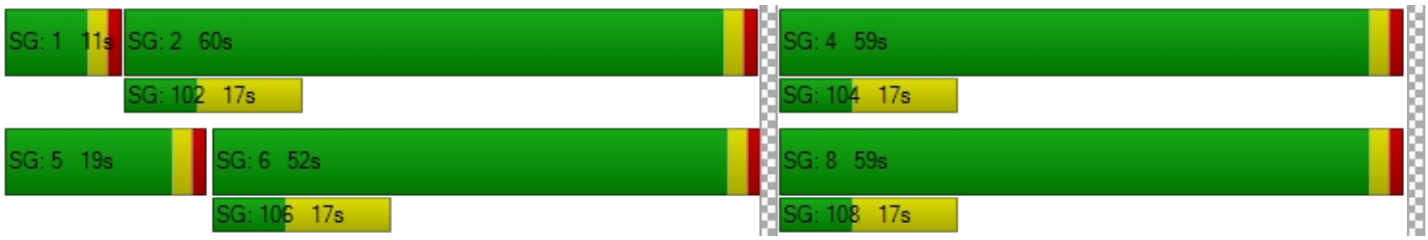
X, volume / capacity	0.83	0.83	0.83	0.81	0.77	0.77	0.84	0.60
d, Delay for Lane Group [s/veh]	82.88	32.38	32.88	105.18	35.50	35.80	38.09	23.42
Lane Group LOS	F	C	C	F	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.09	17.09	17.06	4.07	14.20	13.81	15.70	7.12
50th-Percentile Queue Length [ft/ln]	177.15	427.18	426.61	101.63	355.02	345.26	392.55	178.05
95th-Percentile Queue Length [veh/ln]	11.45	23.87	23.84	7.32	20.38	19.91	22.20	11.50
95th-Percentile Queue Length [ft/ln]	286.29	596.66	595.97	182.93	509.52	497.63	555.02	287.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.88	32.61	32.88	105.18	35.63	35.80	38.09	38.09	38.09	23.42	23.42	23.42
Movement LOS	F	C	C	F	D	D	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	38.31			40.71			38.09			23.42		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	37.43											
Intersection LOS	D											
Intersection V/C	0.833											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.681

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	119	1	0	54	0	0	0	8	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	1235	75	137	950	71	96	237	101	92	125	101
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	325	20	36	250	19	25	62	27	24	33	27
Total Analysis Volume [veh/h]	171	1300	79	144	1000	75	101	249	106	97	132	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	21	69	0	18	66	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	18	66	66	15	63	63	35	35	35	35
g / C, Green / Cycle	0.14	0.53	0.53	0.12	0.50	0.50	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.10	0.37	0.37	0.08	0.29	0.29	0.09	0.20	0.09	0.14
s, saturation flow rate [veh/h]	1714	1900	1862	1714	1900	1854	1160	1805	1043	1762
c, Capacity [veh/h]	247	1003	983	206	958	934	244	505	159	493
d1, Uniform Delay [s]	47.92	12.63	12.69	50.37	13.28	13.29	42.53	34.74	50.37	32.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.84	3.92	4.08	18.01	2.44	2.51	5.11	7.94	16.33	3.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.69	0.70	0.70	0.57	0.57	0.41	0.70	0.61	0.48
d, Delay for Lane Group [s/veh]	62.77	16.55	16.77	68.38	15.72	15.79	47.63	42.68	66.70	35.60
Lane Group LOS	E	B	B	E	B	B	D	D	E	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.80	9.79	9.76	5.16	7.28	7.14	3.02	9.73	3.64	5.66
50th-Percentile Queue Length [ft/ln]	145.00	244.85	244.06	129.11	182.00	178.43	75.60	243.36	91.05	141.50
95th-Percentile Queue Length [veh/ln]	9.75	14.93	14.89	8.89	11.71	11.52	5.44	14.85	6.56	9.56
95th-Percentile Queue Length [ft/ln]	243.74	373.16	372.16	222.29	292.63	287.97	136.08	371.28	163.88	239.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.77	16.65	16.77	68.38	15.75	15.79	47.63	42.68	42.68	66.70	35.60	35.60
Movement LOS	E	B	B	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.74			21.97			43.78			44.60		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	26.80											
Intersection LOS	C											
Intersection V/C	0.681											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	38.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.991

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	86	4	44	27	0	0	0	0	2	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1444	123	398	1160	17	21	9	23	170	16	321
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	361	31	100	290	4	5	2	6	43	4	80
Total Analysis Volume [veh/h]	15	1444	123	398	1160	17	21	9	23	170	16	321
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	58	0	32	79	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	54	54	28	79	79	26	26	26
g / C, Green / Cycle	0.02	0.45	0.45	0.23	0.66	0.66	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.42	0.22	0.31	0.31	0.25	0.23	0.20
s, saturation flow rate [veh/h]	1810	1900	1848	1810	1900	1890	211	798	1615
c, Capacity [veh/h]	44	854	831	423	1252	1246	88	231	350
d1, Uniform Delay [s]	57.73	31.18	31.42	45.27	10.13	10.14	40.21	48.01	46.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.57	17.19	18.90	10.57	1.27	1.28	6.57	6.56	9.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.92	0.93	0.94	0.47	0.47	0.61	0.81	0.92
d, Delay for Lane Group [s/veh]	62.30	48.37	50.31	55.84	11.40	11.42	46.78	54.57	55.65
Lane Group LOS	E	D	D	E	B	B	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.50	25.01	25.10	12.82	7.68	7.67	1.43	6.06	10.25
50th-Percentile Queue Length [ft/ln]	12.62	625.19	627.46	320.52	192.02	191.65	35.75	151.59	256.32
95th-Percentile Queue Length [veh/ln]	0.91	33.21	33.31	18.69	12.23	12.21	2.57	10.10	15.50
95th-Percentile Queue Length [ft/ln]	22.71	830.22	832.86	467.32	305.65	305.17	64.36	252.55	387.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.30	49.25	50.31	55.84	11.41	11.42	46.78	46.78	46.78	54.57	54.57	55.65
Movement LOS	E	D	D	E	B	B	D	D	D	D	D	E
d_A, Approach Delay [s/veh]	49.46			22.64			46.78			55.25		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	38.85											
Intersection LOS	D											
Intersection V/C	0.991											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.083

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	63	26	0	29	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1554	26	0	1353	0	28
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	389	7	0	338	0	7
Total Analysis Volume [veh/h]	1554	26	0	1353	0	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.64
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.27
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	6.74
d_A, Approach Delay [s/veh]	0.00		0.00		16.64	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.715

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	96	27	2	210	60
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1520	96	27	1326	210	60
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	380	24	7	332	53	15
Total Analysis Volume [veh/h]	1520	96	27	1326	210	60
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	84	0	11	95	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	2	36	8	8
g / C, Green / Cycle	0.57	0.57	0.04	0.69	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.42	0.06	0.01	0.37	0.12	0.04
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2055	917	79	2490	288	257
d1, Uniform Delay [s]	8.43	5.20	24.33	4.02	20.97	19.25
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.54	0.05	2.50	0.18	3.53	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.10	0.34	0.53	0.73	0.23
d, Delay for Lane Group [s/veh]	8.97	5.25	26.83	4.20	24.50	19.71
Lane Group LOS	A	A	C	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.60	0.36	0.36	1.78	2.50	0.61
50th-Percentile Queue Length [ft/ln]	114.99	8.97	8.92	44.60	62.50	15.36
95th-Percentile Queue Length [veh/ln]	8.12	0.65	0.64	3.21	4.50	1.11
95th-Percentile Queue Length [ft/ln]	202.92	16.15	16.06	80.29	112.50	27.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.97	5.25	26.83	4.20	24.50	19.71
Movement LOS	A	A	C	A	C	B
d_A, Approach Delay [s/veh]	8.75		4.65		23.43	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	8.26					
Intersection LOS	A					
Intersection V/C	0.715					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	708.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	123	0	0	212	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1536	0	0	1521	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	384	0	0	380	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1536	0	0	1521	17	27	0	42	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.00	0.00	0.02	0.00	1.41	0.00	0.12	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	13.61	0.00	0.00	13.21	0.00	0.00	576.07	708.31	398.30	221.04	333.86	19.66
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00	6.80	6.80	6.80	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.58	0.00	0.00	0.00	0.00	0.00	169.97	169.97	169.97	5.26	5.26	5.26
d_A, Approach Delay [s/veh]	0.17			0.00			467.86			70.01		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	10.37											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	205.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.250

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	5	111	102	0	0	0	0	25	0	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	563	646	682	715	75	65	136	26	482	134	623
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	141	162	171	179	19	16	34	7	121	34	0
Total Analysis Volume [veh/h]	62	563	646	682	715	75	65	136	26	482	134	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	37	0	11	37	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	414	414	414	414	414	414	414	414	414	414
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	39	39	120	120
g / C, Green / Cycle	0.04	0.29	0.29	0.29	0.54	0.54	0.09	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.40	0.38	0.20	0.05	0.04	0.09	0.34	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1848	1828	1615
c, Capacity [veh/h]	71	1048	468	523	1953	872	168	172	529	467
d1, Uniform Delay [s]	198.00	123.72	147.08	147.18	54.63	45.96	176.75	186.77	147.14	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.48	0.43	184.22	149.76	0.11	0.04	1.45	20.87	92.91	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

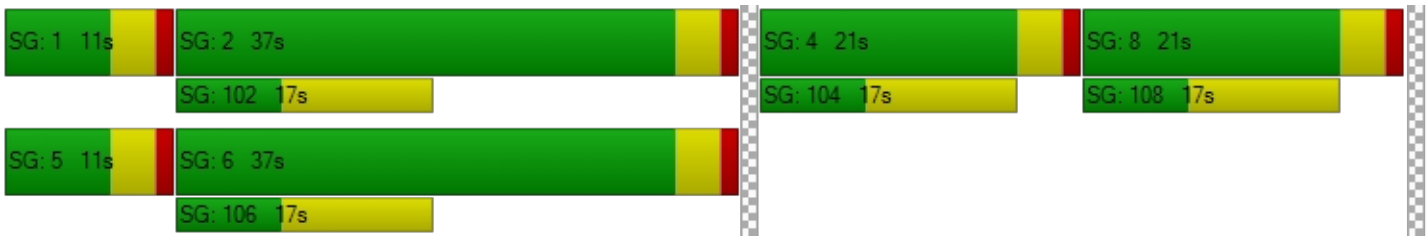
X, volume / capacity	0.88	0.54	1.38	1.30	0.37	0.09	0.39	0.94	1.16	0.00
d, Delay for Lane Group [s/veh]	224.48	124.15	331.30	296.94	54.74	46.01	178.20	207.65	240.05	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.44	26.36	75.92	79.90	22.35	3.95	6.91	19.02	72.44	0.00
50th-Percentile Queue Length [ft/ln]	185.89	659.09	1897.98	1997.48	558.71	98.74	172.81	475.54	1810.91	0.00
95th-Percentile Queue Length [veh/ln]	11.91	34.78	108.37	110.85	30.10	7.11	11.22	26.17	95.48	0.00
95th-Percentile Queue Length [ft/ln]	297.70	869.60	2709.15	2771.20	752.54	177.74	280.60	654.35	2386.95	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	224.48	124.15	331.30	296.94	54.74	46.01	178.20	207.65	207.65	240.05	240.05	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	234.33			166.51			199.22			240.05		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	205.25											
Intersection LOS	F											
Intersection V/C	1.250											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	6.873

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1177	113	225	1061	7	5	22	17	78	56	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	294	28	56	265	2	1	6	4	20	14	37
Total Analysis Volume [veh/h]	18	1177	113	225	1061	7	5	22	17	78	56	149
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.41	0.01	0.00	0.00	3.18	0.03	0.00	6.87	0.33
d_M, Delay for Movement [s/veh]	10.61	0.00	0.00	16.20	0.00	0.00	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Movement LOS	B	A	A	C	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.08	0.04	0.00	2.01	1.01	0.00	7.66	7.66	7.66	38.16	38.16	38.16
95th-Percentile Queue Length [ft/ln]	2.10	1.05	0.00	50.32	25.16	0.00	191.38	191.38	191.38	953.91	953.91	953.91
d_A, Approach Delay [s/veh]	0.15			2.82			10000.00			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	1118.11											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	629.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1221	64	46	1081	3	0	0	10	70	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	305	16	12	270	1	0	0	3	18	0	20
Total Analysis Volume [veh/h]	7	1221	64	46	1081	3	0	0	10	70	0	80
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.08	0.01	0.00	0.00	0.00	0.02	1.75	0.00	0.18
d_M, Delay for Movement [s/veh]	10.59	0.00	0.00	12.19	0.00	0.00	100.68	142.17	12.50	593.98	628.98	512.18
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	F
95th-Percentile Queue Length [veh/ln]	0.03	0.02	0.00	0.27	0.14	0.00	0.06	0.06	0.06	13.27	13.27	13.27
95th-Percentile Queue Length [ft/ln]	0.81	0.41	0.00	6.86	3.43	0.00	1.56	1.56	1.56	331.81	331.81	331.81
d_A, Approach Delay [s/veh]	0.06			0.50			12.50			550.35		
Approach LOS	A			A			B			F		
d_I, Intersection Delay [s/veh]	32.27											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	85.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.199

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	58	0	0	124	3	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	1053	92	39	986	66	90	89	54	154	117	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	263	23	10	247	17	23	22	14	39	29	7
Total Analysis Volume [veh/h]	186	1053	92	39	986	66	90	89	54	154	117	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	21	21	3	17	17	24	24	24	24
g / C, Green / Cycle	0.12	0.34	0.34	0.06	0.28	0.28	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.10	0.31	0.31	0.02	0.28	0.28	1.12	0.03	2.18	0.02
s, saturation flow rate [veh/h]	1810	1900	1847	1810	1900	1858	160	1615	124	1615
c, Capacity [veh/h]	213	651	633	107	539	527	154	645	143	645
d1, Uniform Delay [s]	26.15	18.74	18.77	27.29	21.48	21.48	20.79	11.25	22.36	11.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.15	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.49	16.72	17.47	2.09	35.55	36.05	93.42	0.06	426.05	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.89	0.89	0.37	0.99	0.99	1.16	0.08	1.89	0.04
d, Delay for Lane Group [s/veh]	36.64	35.46	36.24	29.38	57.04	57.54	114.21	11.31	448.41	11.10
Lane Group LOS	D	D	D	C	E	E	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.08	9.77	9.66	0.57	12.03	11.85	6.12	0.41	18.94	0.21
50th-Percentile Queue Length [ft/ln]	77.03	244.19	241.56	14.37	300.85	296.17	152.88	10.23	473.53	5.21
95th-Percentile Queue Length [veh/ln]	5.55	14.89	14.76	1.03	17.72	17.49	11.01	0.74	33.94	0.38
95th-Percentile Queue Length [ft/ln]	138.66	372.33	369.01	25.86	443.08	437.28	275.19	18.41	848.58	9.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.64	35.81	36.24	29.38	57.27	57.54	114.21	114.21	11.31	448.41	448.41	11.10
Movement LOS	D	D	D	C	E	E	F	F	B	F	F	B
d_A, Approach Delay [s/veh]	35.96			56.29			90.36			407.46		
Approach LOS	D			E			F			F		
d_I, Intersection Delay [s/veh]	85.36											
Intersection LOS	F											
Intersection V/C	3.199											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Rubidoux Blvd (NS) at 30th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	230	1119	1119	54	0	166
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	58	124	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1177	1243	54	0	166
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	294	311	14	0	42
Total Analysis Volume [veh/h]	230	1177	1243	54	0	166
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.43	0.01	0.01	0.00	0.00	0.38
d_M, Delay for Movement [s/veh]	16.49	0.00	0.00	0.00	0.00	18.30
Movement LOS	C	A	A	A		C
95th-Percentile Queue Length [veh/ln]	2.10	0.00	0.00	0.00	0.00	1.76
95th-Percentile Queue Length [ft/ln]	52.62	0.00	0.00	0.00	0.00	44.01
d_A, Approach Delay [s/veh]	2.70		0.00		18.30	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.38					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 15: Rubidoux Blvd (NS) at SR-60 FWY WB On-Ramp (EW)

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.850

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	254	1190	0	0	607	705	0	0	0	510	0	243
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	0	32	92	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	1244	0	0	639	797	0	0	0	510	0	247
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	311	0	0	160	199	0	0	0	128	0	62
Total Analysis Volume [veh/h]	254	1244	0	0	639	797	0	0	0	510	0	247
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	15	93	0	0	78	0	0	0	0	27	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	77	77	77	77		77	77
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	8	54	42	42		16	16
g / C, Green / Cycle	0.10	0.70	0.54	0.54		0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.18	0.49		0.15	0.15
s, saturation flow rate [veh/h]	3514	3618	3618	1615		3514	1615
c, Capacity [veh/h]	369	2519	1953	872		705	324
d1, Uniform Delay [s]	33.50	5.45	9.98	16.22		29.00	29.27
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	2.29	0.15	0.10	4.28		1.43	3.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.49	0.33	0.91		0.72	0.76
d, Delay for Lane Group [s/veh]	35.79	5.60	10.08	20.51		30.43	32.99
Lane Group LOS	D	A	B	C		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	2.36	3.52	2.75	12.09		4.41	4.51
50th-Percentile Queue Length [ft/ln]	58.97	87.88	68.77	302.13		110.26	112.75
95th-Percentile Queue Length [veh/ln]	4.25	6.33	4.95	17.79		7.85	7.99
95th-Percentile Queue Length [ft/ln]	106.15	158.18	123.79	444.67		196.37	199.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.79	5.60	0.00	0.00	10.08	20.51	0.00	0.00	0.00	30.43	0.00	32.99
Movement LOS	D	A			B	C				C		C
d_A, Approach Delay [s/veh]	10.72			15.86			0.00			31.26		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.94											
Intersection LOS	B											
Intersection V/C	0.850											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 16: Rubidoux Blvd (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	48.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.970

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	681	354	165	945	0	693	45	506	16	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	5	27	0	41	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	694	354	170	972	0	734	45	506	16	0	4
Peak Hour Factor	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000	1.0000	1.0000	1.0000	0.8750	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	174	89	43	243	0	184	11	127	4	0	1
Total Analysis Volume [veh/h]	0	694	354	170	972	0	734	45	506	16	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	7	0	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	120	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	39	0	15	54	0	0	45	0	21	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	10	0	0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	36	11	51	53	53	3	3
g / C, Green / Cycle	0.30	0.30	0.09	0.43	0.44	0.44	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.28	0.31	0.09	0.27	0.43	0.31	0.01	0.00
s, saturation flow rate [veh/h]	1900	1698	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	576	515	166	1549	804	716	51	46
d1, Uniform Delay [s]	40.23	41.81	54.50	26.83	32.58	27.08	57.15	56.78
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.81	44.30	38.89	1.93	9.04	1.30	3.37	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

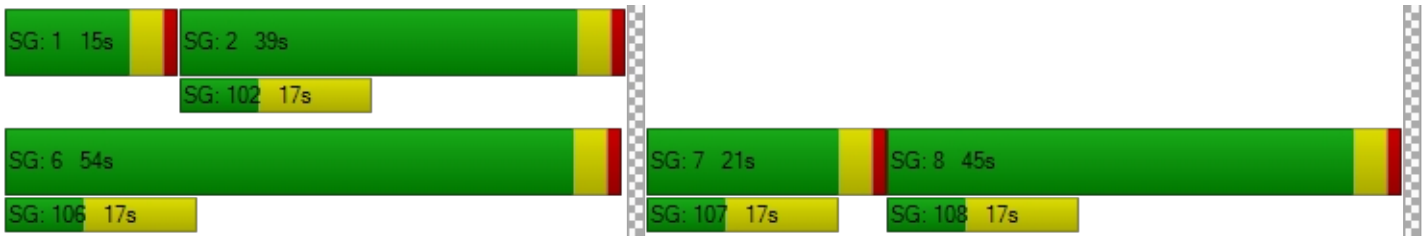
X, volume / capacity	0.91	1.02	1.02	0.63	0.97	0.71	0.31	0.09
d, Delay for Lane Group [s/veh]	61.04	86.11	93.40	28.76	41.62	28.37	60.52	57.59
Lane Group LOS	E	F	F	C	D	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	18.07	21.38	6.80	11.18	23.38	11.79	0.52	0.13
50th-Percentile Queue Length [ft/ln]	451.68	534.48	169.90	279.59	584.40	294.65	13.11	3.21
95th-Percentile Queue Length [veh/ln]	25.04	29.31	11.17	16.67	31.31	17.42	0.94	0.23
95th-Percentile Queue Length [ft/ln]	625.95	732.69	279.30	416.70	782.63	435.41	23.60	5.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	67.18	86.11	93.40	28.76	0.00	41.62	41.62	28.37	60.52	0.00	57.59
Movement LOS		E	F	F	C		D	D	C	E		E
d_A, Approach Delay [s/veh]	73.57			38.38			36.40			59.93		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	48.33											
Intersection LOS	D											
Intersection V/C	0.970											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Rubidoux Blvd (NS) at 34th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	639	77	296	1021	168	112	67	13	17	50	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	27	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	652	77	296	1048	168	112	67	13	17	50	141
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	163	19	74	262	42	28	17	3	4	13	35
Total Analysis Volume [veh/h]	34	652	77	296	1048	168	112	67	13	17	50	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	73	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	10	8	16	16	8	8	8
g / C, Green / Cycle	0.06	0.26	0.26	0.22	0.42	0.42	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.02	0.18	0.05	0.16	0.29	0.10	0.16	0.04	0.09
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1176	1808	1615
c, Capacity [veh/h]	102	955	426	393	1535	685	391	490	333
d1, Uniform Delay [s]	17.39	12.67	10.91	14.05	8.94	7.09	15.03	12.52	13.24
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	0.87	0.20	2.96	0.54	0.18	0.96	0.13	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.68	0.18	0.75	0.68	0.25	0.49	0.14	0.42
d, Delay for Lane Group [s/veh]	19.28	13.54	11.11	17.01	9.48	7.27	15.99	12.65	14.09
Lane Group LOS	B	B	B	B	A	A	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	2.08	0.42	2.24	2.50	0.64	1.43	0.40	0.94
50th-Percentile Queue Length [ft/ln]	7.52	51.92	10.56	56.12	62.48	16.02	35.83	10.05	23.38
95th-Percentile Queue Length [veh/ln]	0.54	3.74	0.76	4.04	4.50	1.15	2.58	0.72	1.68
95th-Percentile Queue Length [ft/ln]	13.53	93.45	19.01	101.01	112.47	28.84	64.50	18.09	42.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.28	13.54	11.11	17.01	9.48	7.27	15.99	15.99	15.99	12.65	12.65	14.09
Movement LOS	B	B	B	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.55			10.71			15.99			13.63		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.13											
Intersection LOS	B											
Intersection V/C	0.739											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	28	20	16	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	40	628	20	16	623
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	10	157	5	4	156
Total Analysis Volume [veh/h]	0	40	628	20	16	623
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	10.56	0.00	0.00	8.87	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.18	0.00	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.62	0.00	0.00	1.29	0.00
d_A, Approach Delay [s/veh]	10.56		0.00		0.22	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.093

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	27	59	9	8	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	27	659	9	8	616
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	165	2	2	154
Total Analysis Volume [veh/h]	23	27	659	9	8	616
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.04	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	21.04	10.58	0.00	0.00	8.90	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.30	0.13	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	7.61	3.13	0.00	0.00	0.65	0.00
d_A, Approach Delay [s/veh]	15.39		0.00		0.11	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.63					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	6	53	0	3	5	7	67	12	23	26	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	6	53	495	3	323	189	485	12	23	275	219
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	13	124	1	81	47	121	3	6	69	55
Total Analysis Volume [veh/h]	26	6	53	495	3	323	189	485	12	23	275	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	56	0	0	56	0	31	48	0	11	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	58	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	27	8	17	17	2	11	11
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.14	0.29	0.29	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.36	0.20	0.10	0.13	0.01	0.01	0.14	0.14
s, saturation flow rate [veh/h]	1071	1640	1365	1617	1810	3618	1615	1810	1900	1629
c, Capacity [veh/h]	438	765	682	754	245	1042	465	68	360	309
d1, Uniform Delay [s]	14.77	8.51	15.83	10.27	24.04	16.87	14.72	27.05	21.95	22.06
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	0.04	1.49	0.39	5.06	0.32	0.02	2.94	2.81	3.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

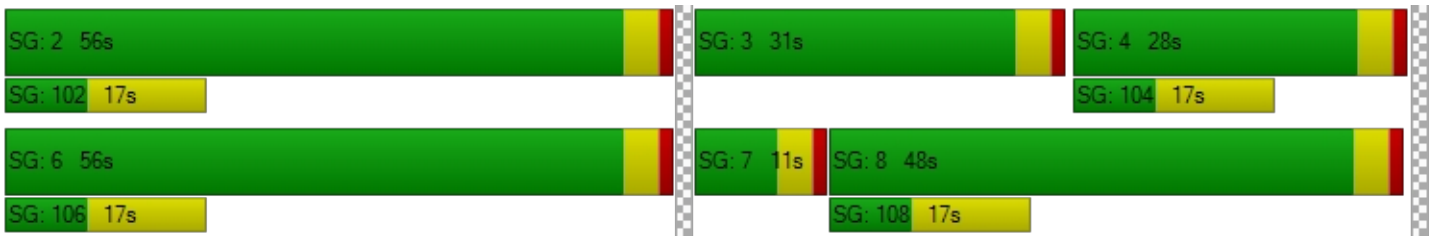
X, volume / capacity	0.06	0.08	0.73	0.43	0.77	0.47	0.03	0.34	0.73	0.75
d, Delay for Lane Group [s/veh]	14.83	8.55	17.31	10.67	29.10	17.19	14.74	29.99	24.76	25.73
Lane Group LOS	B	A	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	0.36	5.41	2.40	2.66	2.44	0.11	0.35	3.36	3.05
50th-Percentile Queue Length [ft/ln]	5.80	8.90	135.15	59.90	66.59	60.98	2.65	8.70	83.94	76.29
95th-Percentile Queue Length [veh/ln]	0.42	0.64	9.22	4.31	4.79	4.39	0.19	0.63	6.04	5.49
95th-Percentile Queue Length [ft/ln]	10.44	16.01	230.48	107.82	119.87	109.76	4.78	15.66	151.10	137.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.83	8.55	8.55	17.31	10.67	10.67	29.10	17.19	14.74	29.99	24.80	25.73
Movement LOS	B	A	A	B	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	10.47			14.67			20.43			25.43		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.01											
Intersection LOS	B											
Intersection V/C	0.769											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	913	0	0	466
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	118	2	2	51
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	1031	2	2	517
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	258	1	1	129
Total Analysis Volume [veh/h]	0	10	1031	2	2	517
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.21	0.00	0.00	10.31	0.00
Movement LOS		B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.06	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.50	0.00	0.00	0.22	0.00
d_A, Approach Delay [s/veh]	12.21		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	146.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.143

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	0	2	0	0	0	0	59	69	2	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	323	2	12	3	4	6	8	445	255	4	225	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	1	3	1	1	2	2	111	64	1	56	3
Total Analysis Volume [veh/h]	323	2	12	3	4	6	8	445	255	4	225	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.14	0.01	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	146.49	145.70	140.64	18.15	19.37	9.75	7.70	0.00	0.00	8.99	0.00	0.00
Movement LOS	F	F	F	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	14.75	14.75	14.75	0.10	0.10	0.10	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	368.82	368.82	368.82	2.61	2.61	2.61	0.45	0.45	0.45	0.33	0.33	0.33
d_A, Approach Delay [s/veh]	146.28			14.65			0.09			0.15		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	38.14											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	308	192	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	19	67	4	10	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	327	259	4	10	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	82	65	1	3	12
Total Analysis Volume [veh/h]	6	327	259	4	10	49
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.75	0.00	0.00	0.00	12.89	9.89
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.07	0.20
95th-Percentile Queue Length [ft/ln]	0.34	0.00	0.00	0.00	1.64	4.99
d_A, Approach Delay [s/veh]	0.14		0.00		10.40	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,003.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.910

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	78	1010	664	95	119	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	26	27	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1076	690	122	180	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	20	269	173	31	45	0
Total Analysis Volume [veh/h]	78	1076	690	122	180	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.01	0.00	2.91	0.00
d_M, Delay for Movement [s/veh]	9.83	0.00	0.00	0.00	1003.91	13.70
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.31	0.00	0.00	0.00	18.43	0.00
95th-Percentile Queue Length [ft/ln]	7.82	0.00	0.00	0.00	460.78	0.00
d_A, Approach Delay [s/veh]	0.66		0.00		1003.91	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	84.56					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	44.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1009	23	57	670	70	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	0	0	26	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1075	23	57	696	70	184
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	269	6	14	174	18	46
Total Analysis Volume [veh/h]	1075	23	57	696	70	184
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.09	0.01	0.23	0.69
d_M, Delay for Movement [s/veh]	0.00	0.00	11.14	0.00	20.56	44.46
Movement LOS	A	A	B	A	C	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.29	0.00	0.88	4.66
95th-Percentile Queue Length [ft/ln]	0.00	0.00	7.26	0.00	22.07	116.47
d_A, Approach Delay [s/veh]	0.00		0.84		37.88	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	4.87					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	30.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	250	787	717	40	48	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	11	6	20	55	62
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	255	798	723	60	103	245
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	200	181	15	26	61
Total Analysis Volume [veh/h]	255	798	723	60	103	245
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.01	0.01	0.00	0.42	0.38
d_M, Delay for Movement [s/veh]	11.10	0.00	0.00	0.00	30.28	14.05
Movement LOS	B	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	1.28	0.00	0.00	0.00	1.98	1.79
95th-Percentile Queue Length [ft/ln]	31.91	0.00	0.00	0.00	49.54	44.78
d_A, Approach Delay [s/veh]	2.69		0.00		18.85	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.30					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	5	0	0	62	6	11	0	30	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	805	176	83	879	17	21	7	50	88	6	246
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	201	44	21	220	4	5	2	13	22	2	62
Total Analysis Volume [veh/h]	36	805	176	83	879	17	21	7	50	88	6	246
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	53	0	15	57	0	11	37	0	15	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	14	14	5	16	16	2	6	6	5	9	9
g / C, Green / Cycle	0.06	0.31	0.31	0.10	0.35	0.35	0.04	0.13	0.13	0.10	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.11	0.05	0.24	0.01	0.01	0.00	0.03	0.05	0.00	0.15
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	104	1112	496	184	1272	568	66	247	210	190	377	320
d1, Uniform Delay [s]	20.37	13.86	12.10	19.00	12.47	9.54	21.10	17.07	17.55	18.92	14.49	17.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.98	0.91	0.43	1.73	0.68	0.02	2.70	0.05	0.58	1.75	0.02	3.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

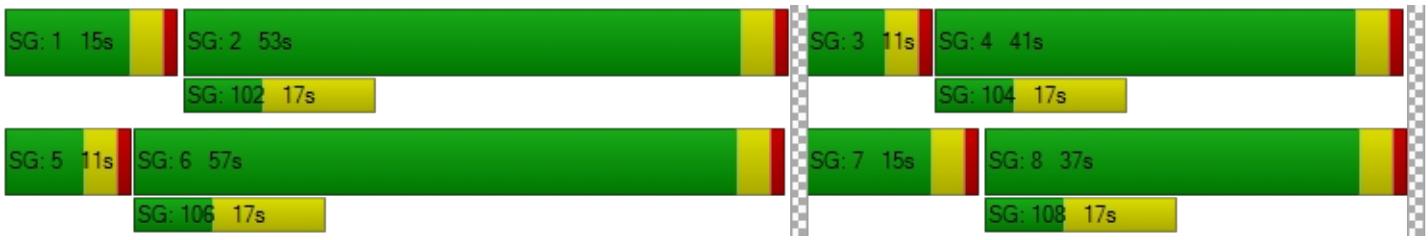
X, volume / capacity	0.35	0.72	0.35	0.45	0.69	0.03	0.32	0.03	0.24	0.46	0.02	0.77
d, Delay for Lane Group [s/veh]	22.35	14.78	12.53	20.73	13.15	9.56	23.80	17.12	18.13	20.67	14.50	20.91
Lane Group LOS	C	B	B	C	B	A	C	B	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	3.11	1.19	0.81	3.13	0.09	0.24	0.06	0.44	0.85	0.04	2.40
50th-Percentile Queue Length [ft/ln]	9.54	77.70	29.78	20.22	78.18	2.31	6.07	1.47	11.09	21.37	1.11	60.05
95th-Percentile Queue Length [veh/ln]	0.69	5.59	2.14	1.46	5.63	0.17	0.44	0.11	0.80	1.54	0.08	4.32
95th-Percentile Queue Length [ft/ln]	17.17	139.85	53.61	36.40	140.72	4.15	10.93	2.65	19.95	38.47	2.00	108.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.35	14.78	12.53	20.73	13.15	9.56	23.80	17.12	18.13	20.67	14.50	20.91
Movement LOS	C	B	B	C	B	A	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	14.65			13.73			19.57			20.74		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.30											
Intersection LOS	B											
Intersection V/C	0.673											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.863

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1053	77	103	797	63	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	0	0	92	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1078	77	103	889	63	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	270	19	26	222	16	10
Total Analysis Volume [veh/h]	1078	77	103	889	63	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	99	0	0	124	21	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	0	0	3	3
g / C, Green / Cycle	0.49	0.49	0.00	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.30	0.05	0.19	0.47	0.10	0.02
s, saturation flow rate [veh/h]	3618	1615	532	1900	635	1615
c, Capacity [veh/h]	1777	793	322	0	365	243
d1, Uniform Delay [s]	4.12	3.04	11.17	0.00	10.66	8.26
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.05	2.60	0.00	0.22	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

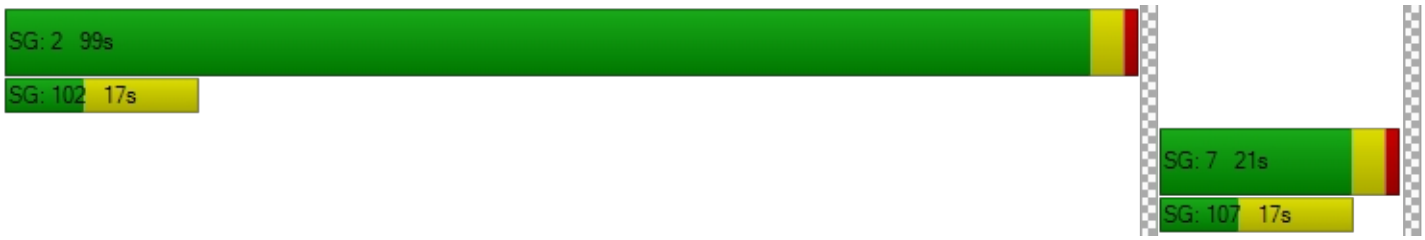
X, volume / capacity	0.61	0.10	0.32	0.00	0.17	0.16
d, Delay for Lane Group [s/veh]	4.46	3.09	13.77	0.00	10.88	8.56
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.28	0.03	0.65	0.00	0.22	0.12
50th-Percentile Queue Length [ft/ln]	7.09	0.82	16.33	0.00	5.61	2.88
95th-Percentile Queue Length [veh/ln]	0.51	0.06	1.18	0.00	0.40	0.21
95th-Percentile Queue Length [ft/ln]	12.77	1.47	29.39	0.00	10.09	5.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.46	3.09	13.77	0.00	10.88	8.56
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	4.36		1.43		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.32					
Intersection LOS	A					
Intersection V/C	0.863					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	624.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	208.473

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	67	0	25	5	111	0	0	67	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	395	3	584	760	708	5	2	665	383
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	99	1	146	190	177	1	1	166	96
Total Analysis Volume [veh/h]	5	3	2	395	3	584	760	708	5	2	665	383
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	57	0	0	57	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	53	53	53	53	8	25	25	0	17	17
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.09	0.27	0.27	0.00	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.18	0.00	180.03	0.36	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	44	1615	2	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	91	951	81	951	159	992	443	7	688	307
d1, Uniform Delay [s]	22.56	7.63	45.03	11.94	41.07	29.51	23.80	44.71	36.18	36.47
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	0.00	1790.27	0.65	1700.85	4.38	0.05	17.99	27.00	135.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

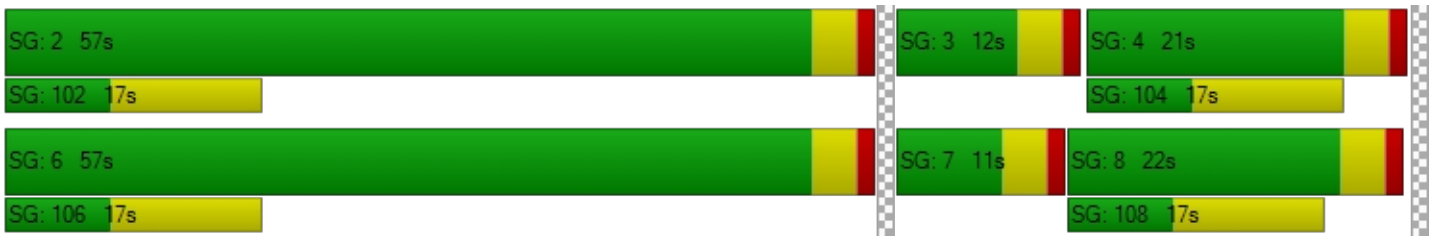
X, volume / capacity	0.09	0.00	4.92	0.61	4.77	0.71	0.01	0.27	0.97	1.25
d, Delay for Lane Group [s/veh]	22.97	7.63	1835.31	12.59	1741.92	33.89	23.85	62.71	63.18	171.78
Lane Group LOS	C	A	F	B	F	C	C	E	E	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.13	0.02	42.04	6.94	78.71	7.33	0.08	0.08	9.66	18.14
50th-Percentile Queue Length [ft/ln]	3.14	0.38	1051.04	173.57	1967.73	183.14	2.06	2.04	241.55	453.54
95th-Percentile Queue Length [veh/ln]	0.23	0.03	75.67	11.26	117.13	11.76	0.15	0.15	14.76	27.88
95th-Percentile Queue Length [ft/ln]	5.65	0.68	1891.87	281.60	2928.18	294.10	3.70	3.67	368.99	697.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.97	22.97	7.63	1835.31	1835.31	12.59	1741.92	33.89	23.85	62.71	63.18	171.78
Movement LOS	C	C	A	F	F	B	F	C	C	E	E	F
d_A, Approach Delay [s/veh]	19.90			751.33			915.12			102.79		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	624.16											
Intersection LOS	F											
Intersection V/C	208.473											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	632.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.822

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	906	1094	95	64	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	176	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	993	1270	97	65	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	248	318	24	16	4
Total Analysis Volume [veh/h]	35	993	1270	97	65	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.01	0.00	1.82	0.08
d_M, Delay for Movement [s/veh]	12.60	0.00	0.00	0.00	632.88	25.21
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh/ln]	0.22	0.00	0.00	0.00	7.10	0.27
95th-Percentile Queue Length [ft/ln]	5.52	0.00	0.00	0.00	177.48	6.66
d_A, Approach Delay [s/veh]	0.43		0.00		512.85	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	16.96					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 31: Market St (NS) at Rivera St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	972	323	133	1167	0	5	24	152	354	6	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	0	3	173	0	0	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	1057	323	136	1340	0	5	24	152	354	6	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	264	81	34	335	0	1	6	38	89	2	24
Total Analysis Volume [veh/h]	54	1057	323	136	1340	0	5	24	152	354	6	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	2	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups			2,4									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	7	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	120	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	39	19	47	0	0	41	0	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	65	84	11	70	70	13	13	15	15	15
g / C, Green / Cycle	0.05	0.54	0.70	0.09	0.58	0.58	0.11	0.11	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.29	0.20	0.08	0.35	0.35	0.02	0.09	0.10	0.10	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1884	1615	1810	1812	1615
c, Capacity [veh/h]	88	1964	1126	164	1111	1111	212	181	219	219	195
d1, Uniform Delay [s]	55.97	17.71	6.88	53.68	15.99	15.99	48.02	52.19	51.49	51.49	49.31
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.71	1.06	0.64	10.28	0.53	0.53	0.29	9.76	7.52	7.50	1.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.54	0.29	0.83	0.60	0.60	0.14	0.84	0.82	0.82	0.49
d, Delay for Lane Group [s/veh]	62.68	18.77	7.52	63.96	16.52	16.52	48.31	61.95	59.01	59.00	51.22
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.77	9.51	3.11	4.50	11.50	11.50	0.80	4.97	5.73	5.74	2.80
50th-Percentile Queue Length [ft/ln]	44.22	237.72	77.77	112.55	287.59	287.59	20.09	124.33	143.34	143.55	70.01
95th-Percentile Queue Length [veh/ln]	3.18	14.57	5.60	7.98	17.07	17.07	1.45	8.63	9.66	9.67	5.04
95th-Percentile Queue Length [ft/ln]	79.60	364.15	139.98	199.55	426.65	426.65	36.17	215.76	241.51	241.79	126.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.68	18.77	7.52	63.96	16.52	16.52	48.31	48.31	61.95	59.00	59.00	51.22
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	17.89			20.89			59.77			57.36		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	26.35											
Intersection LOS	C											
Intersection V/C	0.665											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	65.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.063

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	716
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	0	0	173	0	0	0	0	0	0	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	834	637	0	0	1572	226	0	0	0	111	0	783
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	209	159	0	0	393	57	0	0	0	28	0	0
Total Analysis Volume [veh/h]	834	637	0	0	1572	226	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	55	99	0	0	44	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	51	103	48	48		9	9
g / C, Green / Cycle	0.42	0.86	0.40	0.40		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.46	0.18	0.43	0.14		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1615
c, Capacity [veh/h]	768	3097	1440	643		140	125
d1, Uniform Delay [s]	34.59	1.51	36.19	25.32		54.52	0.00
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	43.98	0.15	52.79	1.51		9.62	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

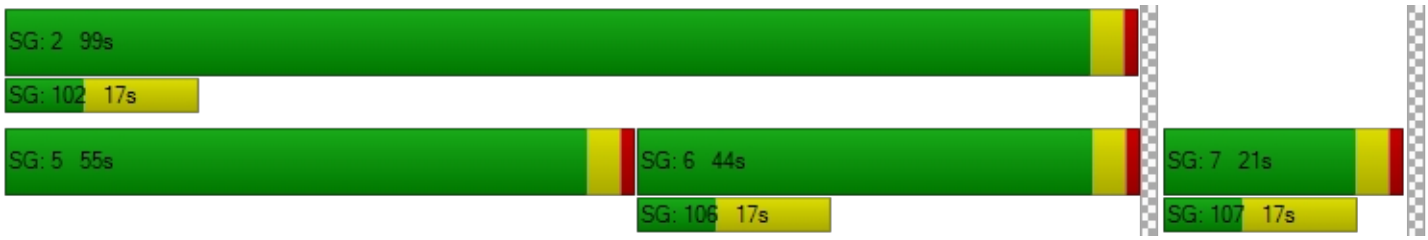
X, volume / capacity	1.09	0.21	1.09	0.35		0.79	0.00
d, Delay for Lane Group [s/veh]	78.57	1.66	88.98	26.83		64.14	0.00
Lane Group LOS	F	A	F	C		E	A
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	31.17	0.80	31.12	4.79		3.68	0.00
50th-Percentile Queue Length [ft/ln]	779.29	19.97	778.08	119.64		91.91	0.00
95th-Percentile Queue Length [veh/ln]	42.82	1.44	42.87	8.37		6.62	0.00
95th-Percentile Queue Length [ft/ln]	1070.42	35.95	1071.69	209.33		165.43	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	78.57	1.66	0.00	0.00	88.98	26.83	0.00	0.00	0.00	64.14	0.00	0.00
Movement LOS	F	A			F	C				E		A
d_A, Approach Delay [s/veh]	45.27			81.17			0.00			64.14		
Approach LOS	D			F			A			E		
d_I, Intersection Delay [s/veh]	64.98											
Intersection LOS	E											
Intersection V/C	1.063											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	119.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.253

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	144	29	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1295	172	801	893	0	172	0	936	0	0	1
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	324	43	200	223	0	43	0	234	0	0	0
Total Analysis Volume [veh/h]	0	1295	172	801	893	0	172	0	936	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	46	84	0	36	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	34	34	42	80	32	32	
g / C, Green / Cycle	0.28	0.28	0.35	0.67	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.36	0.11	0.44	0.25	0.10	0.33	
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	2859	
c, Capacity [veh/h]	1026	458	633	2411	483	763	
d1, Uniform Delay [s]	43.16	34.61	39.17	8.89	35.77	44.16	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	125.98	2.34	122.26	0.09	0.44	104.54	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

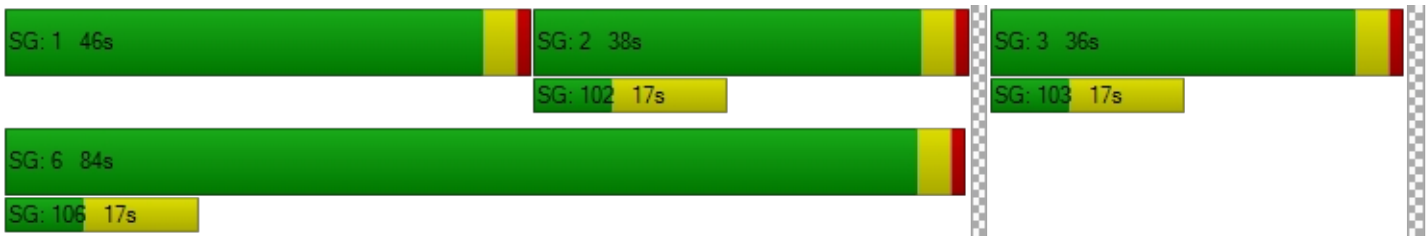
X, volume / capacity	1.26	0.38	1.27	0.37	0.36	1.23	
d, Delay for Lane Group [s/veh]	169.14	36.95	161.43	8.99	36.21	148.71	
Lane Group LOS	F	D	F	A	D	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	33.02	4.35	39.83	4.92	4.17	22.33	
50th-Percentile Queue Length [ft/ln]	825.50	108.76	995.81	123.08	104.15	558.26	
95th-Percentile Queue Length [veh/ln]	48.45	7.77	58.02	8.56	7.50	33.63	
95th-Percentile Queue Length [ft/ln]	1211.32	194.27	1450.49	214.05	187.47	840.81	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	169.14	36.95	161.43	8.99	0.00	36.21	0.00	148.71	0.00	0.00	0.00
Movement LOS		F	D	F	A		D		F			
d_A, Approach Delay [s/veh]	153.64			81.07			131.24			0.00		
Approach LOS	F			F			F			A		
d_I, Intersection Delay [s/veh]	119.03											
Intersection LOS	F											
Intersection V/C	1.253											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 34: Riverside Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.766

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	448	1801	0	0	1468	514	0	0	0	430	9	623
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	21	0	0	9	0	0	0	0	25	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	454	1822	0	0	1477	514	0	0	0	455	9	623
Peak Hour Factor	0.9500	0.9500	0.8170	0.8170	0.9500	0.9500	0.8170	0.8170	0.8170	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	479	0	0	389	135	0	0	0	120	2	164
Total Analysis Volume [veh/h]	478	1918	0	0	1555	541	0	0	0	479	9	656
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	26	80	0	0	54	0	0	0	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	23	77	51	51		37	37	37
g / C, Green / Cycle	0.19	0.64	0.43	0.43		0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.15	0.37	0.23	0.33		0.21	0.23	0.24
s, saturation flow rate [veh/h]	3144	5176	6901	1615		1714	1672	1615
c, Capacity [veh/h]	603	3321	2933	686		529	516	498
d1, Uniform Delay [s]	42.45	4.02	18.58	21.77		30.69	31.43	31.80
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	10.31	0.74	0.69	8.92		7.39	9.77	11.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.58	0.53	0.79		0.70	0.75	0.78
d, Delay for Lane Group [s/veh]	52.76	4.76	19.27	30.69		38.08	41.20	43.25
Lane Group LOS	D	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.15	2.97	6.03	12.06		9.21	10.27	10.60
50th-Percentile Queue Length [ft/ln]	178.72	74.30	150.76	301.59		230.33	256.78	265.00
95th-Percentile Queue Length [veh/ln]	11.53	5.35	10.06	17.76		14.19	15.53	15.94
95th-Percentile Queue Length [ft/ln]	288.35	133.74	251.45	444.00		354.78	388.18	398.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.76	4.76	0.00	0.00	19.27	30.69	0.00	0.00	0.00	38.74	41.20	42.39
Movement LOS	D	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	14.34			22.22			0.00			40.89		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	22.66											
Intersection LOS	C											
Intersection V/C	0.766											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 35: Riverside Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	43.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.022

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1788	750	453	1492	0	690	2	468	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	54	0	34	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1815	804	453	1526	0	690	2	470	0	0	0
Peak Hour Factor	0.8530	0.9500	0.9500	0.9500	0.9500	0.8530	0.9500	0.9500	0.9500	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	478	212	119	402	0	182	1	124	0	0	0
Total Analysis Volume [veh/h]	0	1911	846	477	1606	0	726	2	495	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	67	0	21	88	0	0	32	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	64	64	18	85	29	29	29	
g / C, Green / Cycle	0.53	0.53	0.15	0.71	0.24	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.51	0.56	0.15	0.44	0.23	0.23	0.26	
s, saturation flow rate [veh/h]	3618	1634	3144	3618	1714	1769	1615	
c, Capacity [veh/h]	1929	872	472	2562	414	427	390	
d1, Uniform Delay [s]	15.98	17.33	48.00	1.17	39.94	40.25	40.67	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	12.00	45.80	44.32	1.17	33.08	36.80	63.29	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.95	1.05	1.01	0.63	0.95	0.97	1.06	
d, Delay for Lane Group [s/veh]	27.98	63.13	92.32	2.34	73.02	77.05	103.96	
Lane Group LOS	C	F	F	A	E	E	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	19.70	28.54	9.63	1.56	14.42	15.69	17.66	
50th-Percentile Queue Length [ft/ln]	492.38	713.57	240.75	38.98	360.55	392.24	441.42	
95th-Percentile Queue Length [veh/ln]	26.97	38.92	14.80	2.81	20.65	22.19	25.43	
95th-Percentile Queue Length [ft/ln]	674.34	972.89	369.94	70.17	516.25	554.64	635.85	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	29.32	63.13	92.32	2.34	0.00	74.84	77.05	99.21	0.00	0.00	0.00
Movement LOS		C	E	F	A		E	E	F			
d_A, Approach Delay [s/veh]	39.70			22.95			84.88			0.00		
Approach LOS	D			C			F			A		
d_I, Intersection Delay [s/veh]	43.06											
Intersection LOS	D											
Intersection V/C	1.022											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	61.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.046

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	81	0	0	36	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	2120	42	55	1649	293	461	94	180	67	23	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	558	11	14	434	77	121	25	47	18	6	13
Total Analysis Volume [veh/h]	71	2232	44	58	1736	308	485	99	189	71	24	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	75	0	10	75	0	0	45	0	0	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	72	72	7	72	72	42	42	42	42	42	42
g / C, Green / Cycle	0.05	0.55	0.55	0.05	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.04	0.60	0.60	0.03	0.54	0.57	0.36	0.05	0.12	0.06	0.01	0.03
s, saturation flow rate [veh/h]	1714	1900	1887	1714	1900	1804	1343	1900	1615	1108	1900	1615
c, Capacity [veh/h]	92	1052	1045	92	1052	999	442	614	522	309	614	522
d1, Uniform Delay [s]	59.54	17.00	17.00	59.07	16.04	17.00	41.61	26.23	27.97	35.00	25.32	25.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	52.50	55.24	28.21	21.62	34.39	71.41	0.56	1.95	1.73	0.12	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	1.08	1.09	0.63	0.97	1.02	1.10	0.16	0.36	0.23	0.04	0.10
d, Delay for Lane Group [s/veh]	104.80	69.50	72.24	87.28	37.66	51.39	113.03	26.79	29.91	36.72	25.44	26.16
Lane Group LOS	F	F	F	F	D	F	F	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	37.87	38.41	2.56	26.55	30.94	23.05	1.97	4.08	1.80	0.46	1.04
50th-Percentile Queue Length [ft/ln]	85.79	946.83	960.31	64.11	663.81	773.38	576.28	49.33	102.07	44.95	11.50	26.12
95th-Percentile Queue Length [veh/ln]	6.18	51.13	52.05	4.62	35.00	40.82	32.80	3.55	7.35	3.24	0.83	1.88
95th-Percentile Queue Length [ft/ln]	154.42	1278.27	1301.30	115.40	875.08	1020.62	820.09	88.79	183.72	80.92	20.71	47.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	70.84	72.24	87.28	43.31	51.39	113.03	26.79	29.91	36.72	25.44	26.16
Movement LOS	F	F	E	F	D	D	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	71.90			45.71			81.66			31.11		
Approach LOS	E			D			F			C		
d_I, Intersection Delay [s/veh]	61.93											
Intersection LOS	E											
Intersection V/C	1.046											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Riverside Ave (NS) at Santa Ana Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.766

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	103	1988	42	36	1725	107	137	2	75	50	11	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	84	0	0	36	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	2072	42	36	1761	107	137	2	75	50	11	89
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	545	11	9	463	28	36	1	20	13	3	23
Total Analysis Volume [veh/h]	112	2181	44	38	1854	113	144	2	79	53	12	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	98	0	10	94	0	0	22	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	95	95	7	91	91	19	19	19	19	19
g / C, Green / Cycle	0.08	0.73	0.73	0.05	0.70	0.70	0.15	0.15	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.07	0.59	0.59	0.02	0.52	0.53	0.12	0.05	0.04	0.01	0.06
s, saturation flow rate [veh/h]	1714	1900	1887	1714	1900	1862	1229	1615	1437	1900	1615
c, Capacity [veh/h]	145	1388	1379	92	1330	1304	235	236	72	278	236
d1, Uniform Delay [s]	56.45	0.56	0.57	58.36	1.78	1.82	52.19	46.89	61.59	44.95	47.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	32.04	4.95	5.15	13.01	3.72	4.09	11.82	3.79	48.51	0.29	4.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.80	0.81	0.41	0.74	0.75	0.62	0.33	0.73	0.04	0.40
d, Delay for Lane Group [s/veh]	88.49	5.51	5.71	71.37	5.51	5.91	64.02	50.68	110.09	45.25	52.30
Lane Group LOS	F	A	A	E	A	A	E	D	F	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.79	2.68	2.74	1.53	3.34	3.45	5.20	2.43	2.69	0.34	2.95
50th-Percentile Queue Length [ft/ln]	119.68	66.93	68.48	38.14	83.47	86.25	130.04	60.78	67.13	8.52	73.65
95th-Percentile Queue Length [veh/ln]	8.38	4.82	4.93	2.75	6.01	6.21	8.94	4.38	4.83	0.61	5.30
95th-Percentile Queue Length [ft/ln]	209.39	120.48	123.27	68.65	150.24	155.24	223.54	109.40	120.84	15.33	132.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	88.49	5.61	5.71	71.37	5.69	5.91	64.02	64.02	50.68	110.09	45.25	52.30
Movement LOS	F	A	A	E	A	A	E	E	D	F	D	D
d_A, Approach Delay [s/veh]	9.59			6.95			59.33			71.03		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	12.90											
Intersection LOS	B											
Intersection V/C	0.766											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Riverside Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	125	2108	1863	100	65	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	36	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	2195	1899	100	65	155
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	578	500	26	17	41
Total Analysis Volume [veh/h]	132	2311	1999	105	68	163
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	2.0	2.0	2.0	0.0	2.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	16	110	94	0	20	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	0.0	1.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	107	91	91	17	17
g / C, Green / Cycle	0.10	0.82	0.70	0.70	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.08	0.64	0.55	0.56	0.04	0.10
s, saturation flow rate [veh/h]	1714	3618	1900	1867	1714	1615
c, Capacity [veh/h]	171	2978	1330	1307	224	211
d1, Uniform Delay [s]	54.89	0.95	1.91	1.95	48.50	51.82
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.73	2.05	4.87	5.36	3.46	23.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.15	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.78	0.79	0.80	0.30	0.77
d, Delay for Lane Group [s/veh]	82.61	3.01	6.78	7.31	51.96	75.28
Lane Group LOS	F	A	A	A	D	E
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	5.39	2.23	3.92	4.07	2.13	6.27
50th-Percentile Queue Length [ft/ln]	134.66	55.63	97.95	101.72	53.21	156.69
95th-Percentile Queue Length [veh/ln]	9.19	4.01	7.05	7.32	3.83	10.37
95th-Percentile Queue Length [ft/ln]	229.81	100.13	176.31	183.09	95.78	259.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.61	3.01	7.03	7.31	51.96	75.28
Movement LOS	F	A	A	A	D	E
d_A, Approach Delay [s/veh]	7.31		7.05		68.42	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	10.15					
Intersection LOS	B					
Intersection V/C	0.777					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 39: Riverside Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	52.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.224

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	147	1381	103	124	1215	402	453	525	160	42	234	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	36	87	39	0	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	1381	103	124	1215	438	540	564	160	42	251	126
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	363	27	33	320	115	142	148	42	11	66	33
Total Analysis Volume [veh/h]	155	1454	108	131	1279	461	568	594	168	44	264	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	12	37	0	43	31	0	43	98	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
g_i, Effective Green Time [s]	12	37	37	9	34	34	40	0	0	40	0	0
g / C, Green / Cycle	0.13	0.39	0.39	0.09	0.36	0.36	0.42	0.00	0.00	0.42	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.24	0.41	0.42	0.20	0.35	0.29	0.50	0.31	0.10	0.05	0.14	0.08
s, saturation flow rate [veh/h]	654	1900	1855	654	3618	1615	1133	1900	1615	836	1900	1615
c, Capacity [veh/h]	145	740	722	124	1295	578	529	0	0	410	0	0
d1, Uniform Delay [s]	43.12	22.83	22.83	44.64	24.63	21.93	24.56	0.00	0.00	13.55	0.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	95.27	50.38	55.75	96.81	22.28	10.95	60.39	0.00	0.00	0.53	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

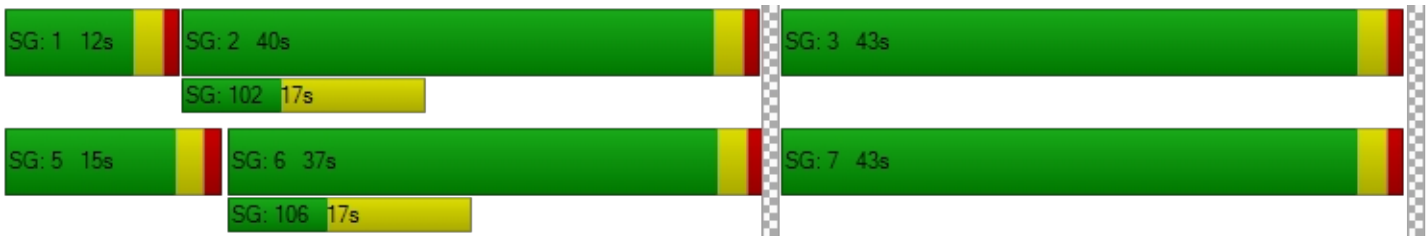
X, volume / capacity	1.07	1.06	1.08	1.06	0.99	0.80	1.07	0.00	0.00	0.11	0.00	0.00
d, Delay for Lane Group [s/veh]	138.39	73.22	78.59	141.45	46.91	32.88	84.95	0.00	0.00	14.08	0.00	0.00
Lane Group LOS	F	F	F	F	D	C	F	A	A	B	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	7.09	23.96	24.47	6.19	16.04	9.16	20.74	0.00	0.00	0.51	0.00	0.00
50th-Percentile Queue Length [ft/ln]	177.20	599.11	611.71	154.80	401.11	229.11	518.58	0.00	0.00	12.74	0.00	0.00
95th-Percentile Queue Length [veh/ln]	11.78	33.35	34.28	10.48	22.61	14.13	29.66	0.00	0.00	0.92	0.00	0.00
95th-Percentile Queue Length [ft/ln]	294.43	833.75	857.11	261.98	565.34	353.23	741.41	0.00	0.00	22.93	0.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	138.39	75.69	78.59	141.45	46.91	32.88	84.95	0.00	0.00	14.08	0.00	0.00
Movement LOS	F	E	E	F	D	C	F	A	A	B	A	A
d_A, Approach Delay [s/veh]	81.53			50.07			36.28			1.40		
Approach LOS	F			D			D			A		
d_I, Intersection Delay [s/veh]	52.72											
Intersection LOS	D											
Intersection V/C	1.224											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 40: Rancho Ave (NS) at Agua Mansa Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	49.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.954

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	82	770	3	2	857	174	502	76	171	2	22	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	0	0	9	24	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	770	3	2	857	183	526	76	186	2	22	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	203	1	1	226	48	138	20	49	1	6	2
Total Analysis Volume [veh/h]	95	811	3	2	902	193	554	80	196	2	23	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	45	0	10	44	0	0	75	0	0	75	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	42	42	7	41	41	72	72
g / C, Green / Cycle	0.06	0.32	0.32	0.05	0.32	0.32	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.21	0.00	0.30	0.30	0.56	0.02
s, saturation flow rate [veh/h]	1714	1900	1898	1714	1900	1785	1489	1838
c, Capacity [veh/h]	105	614	613	92	599	563	871	1047
d1, Uniform Delay [s]	59.27	31.37	31.37	57.15	36.52	36.54	17.14	7.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	63.73	5.58	5.58	0.43	24.88	26.10	21.01	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

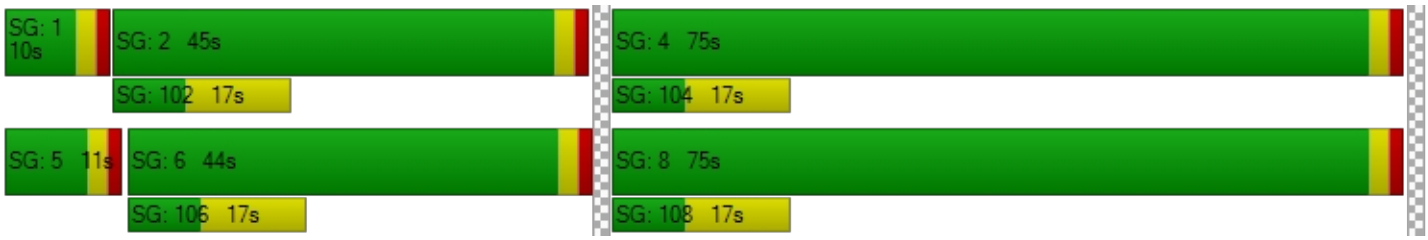
X, volume / capacity	0.90	0.66	0.66	0.02	0.94	0.94	0.95	0.03
d, Delay for Lane Group [s/veh]	123.00	36.94	36.95	57.58	61.40	62.63	38.15	7.72
Lane Group LOS	F	D	D	E	E	E	D	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.91	10.48	10.47	0.07	20.10	19.10	23.09	0.27
50th-Percentile Queue Length [ft/ln]	122.84	261.98	261.68	1.81	502.44	477.50	577.14	6.66
95th-Percentile Queue Length [veh/ln]	8.55	15.79	15.77	0.13	27.45	26.27	30.97	0.48
95th-Percentile Queue Length [ft/ln]	213.73	394.71	394.32	3.26	686.24	656.68	774.14	11.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	123.00	36.95	36.95	57.58	61.86	62.63	38.15	38.15	38.15	7.72	7.72	7.72
Movement LOS	F	D	D	E	E	E	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	45.94			61.99			38.15			7.72		
Approach LOS	D			E			D			A		
d_I, Intersection Delay [s/veh]	49.40											
Intersection LOS	D											
Intersection V/C	0.954											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 17 Year 2035 With Project Morning Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\PM35W2-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.058	46.3	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Right	0.971	44.1	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	NB Left	0.552	21.9	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.430	3.6	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.875	36.3	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	WB Right	0.706	13.3	B
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.602	10.3	B
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	SB Left	0.614	15.8	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.525	5.7	A
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.567	10.0	B
25	Agua Mansa Rd (NS) at Holly St (EW)	Signalized	HCM 2010	SB Left	0.442	8.7	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.784	30.9	C
30	Market St (NS) at Hall Ave (EW)	Signalized	HCM 2010	NB Left	0.789	7.2	A
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	WB Left	0.706	11.5	B
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	0.800	20.0	B
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	NB Left	0.921	24.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	46.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.058

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	393	1439	0	0	1187	841	0	0	0	590	0	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	8	0	0	19	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	408	1447	0	0	1206	841	0	0	0	592	0	574
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	381	0	0	317	221	0	0	0	156	0	151
Total Analysis Volume [veh/h]	429	1523	0	0	1269	885	0	0	0	623	0	604
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	33	101	0	0	68	0	0	0	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	30	98	65	65		26	26	26
g / C, Green / Cycle	0.23	0.75	0.50	0.50		0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.25	0.42	0.25	0.55		0.17	0.17	0.21
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1810	2859
c, Capacity [veh/h]	396	2727	2588	808		362	362	572
d1, Uniform Delay [s]	45.00	0.84	13.46	21.67		45.94	45.94	47.67
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	69.80	0.83	0.67	61.16		22.59	22.59	53.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.27	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.56	0.49	1.10		0.86	0.86	1.06
d, Delay for Lane Group [s/veh]	114.80	1.67	14.13	82.83		68.54	68.54	101.10
Lane Group LOS	F	A	B	F		E	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.76	1.23	5.31	33.56		11.42	11.42	13.07
50th-Percentile Queue Length [ft/ln]	493.96	30.64	132.70	839.08		285.57	285.57	326.65
95th-Percentile Queue Length [veh/ln]	28.33	2.21	9.09	46.21		16.97	16.97	19.55
95th-Percentile Queue Length [ft/ln]	708.16	55.15	227.16	1155.37		424.14	424.14	488.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	114.80	1.67	0.00	0.00	14.13	82.83	0.00	0.00	0.00	68.54	68.54	101.10
Movement LOS	F	A			B	F				E	E	F
d_A, Approach Delay [s/veh]	26.54			42.36			0.00			84.56		
Approach LOS	C			D			A			F		
d_I, Intersection Delay [s/veh]	46.28											
Intersection LOS	D											
Intersection V/C	1.058											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	44.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.971

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1161	482	526	1283	0	669	0	539	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	1	0	21	0	0	0	48	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1184	483	526	1304	0	669	0	587	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	312	127	138	343	0	176	0	154	0	0	0
Total Analysis Volume [veh/h]	0	1246	508	554	1373	0	704	0	618	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	44	0	45	89	0	0	41	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	41	41	42	86	38	38	38	
g / C, Green / Cycle	0.32	0.32	0.32	0.66	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.32	0.38	0.26	0.27	0.29	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1635	1530	
c, Capacity [veh/h]	1632	509	554	2393	501	478	447	
d1, Uniform Delay [s]	33.53	37.61	37.00	3.29	37.54	38.26	39.39	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.45	39.24	38.31	1.01	19.32	25.70	39.07	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.76	1.00	1.00	0.57	0.88	0.92	0.99	
d, Delay for Lane Group [s/veh]	36.97	76.85	75.31	4.30	56.86	63.96	78.46	
Lane Group LOS	D	E	F	A	E	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.97	20.50	22.15	2.91	14.89	15.93	17.87	
50th-Percentile Queue Length [ft/ln]	274.21	512.40	553.81	72.73	372.14	398.14	446.70	
95th-Percentile Queue Length [veh/ln]	16.40	27.92	29.88	5.24	21.21	22.47	24.80	
95th-Percentile Queue Length [ft/ln]	410.00	698.01	746.92	130.91	530.32	561.75	620.00	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	36.97	76.85	75.31	4.30	0.00	59.51	63.96	74.30	0.00	0.00	0.00
Movement LOS		D	E	F	A		E	E	E			
d_A, Approach Delay [s/veh]	48.52			24.71			66.43			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	44.08											
Intersection LOS	D											
Intersection V/C	0.971											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	887	56	117	1019	58	102	144	85	72	93	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	35	0	0	95	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	922	56	117	1114	58	102	144	90	72	93	168
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	243	15	31	293	15	27	38	24	19	24	44
Total Analysis Volume [veh/h]	64	971	59	123	1173	61	107	152	95	76	98	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	70	0	20	78	0	0	40	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	67	67	17	75	75	37	37	37	37
g / C, Green / Cycle	0.07	0.52	0.52	0.13	0.58	0.58	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.27	0.07	0.33	0.33	0.10	0.14	0.07	0.16
s, saturation flow rate [veh/h]	1714	1900	1862	1714	1900	1867	1122	1779	1151	1706
c, Capacity [veh/h]	119	979	960	224	1096	1077	214	506	244	486
d1, Uniform Delay [s]	57.02	12.60	12.60	50.16	8.35	8.36	46.81	33.12	42.77	33.99
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.45	2.06	2.11	9.33	2.13	2.18	8.07	3.34	3.32	4.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.53	0.53	0.55	0.57	0.57	0.50	0.49	0.31	0.57
d, Delay for Lane Group [s/veh]	73.47	14.66	14.70	59.50	10.48	10.54	54.87	36.45	46.09	38.72
Lane Group LOS	E	B	B	E	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.53	6.66	6.54	4.15	5.76	5.69	3.60	6.10	2.26	7.14
50th-Percentile Queue Length [ft/ln]	63.31	166.60	163.62	103.87	144.05	142.35	89.97	152.39	56.43	178.48
95th-Percentile Queue Length [veh/ln]	4.56	10.90	10.74	7.48	9.70	9.61	6.48	10.14	4.06	11.52
95th-Percentile Queue Length [ft/ln]	113.96	272.43	268.51	186.97	242.47	240.19	161.95	253.61	101.57	288.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.47	14.68	14.70	59.50	10.51	10.54	54.87	36.45	36.45	46.09	38.72	38.72
Movement LOS	E	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.12			14.95			42.02			40.31		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	21.91											
Intersection LOS	C											
Intersection V/C	0.552											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	204	1	1	67	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1121	1	1	1321	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	280	0	0	330	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1121	1	1	1321	11	6	0	18	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	104	104	0	101	101	4	4	4	4
g / C, Green / Cycle	0.03	0.86	0.86	0.00	0.84	0.84	0.03	0.03	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.31	0.00	0.00	0.37	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1417	1900
c, Capacity [veh/h]	54	3125	1395	5	3028	1352	90	54	74	64
d1, Uniform Delay [s]	57.25	1.62	1.12	59.81	2.51	1.61	57.91	56.79	58.95	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.32	0.00	16.49	0.46	0.01	0.31	3.53	0.07	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.36	0.00	0.19	0.44	0.01	0.07	0.33	0.01	0.00
d, Delay for Lane Group [s/veh]	61.50	1.94	1.12	76.30	2.97	1.62	58.22	60.32	59.02	0.00
Lane Group LOS	E	A	A	E	A	A	E	E	E	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	1.46	0.00	0.05	2.81	0.03	0.19	0.59	0.03	0.00
50th-Percentile Queue Length [ft/ln]	16.51	36.51	0.05	1.36	70.21	0.80	4.69	14.70	0.79	0.00
95th-Percentile Queue Length [veh/ln]	1.19	2.63	0.00	0.10	5.06	0.06	0.34	1.06	0.06	0.00
95th-Percentile Queue Length [ft/ln]	29.71	65.71	0.09	2.46	126.38	1.44	8.43	26.46	1.42	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	1.94	1.12	76.30	2.97	1.62	58.22	60.32	60.32	59.02	0.00	0.00
Movement LOS	E	A	A	E	A	A	E	E	E	E	A	A
d_A, Approach Delay [s/veh]	2.98			3.02			59.80			59.02		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.57											
Intersection LOS	A											
Intersection V/C	0.430											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.875

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	92	9	37	31	0	0	0	0	6	0	113
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	410	408	661	685	38	61	117	52	417	87	535
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	103	102	165	171	10	15	29	13	104	22	134
Total Analysis Volume [veh/h]	32	410	408	661	685	38	61	117	52	417	87	535
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	27	37	0	11	21	0	41	51	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	27	54	23	45	45	6	21	23	39	39
g / C, Green / Cycle	0.04	0.24	0.49	0.20	0.41	0.41	0.05	0.19	0.21	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.25	0.19	0.19	0.02	0.03	0.09	0.12	0.05	0.33
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1802	3514	1900	1615
c, Capacity [veh/h]	73	878	794	720	1474	658	98	351	746	671	570
d1, Uniform Delay [s]	51.63	35.60	19.05	42.87	23.84	19.79	50.97	39.39	38.75	24.15	34.46
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.15	1.78	2.37	5.30	1.06	0.17	6.32	1.02	0.66	0.09	8.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.47	0.51	0.92	0.46	0.06	0.62	0.48	0.56	0.13	0.94
d, Delay for Lane Group [s/veh]	55.79	37.39	21.43	48.16	24.90	19.96	57.29	40.41	39.41	24.24	42.52
Lane Group LOS	E	D	C	D	C	B	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.95	4.90	7.44	9.25	6.64	0.62	1.82	4.15	5.09	1.56	14.80
50th-Percentile Queue Length [ft/ln]	23.65	122.47	185.90	231.32	166.08	15.57	45.39	103.79	127.15	38.93	369.97
95th-Percentile Queue Length [veh/ln]	1.70	8.53	11.91	14.24	10.87	1.12	3.27	7.47	8.78	2.80	21.11
95th-Percentile Queue Length [ft/ln]	42.56	213.22	297.71	356.03	271.76	28.02	81.70	186.82	219.61	70.07	527.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.79	37.39	21.43	48.16	24.90	19.96	57.29	40.41	40.41	39.41	24.24	42.52
Movement LOS	E	D	C	D	C	B	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	30.42			35.87			44.89			39.74		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	36.29											
Intersection LOS	D											
Intersection V/C	0.875											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	692	96	290	883	1	4	24	64	8	3	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	793	96	290	920	1	4	24	64	8	3	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	198	24	73	230	0	1	6	16	2	1	5
Total Analysis Volume [veh/h]	26	793	96	290	920	1	4	24	64	8	3	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	57	78	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	10	29	29	5	2
g / C, Green / Cycle	0.31	0.31	0.31	0.20	0.60	0.60	0.10	0.05
(v / s)_i Volume / Saturation Flow Rate	0.04	0.24	0.24	0.16	0.24	0.24	0.05	0.02
s, saturation flow rate [veh/h]	616	1900	1829	1810	1900	1899	1689	1689
c, Capacity [veh/h]	237	590	568	371	1137	1137	175	82
d1, Uniform Delay [s]	18.48	15.02	15.02	18.11	5.12	5.12	20.46	22.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	2.13	2.22	3.62	0.23	0.23	2.44	2.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.77	0.77	0.78	0.40	0.40	0.53	0.37
d, Delay for Lane Group [s/veh]	18.69	17.16	17.24	21.73	5.35	5.35	22.90	24.90
Lane Group LOS	B	B	B	C	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.25	4.11	3.97	3.04	1.58	1.58	1.00	0.36
50th-Percentile Queue Length [ft/ln]	6.14	102.67	99.17	76.01	39.46	39.44	25.04	9.04
95th-Percentile Queue Length [veh/ln]	0.44	7.39	7.14	5.47	2.84	2.84	1.80	0.65
95th-Percentile Queue Length [ft/ln]	11.06	184.80	178.51	136.82	71.02	71.00	45.07	16.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.69	17.19	17.24	21.73	5.35	5.35	22.90	22.90	22.90	24.90	24.90	24.90
Movement LOS	B	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.24			9.27			22.90			24.90		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	13.28											
Intersection LOS	B											
Intersection V/C	0.706											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	747	97	63	904	0	0	0	3	44	3	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	0	0	37	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	848	97	63	941	0	0	0	3	44	3	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	212	24	16	235	0	0	0	1	11	1	3
Total Analysis Volume [veh/h]	9	848	97	63	941	0	0	0	3	44	3	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	35	0	43	67	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	12	12	3	15	15	0	3
g / C, Green / Cycle	0.02	0.35	0.35	0.09	0.43	0.43	0.01	0.09
(v / s)_i Volume / Saturation Flow Rate	0.00	0.25	0.25	0.03	0.25	0.25	0.00	0.03
s, saturation flow rate [veh/h]	1810	1900	1832	1810	1900	1900	1615	1768
c, Capacity [veh/h]	31	666	642	168	810	810	10	159
d1, Uniform Delay [s]	16.86	9.81	9.81	14.80	7.59	7.59	17.19	14.89
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.05	1.50	1.56	1.37	0.66	0.66	17.62	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

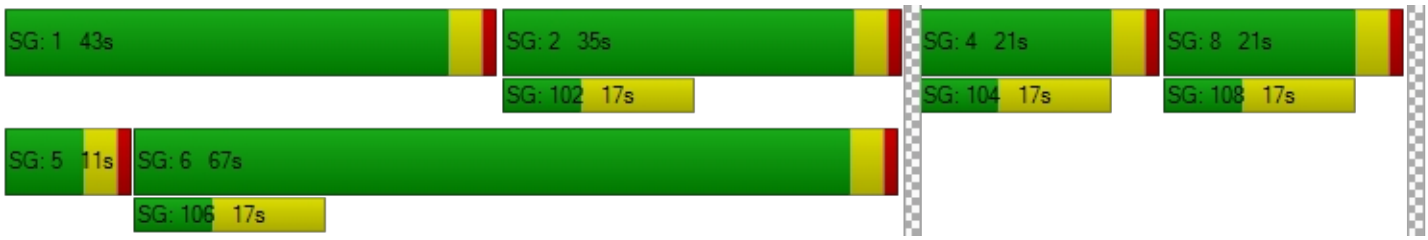
X, volume / capacity	0.29	0.72	0.72	0.37	0.58	0.58	0.31	0.38
d, Delay for Lane Group [s/veh]	21.91	11.31	11.37	16.17	8.26	8.26	34.81	16.37
Lane Group LOS	C	B	B	B	A	A	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.10	2.45	2.37	0.45	1.80	1.80	0.07	0.43
50th-Percentile Queue Length [ft/ln]	2.57	61.20	59.27	11.14	45.01	45.01	1.67	10.75
95th-Percentile Queue Length [veh/ln]	0.19	4.41	4.27	0.80	3.24	3.24	0.12	0.77
95th-Percentile Queue Length [ft/ln]	4.63	110.17	106.69	20.05	81.03	81.03	3.01	19.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.91	11.34	11.37	16.17	8.26	8.26	34.81	34.81	34.81	16.37	16.37	16.37
Movement LOS	C	B	B	B	A	A	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	11.44			8.75			34.81			16.37		
Approach LOS	B			A			C			B		
d_I, Intersection Delay [s/veh]	10.29											
Intersection LOS	B											
Intersection V/C	0.602											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	814	65	9	930	49	58	116	115	85	62	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	0	0	36	1	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	914	65	9	966	50	59	116	115	85	62	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	229	16	2	242	13	15	29	29	21	16	3
Total Analysis Volume [veh/h]	161	914	65	9	966	50	59	116	115	85	62	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	28	0	11	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	33	33	1	27	27	14	14	14	14
g / C, Green / Cycle	0.11	0.54	0.54	0.02	0.45	0.45	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.09	0.26	0.26	0.00	0.27	0.27	0.04	0.13	0.07	0.04
s, saturation flow rate [veh/h]	1810	1900	1856	1810	1900	1867	1349	1747	1168	1855
c, Capacity [veh/h]	208	1036	1012	30	849	835	352	416	220	442
d1, Uniform Delay [s]	25.81	8.39	8.40	29.18	12.57	12.57	21.51	20.07	27.06	18.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.06	1.58	1.62	5.45	3.17	3.22	0.22	1.16	1.11	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.48	0.48	0.30	0.60	0.60	0.17	0.56	0.39	0.16
d, Delay for Lane Group [s/veh]	31.88	9.97	10.01	34.63	15.74	15.79	21.73	21.23	28.16	18.29
Lane Group LOS	C	A	B	C	B	B	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.45	3.61	3.54	0.17	5.20	5.12	0.69	2.74	1.20	0.76
50th-Percentile Queue Length [ft/ln]	61.22	90.15	88.41	4.19	129.96	128.05	17.36	68.60	29.98	18.89
95th-Percentile Queue Length [veh/ln]	4.41	6.49	6.37	0.30	8.94	8.83	1.25	4.94	2.16	1.36
95th-Percentile Queue Length [ft/ln]	110.20	162.26	159.13	7.55	223.44	220.84	31.25	123.48	53.97	33.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.88	9.99	10.01	34.63	15.76	15.79	21.73	21.23	21.23	28.16	18.29	18.29
Movement LOS	C	A	B	C	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	13.08			15.93			21.34			23.64		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.75											
Intersection LOS	B											
Intersection V/C	0.614											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	39	0	1	0	0	0	0	18	25	4	41	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	3	5	10	11	12	3	168	172	15	165	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	1	1	3	3	3	1	42	43	4	41	2
Total Analysis Volume [veh/h]	113	3	5	10	11	12	3	168	172	15	165	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	93	0	0	93	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	3	3	6	6	6	6
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.00	0.01	0.01	0.00	0.19	0.01	0.09
s, saturation flow rate [veh/h]	1410	1711	1430	1740	1233	1744	1057	1888
c, Capacity [veh/h]	527	322	539	327	637	594	505	643
d1, Uniform Delay [s]	7.92	5.62	7.23	5.67	5.82	4.59	7.35	4.06
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	0.03	0.01	0.09	0.00	0.87	0.02	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.02	0.02	0.07	0.00	0.57	0.03	0.27
d, Delay for Lane Group [s/veh]	8.12	5.65	7.24	5.76	5.82	5.46	7.37	4.28
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.21	0.01	0.02	0.03	0.00	0.23	0.03	0.08
50th-Percentile Queue Length [ft/ln]	5.23	0.25	0.41	0.74	0.09	5.76	0.63	1.94
95th-Percentile Queue Length [veh/ln]	0.38	0.02	0.03	0.05	0.01	0.41	0.05	0.14
95th-Percentile Queue Length [ft/ln]	9.41	0.46	0.74	1.33	0.16	10.37	1.14	3.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.12	5.65	5.65	7.24	5.76	5.76	5.82	5.46	5.46	7.37	4.28	4.28
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.96			6.21			5.46			4.53		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.69											
Intersection LOS	A											
Intersection V/C	0.525											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	50	548	648	95	75	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	55	45	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	571	703	140	94	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	143	176	35	24	18
Total Analysis Volume [veh/h]	50	571	703	140	94	72
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	109	98	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	105	94	17	17
g / C, Green / Cycle	0.05	0.81	0.72	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.30	0.46	0.05	0.04
s, saturation flow rate [veh/h]	1714	1900	1846	1714	1615
c, Capacity [veh/h]	92	1535	1335	224	211
d1, Uniform Delay [s]	58.78	0.68	0.74	49.27	48.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.92	0.69	2.28	5.67	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.18	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.37	0.63	0.42	0.34
d, Delay for Lane Group [s/veh]	79.71	1.37	3.02	54.94	53.09
Lane Group LOS	E	A	A	D	D
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.12	0.93	1.67	3.04	2.29
50th-Percentile Queue Length [ft/ln]	52.90	23.19	41.80	75.96	57.26
95th-Percentile Queue Length [veh/ln]	3.81	1.67	3.01	5.47	4.12
95th-Percentile Queue Length [ft/ln]	95.23	41.74	75.24	136.72	103.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.71	1.37	3.02	3.02	54.94	53.09
Movement LOS	E	A	A	A	D	D
d_A, Approach Delay [s/veh]	7.68		3.02		54.14	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	10.00					
Intersection LOS	B					
Intersection V/C	0.567					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	591	70	116	689	11	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	55	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	614	70	116	744	11	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	18	29	186	3	12
Total Analysis Volume [veh/h]	614	70	116	744	11	49
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	130	0	130	130	130	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	86	0	23	109	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	82	82	19	105	17	17
g / C, Green / Cycle	0.63	0.63	0.15	0.81	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.18	0.19	0.07	0.39	0.01	0.03
s, saturation flow rate [veh/h]	1900	1834	1714	1900	1714	1615
c, Capacity [veh/h]	1198	1157	251	1535	224	211
d1, Uniform Delay [s]	4.20	4.22	47.82	0.72	46.94	48.05
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	0.65	6.04	1.10	0.41	2.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.18	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.30	0.46	0.48	0.05	0.23
d, Delay for Lane Group [s/veh]	4.80	4.88	53.86	1.82	47.35	50.61
Lane Group LOS	A	A	D	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.87	1.88	3.69	1.31	0.33	1.52
50th-Percentile Queue Length [ft/ln]	46.68	47.06	92.15	32.82	8.14	37.90
95th-Percentile Queue Length [veh/ln]	3.36	3.39	6.63	2.36	0.59	2.73
95th-Percentile Queue Length [ft/ln]	84.02	84.71	165.87	59.08	14.64	68.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.83	4.88	53.86	1.82	47.35	50.61
Movement LOS	A	A	D	A	D	D
d_A, Approach Delay [s/veh]	4.84		8.84		50.01	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.67					
Intersection LOS	A					
Intersection V/C	0.442					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	17	0	6	9	37	0	0	113	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	277	6	493	516	695	14	3	568	309
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	69	2	123	129	174	4	1	142	77
Total Analysis Volume [veh/h]	11	6	3	277	6	493	516	695	14	3	568	309
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	28	0	0	28	0	54	71	0	11	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	24	34	73	73	1	40	40
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.22	0.31	0.67	0.67	0.01	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.19	0.00	0.17	0.29	0.19	0.01	0.00	0.16	0.19
s, saturation flow rate [veh/h]	1526	1615	1432	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	387	353	338	415	625	556	2409	1076	12	1321	590
d1, Uniform Delay [s]	33.97	33.73	44.82	33.77	40.68	36.98	7.61	6.20	54.49	26.36	27.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.01	4.96	0.01	2.28	7.29	0.30	0.02	10.55	1.02	3.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.01	0.82	0.01	0.79	0.93	0.29	0.01	0.25	0.43	0.52
d, Delay for Lane Group [s/veh]	34.02	33.74	49.78	33.79	42.96	44.27	7.91	6.22	65.04	27.38	30.79
Lane Group LOS	C	C	D	C	D	D	A	A	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.37	0.06	7.98	0.13	6.46	14.35	3.25	0.11	0.12	5.75	6.85
50th-Percentile Queue Length [ft/ln]	9.14	1.60	199.61	3.20	161.52	358.69	81.20	2.75	2.94	143.83	171.36
95th-Percentile Queue Length [veh/ln]	0.66	0.12	12.62	0.23	10.63	20.56	5.85	0.20	0.21	9.69	11.15
95th-Percentile Queue Length [ft/ln]	16.45	2.89	315.47	5.77	265.74	513.99	146.15	4.95	5.30	242.18	278.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.02	34.02	33.74	49.78	33.79	42.96	44.27	7.91	6.22	65.04	27.38	30.79
Movement LOS	C	C	C	D	C	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	33.98			45.32			23.21			28.71		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	30.87											
Intersection LOS	C											
Intersection V/C	0.784											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.789

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	22	770	911	23	21	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	155	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	925	965	23	21	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	231	241	6	5	7
Total Analysis Volume [veh/h]	22	925	965	23	21	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	120	120	120	0	120	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	78	67	0	42	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	40	40	40	40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	29	23	3	3
g / C, Green / Cycle	0.04	0.72	0.59	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.49	0.52	0.01	0.02
s, saturation flow rate [veh/h]	1810	1900	1892	1810	1615
c, Capacity [veh/h]	69	1377	1110	136	122
d1, Uniform Delay [s]	18.75	2.95	7.16	17.33	17.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.57	0.58	2.69	0.52	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.67	0.89	0.15	0.24
d, Delay for Lane Group [s/veh]	21.32	3.53	9.85	17.84	18.44
Lane Group LOS	C	A	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	0.53	4.36	0.18	0.25
50th-Percentile Queue Length [ft/ln]	5.58	13.24	108.98	4.41	6.29
95th-Percentile Queue Length [veh/ln]	0.40	0.95	7.78	0.32	0.45
95th-Percentile Queue Length [ft/ln]	10.04	23.84	194.59	7.94	11.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.32	3.53	9.85	9.85	17.84	18.44
Movement LOS	C	A	A	A	B	B
d_A, Approach Delay [s/veh]	3.94		9.85		18.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.24					
Intersection LOS	A					
Intersection V/C	0.789					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	277	472	0	0	1260	172	0	0	0	150	0	852
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	54	0	0	0	0	0	0	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	277	501	0	0	1314	172	0	0	0	150	0	977
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	69	125	0	0	329	43	0	0	0	38	0	0
Total Analysis Volume [veh/h]	277	501	0	0	1314	172	0	0	0	150	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	29	54	0	0	25	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		L	R
C, Cycle Length [s]	44	44	44	44		44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	9	30	17	17		6	6
g / C, Green / Cycle	0.20	0.68	0.39	0.39		0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.27	0.28		0.08	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1790		1810	1615
c, Capacity [veh/h]	362	2471	1418	702		243	217
d1, Uniform Delay [s]	16.58	2.56	11.16	11.21		17.91	0.00
k, delay calibration	0.11	0.11	0.11	0.11		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	3.41	0.04	0.63	1.32		2.53	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

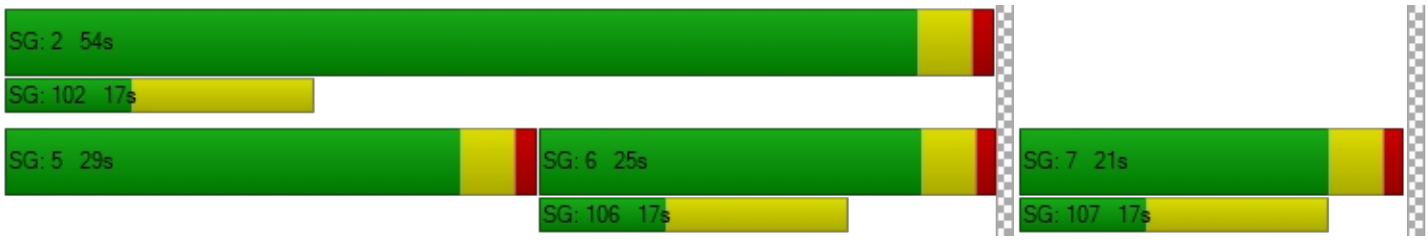
X, volume / capacity	0.77	0.20	0.70	0.71		0.62	0.00
d, Delay for Lane Group [s/veh]	19.98	2.60	11.80	12.52		20.44	0.00
Lane Group LOS	B	A	B	B		C	A
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	2.58	0.30	3.20	3.34		1.42	0.00
50th-Percentile Queue Length [ft/ln]	64.54	7.42	80.02	83.62		35.51	0.00
95th-Percentile Queue Length [veh/ln]	4.65	0.53	5.76	6.02		2.56	0.00
95th-Percentile Queue Length [ft/ln]	116.18	13.35	144.04	150.52		63.91	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.98	2.60	0.00	0.00	11.97	12.52	0.00	0.00	0.00	20.44	0.00	0.00
Movement LOS	B	A			B	B				C		A
d_A, Approach Delay [s/veh]	8.79			12.04			0.00			20.44		
Approach LOS	A			B			A			C		
d_I, Intersection Delay [s/veh]	11.51											
Intersection LOS	B											
Intersection V/C	0.706											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.800

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	510	173	556	877	0	182	0	963	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	43	11	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	536	173	599	888	0	182	0	963	0	0	3
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	134	43	150	222	0	46	0	241	0	0	1
Total Analysis Volume [veh/h]	0	536	173	599	888	0	182	0	963	0	0	3
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	20	41	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	66	66	66	66	66	66	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	13	13	15	32	27	27	
g / C, Green / Cycle	0.20	0.20	0.22	0.48	0.40	0.40	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.17	0.25	0.10	0.34	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	712	318	772	1724	730	1153	
d1, Uniform Delay [s]	25.23	24.07	24.45	12.10	13.18	17.88	
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.64	1.45	1.72	0.24	0.18	1.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.54	0.78	0.52	0.25	0.84	
d, Delay for Lane Group [s/veh]	26.87	25.52	26.17	12.34	13.36	19.55	
Lane Group LOS	C	C	C	B	B	B	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.92	2.44	4.34	4.05	1.68	6.17	
50th-Percentile Queue Length [ft/ln]	98.02	61.07	108.62	101.21	42.04	154.33	
95th-Percentile Queue Length [veh/ln]	7.06	4.40	7.76	7.29	3.03	10.25	
95th-Percentile Queue Length [ft/ln]	176.43	109.93	194.09	182.18	75.67	256.20	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.87	25.52	26.17	12.34	0.00	13.36	0.00	19.55	0.00	0.00	0.00
Movement LOS		C	C	C	B		B		B			
d_A, Approach Delay [s/veh]	26.54			17.91			18.57			0.00		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	19.97											
Intersection LOS	B											
Intersection V/C	0.800											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.921

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	1229	14	40	1855	294	309	19	72	43	23	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	66	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1257	14	40	1921	294	309	19	74	43	23	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	331	4	11	506	77	81	5	19	11	6	19
Total Analysis Volume [veh/h]	71	1323	15	42	2022	309	325	20	78	45	24	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	83	0	10	83	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	80	80	7	80	80	34	34	34	34	34	34
g / C, Green / Cycle	0.05	0.62	0.62	0.05	0.62	0.62	0.26	0.26	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.35	0.35	0.02	0.59	0.20	0.25	0.01	0.05	0.03	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1893	1714	3427	1530	1314	1900	1615	1318	1900	1615
c, Capacity [veh/h]	92	1169	1165	92	2109	942	335	497	422	335	497	422
d1, Uniform Delay [s]	59.54	5.88	5.88	58.50	10.28	5.07	47.41	31.56	32.68	36.81	31.62	32.67
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	2.04	2.06	15.32	12.03	0.93	41.96	0.15	0.96	0.83	0.18	0.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.57	0.57	0.46	0.96	0.33	0.97	0.04	0.18	0.13	0.05	0.18
d, Delay for Lane Group [s/veh]	104.80	7.93	7.94	73.83	22.31	6.00	89.37	31.71	33.65	37.64	31.80	33.61
Lane Group LOS	F	A	A	E	C	A	F	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	4.78	4.77	1.71	16.01	2.00	14.39	0.44	1.82	1.12	0.53	1.80
50th-Percentile Queue Length [ft/ln]	85.79	119.58	119.30	42.84	400.37	49.89	359.87	11.11	45.54	28.07	13.36	44.93
95th-Percentile Queue Length [veh/ln]	6.18	8.37	8.35	3.08	22.58	3.59	20.62	0.80	3.28	2.02	0.96	3.23
95th-Percentile Queue Length [ft/ln]	154.42	209.25	208.86	77.11	564.45	89.80	515.42	20.00	81.98	50.53	24.05	80.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	7.93	7.94	73.83	22.31	6.00	89.37	31.71	33.65	37.64	31.80	33.61
Movement LOS	F	A	A	E	C	A	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.81			21.10			76.37			34.56		
Approach LOS	B			C			E			C		
d_I, Intersection Delay [s/veh]	24.24											
Intersection LOS	C											
Intersection V/C	0.921											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 17 Year 2035 With Project Evening Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\PM35W2-I.pdf

10/2/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Cedar Ave (NS) at I-10 FWY WB Ramps (EW)	Signalized	HCM 2010	NB Left	1.072	46.7	D
2	Cedar Ave (NS) at I-10 FWY EB Ramps (EW)	Signalized	HCM 2010	SB Left	0.927	37.9	D
5	Cedar Ave (NS) at Jurupa Ave (EW)	Signalized	HCM 2010	SB Left	0.681	26.8	C
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.508	5.2	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.984	41.8	D
11	Rubidoux Blvd (NS) at 24th St (EW)	Signalized	HCM 2010	NB Left	0.829	23.3	C
12	Rubidoux Blvd (NS) at 26th St (EW)	Signalized	HCM 2010	EB Right	0.586	12.2	B
13	Rubidoux Blvd (NS) at 28th St (EW)	Signalized	HCM 2010	NB Left	0.630	18.5	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.784	11.3	B
24	Agua Mansa Rd (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.704	12.0	B
25	Agua Mansa Rd (NS) at Holly St (EW)	Signalized	HCM 2010	SB Left	0.503	11.4	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Right	1.076	51.2	D
30	Market St (NS) at Hall Ave (EW)	Signalized	HCM 2010	NB Left	0.903	12.4	B
32	Market St (NS) at SR-60 FWY WB Ramps (EW)	Signalized	HCM 2010	SB Right	0.954	43.5	D
33	Market St (NS) at SR-60 FWY EB Ramps (EW)	Signalized	HCM 2010	NB Thru	1.015	50.8	D
36	Riverside Ave (NS) at Slover Ave (EW)	Signalized	HCM 2010	EB Left	1.046	52.9	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Cedar Ave (NS) at I-10 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	46.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.072

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	514	1712	0	0	1205	688	0	0	0	375	5	608
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	57	23	0	0	9	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	571	1735	0	0	1214	688	0	0	0	375	5	608
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	150	457	0	0	319	181	0	0	0	99	1	160
Total Analysis Volume [veh/h]	601	1826	0	0	1278	724	0	0	0	395	5	640
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	130	130	0	0	130	0	0	0	0	0	130	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	44	100	0	0	56	0	0	0	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	130	130	130	130		130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00	1.00
g_i, Effective Green Time [s]	41	97	53	53		27	27	27
g / C, Green / Cycle	0.32	0.75	0.41	0.41		0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.35	0.50	0.25	0.45		0.11	0.11	0.22
s, saturation flow rate [veh/h]	1714	3618	5176	1615		1810	1812	2859
c, Capacity [veh/h]	541	2699	2110	658		376	376	594
d1, Uniform Delay [s]	37.67	0.09	22.56	29.67		41.64	41.64	47.00
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	73.03	1.38	1.30	65.48		5.31	5.29	59.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33		1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.11	0.68	0.61	1.10		0.53	0.53	1.08
d, Delay for Lane Group [s/veh]	110.69	1.47	23.86	95.14		46.96	46.93	106.72
Lane Group LOS	F	A	C	F		D	D	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	26.90	0.63	8.28	30.20		5.78	5.78	14.07
50th-Percentile Queue Length [ft/ln]	672.58	15.87	206.98	755.11		144.44	144.38	351.63
95th-Percentile Queue Length [veh/ln]	37.89	1.14	13.00	41.96		9.72	9.72	21.03
95th-Percentile Queue Length [ft/ln]	947.36	28.57	324.95	1048.97		242.99	242.91	525.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	110.69	1.47	0.00	0.00	23.86	95.14	0.00	0.00	0.00	46.95	46.93	106.72
Movement LOS	F	A			C	F				D	D	F
d_A, Approach Delay [s/veh]	28.52			49.64			0.00			83.73		
Approach LOS	C			D			A			F		
d_I, Intersection Delay [s/veh]	46.75											
Intersection LOS	D											
Intersection V/C	1.072											

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Cedar Ave (NS) at I-10 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	37.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.927

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1406	533	431	1146	0	812	2	282	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	3	0	9	0	0	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1486	536	431	1155	0	812	2	307	0	0	0
Peak Hour Factor	0.9510	0.9500	0.9500	0.9500	0.9500	0.9510	0.9500	0.9500	0.9500	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	391	141	113	304	0	214	1	81	0	0	0
Total Analysis Volume [veh/h]	0	1564	564	454	1216	0	855	2	323	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	130	0	130	130	0	0	130	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	51	0	39	90	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	130	130	130	130	130	130	130	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	48	48	36	87	37	37	37	
g / C, Green / Cycle	0.37	0.37	0.28	0.67	0.28	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.35	0.26	0.34	0.23	0.27	0.21	
s, saturation flow rate [veh/h]	5176	1615	1714	3618	1714	1715	1530	
c, Capacity [veh/h]	1911	596	475	2421	488	488	435	
d1, Uniform Delay [s]	29.29	31.76	40.23	2.77	37.13	39.44	36.21	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.05	25.67	31.75	0.75	13.31	30.04	10.86	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.82	0.95	0.96	0.50	0.81	0.95	0.74	
d, Delay for Lane Group [s/veh]	33.34	57.43	71.98	3.52	50.44	69.48	47.06	
Lane Group LOS	C	E	E	A	D	E	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	13.37	19.54	17.47	2.27	12.32	17.53	9.66	
50th-Percentile Queue Length [ft/ln]	334.14	488.58	436.84	56.63	308.08	438.30	241.44	
95th-Percentile Queue Length [veh/ln]	19.36	26.79	24.33	4.08	18.08	24.40	14.75	
95th-Percentile Queue Length [ft/ln]	484.03	669.83	608.23	101.94	452.01	609.97	368.85	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	33.34	57.43	71.98	3.52	0.00	60.72	69.48	47.06	0.00	0.00	0.00
Movement LOS		C	E	E	A		E	E	D			
d_A, Approach Delay [s/veh]	39.73			22.13			57.00			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	37.92											
Intersection LOS	D											
Intersection V/C	0.927											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Cedar Ave (NS) at Jurupa Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.681

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	153	1116	74	137	896	71	96	237	93	91	125	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	119	1	0	54	0	0	0	8	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	1235	75	137	950	71	96	237	101	92	125	101
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	325	20	36	250	19	25	62	27	24	33	27
Total Analysis Volume [veh/h]	171	1300	79	144	1000	75	101	249	106	97	132	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	21	69	0	18	66	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	18	66	66	15	63	63	35	35	35	35
g / C, Green / Cycle	0.14	0.53	0.53	0.12	0.50	0.50	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.10	0.37	0.37	0.08	0.29	0.29	0.09	0.20	0.09	0.14
s, saturation flow rate [veh/h]	1714	1900	1862	1714	1900	1854	1160	1805	1043	1762
c, Capacity [veh/h]	247	1003	983	206	958	934	244	505	159	493
d1, Uniform Delay [s]	47.92	12.63	12.69	50.37	13.28	13.29	42.53	34.74	50.37	32.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.84	3.92	4.08	18.01	2.44	2.51	5.11	7.94	16.33	3.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.69	0.70	0.70	0.57	0.57	0.41	0.70	0.61	0.48
d, Delay for Lane Group [s/veh]	62.77	16.55	16.77	68.38	15.72	15.79	47.63	42.68	66.70	35.60
Lane Group LOS	E	B	B	E	B	B	D	D	E	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.80	9.79	9.76	5.16	7.28	7.14	3.02	9.73	3.64	5.66
50th-Percentile Queue Length [ft/ln]	145.00	244.85	244.06	129.11	182.00	178.43	75.60	243.36	91.05	141.50
95th-Percentile Queue Length [veh/ln]	9.75	14.93	14.89	8.89	11.71	11.52	5.44	14.85	6.56	9.56
95th-Percentile Queue Length [ft/ln]	243.74	373.16	372.16	222.29	292.63	287.97	136.08	371.28	163.88	239.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.77	16.65	16.77	68.38	15.75	15.79	47.63	42.68	42.68	66.70	35.60	35.60
Movement LOS	E	B	B	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.74			21.97			43.78			44.60		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	26.80											
Intersection LOS	C											
Intersection V/C	0.681											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.508

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	123	0	0	212	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1536	0	0	1521	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	384	0	0	380	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1536	0	0	1521	17	27	0	42	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	102	102	0	98	98	6	6	6	6
g / C, Green / Cycle	0.03	0.85	0.85	0.00	0.82	0.82	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.42	0.01	0.02	0.03	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1386	1615
c, Capacity [veh/h]	54	3059	1366	2	2955	1319	116	87	82	87
d1, Uniform Delay [s]	57.25	2.49	0.00	0.00	3.48	2.04	56.61	55.28	58.28	53.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.59	0.00	0.00	0.64	0.02	1.02	4.14	0.06	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.50	0.00	0.00	0.51	0.01	0.23	0.48	0.01	0.03
d, Delay for Lane Group [s/veh]	61.50	3.08	0.00	0.00	4.12	2.05	57.63	59.42	58.33	54.10
Lane Group LOS	E	A	A	A	A	A	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	3.24	0.00	0.00	4.45	0.06	0.84	1.34	0.03	0.09
50th-Percentile Queue Length [ft/ln]	16.51	80.93	0.00	0.00	111.23	1.53	20.91	33.45	0.78	2.25
95th-Percentile Queue Length [veh/ln]	1.19	5.83	0.00	0.00	7.91	0.11	1.51	2.41	0.06	0.16
95th-Percentile Queue Length [ft/ln]	29.71	145.67	0.00	0.00	197.71	2.76	37.64	60.20	1.41	4.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	3.08	0.00	0.00	4.12	2.05	57.63	59.42	59.42	58.33	54.10	54.10
Movement LOS	E	A	A	A	A	A	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	3.84			4.10			58.72			55.16		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	5.22											
Intersection LOS	A											
Intersection V/C	0.508											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	41.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	5	111	102	0	0	0	0	25	0	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	563	646	682	715	75	65	136	26	482	134	623
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	141	162	171	179	19	16	34	7	121	34	156
Total Analysis Volume [veh/h]	62	563	646	682	715	75	65	136	26	482	134	623
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	24	24	29	42	0	11	21	0	46	56	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	24	60	25	43	43	6	23	32	48	48
g / C, Green / Cycle	0.05	0.20	0.50	0.21	0.36	0.36	0.05	0.19	0.26	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.40	0.19	0.20	0.05	0.04	0.09	0.14	0.07	0.39
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1848	3514	1900	1615
c, Capacity [veh/h]	93	736	811	731	1303	582	94	351	933	766	651
d1, Uniform Delay [s]	55.97	45.11	24.79	46.73	30.62	25.77	55.98	43.21	37.55	23.00	34.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.03	7.43	7.98	6.14	1.66	0.46	8.72	0.95	0.44	0.11	9.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.76	0.80	0.93	0.55	0.13	0.69	0.46	0.52	0.17	0.96
d, Delay for Lane Group [s/veh]	63.99	52.54	32.77	52.87	32.29	26.23	64.70	44.16	37.99	23.11	43.82
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	8.65	16.57	10.58	8.51	1.52	2.17	4.38	6.10	2.48	18.89
50th-Percentile Queue Length [ft/ln]	51.32	216.20	414.34	264.48	212.87	38.09	54.13	109.39	152.50	61.92	472.30
95th-Percentile Queue Length [veh/ln]	3.70	13.47	23.25	15.91	13.30	2.74	3.90	7.81	10.15	4.46	26.02
95th-Percentile Queue Length [ft/ln]	92.38	336.77	581.25	397.84	332.51	68.57	97.43	195.15	253.76	111.45	650.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.99	52.54	32.77	52.87	32.29	26.23	64.70	44.16	44.16	37.99	23.11	43.82
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	43.05			41.52			50.04			39.31		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.79											
Intersection LOS	D											
Intersection V/C	0.984											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Rubidoux Blvd (NS) at 24th St (EW)

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1116	113	225	934	7	5	22	17	78	56	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1177	113	225	1061	7	5	22	17	78	56	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	294	28	56	265	2	1	6	4	20	14	37
Total Analysis Volume [veh/h]	18	1177	113	225	1061	7	5	22	17	78	56	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	51	0	21	61	0	0	21	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	31	31	12	40	40	4	15
g / C, Green / Cycle	0.03	0.39	0.39	0.15	0.52	0.52	0.06	0.19
(v / s)_i Volume / Saturation Flow Rate	0.01	0.34	0.35	0.12	0.28	0.28	0.02	0.16
s, saturation flow rate [veh/h]	1810	1900	1842	1810	1900	1896	1769	1717
c, Capacity [veh/h]	53	749	726	275	983	980	98	334
d1, Uniform Delay [s]	37.32	21.94	21.98	32.17	12.71	12.72	35.88	30.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.79	3.38	3.57	5.88	0.47	0.47	3.22	5.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

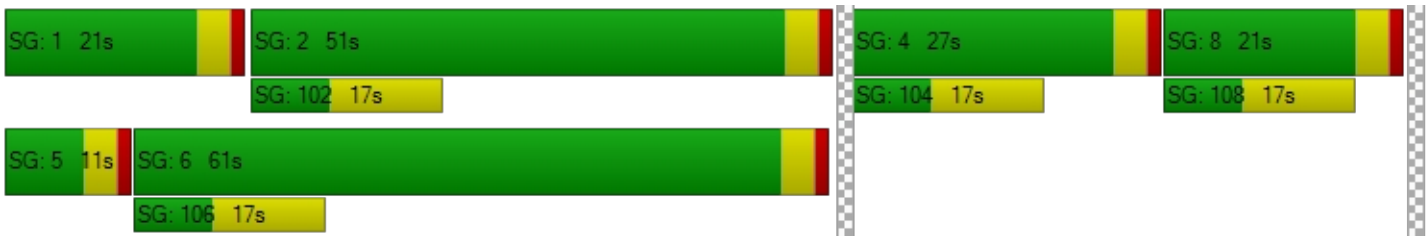
X, volume / capacity	0.34	0.87	0.88	0.82	0.54	0.54	0.45	0.85
d, Delay for Lane Group [s/veh]	41.10	25.32	25.55	38.05	13.19	13.19	39.09	36.44
Lane Group LOS	D	C	C	D	B	B	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.39	10.96	10.72	4.44	5.79	5.78	0.88	5.51
50th-Percentile Queue Length [ft/ln]	9.67	273.98	267.99	111.10	144.83	144.55	22.09	137.79
95th-Percentile Queue Length [veh/ln]	0.70	16.39	16.09	7.90	9.74	9.73	1.59	9.36
95th-Percentile Queue Length [ft/ln]	17.40	409.71	402.23	197.53	243.51	243.14	39.77	234.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.10	25.42	25.55	38.05	13.19	13.19	39.09	39.09	39.09	36.44	36.44	36.44
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	25.65			17.51			39.09			36.44		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	23.30											
Intersection LOS	C											
Intersection V/C	0.829											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Rubidoux Blvd (NS) at 26th St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	1160	64	46	954	3	0	0	10	70	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	127	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1221	64	46	1081	3	0	0	10	70	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	305	16	12	270	1	0	0	3	18	0	20
Total Analysis Volume [veh/h]	7	1221	64	46	1081	3	0	0	10	70	0	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	21	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	45	45	4	48	48	1	8
g / C, Green / Cycle	0.01	0.60	0.60	0.06	0.64	0.64	0.02	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.34	0.34	0.03	0.29	0.29	0.01	0.09
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1898	1615	1700
c, Capacity [veh/h]	25	1135	1115	107	1221	1220	30	191
d1, Uniform Delay [s]	36.72	9.25	9.26	34.17	6.72	6.72	36.45	32.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.05	2.08	2.13	2.74	1.17	1.17	6.37	6.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

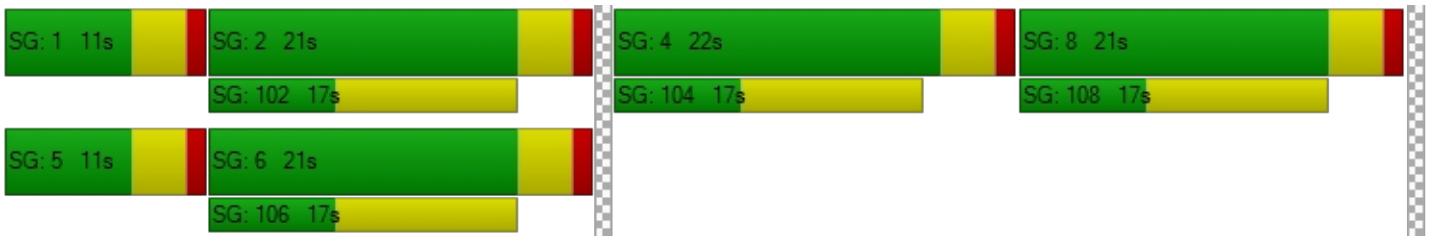
X, volume / capacity	0.28	0.57	0.57	0.43	0.44	0.44	0.33	0.78
d, Delay for Lane Group [s/veh]	42.77	11.33	11.39	36.91	7.89	7.90	42.81	39.42
Lane Group LOS	D	B	B	D	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.17	6.04	5.96	0.87	3.84	3.84	0.23	2.94
50th-Percentile Queue Length [ft/ln]	4.15	150.99	149.09	21.81	96.05	95.97	5.75	73.57
95th-Percentile Queue Length [veh/ln]	0.30	10.07	9.97	1.57	6.92	6.91	0.41	5.30
95th-Percentile Queue Length [ft/ln]	7.47	251.75	249.22	39.25	172.89	172.75	10.35	132.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.77	11.36	11.39	36.91	7.90	7.90	42.81	42.81	42.81	39.42	39.42	39.42
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.53			9.08			42.81			39.42		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	12.20											
Intersection LOS	B											
Intersection V/C	0.586											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Rubidoux Blvd (NS) at 28th St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	186	995	92	39	862	63	87	89	54	154	117	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	58	0	0	124	3	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	1053	92	39	986	66	90	89	54	154	117	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	263	23	10	247	17	23	22	14	39	29	7
Total Analysis Volume [veh/h]	186	1053	92	39	986	66	90	89	54	154	117	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	28	0	11	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	29	29	3	25	25	15	15	15	15
g / C, Green / Cycle	0.13	0.49	0.49	0.06	0.41	0.41	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.10	0.31	0.31	0.02	0.28	0.28	0.07	0.08	0.12	0.08
s, saturation flow rate [veh/h]	1810	1900	1847	1810	1900	1858	1263	1781	1265	1837
c, Capacity [veh/h]	237	931	905	103	790	773	310	451	309	466
d1, Uniform Delay [s]	25.27	11.23	11.25	27.32	14.24	14.24	23.31	18.21	24.73	18.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.62	3.12	3.24	2.31	4.55	4.66	0.51	0.40	1.24	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.62	0.62	0.38	0.67	0.67	0.29	0.32	0.50	0.31
d, Delay for Lane Group [s/veh]	30.89	14.36	14.50	29.63	18.79	18.90	23.83	18.61	25.97	18.56
Lane Group LOS	C	B	B	C	B	B	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.78	5.50	5.41	0.58	6.07	5.97	1.13	1.53	2.08	1.55
50th-Percentile Queue Length [ft/ln]	69.45	137.62	135.16	14.45	151.85	149.14	28.37	38.36	52.10	38.80
95th-Percentile Queue Length [veh/ln]	5.00	9.35	9.22	1.04	10.12	9.97	2.04	2.76	3.75	2.79
95th-Percentile Queue Length [ft/ln]	125.01	233.82	230.49	26.02	252.90	249.28	51.07	69.05	93.78	69.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.89	14.42	14.50	29.63	18.84	18.90	23.83	18.61	18.61	25.97	18.56	18.56
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.73			19.23			20.62			22.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.53											
Intersection LOS	B											
Intersection V/C	0.630											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	0	2	0	0	0	0	59	69	2	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	323	2	12	3	4	6	8	445	255	4	225	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	1	3	1	1	2	2	111	64	1	56	3
Total Analysis Volume [veh/h]	323	2	12	3	4	6	8	445	255	4	225	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	44	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	17	17	17	17
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.23	0.01	0.00	0.01	0.01	0.39	0.01	0.13
s, saturation flow rate [veh/h]	1427	1650	1422	1718	1160	1785	758	1882
c, Capacity [veh/h]	580	547	576	570	571	814	235	858
d1, Uniform Delay [s]	12.91	8.49	10.06	8.47	8.59	9.17	16.84	6.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	0.02	0.00	0.01	0.01	2.80	0.03	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

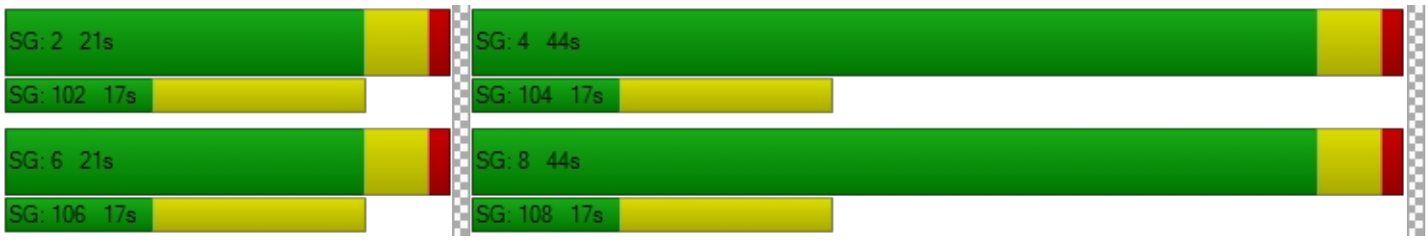
X, volume / capacity	0.56	0.03	0.01	0.02	0.01	0.86	0.02	0.28
d, Delay for Lane Group [s/veh]	13.75	8.51	10.06	8.48	8.60	11.98	16.87	6.56
Lane Group LOS	B	A	B	A	A	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.12	0.06	0.01	0.04	0.04	3.90	0.03	0.81
50th-Percentile Queue Length [ft/ln]	53.00	1.53	0.37	1.09	0.88	97.43	0.75	20.34
95th-Percentile Queue Length [veh/ln]	3.82	0.11	0.03	0.08	0.06	7.02	0.05	1.46
95th-Percentile Queue Length [ft/ln]	95.41	2.75	0.67	1.96	1.59	175.38	1.35	36.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.75	8.51	8.51	10.06	8.48	8.48	8.60	11.98	11.98	16.87	6.56	6.56
Movement LOS	B	A	A	B	A	A	A	B	B	B	A	A
d_A, Approach Delay [s/veh]	13.53			8.85			11.94			6.73		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	11.35											
Intersection LOS	B											
Intersection V/C	0.784											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Agua Mansa Rd (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	78	1010	664	95	119	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	26	27	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	1076	690	122	180	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	20	269	173	31	45	0
Total Analysis Volume [veh/h]	78	1076	690	122	180	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	130	130	130	0	130	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	15	107	92	0	23	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	103	88	19	19
g / C, Green / Cycle	0.08	0.79	0.68	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.05	0.57	0.44	0.11	0.00
s, saturation flow rate [veh/h]	1714	1900	1851	1714	1615
c, Capacity [veh/h]	145	1505	1253	251	236
d1, Uniform Delay [s]	55.27	0.90	2.70	49.83	0.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.55	2.93	2.60	16.25	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.20	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.71	0.65	0.72	0.00
d, Delay for Lane Group [s/veh]	68.82	3.83	5.30	66.08	0.00
Lane Group LOS	E	A	A	E	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.93	2.53	3.38	6.41	0.00
50th-Percentile Queue Length [ft/ln]	73.30	63.28	84.61	160.28	0.00
95th-Percentile Queue Length [veh/ln]	5.28	4.56	6.09	10.56	0.00
95th-Percentile Queue Length [ft/ln]	131.95	113.90	152.31	264.09	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.82	3.83	5.30	5.30	66.08	0.00
Movement LOS	E	A	A	A	E	A
d_A, Approach Delay [s/veh]	8.22		5.30		66.08	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	11.97					
Intersection LOS	B					
Intersection V/C	0.704					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1009	23	57	670	70	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	0	0	26	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1075	23	57	696	70	184
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	269	6	14	174	18	46
Total Analysis Volume [veh/h]	1075	23	57	696	70	184
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	130	0	130	130	130	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	84	0	13	97	33	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	80	80	9	93	29	29
g / C, Green / Cycle	0.62	0.62	0.07	0.72	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.29	0.29	0.03	0.37	0.04	0.11
s, saturation flow rate [veh/h]	1900	1886	1714	1900	1714	1615
c, Capacity [veh/h]	1169	1161	119	1359	382	360
d1, Uniform Delay [s]	5.47	5.48	56.78	0.95	36.87	39.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.35	1.38	13.26	1.38	1.05	5.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.47	0.48	0.51	0.18	0.51
d, Delay for Lane Group [s/veh]	6.83	6.87	70.04	2.33	37.92	44.89
Lane Group LOS	A	A	E	A	D	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	3.70	3.71	2.20	1.41	1.77	5.18
50th-Percentile Queue Length [ft/ln]	92.47	92.72	55.06	35.22	44.15	129.50
95th-Percentile Queue Length [veh/ln]	6.66	6.68	3.96	2.54	3.18	8.91
95th-Percentile Queue Length [ft/ln]	166.45	166.89	99.11	63.39	79.48	222.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.85	6.87	70.04	2.33	37.92	44.89
Movement LOS	A	A	E	A	D	D
d_A, Approach Delay [s/veh]	6.85		7.46		42.97	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.42					
Intersection LOS	B					
Intersection V/C	0.503					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	51.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.076

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	67	0	25	5	111	0	0	67	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	395	3	584	760	708	5	2	665	383
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	99	1	146	190	177	1	1	166	96
Total Analysis Volume [veh/h]	5	3	2	395	3	584	760	708	5	2	665	383
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	53	74	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	31	31	31	49	77	77	0	28	28
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.26	0.41	0.64	0.64	0.00	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.28	0.00	0.20	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	1545	1615	1436	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	448	417	382	491	738	736	2308	1030	7	850	379
d1, Uniform Delay [s]	33.15	33.05	48.67	33.06	41.48	35.59	9.78	7.89	59.62	43.04	45.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	30.91	0.00	1.95	24.56	0.34	0.01	22.11	7.12	48.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

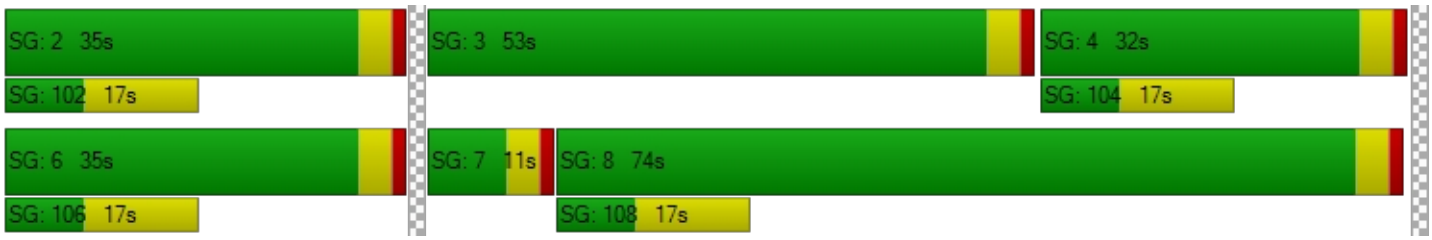
X, volume / capacity	0.02	0.00	1.03	0.01	0.79	1.03	0.31	0.00	0.29	0.78	1.01
d, Delay for Lane Group [s/veh]	33.16	33.05	79.58	33.06	43.43	60.15	10.13	7.90	81.72	50.16	94.63
Lane Group LOS	C	C	F	C	D	F	B	A	F	D	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.18	0.04	14.90	0.07	8.21	25.95	4.15	0.05	0.10	10.07	16.36
50th-Percentile Queue Length [ft/ln]	4.44	1.11	372.59	1.66	205.35	648.76	103.84	1.21	2.57	251.64	408.93
95th-Percentile Queue Length [veh/ln]	0.32	0.08	21.67	0.12	12.91	35.12	7.48	0.09	0.18	15.27	23.12
95th-Percentile Queue Length [ft/ln]	7.98	1.99	541.63	2.98	322.86	878.05	186.91	2.18	4.62	381.72	578.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.16	33.16	33.05	79.58	33.06	43.43	60.15	10.13	7.90	81.72	50.16	94.63
Movement LOS	C	C	C	F	C	D	F	B	A	F	D	F
d_A, Approach Delay [s/veh]	33.14			57.94			35.93			66.44		
Approach LOS	C			E			D			E		
d_I, Intersection Delay [s/veh]	51.18											
Intersection LOS	D											
Intersection V/C	1.076											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Market St (NS) at Hall Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.903

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	35	906	1094	95	64	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	176	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	993	1270	97	65	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	248	318	24	16	4
Total Analysis Volume [veh/h]	35	993	1270	97	65	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	7	7	0	7	0
Maximum Green [s]	120	120	120	0	120	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	11	99	88	0	21	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	R
C, Cycle Length [s]	91	91	91	91	91
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	77	69	6	6
g / C, Green / Cycle	0.05	0.85	0.76	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.52	0.73	0.04	0.01
s, saturation flow rate [veh/h]	1810	1900	1877	1810	1615
c, Capacity [veh/h]	82	1606	1419	121	108
d1, Uniform Delay [s]	42.38	2.29	9.99	41.17	40.09
k, delay calibration	0.11	0.11	0.14	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.49	0.39	6.77	3.64	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.62	0.96	0.54	0.15
d, Delay for Lane Group [s/veh]	45.87	2.68	16.76	44.81	40.71
Lane Group LOS	D	A	B	D	D
Critical Lane Group	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	2.33	19.24	1.52	0.35
50th-Percentile Queue Length [ft/ln]	20.97	58.14	480.91	37.99	8.84
95th-Percentile Queue Length [veh/ln]	1.51	4.19	26.43	2.74	0.64
95th-Percentile Queue Length [ft/ln]	37.74	104.65	660.73	68.39	15.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.87	2.68	16.76	16.76	44.81	40.71
Movement LOS	D	A	B	B	D	D
d_A, Approach Delay [s/veh]	4.15		16.76		44.00	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	12.42					
Intersection LOS	B					
Intersection V/C	0.903					

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Market St (NS) at SR-60 FWY WB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.954

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	834	619	0	0	1399	226	0	0	0	111	0	716
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	0	0	173	0	0	0	0	0	0	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	834	637	0	0	1572	226	0	0	0	111	0	783
Peak Hour Factor	1.0000	1.0000	0.8760	0.8760	1.0000	1.0000	0.8760	0.8760	0.8760	1.0000	0.8760	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	209	159	0	0	393	57	0	0	0	28	0	0
Total Analysis Volume [veh/h]	834	637	0	0	1572	226	0	0	0	111	0	0
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	0	6	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	7	0	0
Maximum Green [s]	120	120	0	0	120	0	0	0	0	120	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	64	99	0	0	35	0	0	0	0	21	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		L	R
C, Cycle Length [s]	120	120	120	120		120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	57	103	42	42		9	9
g / C, Green / Cycle	0.48	0.86	0.35	0.35		0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.46	0.18	0.33	0.34		0.06	0.00
s, saturation flow rate [veh/h]	1810	3618	3618	1781		1810	1615
c, Capacity [veh/h]	861	3099	1257	619		139	124
d1, Uniform Delay [s]	30.62	1.50	38.24	38.53		54.54	0.00
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	8.66	0.15	16.41	29.10		10.03	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

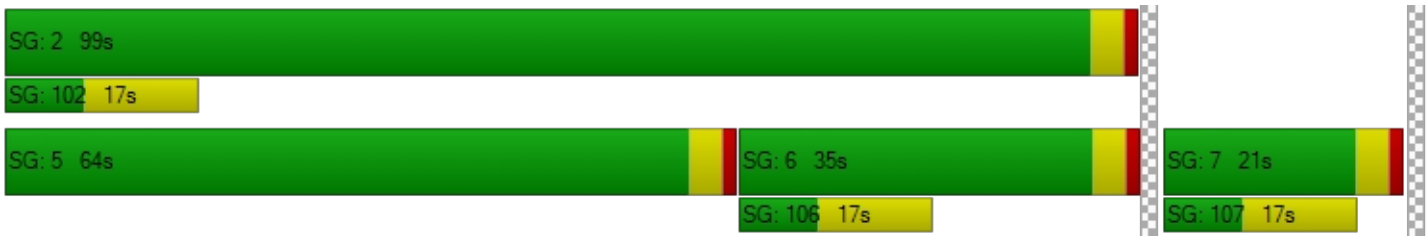
X, volume / capacity	0.97	0.21	0.95	0.97		0.80	0.00
d, Delay for Lane Group [s/veh]	39.27	1.65	54.65	67.63		64.58	0.00
Lane Group LOS	D	A	D	E		E	A
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	24.67	0.79	19.77	22.04		3.69	0.00
50th-Percentile Queue Length [ft/ln]	616.72	19.85	494.19	550.89		92.21	0.00
95th-Percentile Queue Length [veh/ln]	32.81	1.43	27.06	29.73		6.64	0.00
95th-Percentile Queue Length [ft/ln]	820.35	35.73	676.48	743.35		165.98	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.27	1.65	0.00	0.00	57.73	67.63	0.00	0.00	0.00	64.58	0.00	0.00
Movement LOS	D	A			E	E				E		A
d_A, Approach Delay [s/veh]	22.98			58.97			0.00			64.58		
Approach LOS	C			E			A			E		
d_I, Intersection Delay [s/veh]	43.49											
Intersection LOS	D											
Intersection V/C	0.954											

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Market St (NS) at SR-60 FWY EB Ramps (EW)

Control Type:	Signalized	Delay (sec / veh):	50.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.015

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1278	172	657	864	0	172	0	936	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	144	29	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1295	172	801	893	0	172	0	936	0	0	1
Peak Hour Factor	0.9240	1.0000	1.0000	1.0000	1.0000	0.9240	1.0000	0.9240	1.0000	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	324	43	200	223	0	43	0	234	0	0	0
Total Analysis Volume [veh/h]	0	1295	172	801	893	0	172	0	936	0	0	1
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	7	0	0	0	0	0
Maximum Green [s]	0	120	0	120	120	0	120	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	46	0	31	77	0	43	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	42	42	27	73	39	39	
g / C, Green / Cycle	0.35	0.35	0.23	0.61	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.36	0.11	0.23	0.25	0.10	0.33	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	2859	
c, Capacity [veh/h]	1266	565	792	2201	588	929	
d1, Uniform Delay [s]	39.08	28.44	46.58	12.24	30.27	40.58	
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	31.28	1.39	17.83	0.12	0.27	15.57	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.02	0.30	1.01	0.41	0.29	1.01	
d, Delay for Lane Group [s/veh]	70.37	29.82	64.40	12.36	30.54	56.16	
Lane Group LOS	F	C	F	B	C	F	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	23.81	3.84	13.70	6.07	3.78	15.52	
50th-Percentile Queue Length [ft/ln]	595.25	95.95	342.44	151.83	94.43	388.10	
95th-Percentile Queue Length [veh/ln]	32.32	6.91	19.90	10.12	6.80	22.09	
95th-Percentile Queue Length [ft/ln]	808.11	172.71	497.47	252.88	169.98	552.35	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	70.37	29.82	64.40	12.36	0.00	30.54	0.00	56.16	0.00	0.00	0.00
Movement LOS		F	C	F	B		C		F			
d_A, Approach Delay [s/veh]	65.62			36.97			52.18			0.00		
Approach LOS	E			D			D			A		
d_I, Intersection Delay [s/veh]	50.76											
Intersection LOS	D											
Intersection V/C	1.015											

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Riverside Ave (NS) at Slover Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	52.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.046

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	64	2039	42	55	1613	293	461	94	180	67	23	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	81	0	0	36	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	2120	42	55	1649	293	461	94	180	67	23	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	558	11	14	434	77	121	25	47	18	6	13
Total Analysis Volume [veh/h]	71	2232	44	58	1736	308	485	99	189	71	24	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	130	130	0	130	130	0	0	130	0	0	130	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	75	0	10	75	0	0	45	0	0	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	72	72	7	72	72	42	42	42	42	42	42
g / C, Green / Cycle	0.05	0.55	0.55	0.05	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.04	0.60	0.60	0.03	0.51	0.20	0.36	0.05	0.12	0.06	0.01	0.03
s, saturation flow rate [veh/h]	1714	1900	1887	1714	3427	1530	1343	1900	1615	1108	1900	1615
c, Capacity [veh/h]	92	1052	1045	92	1898	847	442	614	522	309	614	522
d1, Uniform Delay [s]	59.54	17.00	17.00	59.07	14.52	8.81	41.61	26.23	27.97	35.00	25.32	25.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	45.26	52.50	55.24	28.21	8.34	1.21	71.41	0.56	1.95	1.73	0.12	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	1.08	1.09	0.63	0.91	0.36	1.10	0.16	0.36	0.23	0.04	0.10
d, Delay for Lane Group [s/veh]	104.80	69.50	72.24	87.28	22.86	10.02	113.03	26.79	29.91	36.72	25.44	26.16
Lane Group LOS	F	F	F	F	C	B	F	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.43	37.87	38.41	2.56	17.17	2.99	23.05	1.97	4.08	1.80	0.46	1.04
50th-Percentile Queue Length [ft/ln]	85.79	946.83	960.31	64.11	429.25	74.80	576.28	49.33	102.07	44.95	11.50	26.12
95th-Percentile Queue Length [veh/ln]	6.18	51.13	52.05	4.62	23.97	5.39	32.80	3.55	7.35	3.24	0.83	1.88
95th-Percentile Queue Length [ft/ln]	154.42	1278.27	1301.30	115.40	599.15	134.64	820.09	88.79	183.72	80.92	20.71	47.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.80	70.84	72.24	87.28	22.86	10.02	113.03	26.79	29.91	36.72	25.44	26.16
Movement LOS	F	F	E	F	C	B	F	C	C	D	C	C
d_A, Approach Delay [s/veh]	71.90			22.76			81.66			31.11		
Approach LOS	E			C			F			C		
d_I, Intersection Delay [s/veh]	52.94											
Intersection LOS	D											
Intersection V/C	1.046											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



APPENDIX G

TRAFFIC SIGNAL WARRANT WORKSHEETS

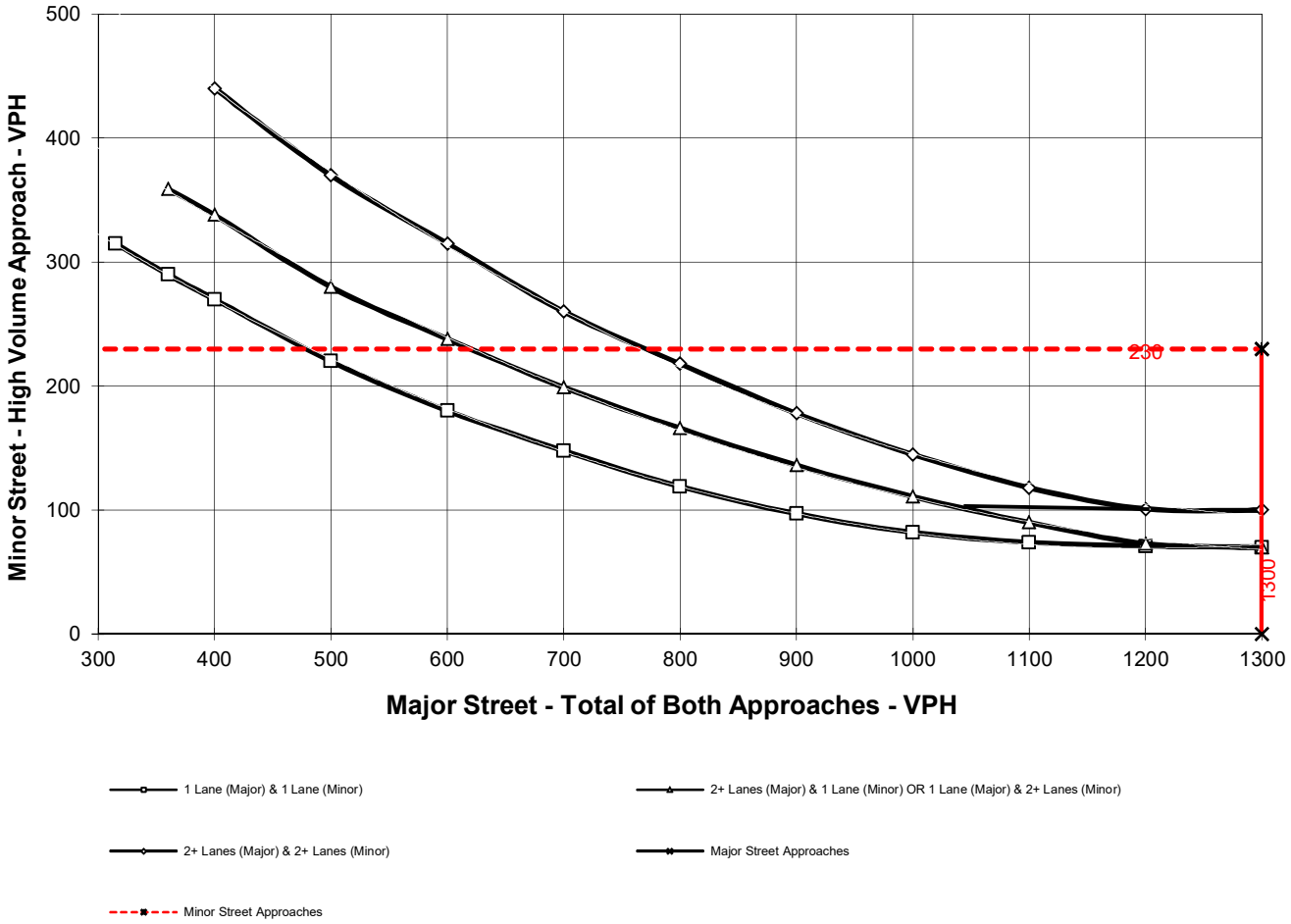
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2333**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **SR-60 Fwy WB On-Ramp** High Volume Approach (VPH) = **230**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Agua Mansa Road**

Total of Both Approaches (VPH) = **1345**

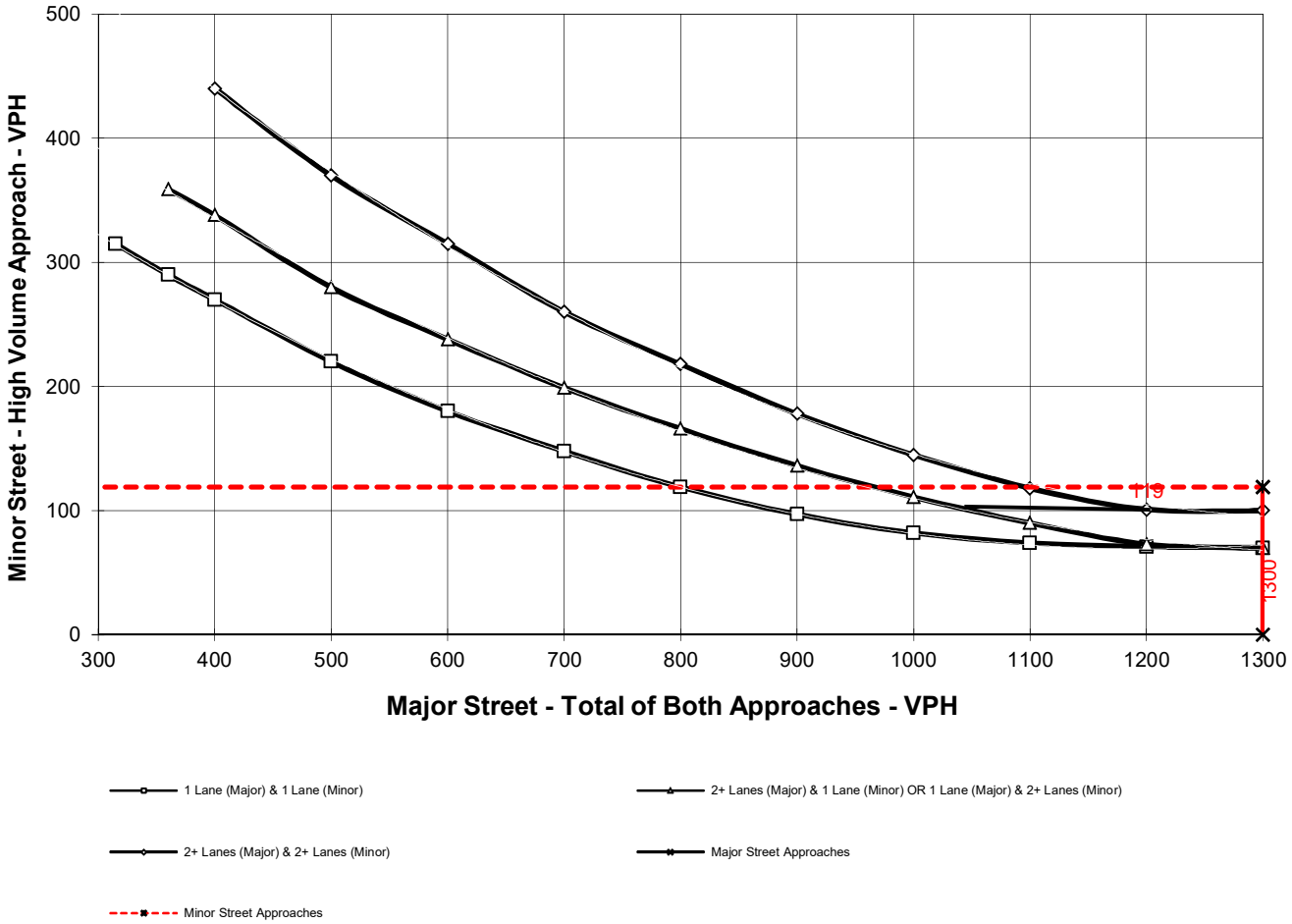
Number of Approach Lanes Major Street = **2**

Minor Street Name = **El Rivino Road**

High Volume Approach (VPH) = **119**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Agua Mansa Road**

Total of Both Approaches (VPH) = **1147**

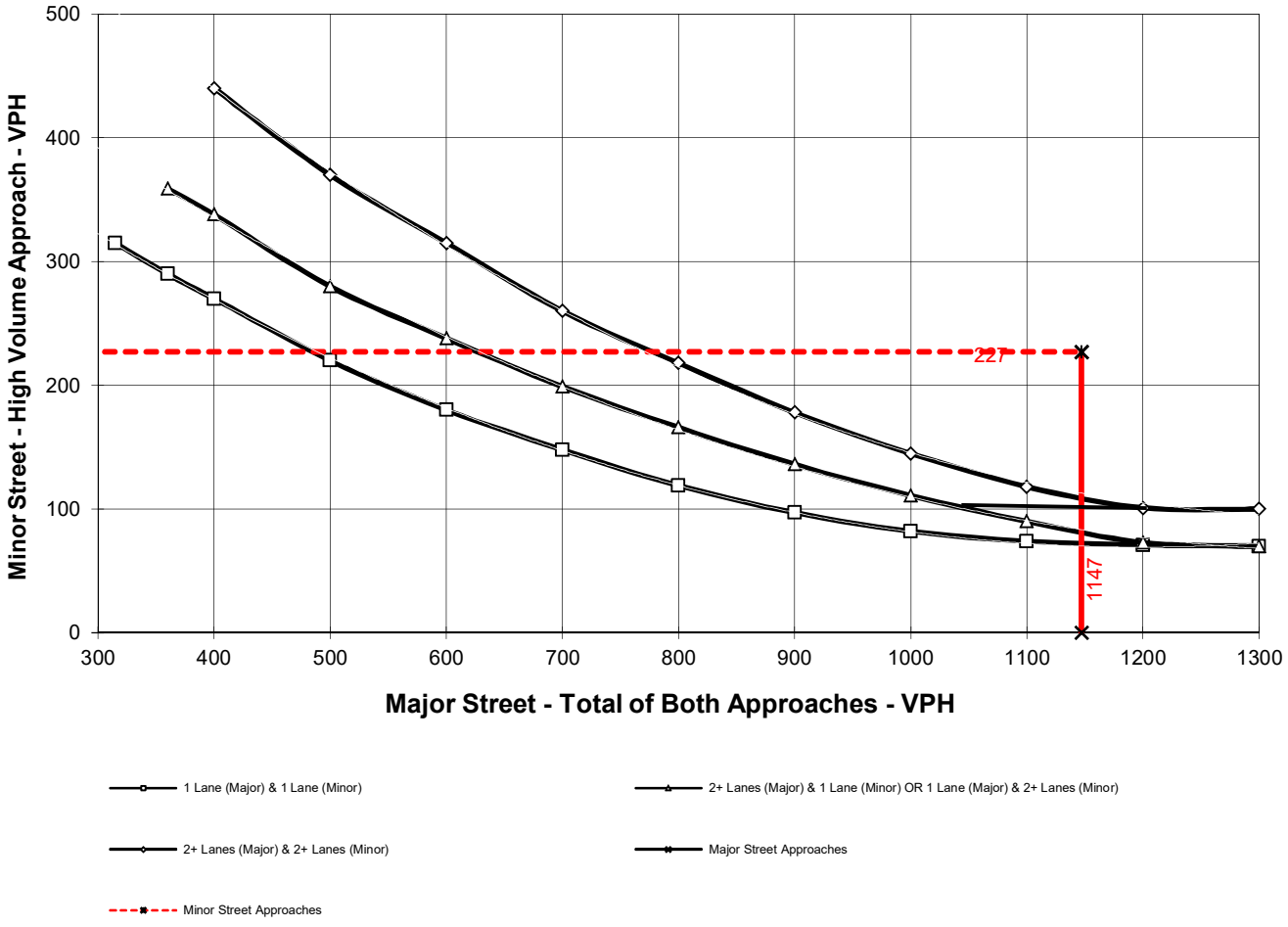
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Holly Street**

High Volume Approach (VPH) = **227**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

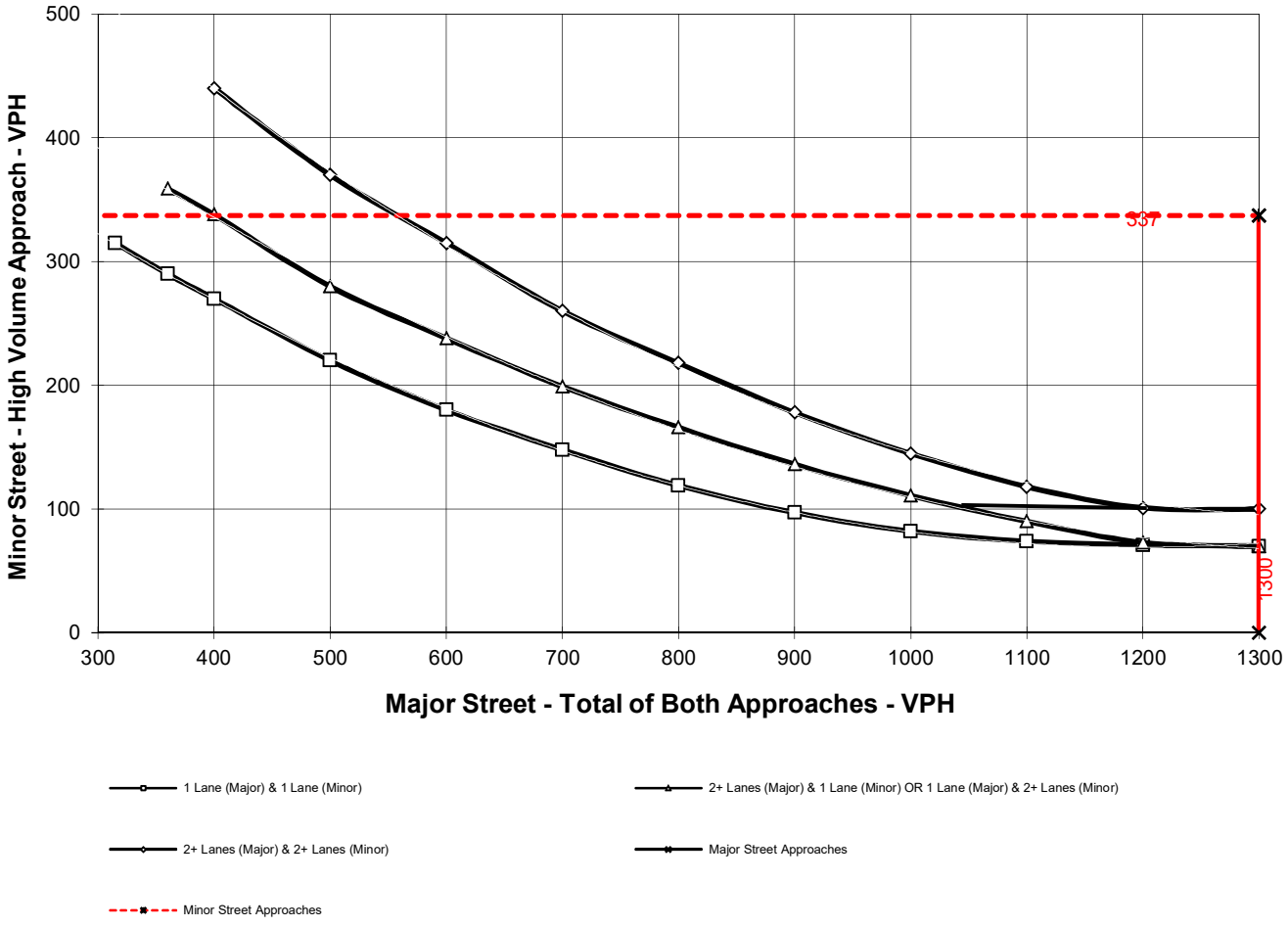
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2386**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **Project Access** High Volume Approach (VPH) = **337**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

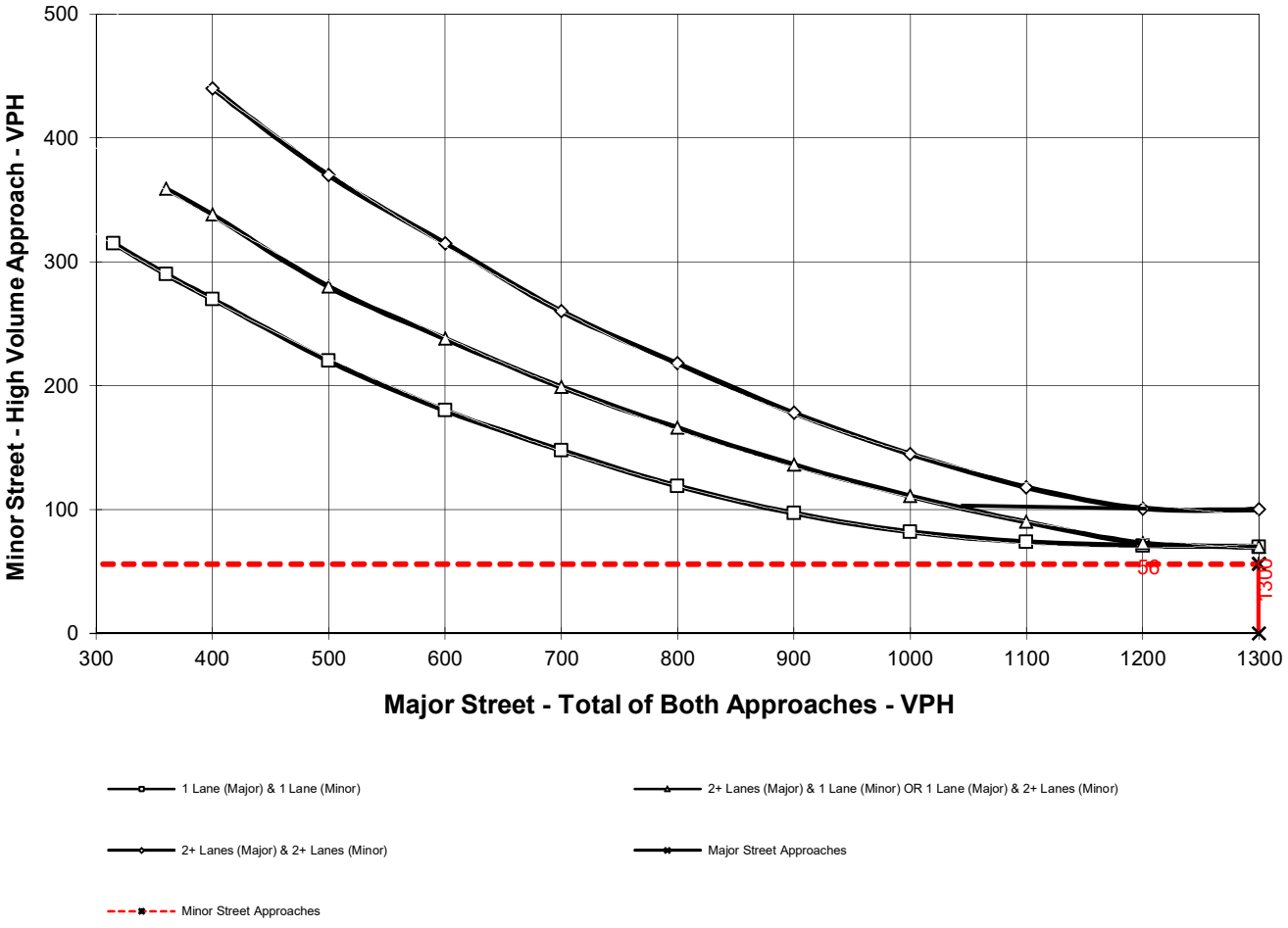
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2626**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **56**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

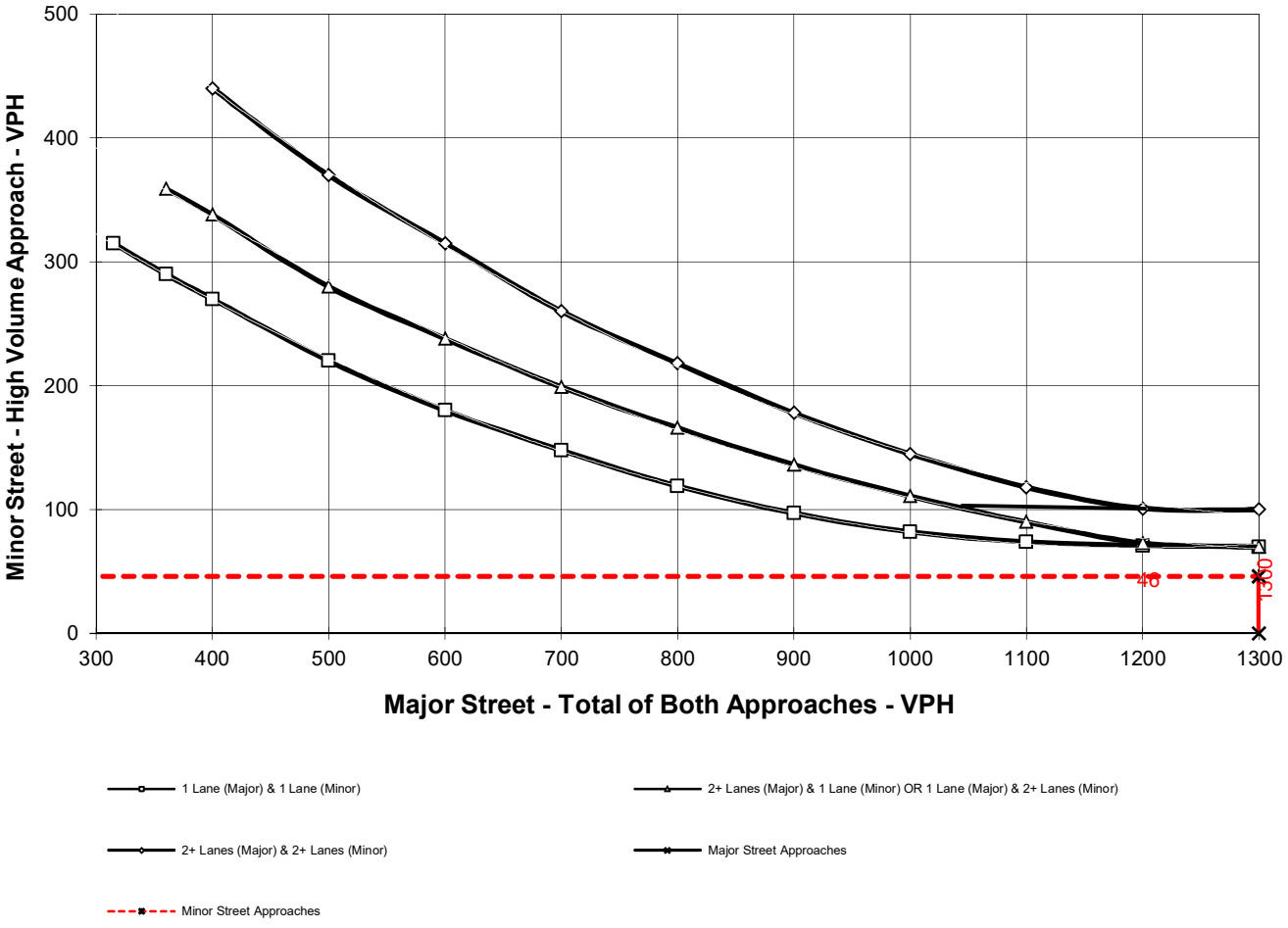
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **1947**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **24th Street** High Volume Approach (VPH) = **46**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

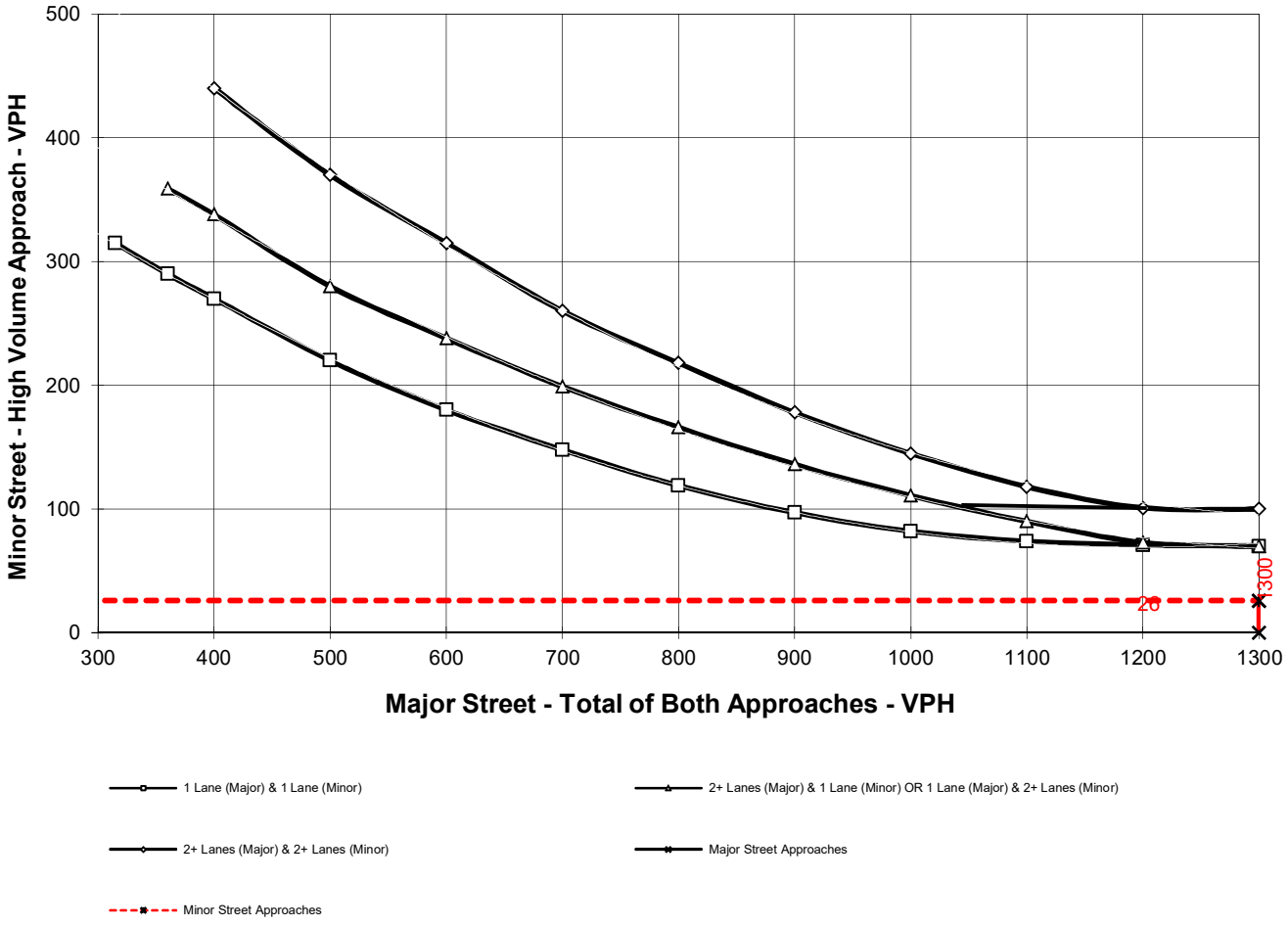
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **1906**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **26th Street** High Volume Approach (VPH) = **26**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

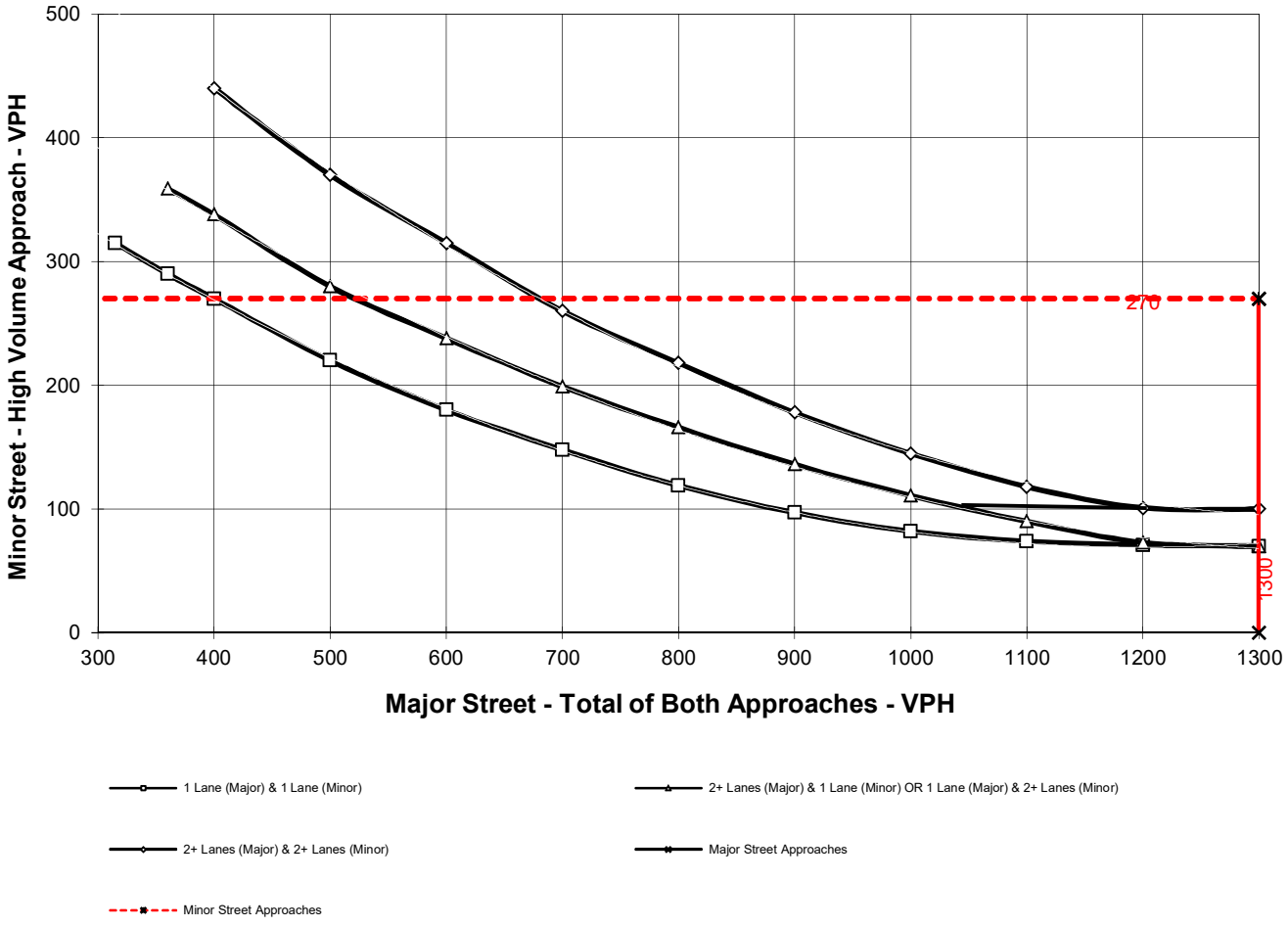
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 2

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2413**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Project Access** High Volume Approach (VPH) = **270**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 2

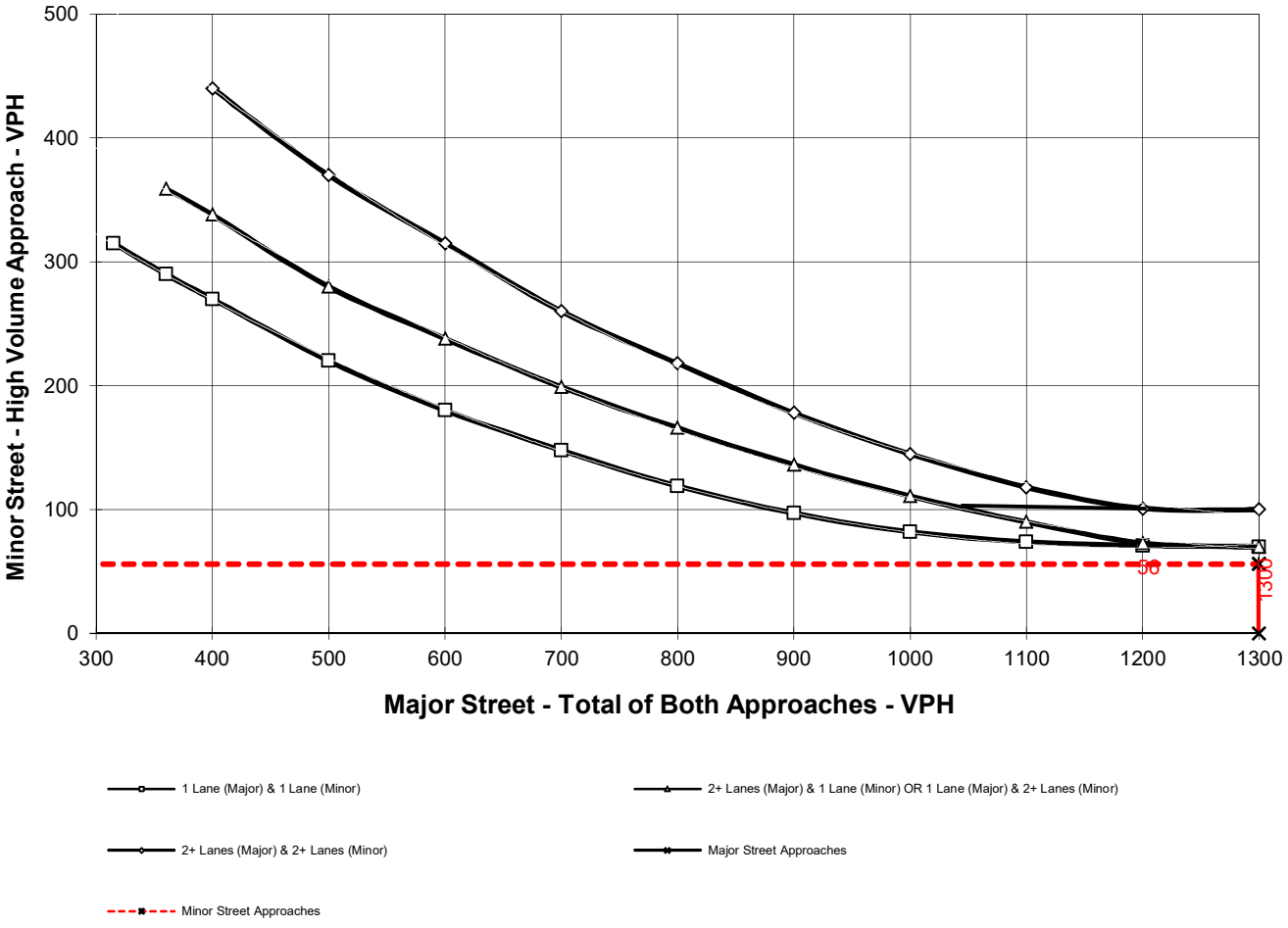
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2598**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **56**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 2

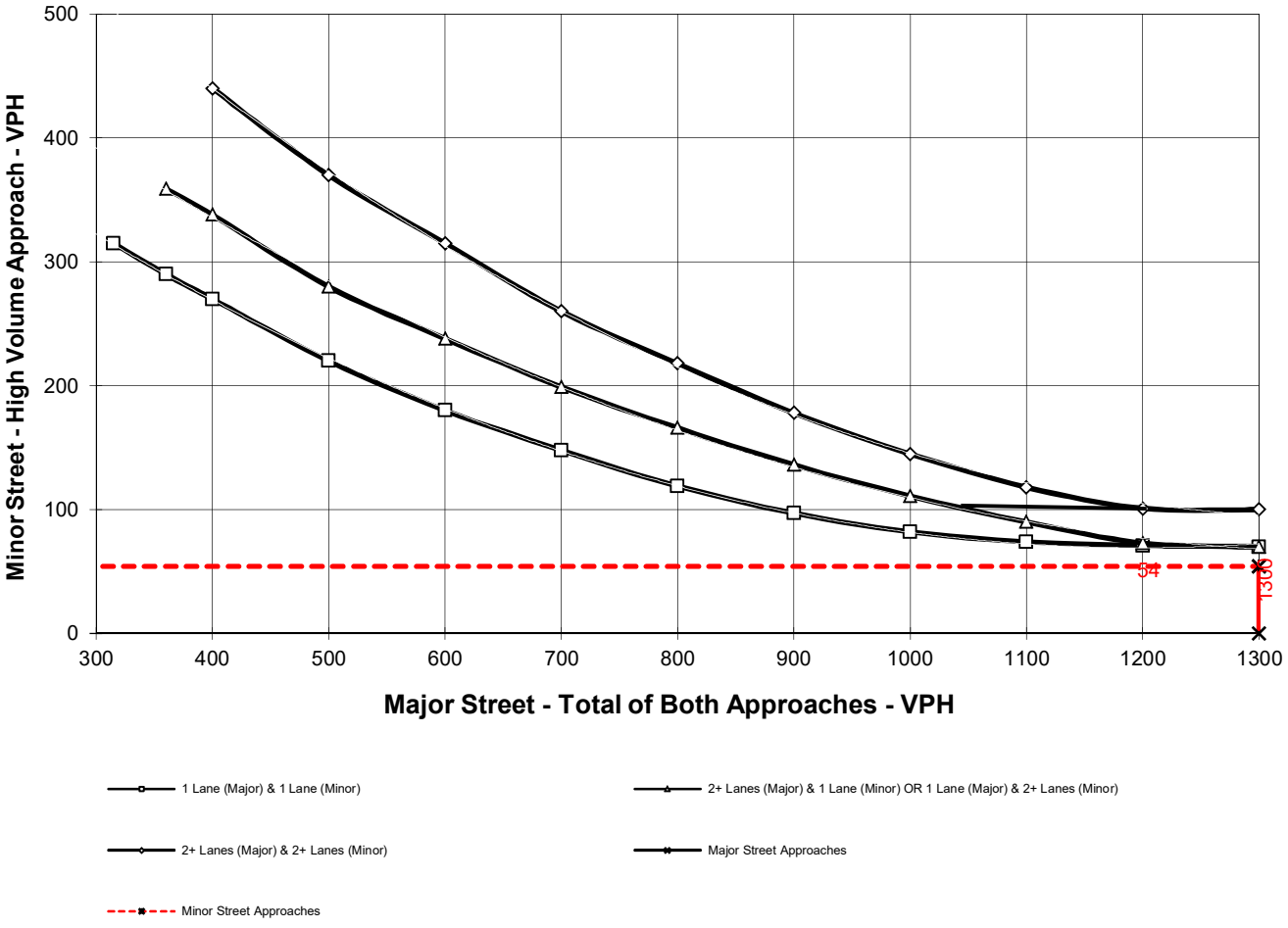
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **1946**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **24th Street** High Volume Approach (VPH) = **54**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 2

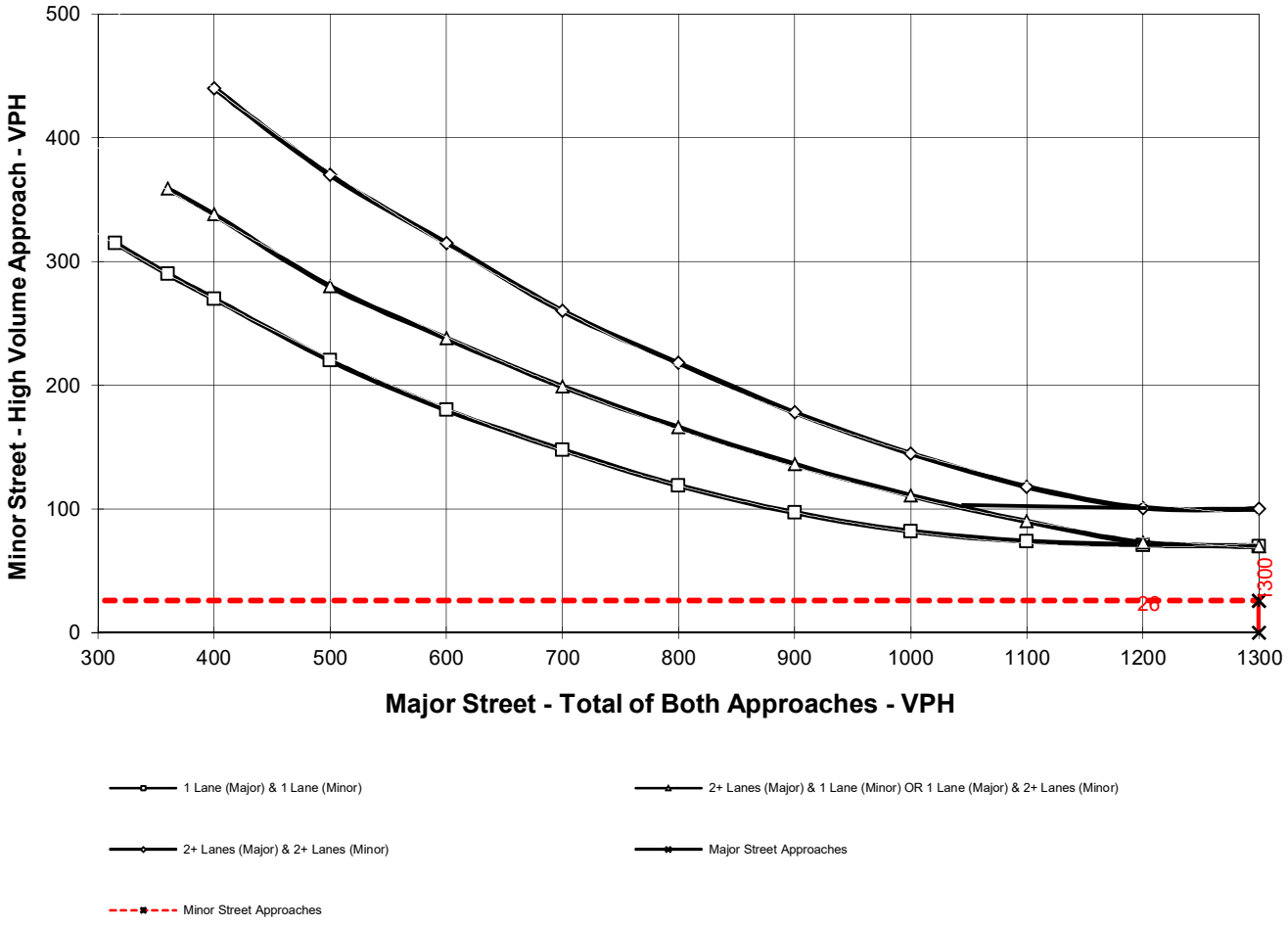
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **1905**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **26th Street** High Volume Approach (VPH) = **26**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

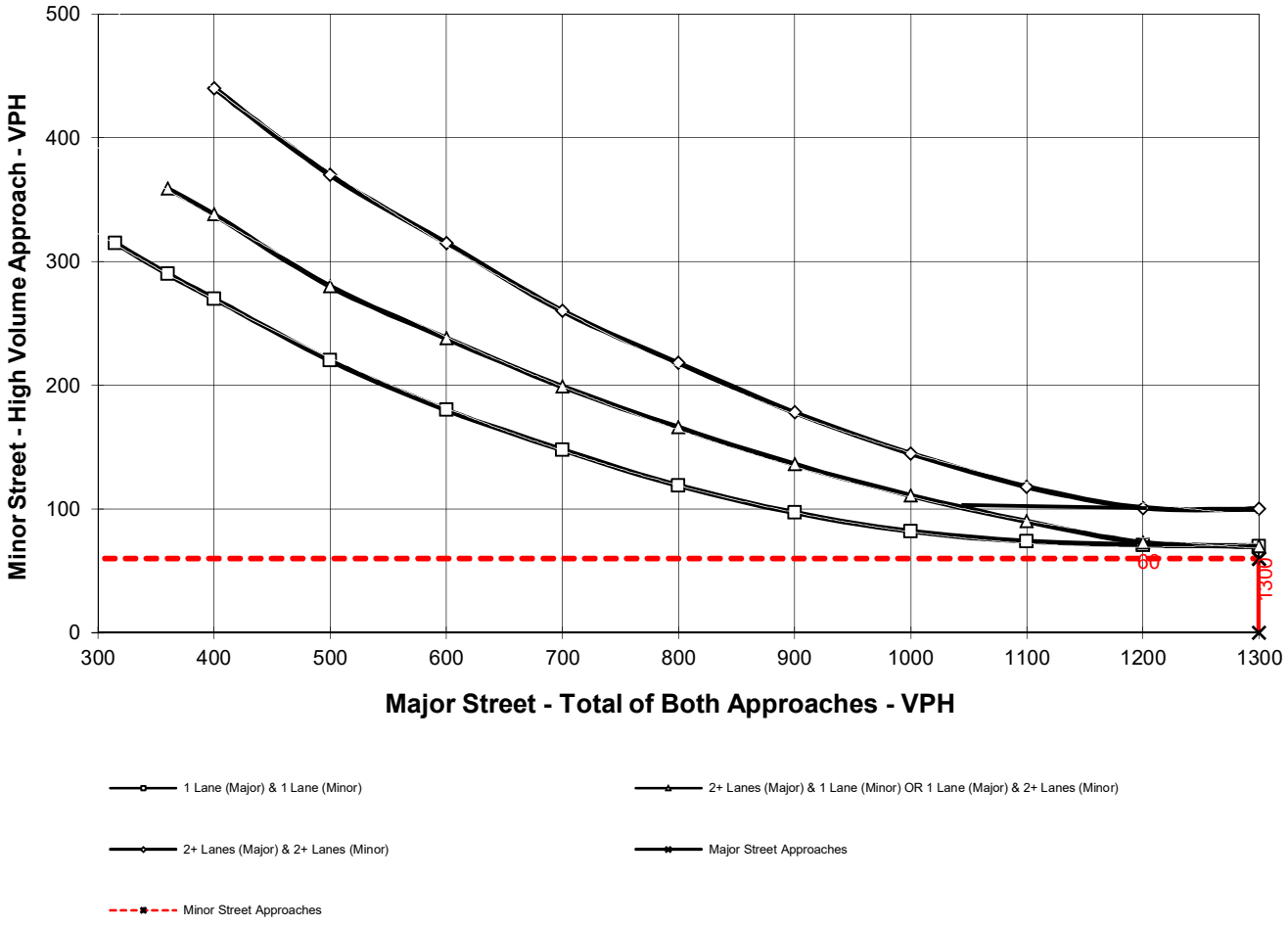
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) Without Project

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2736**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **60**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) Without Project

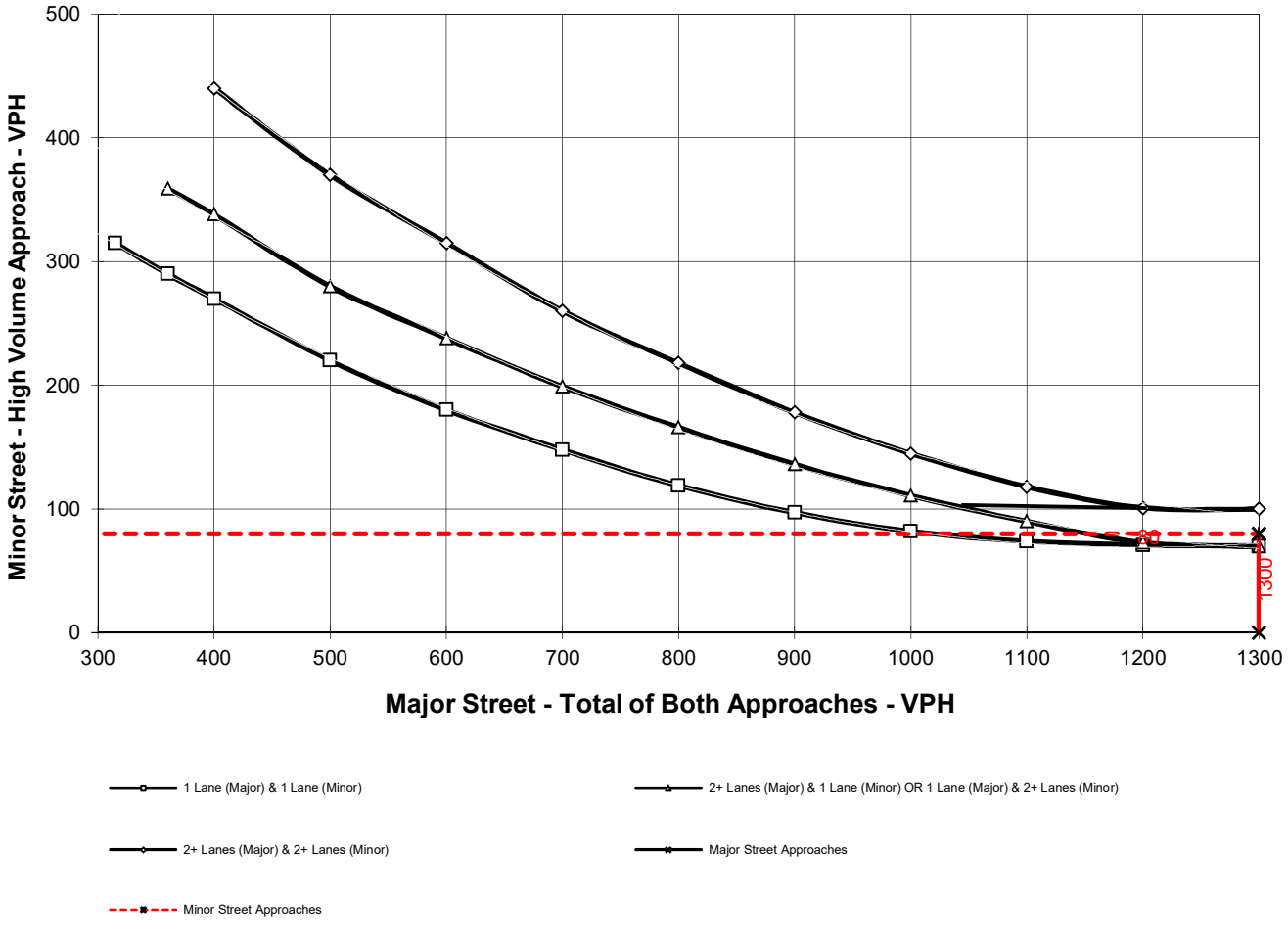
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2201**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **24th Street** High Volume Approach (VPH) = **80**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
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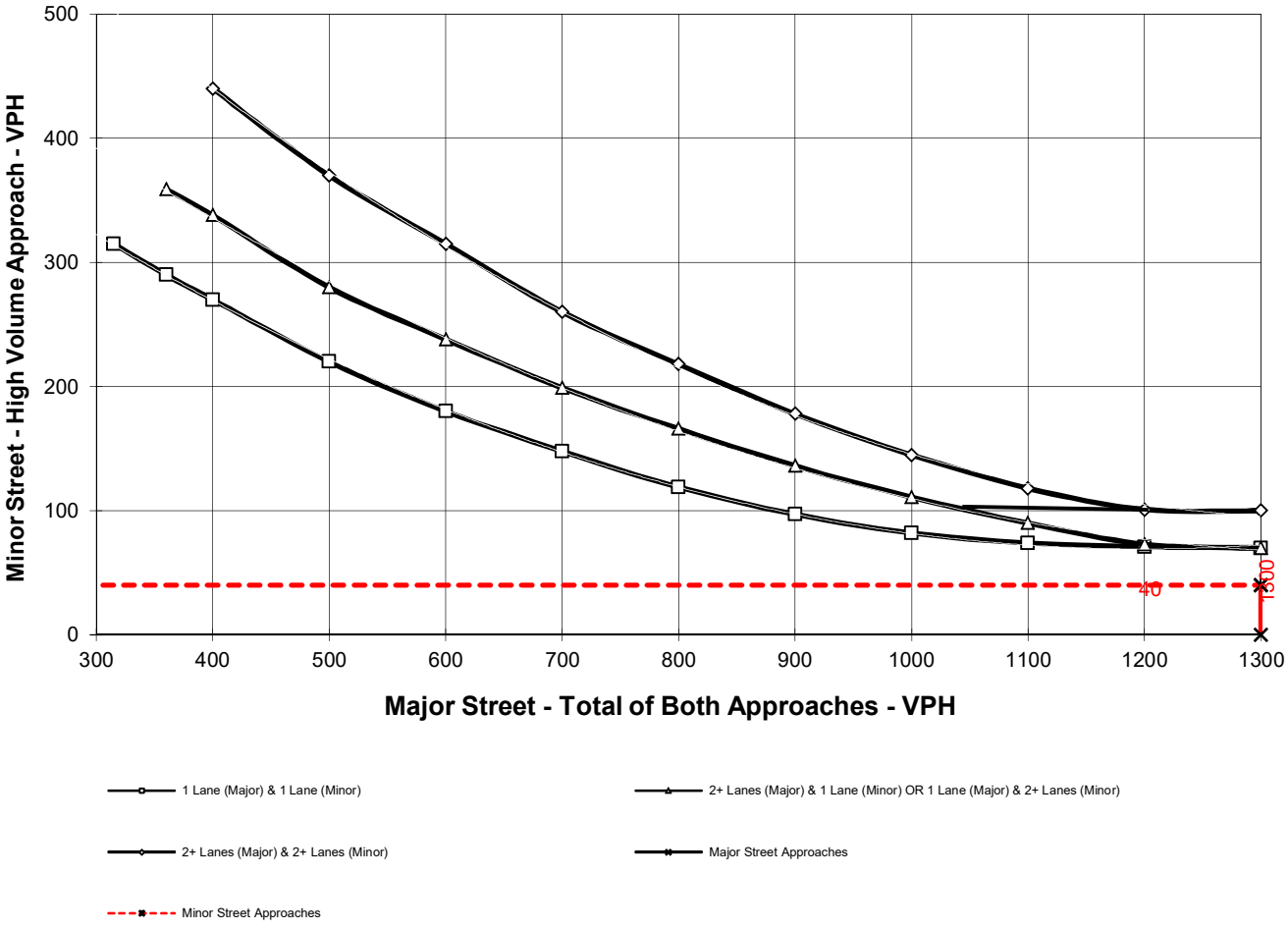
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) Without Project

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2130**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **26th Street** High Volume Approach (VPH) = **40**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 1

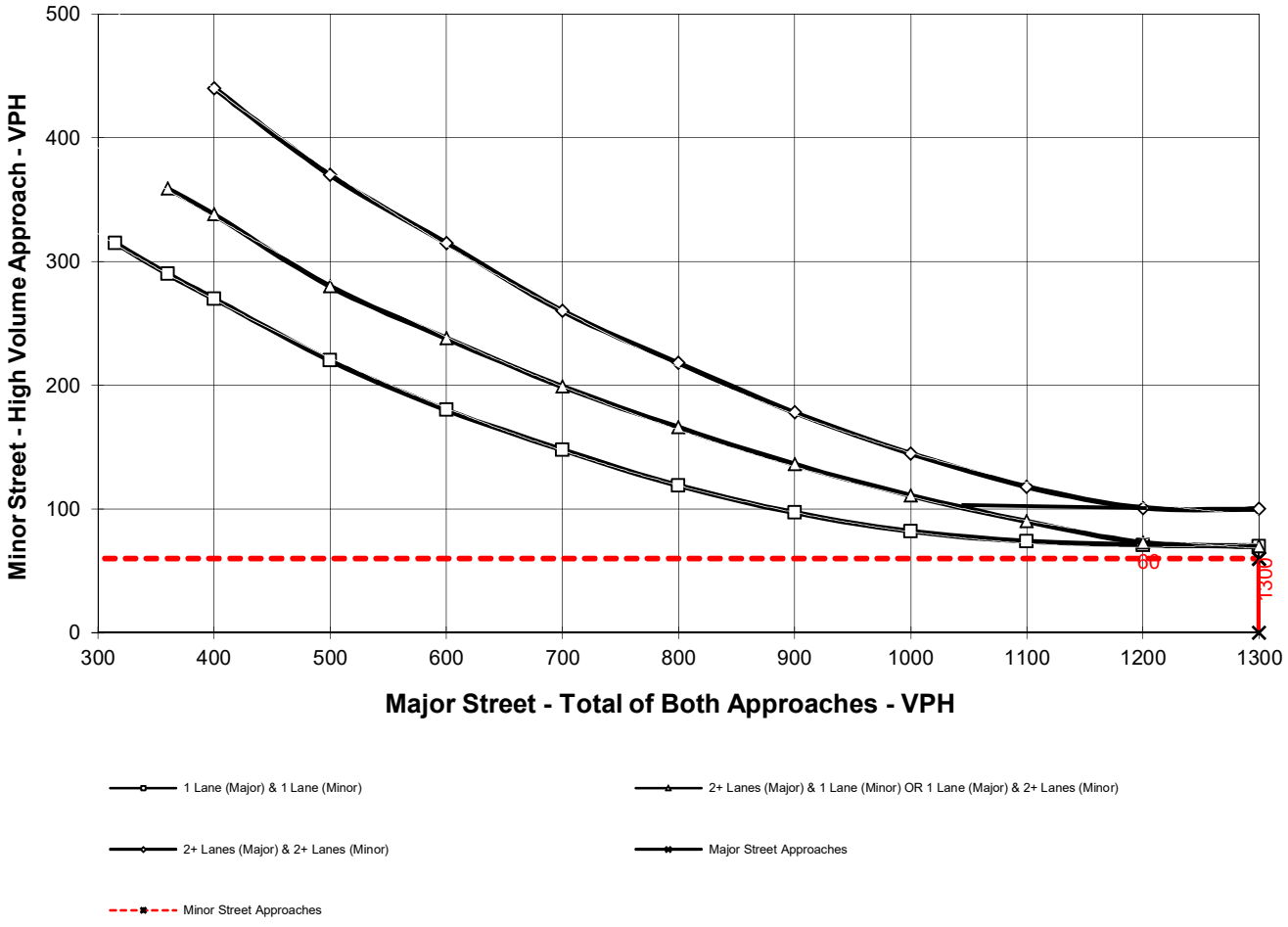
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3099**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **60**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 1

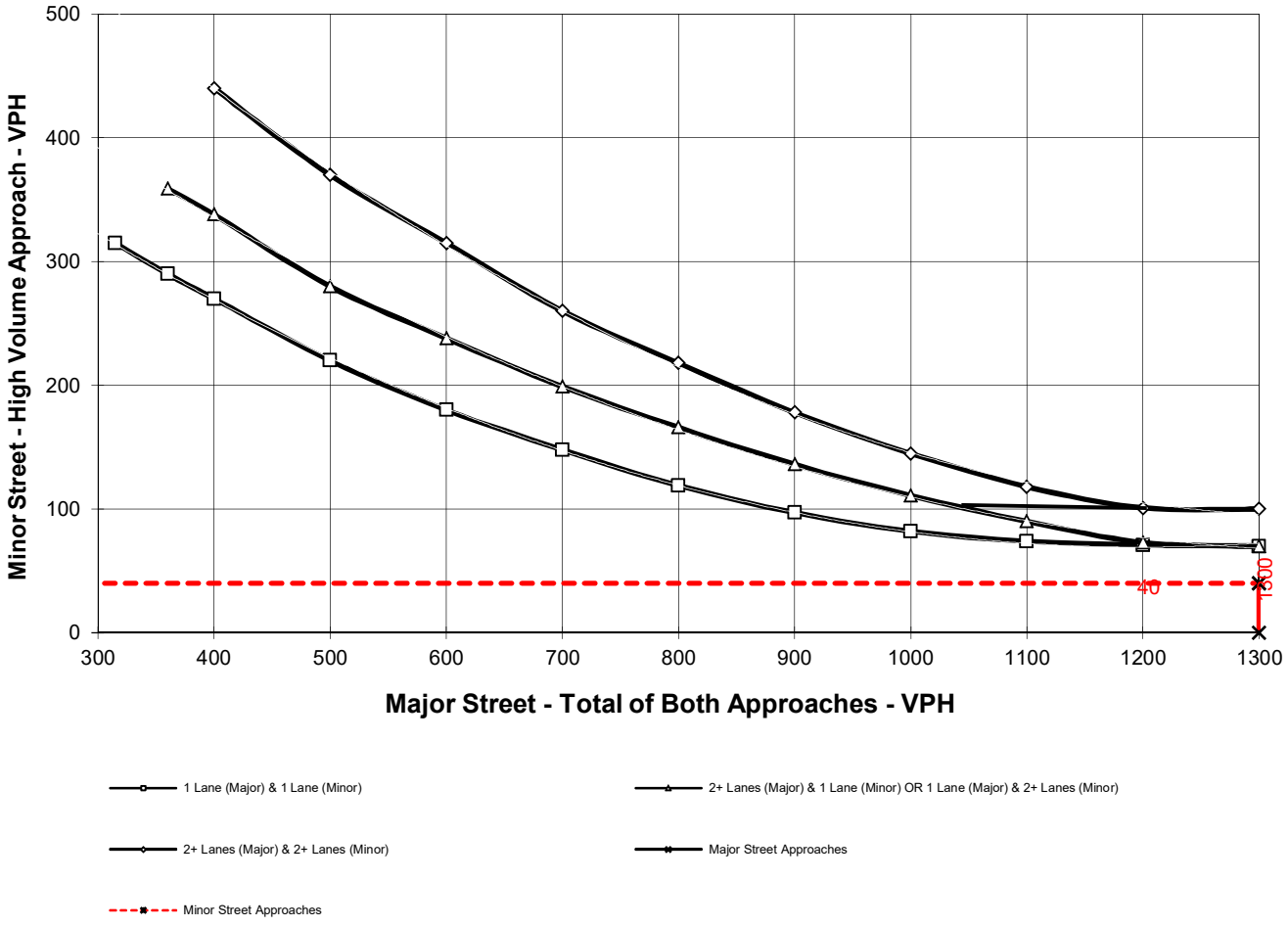
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2319**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **26th Street** High Volume Approach (VPH) = **40**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 1

Major Street Name = **El Rivino Road**

Total of Both Approaches (VPH) = **843**

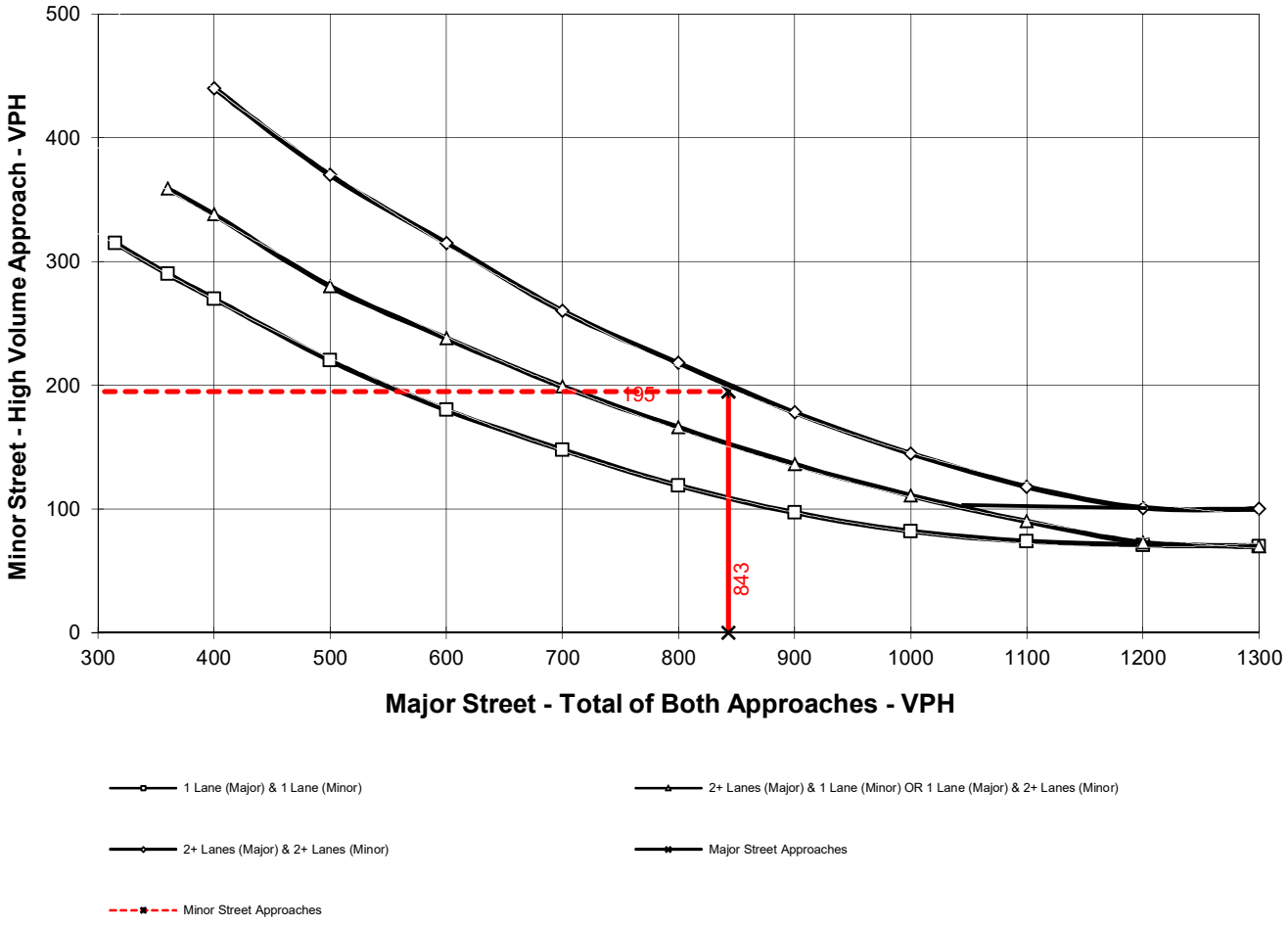
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Hall Avenue**

High Volume Approach (VPH) = **195**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 2

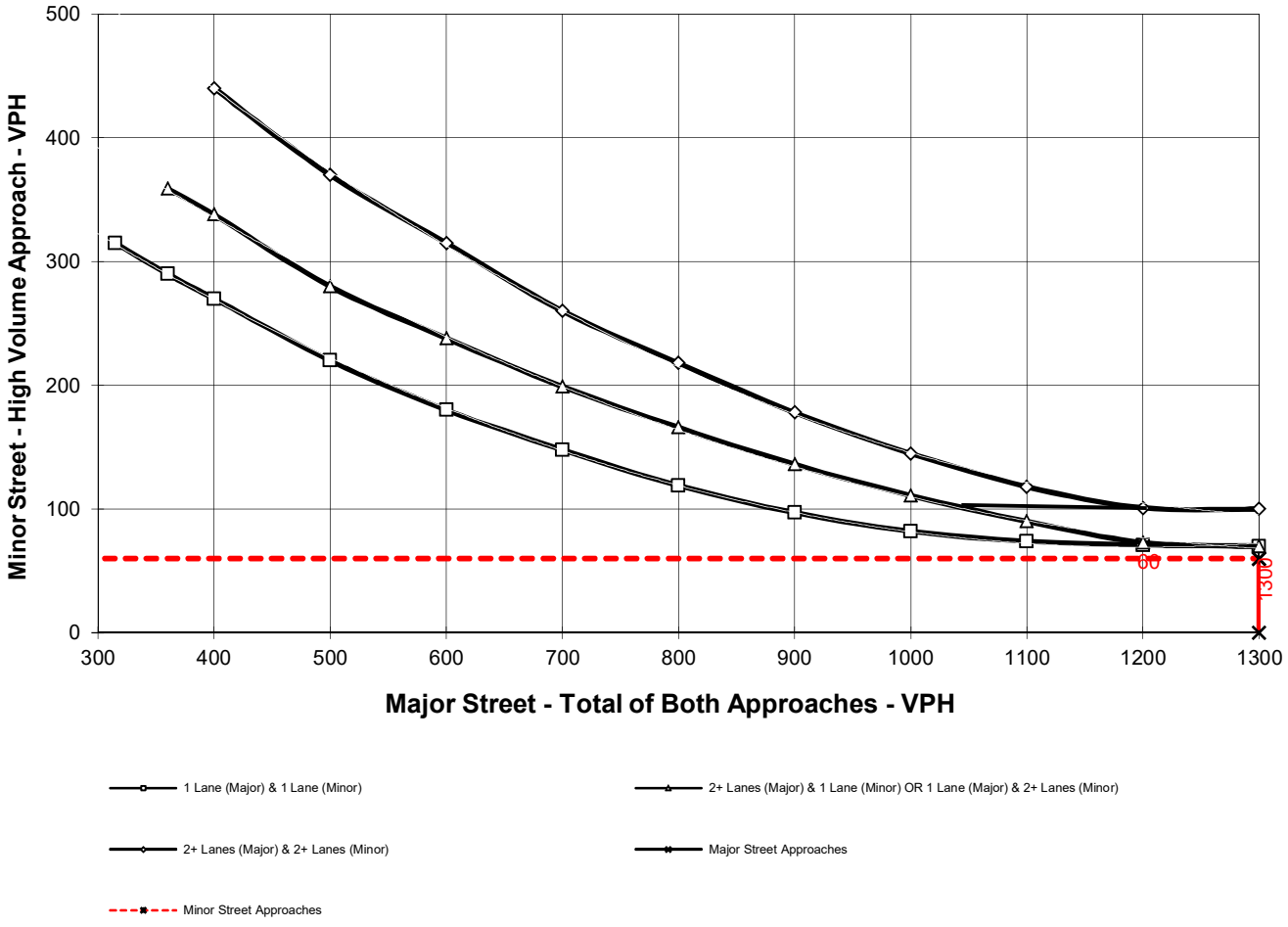
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3071**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **60**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 2

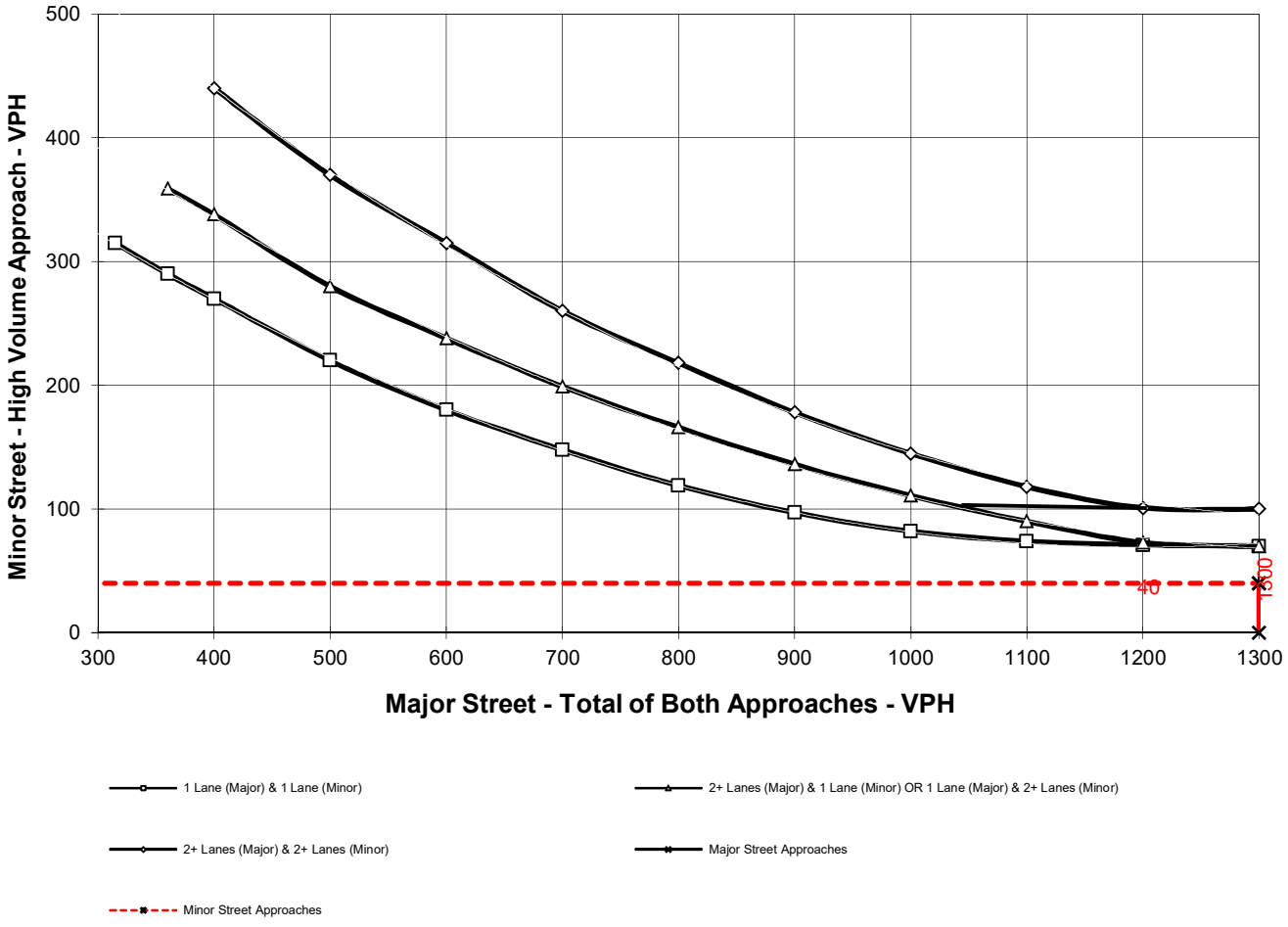
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2318**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **26th Street** High Volume Approach (VPH) = **40**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 2

Major Street Name = **El Rivino Road**

Total of Both Approaches (VPH) = **854**

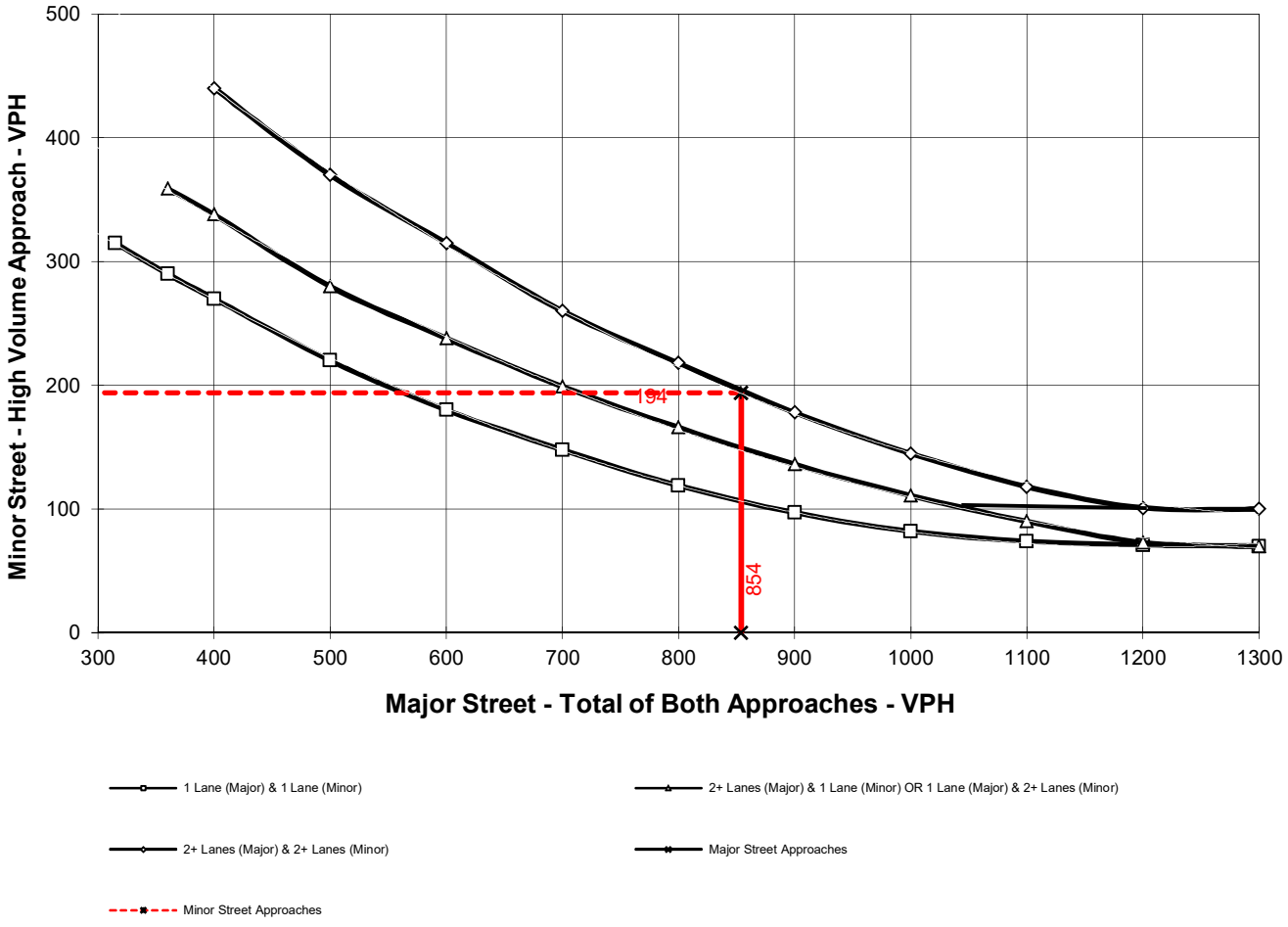
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Hall Avenue**

High Volume Approach (VPH) = **194**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 Without Project

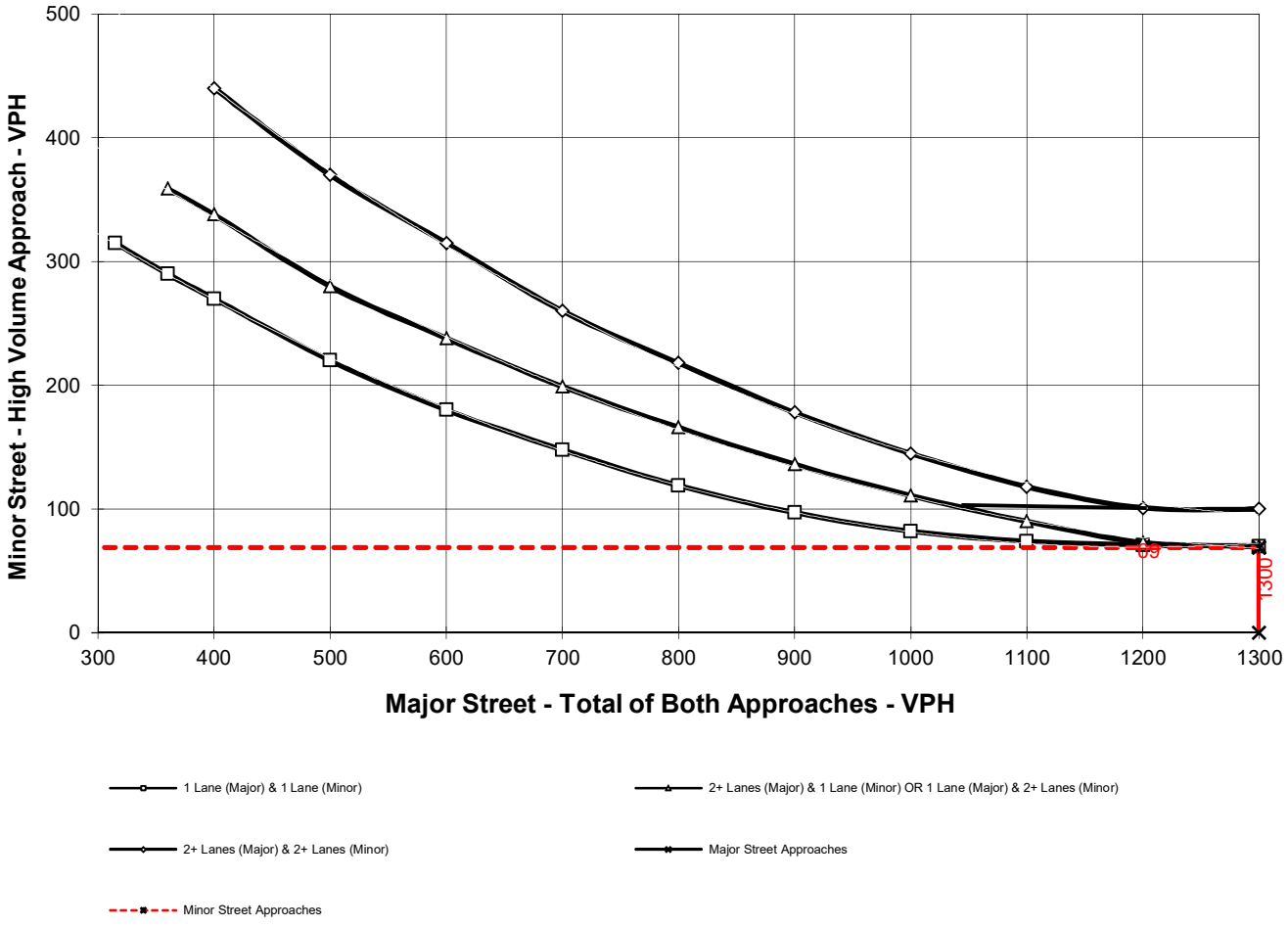
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2759**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **69**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 Without Project

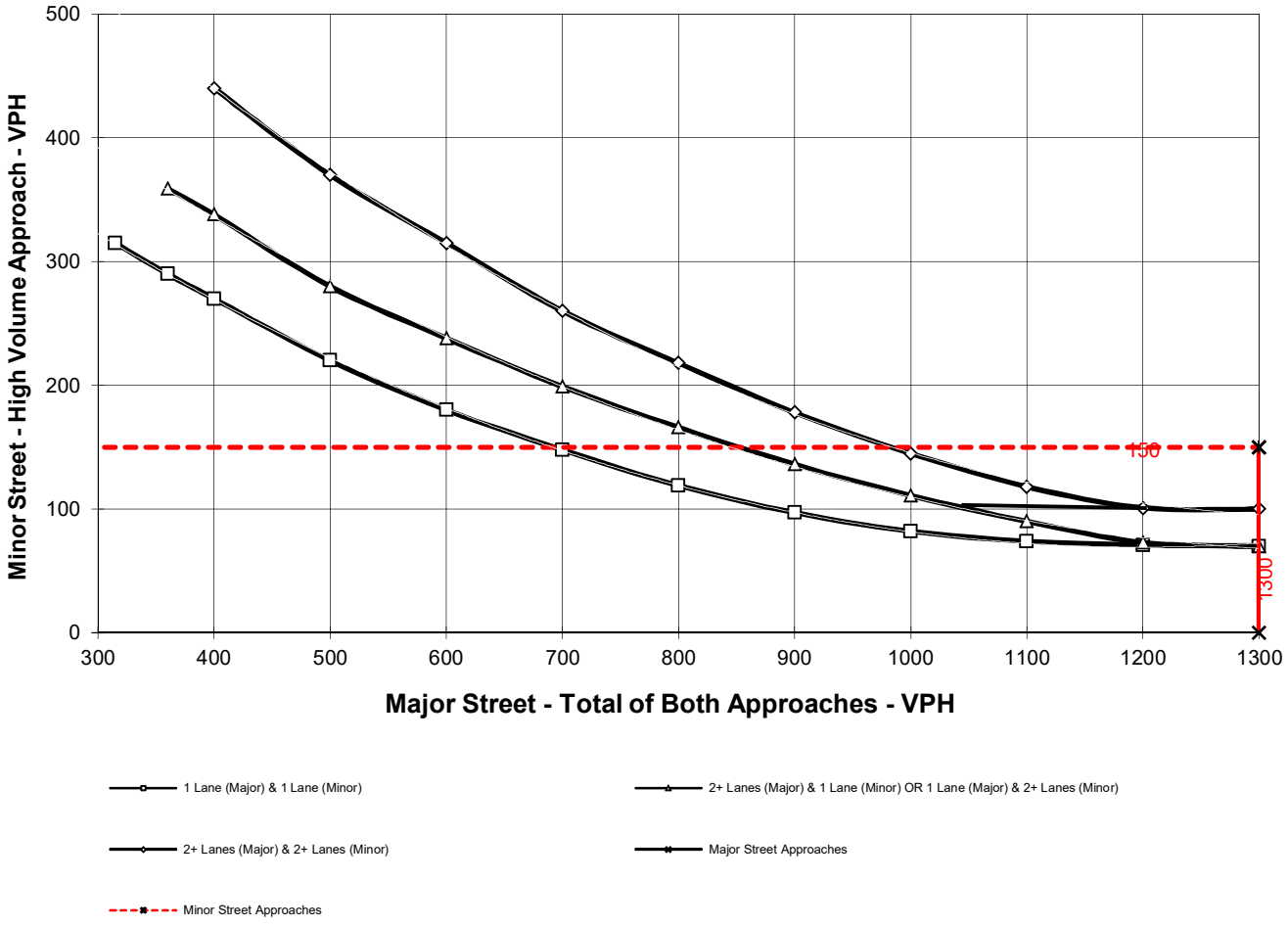
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2234**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **26th Street** High Volume Approach (VPH) = **150**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 Without Project

Major Street Name = **Market Street**

Total of Both Approaches (VPH) = **2130**

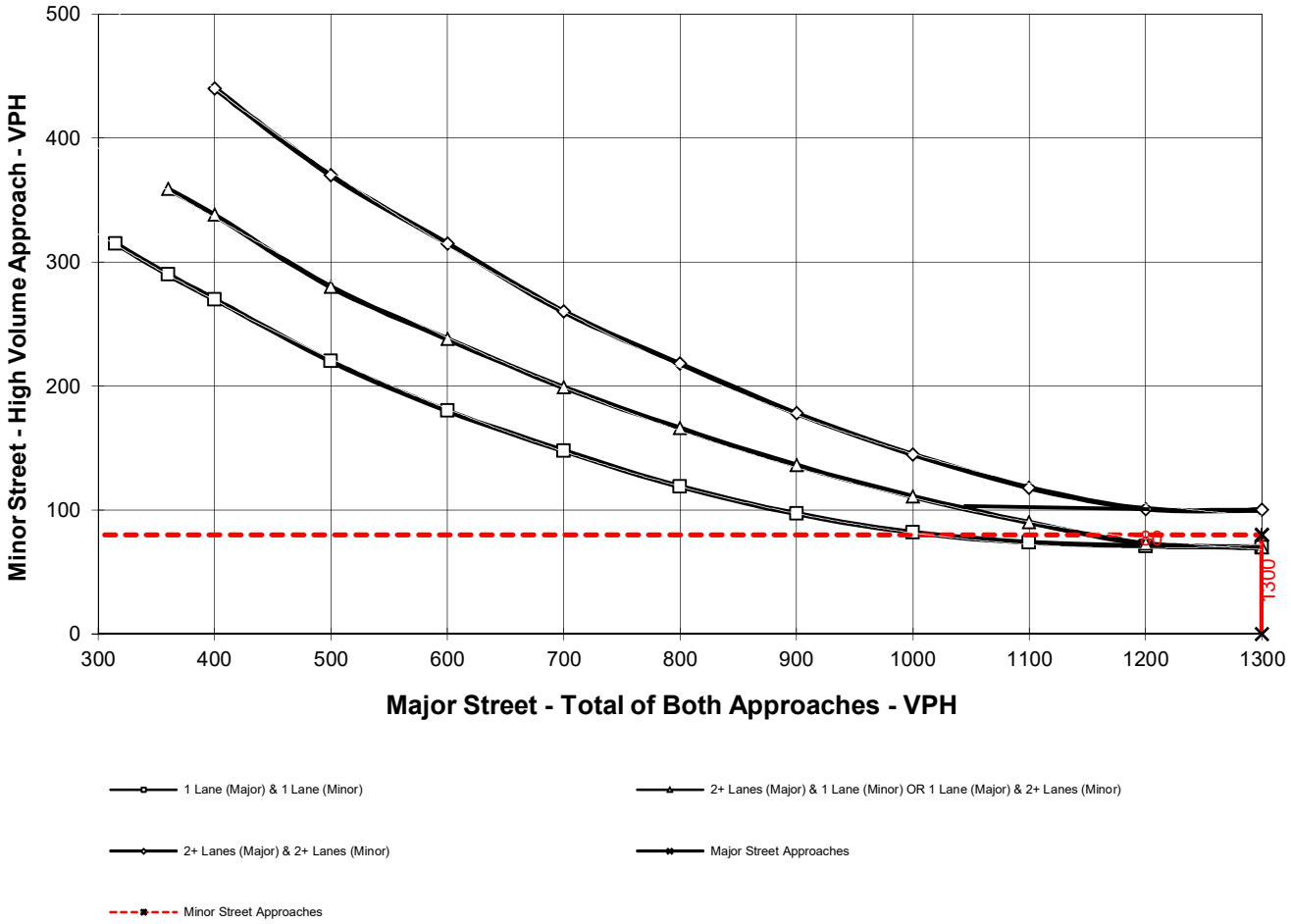
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Hall Avenue**

High Volume Approach (VPH) = **80**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 With Project - Alternative 1

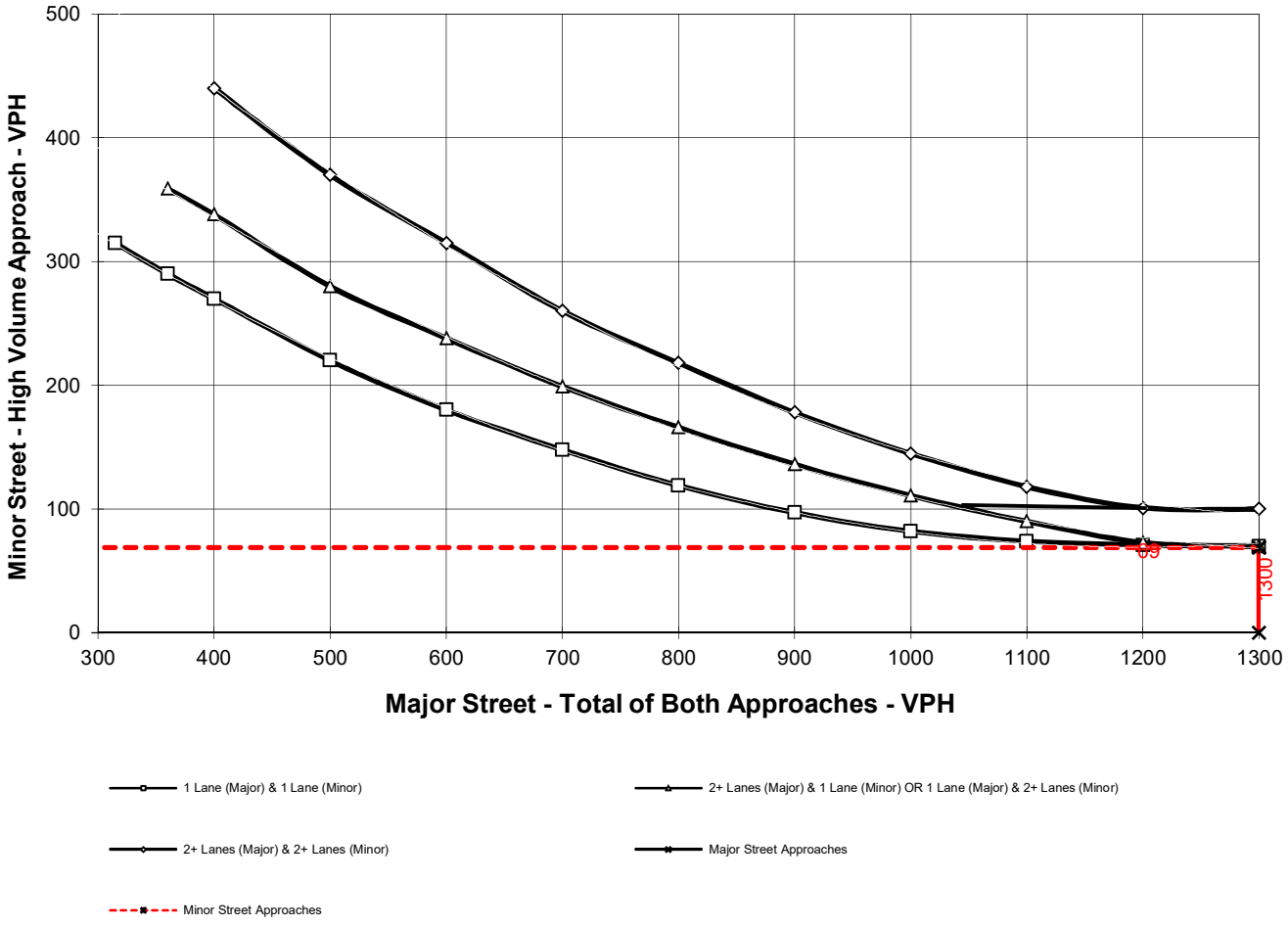
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3122**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **69**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 With Project - Alternative 2

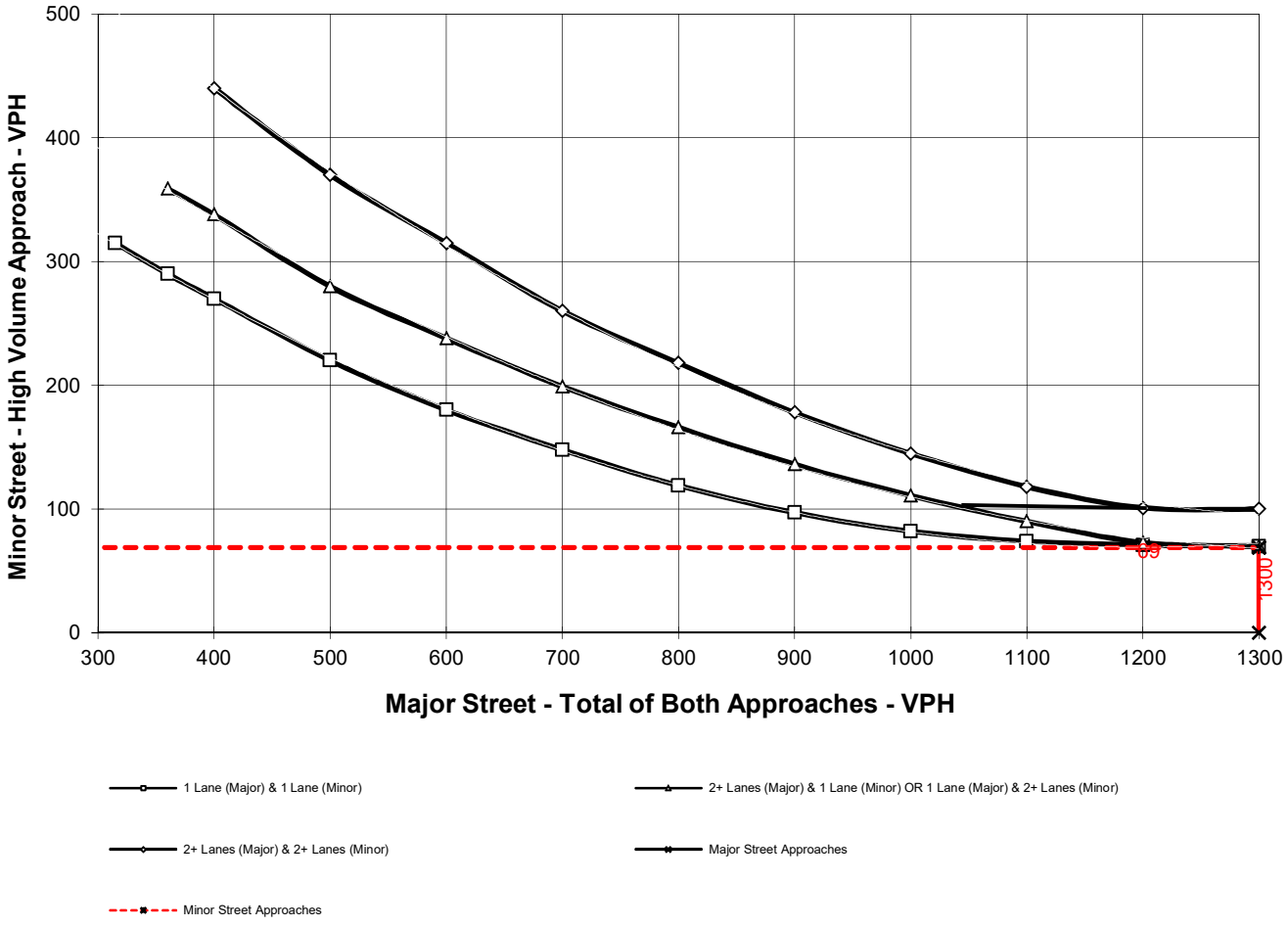
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3094**

Number of Approach Lanes Major Street = **1**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **69**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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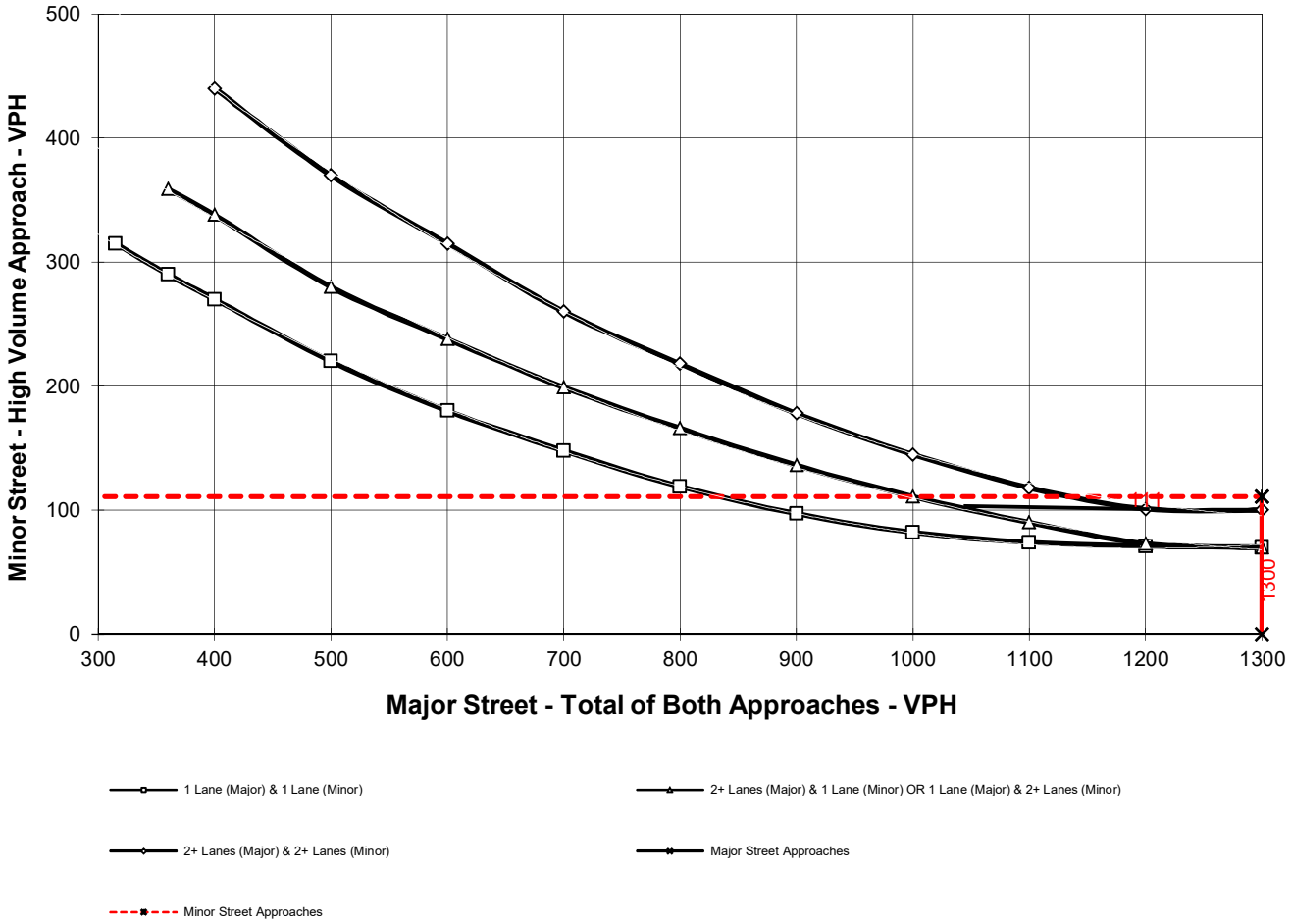
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2526**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Project Access** High Volume Approach (VPH) = **111**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
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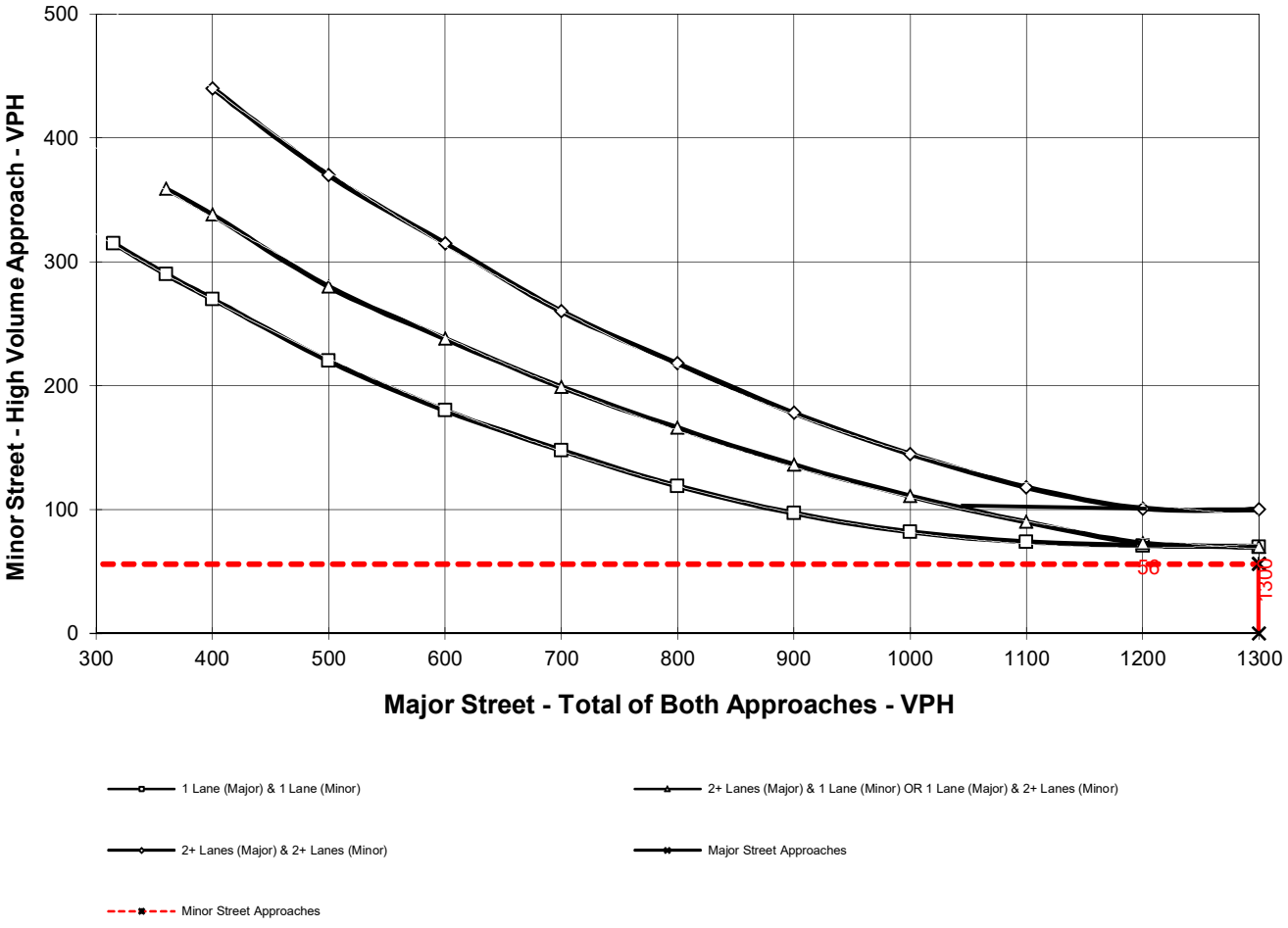
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2606**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **56**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 1

Major Street Name = **El Rivino Road**

Total of Both Approaches (VPH) = **1061**

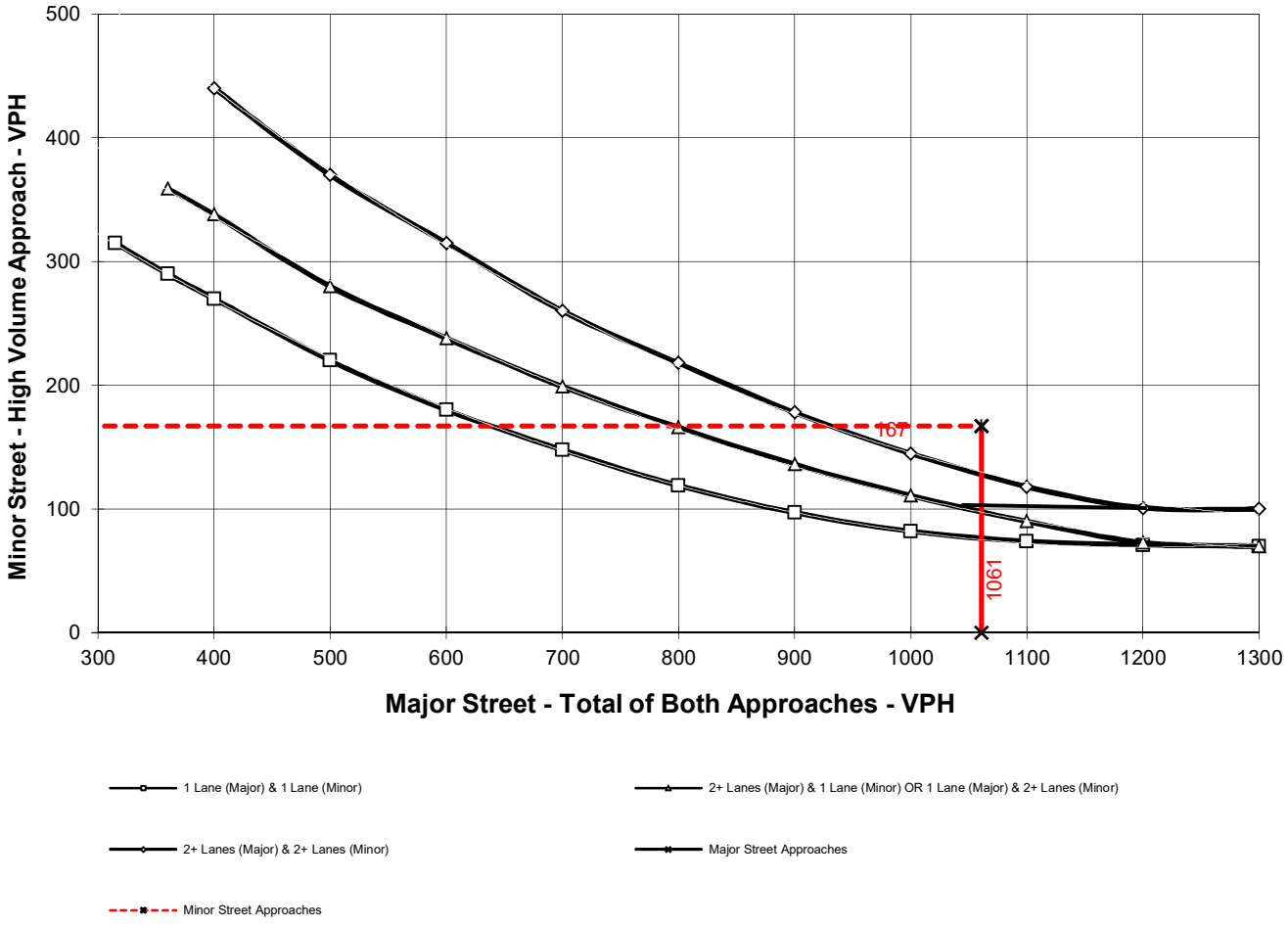
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Project Access**

High Volume Approach (VPH) = **167**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

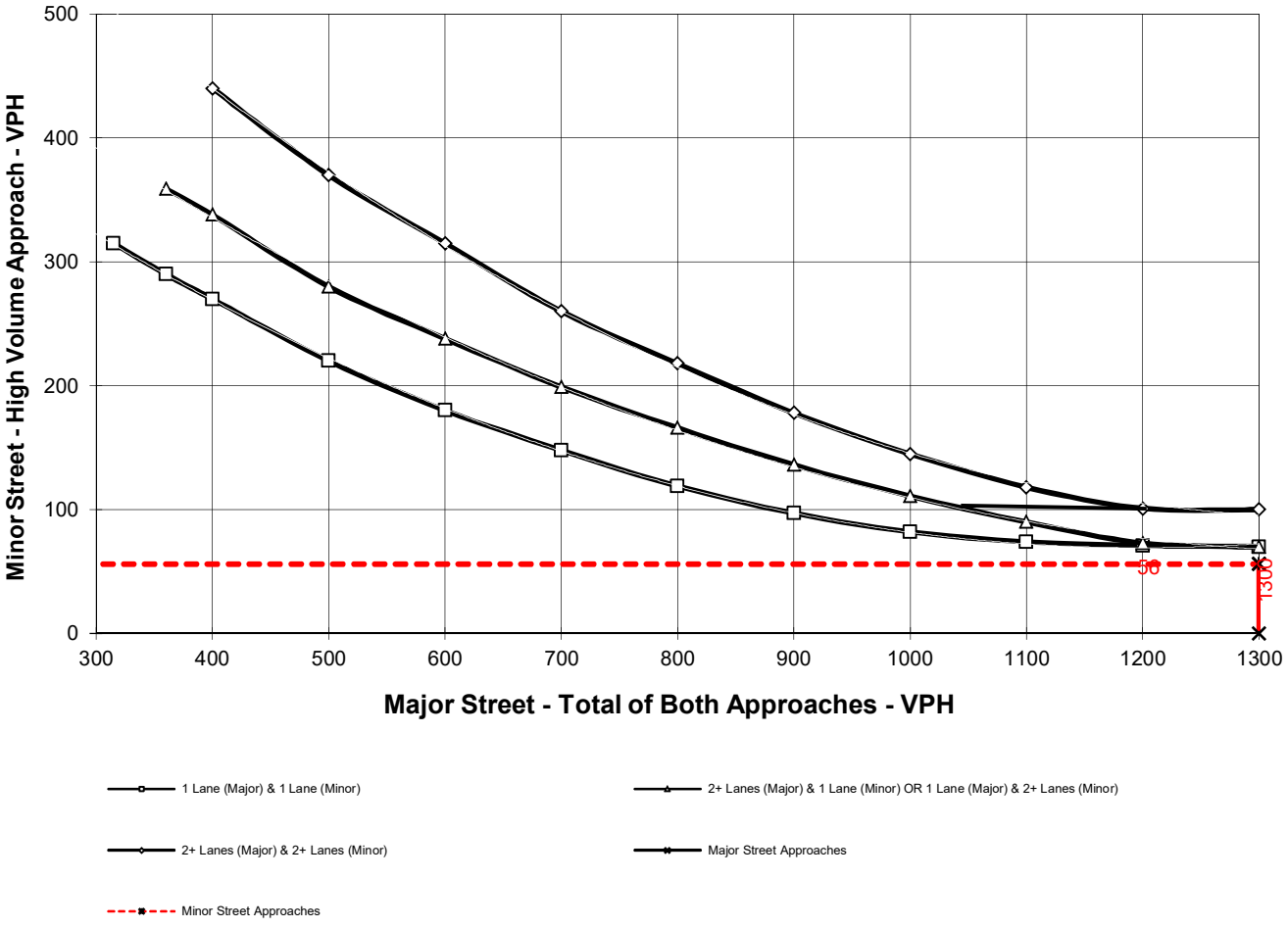
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 2

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **2578**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **56**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Project - Alternative 2

Major Street Name = **El Rivino Road**

Total of Both Approaches (VPH) = **1079**

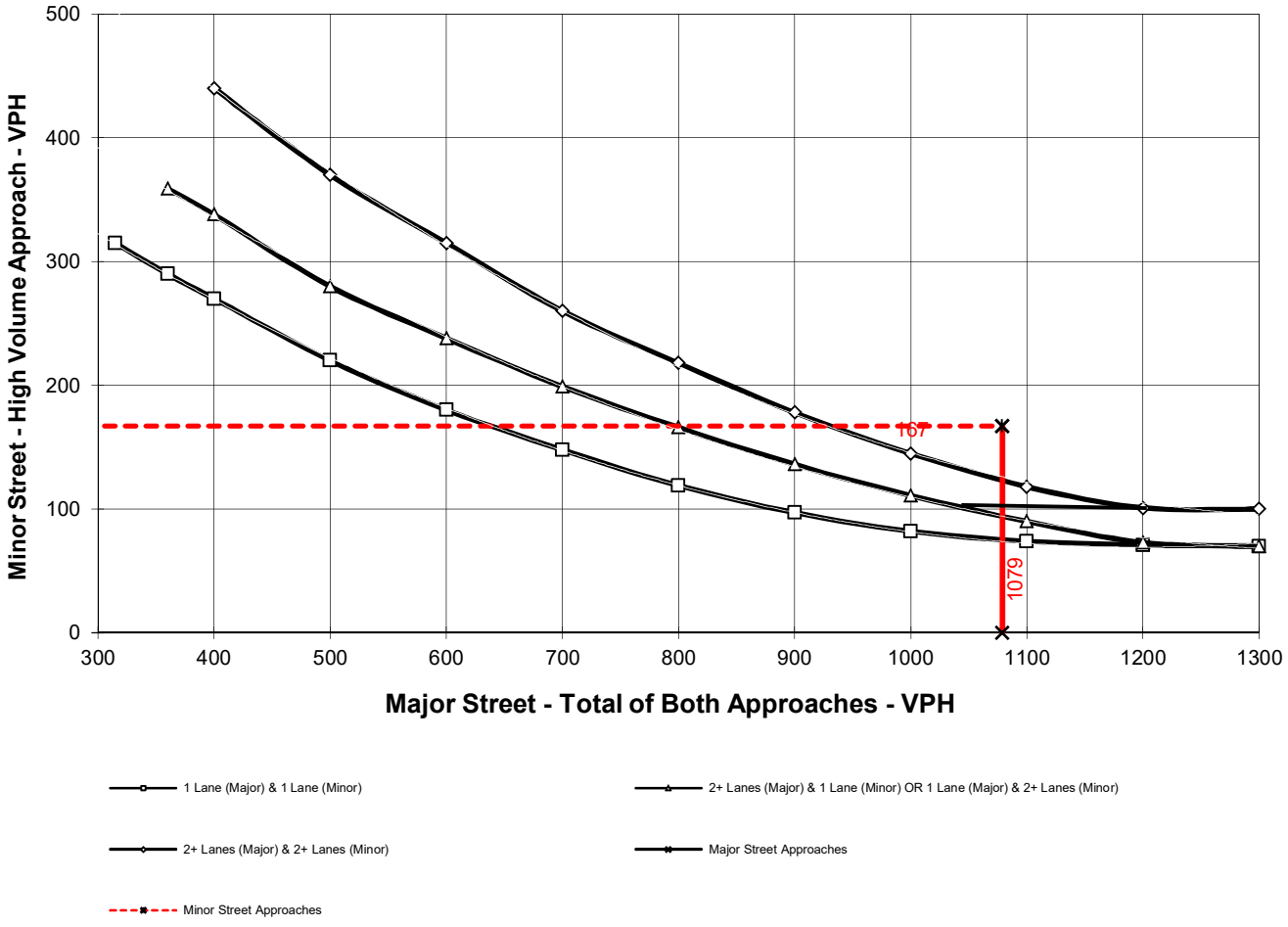
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Project Access**

High Volume Approach (VPH) = **167**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

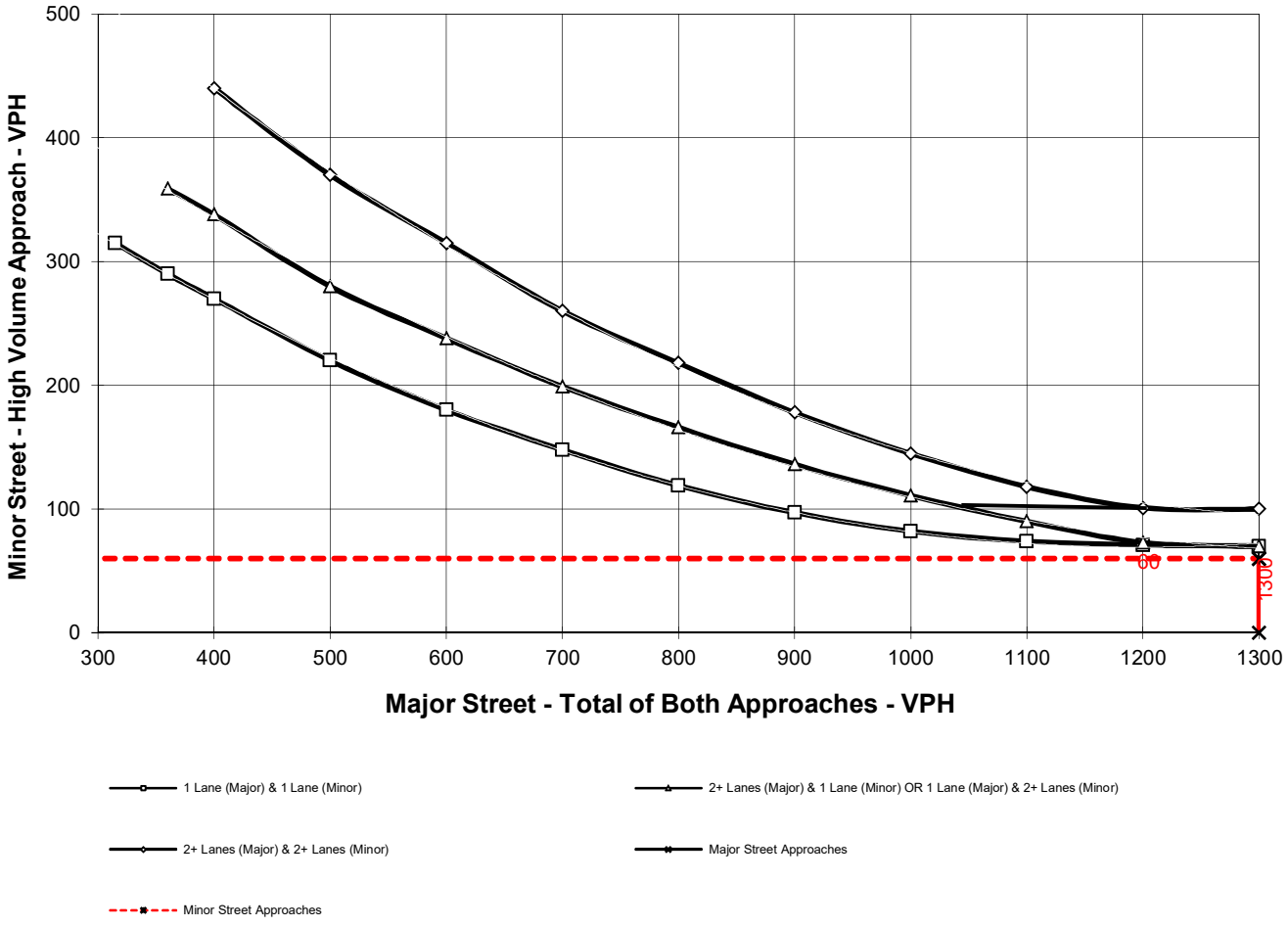
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 1

Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3078**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **60**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Opening Year (2020) With Project - Alternative 2

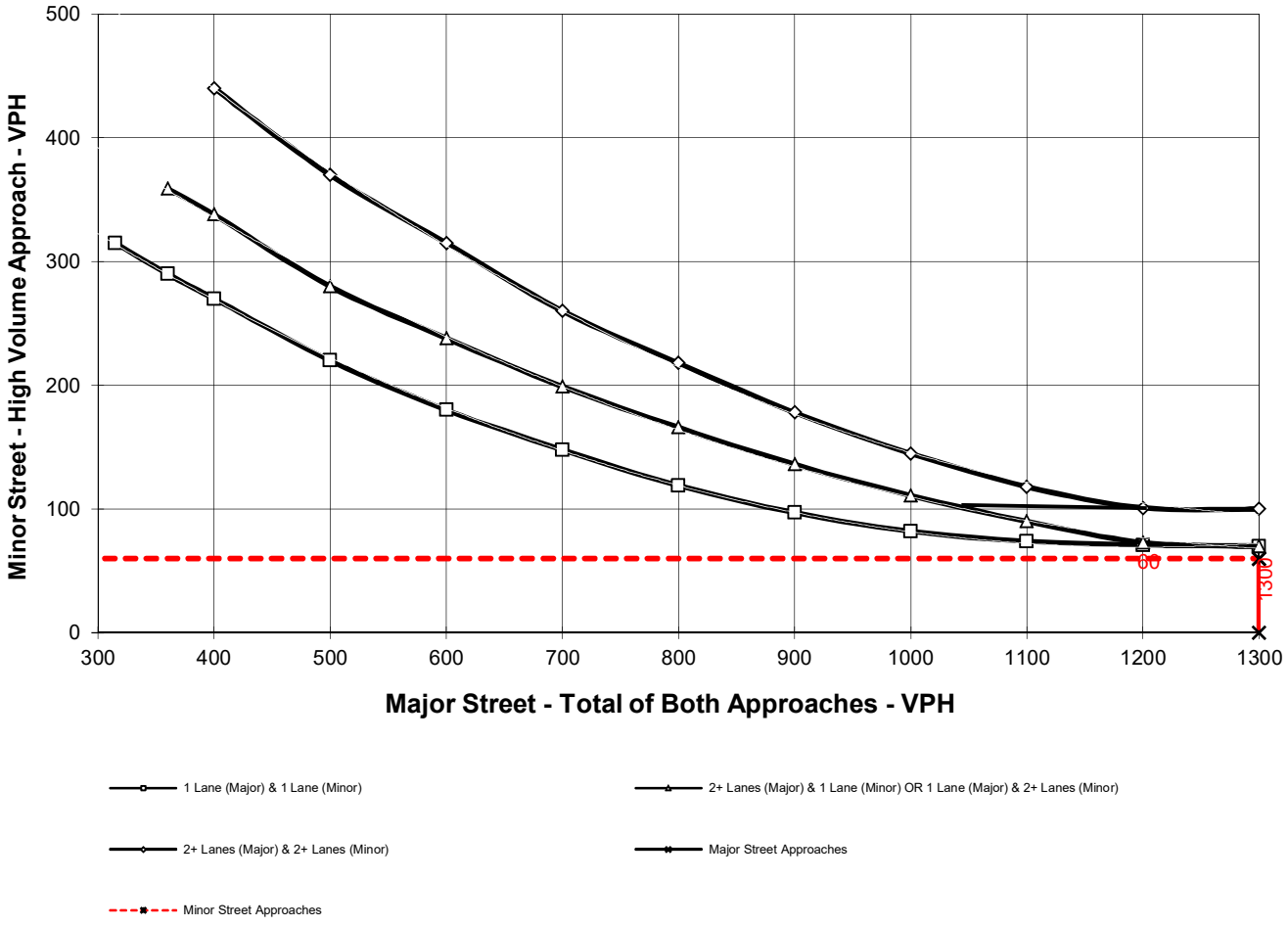
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3050**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **60**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 With Project - Alternative 1

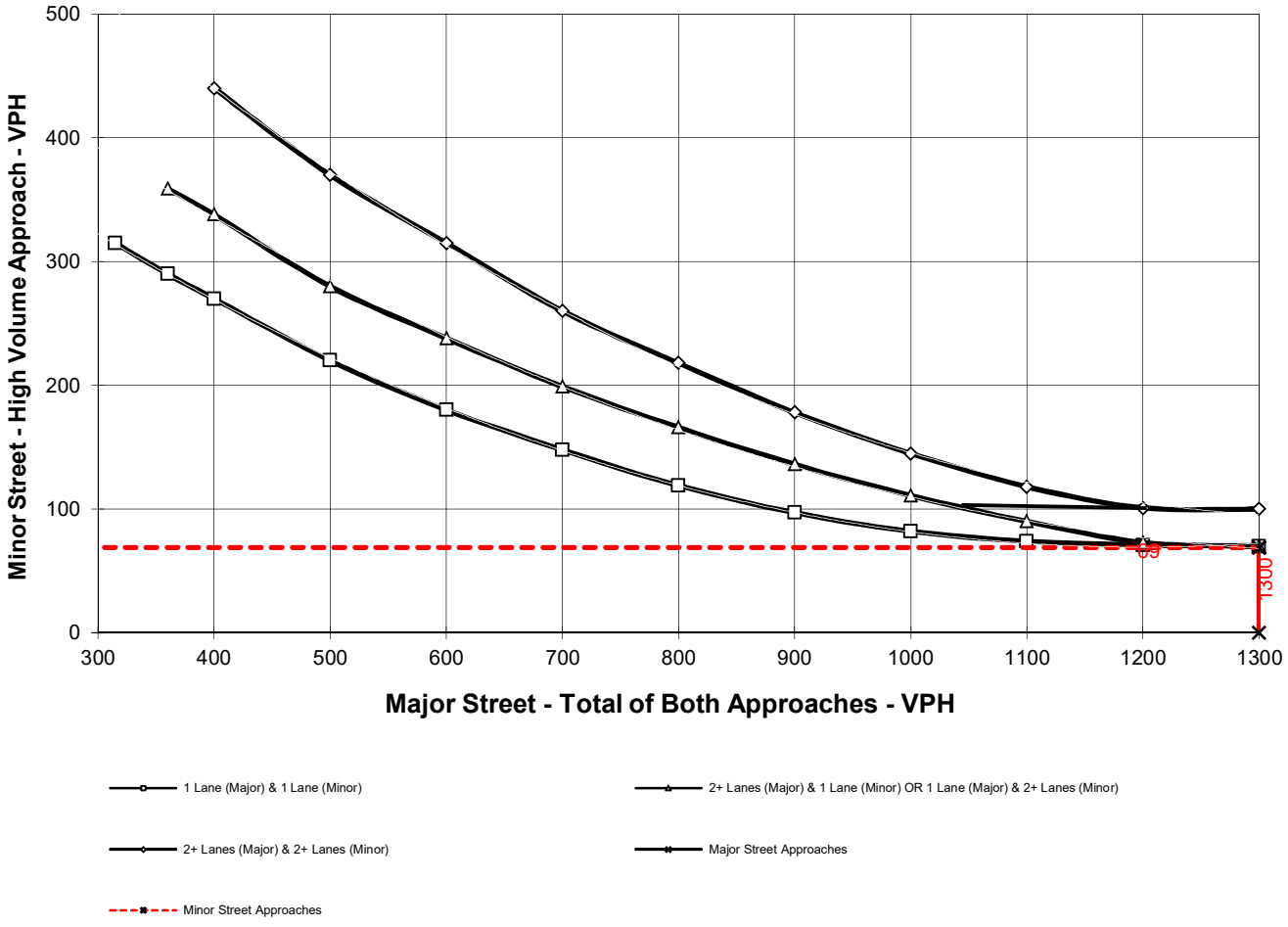
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3102**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **69**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Year 2035 With Project - Alternative 2

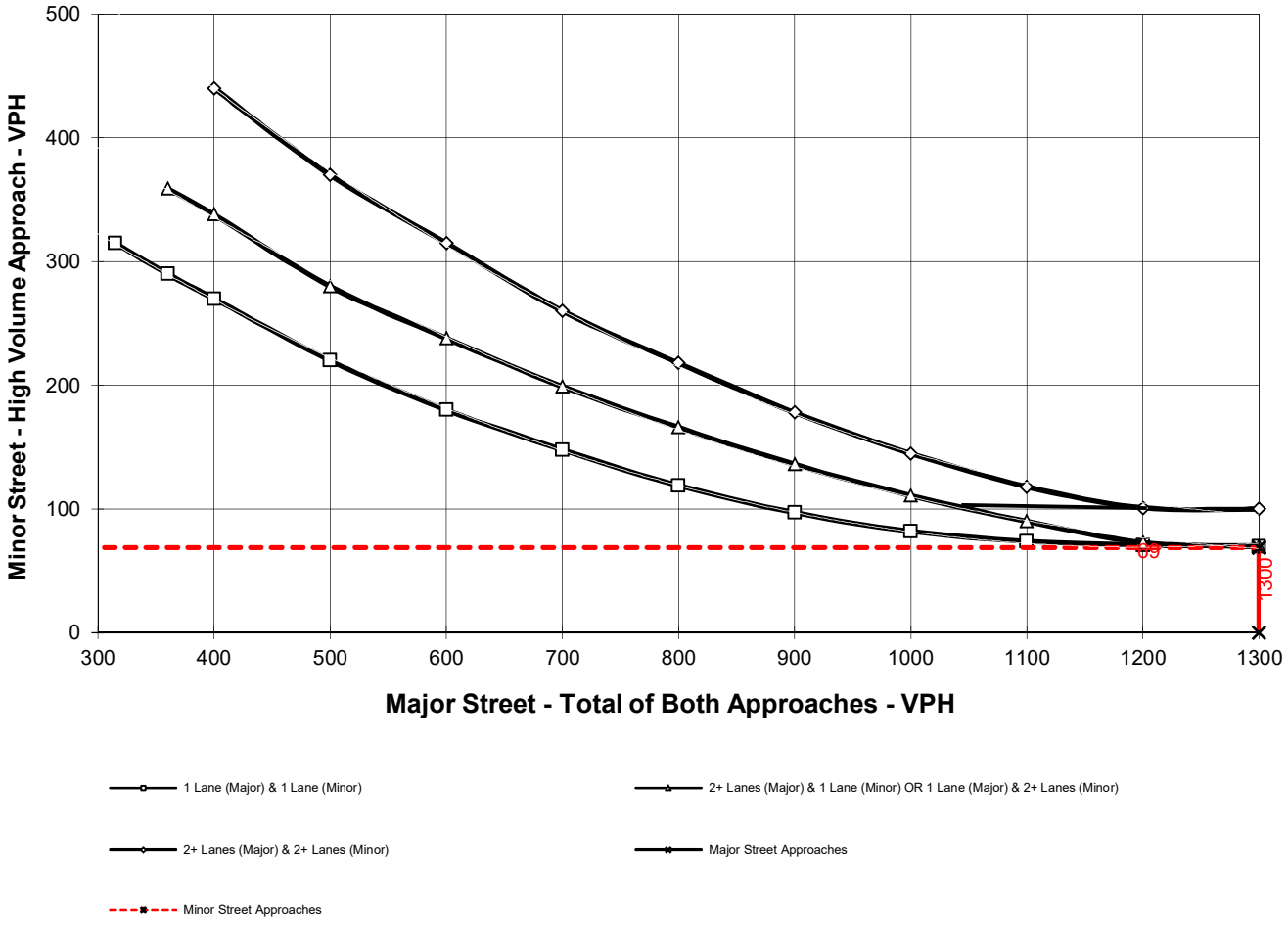
Major Street Name = **Rubidoux Boulevard** Total of Both Approaches (VPH) = **3074**

Number of Approach Lanes Major Street = **2**

Minor Street Name = **Production Circle** High Volume Approach (VPH) = **69**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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APPENDIX H

PROJECT STUDY REPORT FOR SR-60 / RUBIDOUX BOULEVARD INTERCHANGE PROJECT

08 - RIV - 60 - PM 9.33/9.87
EA 1G400 - Project No. 0815000228
August 2017

Project Study Report-Project Development Support (PSR-PDS)
For
SR-60/Rubidoux Boulevard Interchange Project
To
Request Approval of Locally Funded Project to Proceed to Project Approval and Environmental Document Phase

On Route SR-60 at Rubidoux Boulevard

Between Valley Way

And Market Street

APPROVAL RECOMMENDED:

John Marcinek
Riverside County
Accepts Risks Identified in this PSR-PDS and Attached Risk Register

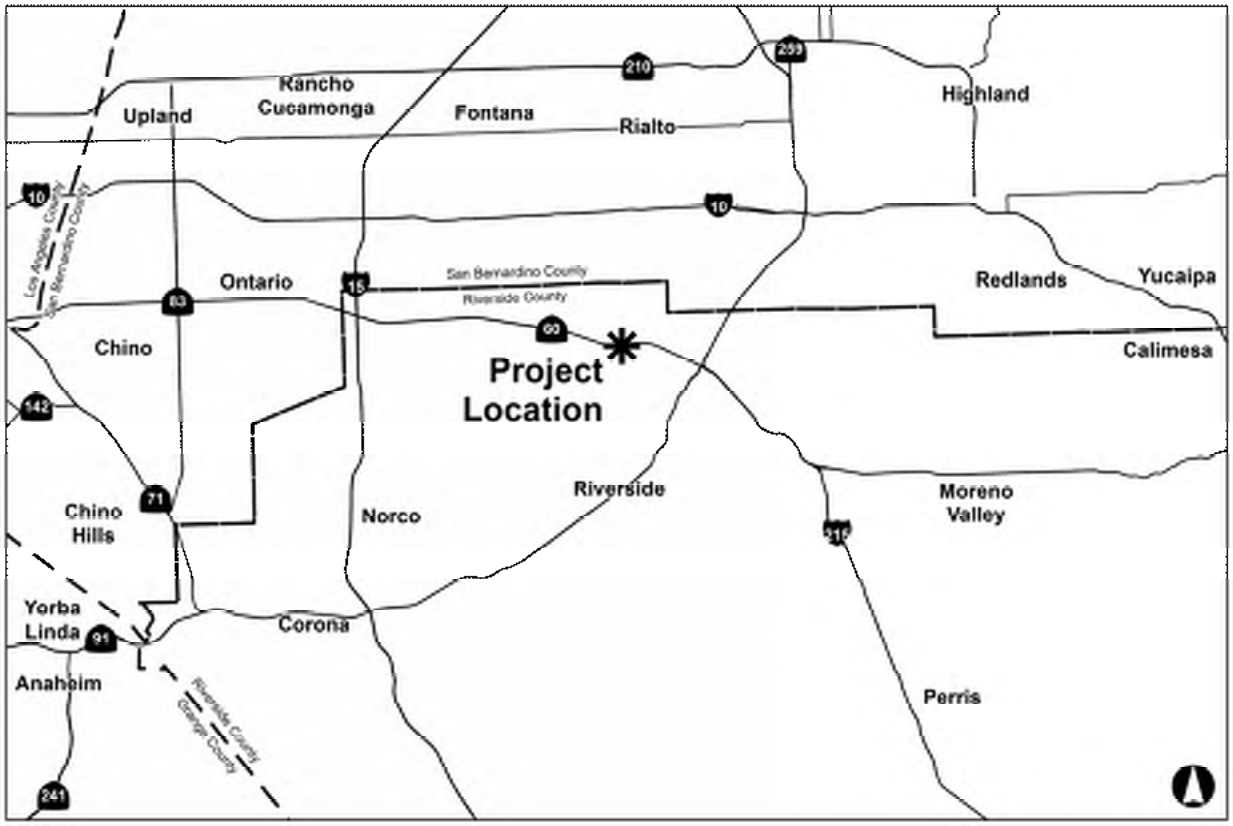
APPROVAL RECOMMENDED:

Nader Naguib, *CALTRANS PROJECT MANAGER*

APPROVED:

John Bulinski, PE
DISTRICT DIRECTOR *DATE*

Vicinity Map



This Project Study Report-Project Development Support (PSR-PDS) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Brandon Reyes, P.E. *DATE*
REGISTERED CIVIL ENGINEER



Table of Contents

1. INTRODUCTION 1

2. BACKGROUND 2

3. PURPOSE AND NEED 3

4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT 4

5. DEFICIENCIES 8

6. CORRIDOR AND SYSTEM COORDINATION 9

7. ALTERNATIVES 10

8. RIGHT-OF-WAY 14

9. STAKEHOLDER INVOLVEMENT 20

10. ENVIRONMENTAL COMPLIANCE 20

11. FUNDING 21

12. DELIVERY SCHEDULE 21

13. RISKS 22

14. EXTERNAL AGENCY COORDINATION 22

15. PROJECT REVIEWS 22

16. PROJECT PERSONNEL 23

17. ATTACHMENTS 23

1. INTRODUCTION

Project Description

The Pomona Freeway, State Route 60 (SR-60), is a major east-west transportation route within Riverside County and an integral part of the freeway network for the Southern California metropolitan area. In an effort to improve traffic flow within the interchange infrastructure along SR-60, the City of Jurupa Valley (City), in cooperation with the California Department of Transportation (Caltrans) District 8 and the County of Riverside, is proposing to upgrade the SR-60 Ramps and improve operations on Rubidoux Boulevard at SR-60 (Proposed Project). This PSR-PDS includes three alternatives including a No Build Alternative, a Tight Diamond Alternative, and a Single Point Urban Interchange (SPUI) Alternative. Caltrans will be the lead agency for California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance when the project moves into the Project Approval/Environmental Document (PA/ED) phase.

The SR-60/Rubidoux Boulevard Interchange is located on SR-60 between Valley Way and Market Street. It is a major access point for existing and proposed residential and commercial sites. This area is projected to experience substantial growth from planned development projects. Build out of the area will generate substantial traffic growth on the freeway and Rubidoux Boulevard at the interchange. Reconfiguration of the interchange at Rubidoux Boulevard will address existing deficiencies and accommodate projected growth.

Table 1: Project Information

Project Limits	08-Riv-60 PM 9.33/9.87		
Number of Alternatives	3 (No Build, Tight Diamond, and SPUI)		
Alternative	Alternative 1 No Build	Alternative 2 Tight Diamond	Alternative 3 SPUI
Current Capital Outlay Support Estimate for PA&ED	$0	$750,000	$750,000
Current Capital Outlay Construction Cost Range	$0	$19M-$21M	$26M-$28M
Current Capital Outlay Right-of-Way Cost Range	$0	$400,000-$500,000	$400,000-$500,000
Funding Source	N/A	Not Yet Funded	
Type of Facility	Interchange		
Number of Structures	1		
Anticipated Environmental Determination or Document	N/A	IS/EA w/ MND/FONSI	
Legal Description	N/A	IN RIVERSIDE COUNTY IN JURUPA VALLEY FROM 0.2 MILES WEST TO 0.3 MILES EAST OF RUBIDOUX BOULEVARD OVERCROSSING	
Project Development Category	N/A	4A	

Project environmental studies are anticipated to begin in mid-2018 and the PA/ED phase is expected to be completed by mid-2020. Construction is anticipated to begin early 2022 for a period of 18 months. The resources required from Caltrans to complete the proposed components are oversight and project approval.

2. BACKGROUND

Facility Description

SR-60 is an east-west transportation route within Los Angeles, San Bernardino and Riverside counties. It connects the Los Angeles metropolitan area with southwest San Bernardino and northwest Riverside Counties. The west terminus is located at the East Los Angeles Interchange. Its east terminus is located at the junction with I-10 in Beaumont. It is also a Surface Transportation Assistance Act (STAA) route for use by oversized trucks. The segment of SR-60 within the Proposed Project limit is a divided eight-lane freeway. It has three mixed-flow lanes and one High Occupancy Vehicle (HOV) lane in each direction. Based on Caltrans 2013 Traffic Data, the annual average daily traffic (AADT) volume to the east and west of the interchange is approximately 150,000.

Rubidoux Boulevard is a north-south arterial in the City of Jurupa Valley providing access throughout the northeast portion of the City. Per the County of Riverside's General Plan, Rubidoux Boulevard is classified as a Major Highway. Currently, it is a four-lane roadway with a two-way left turn lane/median and sidewalks along Rubidoux Boulevard. As Rubidoux Boulevard crosses over SR-60 it has a left turn lane that serves the westbound (WB) SR-60 on-ramp from the south, and the eastbound (EB) SR-60 on-ramp from the north. Rubidoux Boulevard ends at Tilton Avenue in a residential area near Flabob Airport located approximately one mile south of the interchange. Additionally, the northeast end of Rubidoux Boulevard is renamed Cedar Avenue as it passes through Crestmore Heights and continues north into the City of Rialto.

The SR-60/Rubidoux Boulevard Interchange, constructed in 1962, is located on SR-60 between Valley Way and Market Street. The existing interchange consists of the Rubidoux Boulevard Overcrossing with westbound and eastbound entrance and exit ramps. The Rubidoux Boulevard Overcrossing (PM 09.54, Bridge Number 56-0414) is comprised of the original cast-in-place box girder. The structure measures approximately 76 feet in width by 278 feet in length spanning over eight lanes of SR-60 mainline. The bridge has barrier-protected sidewalks in both directions along Rubidoux Boulevard. The interchange has characteristics similar to Type L-1 tight diamond interchanges. The existing EB off-ramp terminates at Rubidoux Boulevard, while the EB on-ramp shares access with a frontage road that also connects to 30th Street. The WB on-ramp begins at Rubidoux Boulevard while the WB off-ramp terminates at the 30th Street intersection to the north of the interchange. The WB on-ramp is uncontrolled, while the WB off-ramp, EB on-ramp, and EB off-ramp are signal controlled. Existing development in the immediate vicinity of

the interchange includes a Jack in the Box restaurant located on the northwest corner of the interchange, along with an Arco gas station. The northeast corner of the vicinity contains several restaurants and auto repair shops. There is a Shell gas station located on the southwest corner of the interchange along with residential apartment buildings. Emerald Meadows Ranch is a proposed development consisting of retail and residential land uses that is planned for the southeast quadrant of the interchange.

Project Sponsor and Local Agency Involvement

Riverside County Transportation and Land Management Agency (RCTLMA) in coordination with the City has identified the need for operational and capacity improvements at the SR-60/ Rubidoux Boulevard Interchange. RCTLMA, the City, and Caltrans developed and finalized the purpose and need statement during a focus meeting held on September 1, 2016.

3. PURPOSE AND NEED

Purpose

The purpose of the Proposed Project is to:

- Relieve congestion and improve traffic operations at the SR-60/Rubidoux Boulevard Interchange;
- Address increased travel associated with existing and planned development anticipated in the City of Jurupa Valley and surrounding areas; and
- Improve existing geometric deficiencies.

Need

The Proposed Project is needed to address the following deficiencies:

- The SR-60/Rubidoux Boulevard Interchange currently experiences queuing at the ramps to and from Rubidoux Boulevard, resulting in delay of travel time at the interchange area – the condition is expected to continue to decline as forecasted volumes increase in this area resulting in deterioration of traffic operations to level of service F by the design year 2045;
- Planned developments within the vicinity of the interchange are expected to increase the local population and truck traffic resulting in local and regional traffic demands; and
- Without the Proposed Project, the SR-60/Rubidoux Boulevard Interchange will continue to operate with existing geometric deficiencies; specifically vertical clearance on a National Network truck route and nonstandard ramp intersection configurations at the westbound exit and eastbound entrance ramps.

4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT

A Traffic Engineering Performance Assessment (TEPA) has been prepared for the Proposed Project to provide a macro-level assessment of readily available traffic information relevant to this project. The TEPA provides analysis in support of the purpose and need statement and also describes the scope and magnitude of proposed traffic engineering studies that will be performed in the PA/ED phase of the Proposed Project design, which will evaluate existing, opening year, and design year traffic conditions. Opening year is assumed to be 2025, and the design year will be 2045. The TEPA serves as a reference document for this PSR-PDS. As per the Highway Design Manual (HDM) Chapter 500, Project Development Procedure Manual Chapter 27 and Design Information Bulletin #77, this project is at an existing interchange that does not change system access and therefore does not require a study area or area of influence of operations at adjacent interchanges along SR-60.

SR-60 is classified as an Urbanized Principal Arterial in the Proposed Project area per the District 8 Transportation Concept Report (TCR) for SR-60, dated September 2012. The Proposed Project is located in Segment 2, between the San Bernardino/Riverside County Line and the 60/91/215 Interchange. This segment of SR-60 is currently six mixed-flow lanes and two HOV lanes. The recommended concept for this segment is eight mixed-flow lanes and two HOV lanes.

While the design year for this project has been determined to be 2045, there are no readily available sources of information that contain 2045 traffic forecasts for the study area. However, using the Riverside County Traffic Analysis Model (RIVTAM), traffic forecasts were developed for 2045. Traffic forecasts for the SR-60 freeway mainline were also developed using growth rates determined from RIVTAM and the model-projected growth was added to existing data collected from the Caltrans Performance Measurement System and extrapolated to 2045. It should be noted that the development of new traffic forecasts are not typical for TEPA documents. However, given the lack of recent forecasts in this area, use of RIVTAM (unmodified) provided the most readily available information for this project. Forecasts will be refined as part of the PA/ED phase of the Proposed Project.

Intersection Operations

Existing intersection lane configurations, signal timings, and peak-hour turning movement volumes were used to calculate the levels of service for the key intersections during each peak hour. The results of the Level of Service (LOS) analysis using the Synchro software program for existing conditions are presented in **Table 2**.

Table 2: Existing Year Intersection Analysis Summary

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
1- Rubidoux Boulevard/30th Street/SR-60 WB Off-ramp	Signal	13.1	B	24.3	C
2- Rubidoux Boulevard/SR-60 WB On-ramp[2]	Uncontrolled	4.6	A	3.2	A
3- Rubidoux Boulevard/SR-60 EB Ramps	Signal	18.6	B	30.7	C
4- Rubidoux Boulevard/Emerald Meadows Parkway	Planned	-	-	-	-

Notes: **Bold** indicates unacceptable level of service.
AM = morning peak hour, PM = evening peak hour, LOS = level of service
1. For signalized intersection, delay shows whole intersection weighted average control delay using methods described in the *2010 HCM*.
Source: Fehr & Peers, 2015.

Table 3 presents the AM and PM peak hour intersection operations under Alternative 1 (No Build), Alternative 2 (Tight Diamond), and Alternative 3 (SPUI) for the design year 2045 conditions. More detailed traffic operations analysis (e.g., simulation) will be performed under the PA/ED phase.

Table 3: Design Year Intersection Analysis Summary

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
Alternative 1					
1- Rubidoux Boulevard/30th Street/SR-60 WB Off-ramp	Signal	**63.4**	**E**	**124.2**	**F**
2- Rubidoux Boulevard/SR-60 WB On-ramp[2]	Uncontrolled	**41.6**	**E**	**53.8**	**F**
3- Rubidoux Boulevard/SR-60 EB Ramps	Signal	**253.4**	**F**	**218.6**	**F**
4- Rubidoux Boulevard/Emerald Meadows Parkway	Signal	24.6	C	18.5	B
Alternative 2					
1- Rubidoux Boulevard/30th Street	SSSC	15.2	C	18.8	C
2- Rubidoux Boulevard/SR-60 WB Ramps	Signal	15.6	B	19.2	B
3- Rubidoux Boulevard/SR-60 EB Ramps	Signal	33	C	25.2	C
4- Rubidoux Boulevard/Emerald Meadows Parkway	Signal	23.8	C	17.2	B
Alternative 3					
1-Rubidoux Boulevard / SR-60 Ramps	Signal	28.7	C	26.2	C
2-Rubidoux Boulevard/Emerald Meadows Parkway	Signal	28.8	C	22.0	C

Notes: **Bold** indicates unacceptable level of service.
AM = morning peak hour, PM = evening peak hour, LOS = level of service
1. For signalized intersection, delay shows whole intersection weighted average control delay using methods described in the *2010 HCM*.
Source: Fehr & Peers, 2015.

With the improvements proposed by Alternative 2 or 3 in place, all the study intersections would improve significantly to operate acceptably at LOS C or better.

Freeway Operations

Since the freeway mainline and ramp junction configurations and freeway forecasts remain the same in Alternative 2 and 3 in comparison to Alternative 1, the operations results of freeway mainline and ramp junctions for Alternative 2 and 3 would be the same as the results for Alternative 1 as shown in **Table 4**. With no improvements made to the freeway as part of the Proposed Project, most of the study freeway facilities are expected to operate unacceptably during AM and PM peak hours.

Table 4: Design Year Freeway Analysis Summary

Segment	Type	AM Peak Hour		PM Peak Hour	
		Density[1]	LOS	Density[1]	LOS
Alternatives 1, 2, & 3					
SR-60-Westbound					
East of Rubidoux Boulevard Off-Ramp	Basic	-	F	-	F
Rubidoux Boulevard Off-Ramp	Diverge	-	F	-	F
Rubidoux Boulevard On-Ramp	Merge	-	F	-	F
West of Rubidoux Boulevard On-Ramp	Basic	-	F	-	F
SR-60- East Bound					
West of Rubidoux Boulevard Off-Ramp	Basic	-	F	-	F
Rubidoux Boulevard Off-Ramp	Diverge	-	F	-	F
Rubidoux Boulevard On-Ramp	Merge	-	F	-	F
East of Rubidoux Boulevard On-Ramp	Basic	-	F	-	F

Notes: 1. Density was reported in number of vehicles per mile per lane.

2. The maximum density for ramp junctions and weaving sections under LOS E is not defined in the HCM. The maximum density for basic segments of 45 vplpm was assumed to apply to ramp junctions and weaving sections, when density becomes greater than 45 vplpm it is no longer reported.
Source: Fehr & Peers, 2015.

Findings that Support the Purpose and Need

As shown in this section, the existing roadway system along Rubidoux Boulevard does not provide sufficient capacity to serve forecasted 2045 travel demands. These roadway deficiencies will have adverse impacts on the mobility and safety of the roadway systems.

With the improvements proposed by Alternative 2 and 3 in place, which mainly include the widening and reconfiguration of the ramps, the interchange would improve significantly to operate at LOS C or better during both peak hours.

Recommended Design Features

Based on the latest design standards, new technology and an increasing focus on multi-modal travel; the following features are recommended for consideration during the PA/ED design to improve operations and safety along Rubidoux Boulevard and ramps at the interchange with SR-60:

- Americans with Disabilities Act (ADA) compliant pedestrian facilities i.e. curb ramps, sidewalks and crosswalks
- Traffic signal modifications
- Lighting
- Ramp metering system modifications
- Traffic detection systems
- Barrier protection of bridge columns
- Truck turning enhancements
- Midwest guardrails
- Clear recovery zones
- Bicycle facility modifications

Traffic Engineering Studies

Further traffic analysis will be prepared for the Proposed Project during PA/ED to study existing, opening year, and design year conditions. The following analyses will be included:

- Existing Conditions Analysis
  - Simulation analysis
  - Queuing, storage and delay
- Traffic Forecasts
  - Review the model assumptions in study area
  - Develop design year and opening year traffic forecasts
  - Prepare VMT and VHT data for PM analysis

- Design Year Operations Analysis
  - Opening and design year models
  - Mainline and ramp analysis
  - Pedestrian, bicycle and transit assessment
  - Safety analysis
  - Signal timing and pedestrian delay
- Traffic Operations Analysis Report
- Intersection Control Evaluation
- Benefit/Cost Analysis

Other Traffic Considerations and Coordination

In addition to the traffic analyses listed above, traffic-related efforts during PA/ED should include the following:

- Electrical systems, including traffic signals, safety lighting, and overhead sign structures;
- Coordination with Caltrans regarding Intelligent Transportation Systems (ITS) components including traffic monitoring, cameras, ramp metering and connection with the Caltrans Traffic Management Center;
- Transportation Management Plan data sheets; and
- Construction staging

5. DEFICIENCIES

Primary Deficiencies

As stated in the TEPA section, the existing roadway system along Rubidoux Boulevard does not provide sufficient capacity to serve forecasted 2045 travel demands. These roadway deficiencies will have adverse impacts on the mobility and safety of the roadway systems. Anticipated growth in the area will only further deteriorate traffic operations.

Without the Proposed Project, the operation and efficiency of the SR-60/Rubidoux Boulevard Interchange will continue to deteriorate over time; resulting in congestion, delays, and consequent decreased LOS at the interchange and adjacent intersections.

Secondary Deficiencies

During an initial screening the following secondary deficiencies within the Proposed Project area were identified:

- Nonstandard sidewalk width on Rubidoux Boulevard Overcrossing
- Nonstandard left shoulder along ramps
- Nonstandard outside shoulder on SR-60 beneath Rubidoux Boulevard Overcrossing
- Nonstandard horizontal clearance on SR-60 beneath Rubidoux Boulevard Overcrossing
- Nonstandard vertical clearance under Rubidoux Boulevard Overcrossing
- Nonstandard distance between curb returns on Rubidoux Boulevard from 30th Street to WB on-ramp
- Nonstandard access control from EB off-ramp to local driveway
- Absence of sidewalks and crosswalks at various locations

6. CORRIDOR AND SYSTEM COORDINATION

SR-60 is an STAA route on the National Network, a priority global gateway trade corridor as part of the Global Gateways Development Program, and a transportation gateway of major statewide significance per the Caltrans Interregional Transportation Strategic Plan (ITSP).

SR-60 is classified as an Urbanized Principal Arterial in the Proposed Project area per the District 8 TCR for SR-60 and is located in Segment 2, between the San Bernardino/Riverside County Line and the 60/91/215 Interchange. This segment of SR-60 is currently six mixed-flow lanes and two HOV lanes. The recommended concept for this segment is eight mixed-flow lanes and two HOV lanes.

The 2016 Regional Transportation Plan (RTP), 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy prepared by the Southern California Association of Governments includes the Proposed Project improvements:

(1) RTP Project ID# 3A04A29
Description: RECONSTRUCT/WIDEN IC, RAMPS AND CHANNELIZATION IMPROVEMENTS.

The 2014 Jurupa Area Plan designates Rubidoux Boulevard as a Major Highway with four traffic lanes.

Caltrans uses Context Sensitive Solutions (CSS) as an approach to plan, design, construct, maintain, and operate its transportation system aligned with its mission, vision, and goals. CSS employs a collaborative, interdisciplinary approach involving all stakeholders to promote concepts that integrate and balance community, aesthetic, historic, and

environmental values with transportation safety, maintenance, and performance goals. As the project progresses through the PA/ED phase, the incorporation of CSS should be implemented through coordination amongst the Project Development Team (PDT). CSS would be considered in the design of the new structures, including the proposed bridges and retaining walls, to preserve and enhance the aesthetics of the adjacent communities. Project design shall consider features including light standards and/or softscape treatments, such as revegetation or other landscape treatments. These design features will reduce visual impacts and enhance the aesthetic quality of the various project components.

CSS concepts are incorporated in Alternative 2 and Alternative 3. These features would be considered and include the following items:

- Bicycle lanes
- Sidewalks, crosswalks and curb returns
- ADA compliant improvements
- Bridge lighting
- Structure aesthetic treatments

See Transportation Planning Scoping Information Sheet (Attachment G) for additional corridor and system information.

7. ALTERNATIVES

Project Alternatives

Following a screening process undertaken on September 1st, 2015 to develop the alternative configurations for consideration for this study, the PDT identified three alternatives that are described in detail below. See Attachments B & C for the alternative plans and typical sections, respectively.

Alternative 1 (No Build Alternative)
Under this alternative, no reconstruction or improvements would be made to the existing SR-60/Rubidoux Boulevard Interchange other than routine roadway maintenance and currently approved improvements. This alternative does not meet the Proposed Project Purpose and Need. Rather, it provides a basis for the analysis and evaluation of the Build Alternatives.

Alternative 2 (Tight Diamond)
This alternative would reconfigure the ramps in a tight diamond configuration. Ramp improvements include widening the EB and WB off-ramps to accommodate an additional left turn lane and right turn lane. The EB on-ramp would be widened from one to three lanes and the WB on-ramp would be widened from one to two lanes. Both the EB and WB on-ramps would be improved to include standard shoulder widths, HOV preferential lanes, ramp metering, and California Highway Patrol (CHP) enforcement areas. Improvements to Rubidoux Boulevard include the addition of a northbound right-turn lane, southbound

right-turn lane, and northbound left-turn lane. Reconstruction of the existing overcrossing would eliminate the nonstandard vertical clearance over SR-60, provide standard bridge sidewalk widths, and accommodate future widening.

Under this alternative, current access to 30th Street north of the interchange would become right-in, right-out access only. Due to the proposed ramp improvements, the portion of 30th Street south of the interchange would no longer have access to the shared EB on-ramp, eliminating the frontage road south of the interchange. The Emerald Meadows Ranch development is anticipated to realign 30th street in this quadrant and connect it to Rubidoux Boulevard between the EB ramps and 34th Street.

Alternative 2 would impact areas in all four interchange quadrants, with much of the impacts occurring at the ramp termini and the properties in the northerly quadrants. Additional right of way would be required to accommodate the proposed improvements.

Alternative 3 (SPUI)

This alternative would reconfigure all of the SR-60 Ramps at Rubidoux Boulevard in a SPUI configuration. The EB off-ramp would be improved to include two left turn lanes and one right turn lane. The WB off-ramp would include one left turn lane and one right turn lane. The WB on-ramp would be two lanes and the EB on-ramp would be three lanes. Both the EB and WB on-ramps would be improved to include standard shoulder widths, ramp metering, HOV preferential lanes, and CHP enforcement areas. Improvements to Rubidoux Boulevard include the addition of a right turn lane and left turn lane in both directions of travel. Reconstruction of the existing overcrossing would accommodate the SPUI configuration, eliminate the nonstandard vertical clearance over SR-60, provide standard bridge sidewalk widths, and accommodate future widening.

Under this alternative, current access to 30th Street north of the interchange would become right-in, right-out access only. Access to 30th Street from the shared EB on-ramp frontage road would be eliminated as part of this alternative. The Emerald Meadows Ranch development is anticipated to realign 30th street in this quadrant and connect it to Rubidoux Boulevard between the EB ramps and 34th Street.

Alternative 3 would impact areas in all four interchange quadrants, with much of the impacts occurring at the ramp termini and the properties in the northwest and southeast quadrants. Additional right of way would be required to accommodate the proposed improvements.

Nonstandard Features

The following nonstandard features have been identified in the proposed alternatives based on post December 16th, 2016 Caltrans HDM 6th Edition standards. Caltrans District 8 Project Delivery Coordinator, Luis Betancourt, concurred with the probability of design exception approvals on 7/6/17. Further design exception analysis will be performed in the PA/ED phase of the Proposed Project, which will include analysis of collisions to

determine if existing design exception locations are unsafe. See the Design Exception Risk Assessment (Attachment J) for a full assessment of design exceptions.

Design Standards Risk Assessment Table		
Alternative(s)	Design Standard from Highway Design Manual Tables 82.1A & 82.1B	Probability of Design Exception Approval (None, Low, Medium, High,)
1	**Bridge Sidewalk Width** HDM Index 208.4	Low
1	**Ramp Shoulder Width** HDM Index 302.1	Low
1, 2, 3	**Mainline Shoulder Width** HDM Index 302.1	High
1, 2, 3	**Horizontal Clearances for Highways (Minimum Clearances)** HDM Index 309.1 (3)	High
1	**Vertical Clearances (Major Structures)** HDM Index 309.2 (1)(a)	Medium
1, 2	**Ramps (Location and Design of Ramp Intersections on the Crossroads)** HDM Index 504.3 (3)	High
1, 2	Angle of Intersection HDM Index 403.3	Medium
1, 2, 3	Access Control HDM Index 504.8	Medium

Mandatory Design Exception Features

1. Bridge Sidewalk Width, HDM Index 208.4 – Bridge sidewalk width must be 6 feet. This standard would not be met on the No Build Alternative due to existing 5-foot sidewalks on Rubidoux Boulevard Overcrossing.

2. Shoulder Width, HDM Index 302.1 – Left shoulder width must be at least 4 feet on multilane ramps. This standard would not be met on the No Build Alternative due to an existing 2-foot left shoulder on each of the SR-60/Rubidoux Boulevard Ramps.

3. Shoulder Width, HDM Index 302.1 – Right shoulder width must be at least 10 feet on freeways and expressways with 4 lanes or more in each direction. This standard would not be met on the No Build, Tight Diamond, or SPUI Alternatives due to an existing 2-foot inside shoulder and 8-foot outside shoulder on SR-60 within the limits of the project.

4. Horizontal Clearances for Highways (Minimum Clearances), HDM Index 309.1 (3) – The minimum horizontal clearance to all objects shall be equal to the standard shoulder width of the highway facility (10 feet). This standard would not be met on the No Build,

Tight Diamond, and SPUI Alternatives due to an existing 2-foot horizontal clearance to the median concrete barrier on SR-60 within the limits of the project.

5. Vertical Clearances (Major Structures), HDM Index 309.2 (1)(a) – The minimum vertical clearance shall be 16 feet 6 inches over the roadbed of the State facility. This standard would not be met on the No Build Alternative due to the existing 15 feet 2 inches of vertical clearance on SR-60 beneath the Rubidoux Boulevard Overcrossing.

6. Ramps (Location and Design of Ramp Intersections at the Crossroads), HDM Index 504.3 (3) – A 400-foot minimum distance is needed from curb return to curb return on Rubidoux Boulevard from 30th Street to the WB on-ramp. The No Build and Tight Diamond Alternatives propose that the existing spacing between 30th Street and the WB on-ramp remain to preserve access to local businesses.

Advisory Design Exception Features

1. Angle of Intersection, HDM Index 403.3 – The HDM calls for a 75 degree minimum angle of intersection on Rubidoux Boulevard from 30th Street to the WB on-ramp. The existing angle of intersection is approximately 50 degrees, which the first two alternatives maintain. Changing the existing angle of intersection between Rubidoux Boulevard and ramps would require substantial construction costs, R/W impacts and staging efforts.

2. Access Control, HDM Index 504.8 – Access control should extend 100 feet beyond the end of the curb return at ramp termini. The existing access control south of the EB off-ramp is approximately 50 feet due to the Shell gas station driveway and is proposed to remain on all alternatives. Extending access control would require substantial R/W impacts and permanent closure of the driveway.

Additional Considerations

Stormwater

The project is within the jurisdiction of the Santa Ana Regional Water Quality Control Board. The Proposed Project is located in the Santa Ana River watershed (Middle Santa Ana River Hydrologic Area, hydrologic sub-area number 801.27). Its northwest quadrant discharges to a v-ditch located north of the SR-60 WB on-ramp, which confluences with the Rubidoux Retention Basin. The Rubidoux Retention Basin is adjacent to the Proposed Project, and shares the Proposed Project's northern boundary. If the Rubidoux Retention Basin overtops its spillway, it will flow into the storm drain system underneath the median of the SR-60. The southwest, northeast, and southeast quadrants of the Proposed project are collected in the Caltrans storm drain system underneath the SR-60 median and flow east for 1.2 miles until it confluences with Santa Ana River Reach 4. This project will not discharge directly to an area of special biological significance.

Permanent treatment controls will be implemented to address the stormwater impacts caused by this project. Additionally, temporary pollution controls will be implemented during the early construction phases to provide additional protection and to address any construction stormwater impacts. Slopes will be disturbed only when necessary and cut and fills will be minimized to reduce slope lengths as necessary. The project will be scheduled or phased such that minimal soil-disturbance work will be completed during the rainy season. Permanent/temporary treatment Best Management Practices (BMPs) may be installed early in the construction process to provide additional protection during construction. Currently, there are no existing treatment BMPs within the project limits. However, there is an existing detention basin northwest of the project limits which may be an alternative to treating the post construction area. Further information and analysis regarding this will be provided at the PA/ED phase.

A Location Hydraulic Study for the proposed drainage improvements will be prepared during the PA/ED phase of the project. The hazards to be assessed include the changes in the hydraulic grade level in existing and proposed culverts due to extensions and changes in slope; and slope stabilization due to impacts of flow and proposed grading. The proposed swale and toe ditch realignments and culvert extensions should coincide with the guidelines in the HDM. The Riverside Flood Control and Water Conservation District (RCFC) does not typically maintain storm drains within Caltrans right of way and the local drainage systems are maintained by the City of Riverside. An encroachment permit to discharge potential runoff from Rubidoux Boulevard into the nearby RCFC basin will be needed.

Additionally, a Storm Water Pollution Prevention Plan will be prepared for this project to address construction BMPs. The goal of the proposed treatment BMP strategy, for National Pollutant Discharge Elimination System (NPDES), is to treat 100% of the Water Quality Volume/Water Quality Flow (WQV/WQF) generated from the proposed impervious surfaces within the project limits for the Build Alternatives. The proposed treatment BMP strategy will be to treat by infiltrating storm water alongside slopes. If at a minimum 100% of the WQV/WQF cannot be infiltrated, structural treatment BMPs will be implemented to supplement treatment. The estimated percentage of impervious surface area (proposed) treatment and infiltration calculations will be determined during the PA/ED and PS&E project phases.

A signed Storm Water Data Report (SWDR) has been prepared for the Proposed Project; see Attachment F for more information.

8. RIGHT OF WAY

Below is a summary of the right of way required for each project alternative. Attachment H provides the Conceptual Cost Estimate – Right of Way Component.

Alternative 1 (No Build): No parcels are required.

Alternative 2 (Tight Diamond): Alternative 2 is anticipated to require approximately 13,725 square feet (ft^2) of right of way, affecting a total of six commercial parcels. Partial acquisitions are anticipated to be 5895 ft^2, affecting four of the six parcels. Temporary Construction Easements (TCE) are anticipated to be 7830 ft^2, affecting all six parcels.
Alternative 3 (SPUI): Alternative 3 is anticipated to require approximately 15,105 square feet (ft^2) of right of way, affecting a total of eight commercial parcels. Partial acquisitions are anticipated to be 5630 ft^2, affecting six of the eight parcels. TCEs are anticipated to be 9475 ft^2, affecting all eight parcels.

Utilities

Utility research was initiated via the Dig Alert website to establish a list of potential utility companies in and around the Proposed Project area. Those identified companies were contacted for verification and facility maps. Additional utility data was obtained from available City and RCTLMA as-built plans. The following utilities may have facilities within or immediately adjacent to the Proposed Project site.

Utility	Owner
Cable	Charter
Electrical	Southern California Edison
Gas	Southern California Gas
Water	Jurupa Ditch Company, Inc.
	Rubidoux Community Services District
	Santa Ana Watershed Project Authority
	Empire Water
	Metropolitan Water District
Wireless	Sprint
	AT&T
	NextG Networks
	Level

Coordination with the identified utility companies will be carried out during the PA/ED, PS&E and construction phases. The need for relocation of any lines will be confirmed during PA/ED. Anticipated impacts are to be determined, pending continued coordination with the utilities

Railroad

There are no railroad facilities within the Proposed Project limits.

9. STAKEHOLDER INVOLVEMENT

RCTLMA, who is the Proposed Project sponsor, and the City of Jurupa Valley have attended pre-PID and focus meetings to develop and understand the build alternatives.

The draft environmental document prepared for the Proposed Project will be publicly noticed and circulated as applicable. A series of public workshops and/or potential interviews with stakeholders and property owners are anticipated to gain input prior to completion of the draft environmental document.

10. ENVIRONMENTAL COMPLIANCE

Based on the technical summaries described in the Preliminary Environmental Analysis Report (PEAR), it is expected that impacts associated with all build alternatives would be mitigated to a level below significance. Therefore, an Initial Study/Environmental Assessment (IS/EA) with a Mitigated Negative Declaration/Finding of No Significant Impact (MND/FONSI) is the anticipated environmental document for CEQA/NEPA compliance for the Proposed Project. The schedule associated with the IS/EA is expected to have a duration of approximately 24 months (PEAR Attachment C: Schedule [Gantt Chart]).

As discussed above, technical studies are required in support of the environmental document for this project (PEAR Attachment A: PEAR Environmental Studies Checklist). It is not anticipated that the individual resource evaluations will identify significant environmental concerns within or adjacent to the project area that cannot be mitigated. If additional technical studies are necessary, the completion of these studies could affect schedule and cost. Construction monitoring for biological and cultural resources, if deemed necessary, could also complicate, delay, or lengthen the schedule and increase costs.

11. FUNDING

At this time, no federal or state funding has been identified for this project. The Proposed Project will be funded via developer fees.

Capital Outlay Project Estimate

	Range of Estimate	
	Construction	Right-of-Way
Alternative 1	$0	$0
Alternative 2	$19M – $21M	$400,000 - $500,000
Alternative 3	$26M – $28M	$400,000 - $500,000

The level of detail available to develop these capital outlay project estimates is only accurate to within the above ranges and is useful for long-range planning purposes only. The capital outlay project estimates should not be used to program or commit State-programmed capital outlay funds. The Project Report will serve as the appropriate document from which the remaining support and capital components of the Proposed Project will be programmed.

Capital Outlay Support Estimate

The capital outlay support estimate for this project is shown below:

Phase	$
PA/ED	$750,000
PS&E	$850,000
R/W	$150,000
Construction	$1,000,000
Total	$2,750,000

12. DELIVERY SCHEDULE

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
PROGRAM PROJECT	M015	1/1/2018
BEGIN ENVIRONMENTAL	M020	6/1/2018
CIRCULATE DED EXTERNALLY	M120	6/1/2019
PA/ED	M200	6/1/2020

The anticipated funding fiscal year for construction is 2021/22.

13. RISKS

The Project Risk Management Team has prepared a risk register that identifies risks to carry forward to the PA/ED phase. Fifteen (15) potential risks were identified; all identified as threats. These risks should be monitored and updated during the PA/ED phase. Based on additional information gained throughout the life of the Proposed Project, risks may be avoided, accepted, or managed through design and scope refinement. See Attachment I for the Risk Register.

Risk Register Summary Table

ID	Category	Title	Priority Rating
1	Design	Emerald Meadows Ranch	Medium
2	Design	Interchange Skew	Medium
3	Design	30th Street	Medium
4	Design	Ramp Intersection Spacing	Medium
5	ROW	Property Access	High
6	ROW	Right of Way Acquisition Delays	Low
7	PM	Lack of Project Funding	Medium
8	PM	Delay of Locally Preferred Alternative	Medium
9	Construction	Utility Relocation Difficulties	Medium
10	ROW	Right of Way	Low
11	Design	Design Constraints	Medium
12	Environmental	Environmental Regulations	Low
13	Design	Public Support	Medium
14	Environmental	Environmental Assessment	Low
15	Design	Bridge Habitat	Low

14. EXTERNAL AGENCY COORDINATION

State Route 60 is off the federal interstate system and is exempt from federal approval for design.

15. PROJECT REVIEWS

District Maintenance Mike Ristic Date 12/26/16
District Traffic Safety Engineer Haissam Yahya Date 12/26/16
Headquarters Project Delivery Coordinator Luis Betancourt Date 7/6/17
Project Manager Nader Naguib Date 12/26/16
FHWA Liaison Anthony Ng Date 1/3/17
District Safety Review Kevin Chen Date 12/21/16
Constructability Review Mohammed Sadique Hossain Date 12/22/16

16. PROJECT PERSONNEL

John Marcinek — Phone # 951.955.3727
Project Manager
RCTLMA

Nader Naguib — Phone # 909.388.7180
Project Manager
Caltrans District 8

Diane Morales — Phone # 909.838.4625
Task Manager/PID Program Manager
Division of Planning and Local Assistance, Caltrans District 8

Matthew Maestas — Phone # 909.383.4825
Project Manager, Planning
Caltrans District 8

Kurt R. Heidelberg — Phone # 909.388.7028
Senior Environmental Planner
Caltrans District 8

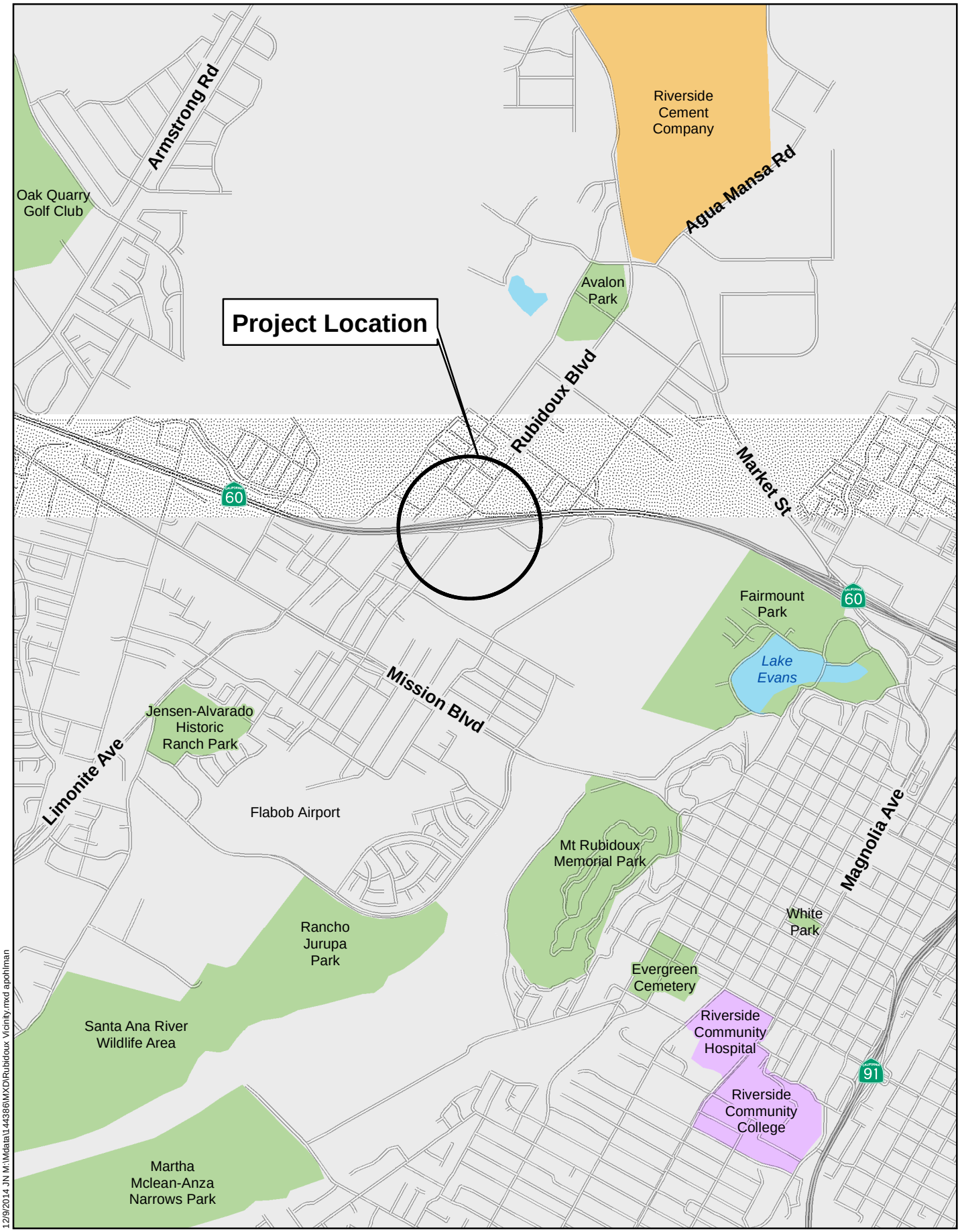
Brandon Reyes — Phone # 909.974.4967
Project Manager
Michael Baker International

17. ATTACHMENTS

A. Vicinity Map (1)
B. Project Alternative Plans (3)
C. Typical Cross Sections (2)
D. Capital Outlay Project Cost Estimate (18)
E. PEAR
F. SWDR (signed cover sheet)
G. Transportation Planning Scoping Information Sheet (8)
H. Conceptual Cost Estimate – Right-of-Way Component (6)
I. Risk Register (2)
J. Design Exception Risk Assessment (1)

Vicinity Map

Attachment A



12/9/2014 JN M:\Mdata\144386\MXD\Rubidoux Vicinity.mxd apohlman

SR60 / RUBIDOUX INTERCHANGE

0 0.25 0.5 1 Miles

Source: ESRI World Topographic Basemap

Vicinity Map

K-4426

Exhibit

Project Alternatives Plans

Attachment B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Riv	60	9.33/9.87		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRANDON REYES
No. 79226
Exp. 03-31-18
CIVIL
STATE OF CALIFORNIA

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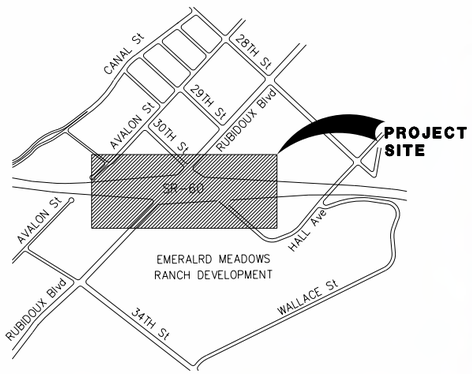
SUITE 100
ONTARIO, CA 91764

COUNTY OF RIVERSIDE
4080 LEMON STREET
RIVERSIDE, CA
92501



VICINITY MAP

NOT TO SCALE

SR-60/RUBIDOUX BOULEVARD
INTERCHANGE PROJECT

ALTERNATIVE 1
NO BUILD

SCALE = 1:300

K-4428

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Riv	60	9.33/9.87		

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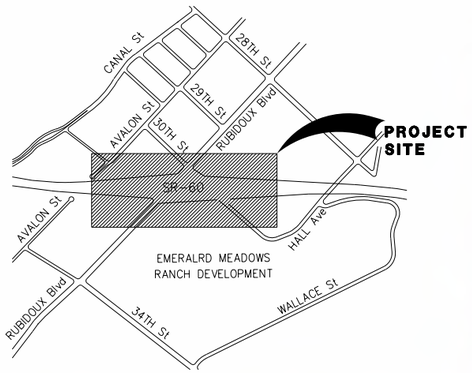

VICINITY MAP
NOT TO SCALE

SR-60/RUBIDOUX BOULEVARD
INTERCHANGE PROJECT

ALTERNATIVE 2
TIGHT DIAMOND ALTERNATIVE

SCALE = 1:300

K-4429

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Riv	60	9.33/9.87		

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PLANS APPROVAL DATE

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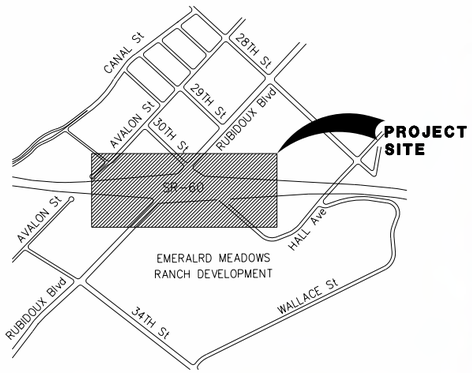

VICINITY MAP
NOT TO SCALE

SR-60/RUBIDOUX BOULEVARD
INTERCHANGE PROJECT

ALTERNATIVE 3
SPUI
ALTERNATIVE

SCALE = 1:300

K-4430

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DATE REVISED

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UNIT 0000
PROJECT NUMBER & PHASE 0815000228

Typical Cross Sections

Attachment C

NOTES:
1. SEE ATTACHMENT B: PROJECT ALTERNATIVES PLANS FOR LOCATION OF RETAINING WALLS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Riv	60	9.33/9.87		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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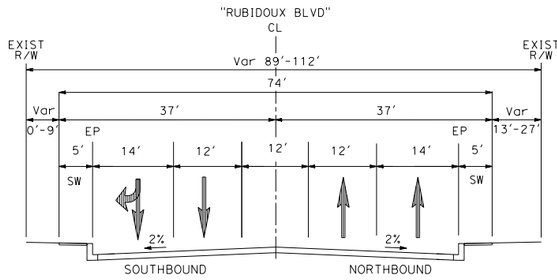
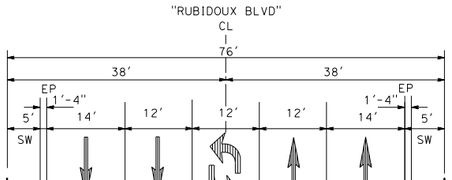
92501

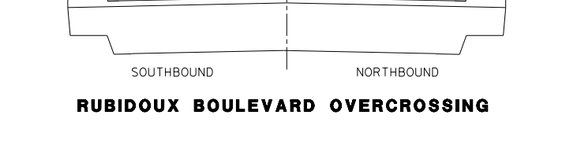
ALTERNATIVE 1 (NO BUILD)



RUBIDOUX BOULEVARD NORTH LEG
(BETWEEN 29TH St AND OVERCROSSING)

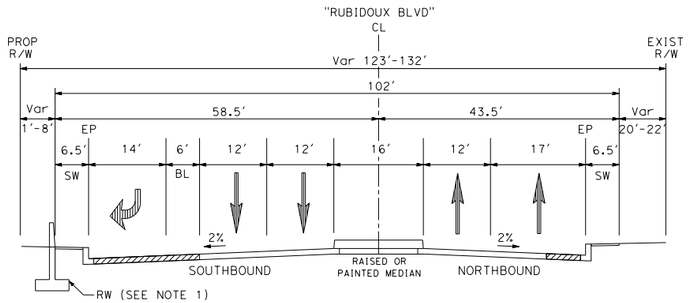


RUBIDOUX BOULEVARD OVERCROSSING



RUBIDOUX BOULEVARD SOUTH LEG
(BETWEEN OVERCROSSING AND 34TH St)

ALTERNATIVE 2 (TIGHT DIAMOND)



RUBIDOUX BOULEVARD NORTH LEG
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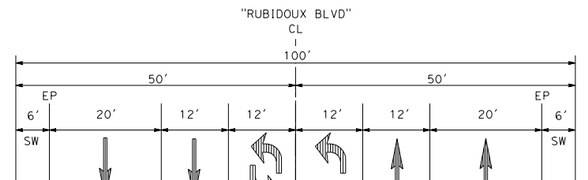
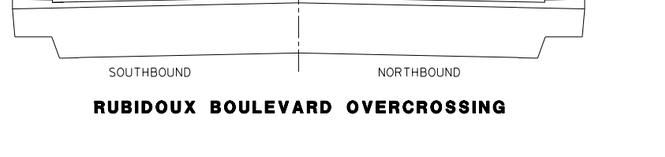
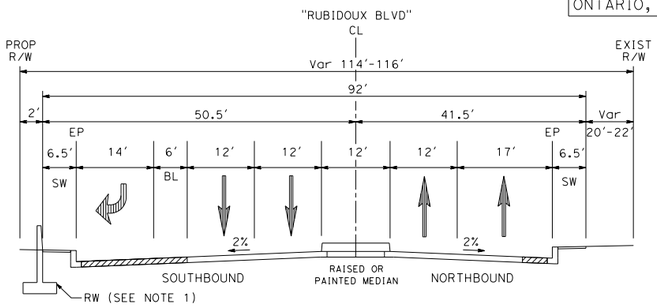


RUBIDOUX BOULEVARD OVERCROSSING

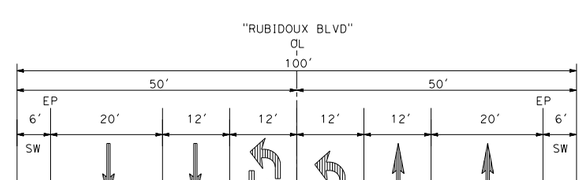


RUBIDOUX BOULEVARD SOUTH LEG
(BETWEEN OVERCROSSING AND 34TH St)

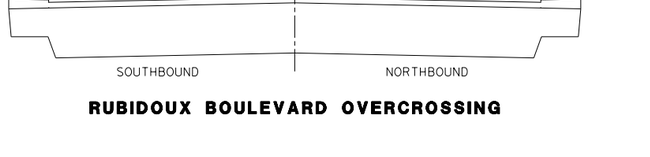
ALTERNATIVE 3 (SPUI)



RUBIDOUX BOULEVARD NORTH LEG
(BETWEEN 29TH St AND OVERCROSSING)



RUBIDOUX BOULEVARD OVERCROSSING



RUBIDOUX BOULEVARD SOUTH LEG
(BETWEEN OVERCROSSING AND 34TH St)

PROPOSED NEW PAVEMENT

K-4432

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 0815000228

NOTES:
1. SEE ATTACHMENT B: PROJECT ALTERNATIVES PLANS FOR LOCATION OF RETAINING WALLS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Riv	60	9.33/9.87		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

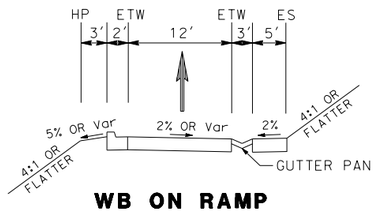
REGISTERED PROFESSIONAL ENGINEER
BRANDON REYES
No. 79226
Exp. 03-31-18
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

MICHAEL BAKER INTL
3536 CONCOURS ST
SUITE 100
ONTARIO, CA 91764

COUNTY OF RIVERSIDE
4080 LEMON STREET
RIVERSIDE, CA
92501

ALTERNATIVE 1 (NO BUILD)



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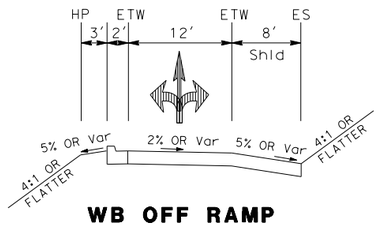

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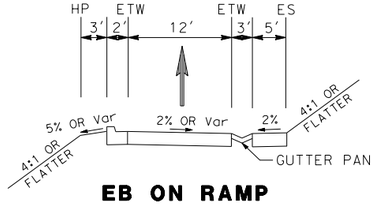

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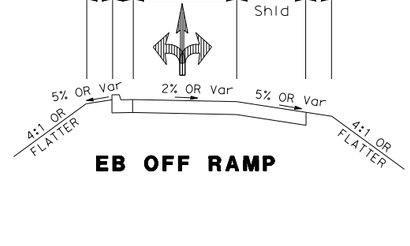

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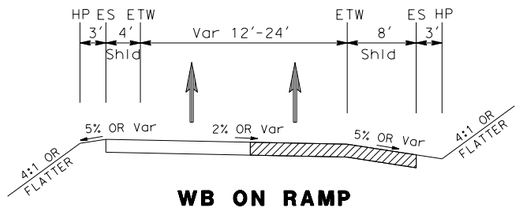
ALTERNATIVE 2 (TIGHT DIAMOND)



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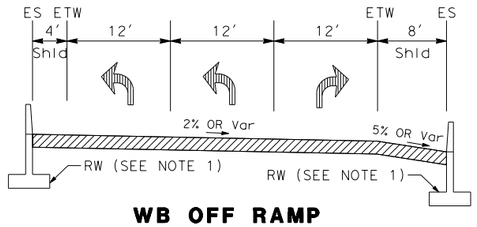

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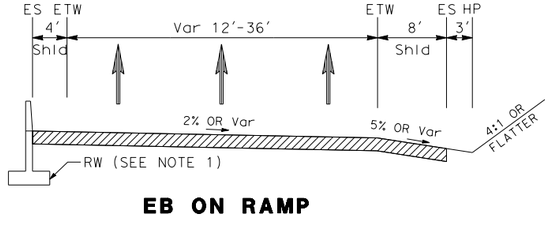

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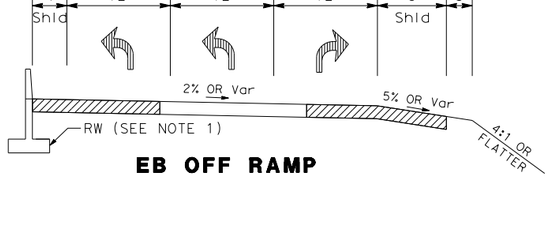
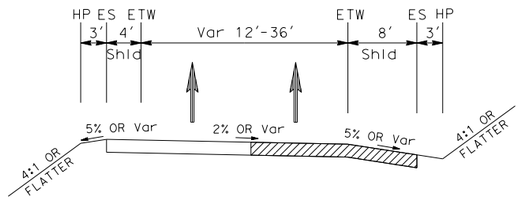


EB OFF RAMP

ALTERNATIVE 3 (SPUI)



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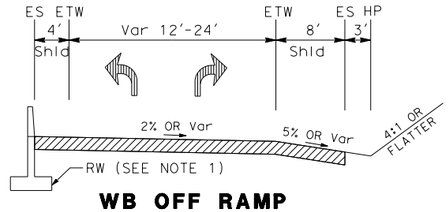

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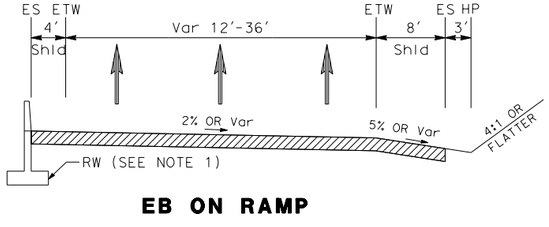

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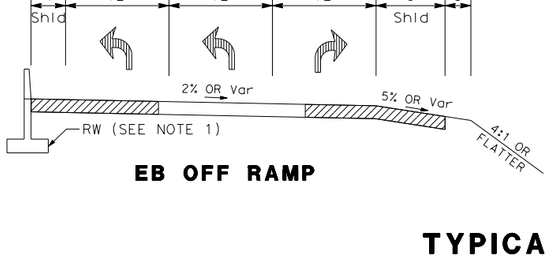


EB OFF RAMP

PROPOSED NEW PAVEMENT

K-4433

TYPICAL CROSS SECTIONS

NO SCALE

X-2

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 0815000228

Capital Outlay Project Cost Estimate

Attachment D

PRELIMINARY
PROJECT COST ESTIMATE

SR-60/Rubidoux Blvd Interchange Project Cost Estimate

Project ID: 0815000228

Type of Estimate : PSR-PDS
Program Code : 08-RIV-60
Project Limits : PM 9.33/9.87
Description:
Scope : Reconstruct/widen interchange, improve ramps and channelization
Alternative : 2 (Tight Diamond)

	Current Cost	Escalated Cost
ROADWAY ITEMS	$ 11,689,500	$ -
STRUCTURE ITEMS	$ 8,750,000	$ -
SUBTOTAL CONSTRUCTION COST	$ 20,439,500	$ -
RIGHT OF WAY	$ 402,016	$ -
TOTAL CAPITAL OUTLAY COST	$ 20,842,000	$ -
PR/ED SUPPORT	$ -	$ -
PS&E SUPPORT	$ -	$ -
RIGHT OF WAY SUPPORT	$ -	$ -
CONSTRUCTION SUPPORT	$ -	$ -
TOTAL CAPITAL OUTLAY SUPPORT COST*	$ -	$ -
TOTAL PROJECT COST	$ 20,850,000	$ -

If Project has been programmed enter Programmed Amount $ -

Date of Estimate (Month/Year): Month / Year — May / 2017

Estimated Date of Construction Start (Month/Year): January / 2021

Number of Working Days: 370 Working Days

Estimated Mid-Point of Construction (Month/Year): Month / Year

Number of Plant Establishment Days: Days

Estimated Project Schedule

PID Approval	5/2017
PA/ED Approval	4/2019
PS&E	1/2021
RTL	1/2021
Begin Construction	1/2021

Approved by Project Manager

Project Manager **Date** **Phone**

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	Earthwork	$	419,600
2	Pavement Structural Section	$	2,370,500
3	Drainage	$	932,500
4	Specialty Items	$	1,009,100
5	Environmental	$	600,000
6	Traffic Items	$	1,107,400
7	Detours	$	-
8	Minor Items	$	515,200
9	Roadway Mobilization	$	695,500
10	Supplemental Work	$	531,000
11	State Furnished	$	385,500
12	Overhead	$	785,300
13	Contingencies	$	2,337,900
	TOTAL ROADWAY ITEMS	**$**	**11,689,500**

Estimate Prepared By _____
Name and Title Date Phone

Estimate Reviewed By _____
Name and Title Date Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
160102	Clearing & Grubbing	LS	1	x	50,000.00	=	$	50,000
170101	Develop Water Supply	LS	1	x	10,000.00	=	$	10,000
190101	Roadway Excavation	CY	5,310	x	10.00	=	$	53,100
192037	Structure Excavation (Retaining Wall)	CY	2,570	x	37.00	=	$	95,090
193013	Structure Backfill (Retaining Wall)	CY	3,690	x	42.00	=	$	154,980
198001	Imported Borrow	CY	4,700	x	12.00	=	$	56,400

TOTAL EARTHWORK SECTION ITEMS $ 419,600

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
150770	Remove Asphalt Concrete Pavement	SQFT	83,740	x	7.00	=	$	586,180
150771	Remove Asphalt Concrete Dike	LF	4,050	x	2.00	=	$	8,100
153240	Remove Concrete (Curb, Gutter & Sidewalk)	CY	335	x	270.00	=	$	90,450
250401	Class 4 Aggregate Subbase	CY	2,720	x	55.00	=	$	149,600
260201	Class 2 Aggregate Base	CY	2,200	x	53.00	=	$	116,600
390132	Hot Mix Asphalt (Type A)	TON	1,680	x	110.00	=	$	184,800
394071	Place Hot Mix Asphalt Dike	LF	4,050	x	5.00	=	$	20,250
401000	Concrete Pavement (JPCP)	CY	5,450	x	200.00	=	$	1,090,000
731502	Minor Concrete (Curb, Gutter, Sidewalk and Driveway)	CY	415	x	300.00	=	$	124,500

TOTAL STRUCTURAL SECTION ITEMS $ 2,370,500

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
028195	BMP (Temporary & Permanent)	LS	1	x	250,000.00		$	250,000
150803	Remove Existing Drainage Systems	EA	3	x	10,000.00		$	30,000
707050 / 707051	Inlets & Manholes	EA	18	x	5,000.00		$	90,000
620100 / 620140	18" and 24" Culverts	LF	2,750	x	150.00	=	$	412,500
xxxxxx	Ditch and Slope Protection	LS	1	x	100,000.00	=	$	100,000
155213	Culvert Cleaning, Inspection, & Repair	LF	500	x	100.00	=	$	50,000

TOTAL DRAINAGE ITEMS $ 932,500

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
070012	Progress Schedule (Critical Path Method)	LS	1	x	10,000.00	=	$	10,000
510060	Structural Concrete (Retaining Wall)	CY	1,770	x	450.00	=	$	796,500
520103	Bar Reinf. Steel (Retaining Wall)	LB	50,000	x	1.15	=	$	57,500
832001	Midwest Guardrail System	LF	900	x	30.00	=	$	27,000
8395XX	Alternative Flared Terminal System	EA	2	x	2,800.00	=	$	5,600
839607	Crash Cushion	EA	2	x	25,000.00	=	$	50,000
839742	Concrete Barrier (Type 60)	LF	625	x	100.00	=	$	62,500

TOTAL SPECIALTY ITEMS $ 1,009,100

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)		Cost	
						Subtotal Environmental		*$ -*

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)		Cost	
200001	Highway Planting	LS	1	x	50,000.00	= $	50,000	
204099	Plant Establishment Work	LS	1	x	25,000.00	= $	25,000	
208000	Irrigation System	LS	1	x	25,000.00	= $	25,000	
						Subtotal Landscape and Irrigation		*$ 100,000*

5C - NPDES

Item code		Unit	Quantity		Unit Price ($)		Cost	
074016	Construction Site Management	LS	1	x	500,000.00	= $	500,000	
	Total Sections 1-8	EA	6,454,300	x	1.60%	$	103,269	
						Subtotal NPDES (Without Supplemental Work)		*$ 500,000*
						TOTAL ENVIRONMENTAL		**$ 600,000**

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
860090	Maintain Existing Traffic Management System Elements During Construction	LS	1	x	5,000.00	=	$	5,000
860810	Inductive Loop Detectors	EA	20	x	700.00	=	$	14,000
86055X	Lighting & Sign Illumination	LS	1	x	25,000.00	=	$	25,000
8607XX	Interconnection Facilities	LS	1	x	5,000.00	=	$	5,000
860XXX	Signals & Lighting	LS	2	x	250,000.00	=	$	500,000
8611XX	Ramp Metering System (Location 1&2)	LS	2	x	100,000.00	=	$	200,000

Subtotal Traffic Electrical *$ 749,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	25,000.00	=	$	25,000
566011	Roadside Sign (One Post)	EA	20	x	270.00	=	$	5,400
566012	Roadside Sign (Two Post)	EA	20	x	630.00	=	$	12,600
84XXXX	Permanent Pavement Delineation	LS	1	x	50,000.00	=	$	50,000

Subtotal Traffic Signing and Striping *$ 93,000*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120100	Traffic Control System	LS	1	x	250,000.00	=	$	250,000
128650	Portable Changeable Message Signs	EA	2	x	5,000.00	=	$	10,000
129000	Temporary Railing (Type K)	LF	200	x	15.00	=	$	3,000
129100	Temp. Crash Cushion Module	EA	2	x	200.00	=	$	400
129099A	Traffic Plastic Drum	EA	20	x	100.00	=	$	2,000

Subtotal Stage Construction and Traffic Handling *$ 265,400*

TOTAL TRAFFIC ITEMS **$ 1,107,400**

SECTION 7: DETOURS

Include constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)		Cost
					TOTAL DETOURS	**$**	**-**
					SUBTOTAL SECTIONS 1-7	$	6,439,100

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items							
	ADA Items				2.0%	$	128,782
8B - Bike Path Items							
	Bike Path Items				1.0%	$	64,391
8C - Other Minor Items							
	Other Minor Items				5.0%	$	321,955
	Total of Section 1-7	$	6,439,100	x	8.0%	= $	515,128
					TOTAL MINOR ITEMS	**$**	**515,200**

SECTIONS 9: MOBILIZATION

Item code							
999990	Total Section 1-8	$	6,954,300	x	10%	= $	695,430
					TOTAL MOBILIZATION	**$**	**695,500**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost
066063	Traffic Management Plan - Public Information	LS	1	x	5,000.00	= $	5,000
066090	Maintain Traffic	LS	1	x	25,000.00	= $	25,000
066094	Value Analysis	LS	1	x	25,000.00	= $	25,000
066610	Partnering	LS	1	x	20,000.00	= $	20,000
066921	Dispute Review Advisor	LS	1	x	5,000.00	= $	5,000
	*Cost of **NPDES** Supplemental Work specified in Section 5C*					= $	103,269
	Total Section 1-8	$	6,954,300		5%	= $	347,715
					TOTAL SUPPLEMENTAL WORK	**$**	**531,000**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066063	Public Information	LS	1	x	25,000.00	=	$25,000
066105	RE Office	LS	1	x	138,088.89	=	$138,089
066062A	COZEEP Expenses	LS	1	x	20,000.00	=	$20,000
066004	Miscellaneous State Furnished Materials	LS	1	x	100,000.00	=	$100,000
869001	Miscellaneous Electrical	LS	1	x	30,000.00	=	$30,000
006916	Annual Construction General Permit	EA	2	x	1,432.00	=	$2,864
	Total Section 1-8	$	6,954,300		1%	= $	69,543

TOTAL STATE FURNISHED $385,500

SECTION 12: TIME-RELATED OVERHEAD

Estiamted Time-Releated Overhead (TRO) Percentage (0% to 10%) = 5%

Item code		Unit	Quantity		Unit Price ($)		Cost	
					Total of All Contract Items Only	$	15,704,300	(used to calculate TRO)
					Total Project Cost	$	17,316,300	(used to check if project is greater than $5 million excluding contingency)
070018	Time-Related Overhead	WD	370	X	2122.43243	=	$785,300	

TOTAL TIME-RELATED OVERHEAD $785,300

SECTION 13: CONTINGENCY

(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	$	9,351,600	x	25%	=	$2,337,900	

TOTAL CONTINGENCY $2,337,900

II. STRUCTURE ITEMS

Bridge 1

DATE OF ESTIMATE	11/09/16	00/00/00	00/00/00
Bridge Name	RUBIDOUX BLVD OC	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-0414	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	100 LF	0.00 LF	0.00 LF
Total Bridge Length (Feet)	280 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	28000 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$312.50	$0.00	$0.00

COST OF EACH STRUCTURE	**$8,750,000.00**	**$0.00**	**$0.00**

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0.00 SQFT	0.0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0.00	$0.00	$0.00

COST OF EACH STRUCTURE	**$0.00**	**$0.00**	**$0.00**

TOTAL COST OF BRIDGES	**$8,750,000.00**
TOTAL COST OF BUILDINGS	**$0.00**

TOTAL COST OF STRUCTURES[1]	**$8,750,000.00**

Estimate Prepared By: _____ _____
XXXXXXXXXXXXXXXX ------ Division of Structures Date

[1]Structure's Estimate includes Overhead and Mobilization.
Add more sheets if needed. Call them 9a, 9b, 9c, …, etc

PRELIMINARY
PROJECT COST ESTIMATE

SR-60/Rubidoux Blvd Interchange Project Cost Estimate

Project ID: 0815000228

Type of Estimate : PSR-PDS
Program Code : 08-RIV-60
Project Limits : PM 9.33/9.87
Description:
Scope : Reconstruct/widen interchange, improve ramps and channelization
Alternative : 3 (SPUI)

	Current Cost	Escalated Cost
ROADWAY ITEMS	$ 12,145,200	$ -
STRUCTURE ITEMS	$ 15,000,000	$ -
SUBTOTAL CONSTRUCTION COST	$ 27,145,200	$ -
RIGHT OF WAY	$ 464,908	$ -
TOTAL CAPITAL OUTLAY COST	$ 27,611,000	$ -
PR/ED SUPPORT	$ -	$ -
PS&E SUPPORT	$ -	$ -
RIGHT OF WAY SUPPORT	$ -	$ -
CONSTRUCTION SUPPORT	$ -	$ -
TOTAL CAPITAL OUTLAY SUPPORT COST*	$ -	$ -
TOTAL PROJECT COST	$ 27,650,000	$ -

If Project has been programmed enter Programmed Amount $ -

Date of Estimate (Month/Year): Month / Year — May / 2017

Estimated Date of Construction Start (Month/Year): January / 2021

Number of Working Days: 370 Working Days

Estimated Mid-Point of Construction (Month/Year): Month / Year

Number of Plant Establishment Days: Days

Estimated Project Schedule

PID Approval	5/2017
PA/ED Approval	4/2019
PS&E	1/2021
RTL	1/2021
Begin Construction	1/2021

Approved by Project Manager

Project Manager **Date** **Phone**

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	Earthwork	$	370,100
2	Pavement Structural Section	$	2,089,500
3	Drainage	$	1,455,000
4	Specialty Items	$	596,100
5	Environmental	$	725,000
6	Traffic Items	$	957,400
7	Detours	$	-
8	Minor Items	$	805,200
9	Roadway Mobilization	$	699,900
10	Supplemental Work	$	531,900
11	State Furnished	$	386,000
12	Overhead	$	1,100,000
13	Contingencies	$	2,429,100
	TOTAL ROADWAY ITEMS	**$**	**12,145,200**

Estimate Prepared By

Name and Title Date Phone

Estimate Reviewed By

Name and Title Date Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
160101	Clearing & Grubbing	LS	1	x	100,000.00	=	$	100,000
170101	Develop Water Supply	LS	1	x	10,000.00	=	$	10,000
190101	Roadway Excavation	CY	5,220	x	10.00	=	$	52,200
192037	Structure Excavation (Retaining Wall)	CY	1,300	x	37.00	=	$	48,100
193013	Structure Backfill (Retaining Wall)	CY	1,720	x	42.00	=	$	72,240
198001	Imported Borrow	CY	7,290	x	12.00	=	$	87,480

TOTAL EARTHWORK SECTION ITEMS $ 370,100

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
150770	Remove Asphalt Concrete Pavement	SQFT	79,720	x	7.00	=	$	558,040
150771	Remove Asphalt Concrete Dike	LF	4,050	x	2.00	=	$	8,100
1532XX	Remove Concrete (Curb, Gutter & Sidewalk)	CY	340	x	270.00	=	$	91,800
250401	Class 4 Aggregate Subbase	CY	2,420	x	55.00	=	$	133,100
260201	Class 2 Aggregate Base	CY	2,020	x	53.00	=	$	107,060
390132	Hot Mix Asphalt (Type A)	TON	760	x	110.00	=	$	83,600
394071	Place Hot Mix Asphalt Dike	LF	4,050	x	5.00	=	$	20,250
401000	Concrete Pavement (JPCP)	CY	4,830	x	200.00	=	$	966,000
731502	Minor Concrete (Curb, Gutter, Sidewalk and Driveway)	CY	405	x	300.00	=	$	121,500

TOTAL STRUCTURAL SECTION ITEMS $ 2,089,500

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
	BMP (Permanent)	LS	1	x	250,000.00		$	250,000
150803	Remove Existing Drainage Systems	EA	8	x	10,000.00		$	80,000
707050 / 707051	Inlets & Manholes	EA	30	x	5,000.00		$	150,000
620100 / 620140	18" and 24" Culverts	LF	5,500	x	150.00	=	$	825,000
xxxxxx	Ditch and Slope Protection	LS	1	x	100,000.00	=	$	100,000
155213	Culvert Cleaning, Inspection, & Repair	LF	500	x	100.00	=	$	50,000

TOTAL DRAINAGE ITEMS $ 1,455,000

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
070012	Progress Schedule (Critical Path Method)	LS	1	x	10,000.00	=	$	10,000
510060	Structural Concrete (Retaining Wall)	CY	820	x	450.00	=	$	369,000
520103	Bar Reinf. Steel (Retaining Wall)	LB	60,000	x	1.15	=	$	69,000
832001	Midwest Guardrail System	LF	1,000	x	30.00	=	$	30,000
8395XX	Alternative Flared Terminal System	EA	2	x	2,800.00	=	$	5,600
839607	Crash Cushion	EA	2	x	25,000.00	=	$	50,000
839742	Concrete Barrier (Type 60)	LF	625	x	100.00	=	$	62,500

TOTAL SPECIALTY ITEMS $ 596,100

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost	
						Subtotal Environmental			*$ -*

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost	
200001	Highway Planting	LS	1	x	50,000.00	=	$	50,000	
204099	Plant Establishment Work	LS	1	x	25,000.00	=	$	25,000	
208000	Irrigation System	LS	1	x	25,000.00	=	$	25,000	
						Subtotal Landscape and Irrigation			*$ 100,000*

5C - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost	
074016	Construction Site Management	LS	1	x	625,000.00	=	$	625,000	
Supplemental Work for NPDES									
	Total Sections 1-8	EA	6,373,300	x	1.60%		$	101,973	
						Subtotal NPDES (Without Supplemental Work)			*$ 625,000*
						TOTAL ENVIRONMENTAL			**$ 725,000**

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
860090	Maintain Existing Traffic Management System Elements During Construction	LS	1	x	5,000.00	=	$	5,000
860810	Inductive Loop Detectors	EA	20	x	700.00	=	$	14,000
86055X	Lighting & Sign Illumination	LS	1	x	25,000.00	=	$	25,000
8607XX	Interconnection Facilities	LS	1	x	5,000.00	=	$	5,000
860XXX	Signals & Lighting	LS	1	x	350,000.00	=	$	350,000
8611XX	Ramp Metering System (Location 1&2)	LS	2	x	100,000.00	=	$	200,000

Subtotal Traffic Electrical *$ 599,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	25,000.00	=	$	25,000
566011	Roadside Sign (One Post)	EA	20	x	270.00	=	$	5,400
566012	Roadside Sign (Two Post)	EA	20	x	630.00	=	$	12,600
84XXXX	Permanent Pavement Delineation	LS	1	x	50,000.00	=	$	50,000

Subtotal Traffic Signing and Striping *$ 93,000*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120100	Traffic Control System	LS	1	x	250,000.00	=	$	250,000
128650	Portable Changeable Message Signs	EA	2	x	5,000.00	=	$	10,000
129000	Temporary Railing (Type K)	LF	200	x	15.00	=	$	3,000
129100	Temp. Crash Cushion Module	EA	2	x	200.00	=	$	400
129099A	Traffic Plastic Drum	EA	20	x	100.00	=	$	2,000

Subtotal Stage Construction and Traffic Handling *$ 265,400*

TOTAL TRAFFIC ITEMS **$ 957,400**

SECTION 7: DETOURS

Include constructing, maintaining, and removal

Item code		Unit	Quantity	Unit Price ($)	Cost
				TOTAL DETOURS	**$ -**
				SUBTOTAL SECTIONS 1-7	$ 6,193,100

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items							
	ADA Items			2.0%	$	123,862	
8B - Bike Path Items							
	Bike Path Items			1.0%	$	61,931	
8C - Other Minor Items							
	Other Minor Items			10.0%	$	619,310	
	Total of Section 1-7	$	6,193,100	x 13.0% =	$	805,103	
				TOTAL MINOR ITEMS		**$**	**805,200**

SECTIONS 9: MOBILIZATION

Item code								
999990	Total Section 1-8	$	6,998,300	x 10% =	$	699,830		
				TOTAL MOBILIZATION			**$**	**699,900**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost
066063	Traffic Management Plan - Public Information	LS	1	x	5,000.00	= $	5,000
066090	Maintain Traffic	LS	1	x	25,000.00	= $	25,000
066094	Value Analysis	LS	1	x	25,000.00	= $	25,000
066610	Partnering	LS	1	x	20,000.00	= $	20,000
066921	Dispute Review Advisor	LS	1	x	5,000.00	= $	5,000
	*Cost of **NPDES** Supplemental Work specified in Section 5C*					= $	101,973
	Total Section 1-8	$	6,998,300		5%	= $	349,915
					TOTAL SUPPLEMENTAL WORK		**$**	**531,900**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066063	Public Information	LS	1	x	25,000.00	=	$25,000
066105	RE Office	LS	1	x	138,088.89	=	$138,089
066062A	COZEEP Expenses	LS	1	x	20,000.00	=	$20,000
066004	Miscellaneous State Furnished Materials	LS	1	x	100,000.00	=	$100,000
869001	Miscellaneous Electrical	LS	1	x	30,000.00	=	$30,000
066916	Annual Construction General Permit	EA	2	x	1,432.00	=	$2,864
	Total Section 1-8	$	6,998,300		1%	= $	69,983

TOTAL STATE FURNISHED $386,000

SECTION 12: TIME-RELATED OVERHEAD

Estiamted Time-Releated Overhead (TRO) Percentage (0% to 10%) = 5%

Item code		Unit	Quantity		Unit Price ($)		Cost	
					Total Project Cost	$	23,616,100	(used to check if project is greater than $5 million excluding contingency)
070018	Time-Related Overhead	WD	370	X	2972.97297	=	$1,100,000	

TOTAL TIME-RELATED OVERHEAD $1,100,000

SECTION 13: CONTINGENCY

(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	$	9,716,100	x	25%	=	$2,429,025	

TOTAL CONTINGENCY $2,429,100

II. STRUCTURE ITEMS

Bridge 1

DATE OF ESTIMATE	11/09/16	00/00/00	00/00/00
Bridge Name	RUBIDOUX BLVD OC	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-0414	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Bridge Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	45500 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$329.67	$0.00	$0.00

COST OF EACH STRUCTURE	**$15,000,000.00**	**$0.00**	**$0.00**

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0.00 SQFT	0.0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0.00	$0.00	$0.00

COST OF EACH STRUCTURE	**$0.00**	**$0.00**	**$0.00**

TOTAL COST OF BRIDGES	**$15,000,000.00**
TOTAL COST OF BUILDINGS	**$0.00**

TOTAL COST OF STRUCTURES[1]	**$15,000,000.00**

Estimate Prepared By: _____ _____
XXXXXXXXXXXXXXXX ------ Division of Structures Date

[1]Structure's Estimate includes Overhead and Mobilization.
Add more sheets if needed. Call them 9a, 9b, 9c, …, etc

Preliminary Environmental Analysis Report (PEAR)

Attachment E

PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

1. Project Information

District	County	Route	PM	EA 08-1G400
08	Riverside	SR-60	9.33/9.87	PN 08-15000228
Project Title: SR/60 Rubidoux Boulevard Interchange Project				
Project Manager Nader Naguib			Phone # 909-388-7180	
Project Engineer Brandon Reyes			Phone # 909-974-4967	
Environmental Office Chief/Manager Kurt Heidelberg			Phone # 909-388-7028	
PEAR Preparer Renee Gleason			Phone # 909-974-4912	

2. Project Description

The County of Riverside Transportation Department, in cooperation with the California Department of Transportation (Caltrans) District 8 and the City of Jurupa Valley, proposes to reconstruct and improve the SR-60/Rubidoux Boulevard interchange located in the City of Jurupa Valley in northwestern Riverside County. SR-60 is an east-west transportation route within Los Angeles, San Bernardino and Riverside counties, and connects the Los Angeles metropolitan area with southwest San Bernardino and northwest Riverside counties. The western terminus of SR-60 is located at its junction with the East Los Angeles Interchange, whereas its eastern terminus is located at the junction with I-10 in Beaumont. It is also a Surface Transportation Assistance Act (STAA) Route for use by oversized trucks. The segment of SR-60 within the project limits is a divided eight-lane freeway and consists of three mixed-flow lanes and one High Occupancy Vehicle (HOV) lane in each direction. Based on Caltrans 2013 Traffic Data, the annual average daily traffic (AADT) volume to the east and west of the interchange is approximately 150,000.

Rubidoux Boulevard is a northeast-southwest arterial in the City of Jurupa Valley providing access throughout the northeast portion of the City. Per the County of Riverside's General Plan, Rubidoux Boulevard is classified as a Major Highway. Currently, it is a four-lane roadway with a two-way left turn lane/median and sidewalks along Rubidoux Boulevard. As Rubidoux Boulevard crosses SR-60, it has a left-turn lane that serves the westbound (WB) SR-60 on-ramp from the south, and the eastbound (EB) SR-60 on-ramp from the north. The crossing also has sidewalks. Rubidoux Boulevard ends at Tilton Avenue in a residential area near Flabob Airport, which is located approximately one mile south of the interchange. Additionally, the northeast end of Rubidoux Boulevard is renamed Cedar Avenue as it passes through Crestmore Heights and continues north into the City of Rialto.

The SR-60/Rubidoux Boulevard Interchange, constructed in 1962, is located on SR-60 between Valley Way and Market Street. The existing interchange consists of the Rubidoux Boulevard overcrossing with WB and EB entrance and exit ramps. The Rubidoux Boulevard overcrossing (PM 09.54, Bridge Number 56-0414) is comprised of the original cast-in-place box girder. The structure measures approximately 76 feet in width by 278 feet in length spanning over eight lanes of SR-60 mainline. The bridge has barrier-protected sidewalks in both directions along Rubidoux Boulevard. The interchange has characteristics similar to Type L-1 tight diamond interchanges. The existing EB off-ramp terminates at Rubidoux Boulevard, while the EB on-ramp shares access with a Frontage Road that also connects to 30th Street. The WB on-ramp begins at Rubidoux Boulevard while the WB off-ramp terminates at the 30th Street intersection to the north of the interchange. The WB on-ramp is uncontrolled, while the WB off-ramp and EB ramps are signal controlled. Existing development in the immediate vicinity of the interchange includes a Jack in the Box restaurant located on the northwest corner of the interchange, along with an Arco AM/PM gas station. The northeast corner of the vicinity contains several restaurants and auto repair shops. There is a Shell gas station located on the southwest corner of the interchange along with residential apartment buildings. Emerald Meadows Ranch is a proposed development consisting of retail and residential land uses that is planned for the southeast corner of the interchange.

Purpose and Need

Purpose

The purpose of the proposed project is to:

- Relieve congestion and improve traffic operations at the State Route 60 (SR-60)/Rubidoux Boulevard Interchange;
- Address increased travel associated with existing and planned development anticipated in the City of Jurupa Valley and surrounding areas; and
- Improve existing geometric deficiencies.

Need

The proposed project is needed to address the following deficiencies:

- The SR-60/Rubidoux Boulevard Interchange currently experiences queuing at the ramps to and from Rubidoux Boulevard, resulting in delay of travel time at the interchange area – the condition is expected to continue to decline as forecasted volumes increase in this area resulting in deterioration of traffic operations to level of service F by the design year 2045;
- Planned developments within the vicinity of the of the interchange are expected to increase the local population and truck traffic resulting in local and regional traffic demands; and
- Without the project, the SR-60/Rubidoux Boulevard Interchange will continue to operate with existing geometric deficiencies; specifically vertical clearance on a National Network truck route and non-standard ramp intersection configurations at the WB exit and EB entrance ramps.

Alternatives

Alternative 1 (No Build Alternative)

Under this alternative, no reconstruction or improvements would be made to the existing SR-60/Rubidoux Boulevard Interchange other than routine roadway maintenance and currently approved improvements. This alternative does not meet the project purpose and need. Rather, it provides a basis for the analysis and evaluation of the Build Alternatives.

Alternative 2 (Tight Diamond)

This alternative would reconfigure the ramps in a tight diamond configuration. Ramp improvements include widening the EB and WB off-ramps to accommodate an additional left turn lane and right turn lane. The EB on-ramp would be widened from one to three lanes and the WB on-ramp would be widened from one to two lanes. Both the EB and WB on-ramps would be improved to include standard shoulder widths, HOV preferential lanes, ramp metering and California Highway Patrol (CHP) enforcement areas. Improvements to Rubidoux Blvd include the addition of a northbound right-turn lane, southbound right-turn lane, and northbound left-turn lane. Reconstruction of the existing overcrossing would eliminate the nonstandard vertical clearance over SR-60, provide standard bridge sidewalk widths, and accommodate future widening.

Under this alternative, current access to 30th Street north of the interchange would become right-in, right-out access only. Due to the proposed ramp improvements, the portion of 30th Street south of the interchange would no longer have access to the shared EB on-ramp, eliminating the frontage road south of the interchange. The Emerald Meadows Ranch development is anticipated to realign 30th street in this quadrant and connect it to Rubidoux Blvd between the EB ramps and 34th Street.

Alternative 2 would impact areas in all four interchange quadrants, with much of the impacts occurring at the ramp termini and the properties in the northerly quadrants. Additional right of way would be required to accommodate the proposed improvements.

Alternative 3 (SPUI)

This alternative would reconfigure all of the SR-60 Ramps at Rubidoux Blvd in a SPUI configuration. The EB off-ramp would be improved to include two left turn lanes and one right turn lane. The WB off-ramp would include one left turn lane and one right turn lane. The WB on-ramp would be two lanes and the EB on-ramp would be three lanes. Both the EB and WB on-ramps would be improved to include standard shoulder widths, ramp metering, HOV preferential lanes and CHP enforcement areas. Improvements to Rubidoux Blvd include the addition of a right turn lane and left turn lane in both directions of travel. Reconstruction of the existing overcrossing would accommodate the SPUI configuration, eliminate the nonstandard vertical clearance over SR-60, provide standard bridge sidewalk widths, and accommodate future widening.

Under this alternative, current access to 30th Street north of the interchange would become right-in, right-out access only. Access to 30th Street from the shared EB on-ramp frontage road would be eliminated as part of this alternative. The Emerald Meadows Ranch development is anticipated to realign 30th street in this quadrant and connect it to Rubidoux Blvd between the EB ramps and 34th Street.

Alternative 3 would impact areas in all four interchange quadrants, with much of the impacts occurring at the ramp termini and the properties in the northwest and southeast quadrants. Additional right of way would be required to accommodate the proposed improvements.

3. Anticipated Environmental Approval

CEQA		NEPA	
Environmental Determination			
Statutory Exemption	☐		
Categorical Exemption	☐	Categorical Exclusion	☐
Environmental Document			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	☒	Routine Environmental Assessment with proposed Finding of No Significant Impact Complex Environmental Assessment with proposed Finding of No Significant Impact	☒ ☐
Environmental Impact Report	☐	Environmental Impact Statement	☐
CEQA Lead Agency (if determined):		Caltrans District 8	
Estimated length of time (months) to obtain environmental approval:		24 months	
Estimated person hours to complete identified tasks:		1,040	

The anticipated environmental document for the proposed project is an Initial Study (IS) leading to a Mitigated Negative Declaration (MND) under CEQA, and a Routine Environmental Assessment (EA) leading to a Finding of No Significant Impact (FONSI) under NEPA.

4. Special Environmental Considerations

The preliminary impact area associated with the Build Alternatives is reviewed within this document. In general, special considerations include any special processes and/or seasonal constraints that may affect project delivery and require unusual, exceptional, or extended environmental processes.

For the proposed project, special environmental considerations may include the need for construction monitoring for cultural resources or biological resources (as required under the Migratory Bird Treaty Act). Though it is not expected that impacts to jurisdictional waters of the U.S. and State would occur, additional investigation would be required to confirm this finding and determine whether permits from the U.S. Army Corps of Engineers (ACOE), State Water Resources Control Board (SWRCB), and California Department of Fish and Wildlife (CDFW) would be required. If any of these activities are deemed necessary, there is a potential that the environmental process may be extended. The requirement for these potential permits, approvals, and consultations would be determined as part of project-specific field investigations and technical analyses to be performed during the PA/ED phase.

5. Anticipated Environmental Commitments

The following is a list of possible avoidance, minimization, and/or mitigation measures that could be required for the purposes of the project under all of the Build Alternatives.

1. If human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify the Most Likely Descendant (MLD). The MLD may inspect the site of the discovery with the permission of the land owner or his/her authorized representative. The MLD shall complete the inspection within 48 hours of being granted access to the site.

2. If buried cultural resources are encountered during project activities, it is Caltrans' policy that work stop within 60 feet of the area until a qualified archaeologist can evaluate the nature and significance of the find.

3. If any paleontological resources are encountered during construction activities, all ground-disturbing activities shall stop until the services of a qualified paleontologist can be retained to identify and evaluate the resources and, if necessary, recommend mitigation measures to document and preserve the resources.

4. If ground-disturbing activities are scheduled to commence during the nesting bird breeding season (February 15 through September 1), preconstruction nesting bird breeding surveys shall be conducted by a qualified biologist in order to identify possible nesting activity. A construction-free buffer of suitable dimensions must be established around any active nesting bird nests (up to 300 feet [ft], depending on the nest location and species) for the duration of the project or until it has been determined that the chicks have fledged and are independent of their parents.

5. If unknown wastes or suspect materials are discovered during construction by the contractor that he/she believes may involve hazardous waste/materials, the contractor shall:

a. Immediately stop work in the vicinity of the suspected contaminant;
b. Remove workers and the public from the area;
c. Notify the project engineer of the implementing agency;
d. Secure the areas as directed by the project engineer; and
e. Notify the implementing agency's Hazardous Waste/Materials Coordinator.

6. Mitigation for construction air quality impacts will require compliance with South Coast Air Quality Management District (SCAQMD) Rule 403 and the Fugitive Dust Control Plan.

7. Mitigation for long-term permanent noise impacts may include noise abatement measures such as constructing noise barriers.

8. Mitigation for visual impacts including beautification (aesthetics), hardscaping, and landscaping elements shall be presented to Caltrans Landscape Architecture for approval/guidance.

Revised April 2011

9. During construction, Underground Service Alert (USA) services shall be used to identify the location of all public utilities and avoid unplanned disruptions.

10. In compliance with Executive Order 13112 (Invasive Species) and subsequent guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

11. Where landscaping is proposed, the project shall install landscaping that is compatible with the existing landscaping. A certain ratio of plant replacement may apply, depending on the plant replacement size. All selected plant species within the roadway ROW shall share similar water requirements. The new landscaping concept and plant palette shall be developed in coordination with and approved by the Caltrans District Landscape Architect.

12. Compliance with the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit through water quality treatment of runoff from new impervious areas or the equivalent within the project limits will be implemented per the Caltrans Project Planning and Design Guide.

Additional commitments, and/or further refinement of the above-listed commitments, could be required and would be determined as part of the PA/ED phase.

6. Permits and Approvals

Table A identifies the anticipated permits and approvals required for the project. These permits and approvals are subject to change based on project-specific field investigations and technical analyses to be performed during the PA/ED phase. As discussed in Section 8.15 of this document, the project is not anticipated to result in impacts to any areas subject to U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW) jurisdiction. Therefore, none of the respective permits for these agencies will be required.

Table A: Permits and Approvals

Permit/Approval	Agency	Notes
Caltrans Statewide NPDES Permit, Order No. 2012-0011-DWQ, NPDES No. CAS000003	SWRCB	Required to prepare a Storm Water Data Report (SWDR) and implement Caltrans-approved Treatment and Design Pollution Prevention Best Management Practices (BMPs) for areas within Caltrans ROW
Riverside County NPDES Permit, Order No. R8-2010-0033, NPDES No. CAS618033	Santa Ana RWQCB	Required to prepare a Water Quality Management Plan (WQMP) and implement Treatment Control BMPs for areas outside Caltrans ROW.
NPDES No. CAS000002, General Construction Permit (GCP) Order No. 2009-009-DWQ	SWRCB	Required to obtain permit coverage prior to ground disturbance and prepare a Storm Water Pollution Prevention Plan (SWPPP) and implement construction BMPs during construction.
Encroachment Permit	Caltrans District 8	Required for field surveys and construction activities
Encroachment Permit	City of Jurupa Valley	Required for field surveys and construction activities
Western Riverside County Multiple Species Habitat Conservation Plan Consistency Determination	CDFW and U.S. Fish and Wildlife Service	Consistency Determination to be obtained during PA/ED and prior to public circulation of the draft environmental document.

7. Level of Effort: Risks and Assumptions

The environmental factors that could affect cost and schedule for this proposed project include the anticipated permit processes (NPDES/Storm Water Pollution Prevention Plan [SWPPP] approvals from the Santa Ana RWQCB and encroachment permits). Other factors include the need for additional technical studies or the identification of cultural or biological resources resulting in unanticipated mitigation requirements. The environmental document would be prepared based on technical studies completed and approved for the project, as well as any additional studies in the vicinity of the project. For the proposed project, special considerations may entail the potential for hazardous wastes/hazardous materials within the project limits, and preconstruction biological resource surveys. External factors beyond Caltrans control, such as resource agency staffing shortages, may lengthen consultation time frames.

8. PEAR Technical Summaries

8.1 Land Use: The project site is located within the City of Jurupa Valley, and the project area can be characterized as urbanized in nature. Development within or adjacent to the project site includes several medium- and medium-high density, single- and multi-family residences and commercial retail establishments in the northeast, northwest, and southwest quadrants, and vacant land in the southeast quadrant. There is a fast food establishment immediately adjacent to the SR-60 westbound on-ramp, and a gas station immediately adjacent to the SR-60 eastbound off-ramp. The southeast quadrant of the interchange is currently vacant but planned for future commercial retail and high-density residential land uses. There are no parks or recreational facilities within 0.5 miles (mi) of the project site.

Based on the City's General Plan Land Use Map (July 2011), the following land use designations apply to the project:

- **Northwest Quadrant**: Medium Density Residential; Commercial Retail; Light Industrial
- **Northeast Quadrant**: Medium High Density Residential; Commercial Retail
- **Southwest Quadrant**: Medium High Density Residential; Commercial Retail
- **Southeast Quadrant**: Very High Density Residential; Commercial Retail

Based on the City's Zoning Map, the following zoning designations apply to the project:

- **Northwest Quadrant**: Residential (R1, R3); Commercial (C-1/C-P)
- **Northeast Quadrant**: Residential (R1); Commercial (C-1/C-P)
- **Southwest Quadrant**: Residential (R1, R3); Commercial (C-1/C-P)
- **Southeast Quadrant**: SP Zone

Land use compatibility and consistency with the City's General Plan and Zoning Codes will be evaluated during PA/ED; a separate technical study is not required.

8.2 Growth: The project is intended to improve traffic operations at the SR-60/Rubidoux Boulevard Interchange by relieving existing congestion. In addition, the project would correct existing geometric deficiencies; specifically, it would improve vertical clearance on a National Network truck route and non-standard ramp intersection configurations at the WB exit and EB entrance ramps. No residences or businesses would be introduced as a result of this project; therefore, a direct increase in population would not occur. The project would accommodate projected growth in the vicinity of the project improvements, however, the project itself is not considered to be growth-inducing. A separate technical study is not required; however, a "First Cut Screening" will be performed during PA/ED for inclusion in the Environmental Document.

8.3 Farmlands/Timberlands: Based on the City of Jurupa Valley's General Plan and Zoning Designation maps, there are no farmland or timberland designations within or adjacent to the project area. According to the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program 2014 Riverside County Map, the project area consists of Urban and Built-Up Land. The CDC does not identify any farmlands as occurring within or in the vicinity of the project. A separate technical study is not required.

8.4 Community Impacts: The project area can be characterized as urbanized in nature. Development within or adjacent to the project site includes predominately residential and commercial land uses (see Section 8.1 [Land Use] above for additional discussion regarding existing land use in the project vicinity). Given the nature of the proposed improvements (reconstruction of an existing roadway facility) associated with the Build Alternatives, the project would not divide the existing community or influence growth.

There are four community facilities (three places of worship and one elementary school) within 0.5 mi of the project site that could experience temporary construction-related impacts during project construction. No additional community facilities are located within 0.5 mi of the project site.

The Build Alternatives would require partial permanent ROW acquisition. However, all permanent ROW acquisition consists of partial takes only and no residential or business relocations would result with project implementation. The project is anticipated to potentially affect a total of 4 parcels for Alternative 2, or 6 parcels for Alternative 3. Based on initial limited design information available at this time it is estimated that the area of permanent acquisition may be approximately 5,895 square feet (ft^2) for Alternative 2, or 5,630 ft^2 for Alternative 3. The potential ROW that the project may need is not expected to result in the displacement of any existing development. Tables B and C summarize early initial estimates regarding the project's anticipated permanent ROW acquisition requirements and identifies the associated related parcels for Alternatives 2 and 3, respectively. Based on current project design considerations, it is currently anticipated that any permanent acquisitions would be partial in nature (no full acquisitions are expected to be required).

Table B: Alternative 2 Potential Permanent ROW Acquisition Requirements

Assessor Parcel Number	Street Address	Present Use	Potential Partial Acquisition Area
179-130-004	3260 Rubidoux Blvd, Riverside CA	Vacant Commercial	1,500 ft^2
179-130-003	3200 Rubidoux Blvd, Riverside CA	Vacant Commercial	2,050 ft^2
178-202-023	2985 Rubidoux Blvd, Riverside CA	Commercial/Gas Station	1,870 ft^2
178-201-011	5642 30th St, Riverside CA	Commercial/Restaurant	475 ft^2
TOTAL			**5,895 ft^2**

Table C: Alternative 3 Potential Permanent ROW Acquisition Requirements

Assessor Parcel Number	Street Address	Present Use	Potential Partial Acquisition Area
179-130-004	3260 Rubidoux Blvd, Riverside CA	Vacant Commercial	600 ft^2
179-130-003	3200 Rubidoux Blvd, Riverside CA	Vacant Commercial	1,950 ft^2
179-130-008	3070 Rubidoux Blvd, Riverside CA	Vacant Commercial	150 ft^2
178-202-023	2985 Rubidoux Blvd, Riverside CA	Commercial/Gas Station	1,125 ft^2
178-201-011	5642 30th St, Riverside CA	Commercial/Restaurant	1,590 ft^2
179-083-018	3071 Rubidoux Blvd, Riverside CA	Commercial/Gas Station	215 ft^2
TOTAL			**5,630 ft^2**

Environmental Justice: Title VI of the Civil Rights Act of 1964 requires that no person, because of race, color, religion, national origin, sex, age, or handicap, be excluded from participation in, denied benefits of, or subjected to discrimination by any federal-aid activity. In addition, all projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, which directs federal agencies to take the appropriate and necessary steps to identify an address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. The term "minority" includes persons who identify themselves as Black/African American, Asian, Native Hawaiian/Pacific Islander, Native American/Native Alaskan, or Hispanic/Latino origin.

"Low income" is defined based on the Department of Health and Human Services poverty guidelines. For 2015, this was $24,250 for a family of four.[1]

Table D below provides U.S. Census Bureau data, showing the percentages of racial minorities, Hispanics, and low-income populations (environmental justice populations) within the project area census tracts (Census Tracts 401.01 and 402.04), the City of Jurupa Valley, and the County of Riverside. As shown in the table, the census tracts in the immediate project vicinity demonstrate a higher percentage of both minority and low-income populations than those present in the city and county overall. Although a separate technical study is not required, an evaluation of the effects of the project on the surrounding community and its quality of life will be conducted and included in the Environmental Document.

Table D: Percentages of Racial Minorities, Hispanics, and Low-Income Populations

Census Tract/ Jurisdiction	Racial Minorities[1]	Hispanics[2]	Below Poverty Level[3]
Census Tract 401.01	50.8%	78.8%	16.8%
Census Tract 402.04	62.4%	86.1%	29.1%
City of Jurupa Valley	41.6%	68.7%	14.1%
Riverside County	31.2%	46.5%	13.1%

Source: U.S. Census Bureau website www.factfinder.census.gov/ accessed 11-17-16. Table DP05, 2010-2014 American Community Survey 5-Year Estimates.

Notes: 1 = Racial minorities include individuals who identify as Black/African-American, Asian, Native Hawaiian/Pacific Islander, Native American/Native Alaskan, Some Other Race, or two or more races on the United States Census.

2 = The Hispanic population is not considered a race but rather, an ethnicity; therefore, Hispanics can be of any race.

3 = Source: Table DP03, "Percentage of Families and People Whose Income in the Past 12 Months is Below the Poverty Level" 2010-2014 American Community Survey 5-Year Estimates.

8.5 Visual/Aesthetics: The project area can be characterized as developed land. Land uses within and adjacent to the project site include residential and commercial development in the northwest, northeast, and southwest quadrants of the interchange, and vacant disturbed land in the southeast quadrant of the interchange. The project is not on or adjacent to an officially designated State scenic highway according to the Caltrans California Scenic Highway Mapping System[2].

Visual resources are often subjective in nature. Therefore, the visual impacts analysis is completed per the FHWA's *Visual Impact Assessment for Highway Projects* (January 1988). This screening is completed pursuant to the Caltrans Standard Environmental Reference (SER) guidelines for evaluating visual impacts, discusses the project area, and provides mitigation if necessary. According to the "Questionnaire to Determine Visual Impact Assessment [VIA] Level" that was completed for the project and is attached to this PEAR document, the project would result in a moderate change to the physical

[1] U.S. Department of Health and Human Services (DHHS) Poverty Guidelines website https://aspe.hhs.gov/2015-poverty-guidelines accessed 11-17-16.

[2] California Department of Transportation, *California Scenic Highway Mapping System*, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed November 21, 2016.

characteristics of the existing environment, and would appear similar in visual character compared to the existing condition. There is a low likelihood that the project would be controversial within the community, and the project's aesthetic approach would be consistent with applicable laws, ordinances, regulations, policies, or standards. Therefore, due to the nature of the proposed improvements at the interchange associated with the Build Alternatives, an abbreviated VIA will be prepared for the project. A full VIA is not anticipated to be required for the project.

8.6 Cultural Resources: A cultural resource literature and records search was completed for the approximately 6.5-acre project area (this acreage excludes the paved SR-60 highway) on July 8, 2015, at the Eastern Information Center at the University of California, Riverside. Sources consulted during the records search included the National Register of Historic Places (NRHP) (1997–2002 and supplements); *Survey of Surveys: A Summary of California's Historical and Architectural Resources* (1989); *Five Views: An Ethnic Sites Survey for California* (1988, updated in 2004); California Historical Landmarks; historical mapping; and California Points of Historical Interest. Records from the Inventory of Historic Structures entered into the Office of Historic Preservation computer files were also consulted.

The records search area covered a 1-mile radius surrounding the project area limits. The results of that search indicate that no less than 47 cultural resource studies were performed previously within one mile of the project area since 1971. Five of these studies involved a portion of the project area; however, the majority of the project area has not been previously surveyed for cultural resources. Sixty-seven previously recorded cultural resources are located within a 1-mile radius of the project area. Of these, 3 are prehistoric archaeological sites, 7 are historical archaeological sites, and the remaining 57 are built-environment resources. None of these resources are located within the project limits. Based on the Office of Historic Preservation's Archaeological Determinations of Eligibility (ADOE) List, four resources within one mile of the project area are potentially eligible for the inclusion on the NHRP (P-33-007410, -007413, -007422, and -007724); four resources are not eligible but may be of local interest (P-33-011747, -011748, -011749, and -011750); and four have not been evaluated for inclusion on the NRHP (P-33-007411, -009698, -011751, and -016711). The remaining 55 resources are not listed on the ADOE list.

Based on the results of the literature and records search, the project area is considered highly sensitive for built-environment resources. Conversely, sensitivity for prehistoric and historical archaeological resources in the project area is considered low.

An Historic Property Survey Report (HPSR), Historical Resources Evaluation Report (HRER), Archaeological Survey Report (ASR), and Area of Potential Effects (APE) Map are required to identify cultural resources, assess potential impacts to cultural resources, and determine appropriate minimization and mitigation measures to reduce these impacts. Native American coordination is also required for the project. A Sacred Lands File search with the Native American Heritage Commission (NAHC) will be conducted and the NAHC will provide a list of Native Americans contacts that may know of cultural resources in the project area. The cultural consultant will work with the Caltrans District Native American Coordinator to determine which of the individuals provided on the NAHC lists will be contacted about the project, first by letter, and followed by telephone calls. Section 106 and AB 52 consultation will be necessary for this project.

8.7 **Hydrology and Floodplain**: According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (Map Number 06065C0045G [August 28, 2008]), the project area falls within Zone X, which is defined as areas determined to be outside the 1 percent annual chance floodplain (100-year floodplain) as defined by FEMA and is outside the 0.2 percent annual chance floodplain (500-year floodplain). A separate technical study is not required for the project.

8.8 **Water Quality and Storm Water Runoff**: The project is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (SARWQCB). The project is located in the Santa Ana River watershed (Middle Santa Ana River Hydrologic Area [Hydrologic Sub-Area Number 801.27]). Its northwest quadrant discharges to a v-ditch located north of the WB on-ramp, which confluences with the Rubidoux Retention Basin. The Rubidoux Retention Basin is adjacent to the project, and shares the project's northern boundary. If the Rubidoux Retention Basin overtops its spillway, it will flow into the storm drain system underneath the median of SR-60. The southwest, northeast, and southeast quadrants of the project are collected in the Caltrans storm drain system underneath the SR-60 median and flow east for 1.2 miles until it confluences with Santa Ana River Reach 4. The project will not discharge directly to an Area of Special Biological Significance.

The principal receiving waterbody to the project area is the Santa Ana River Reach 4, Santa Ana River Reach 3, Santa Ana River Reach 2, Santa Ana River Reach 1, and ultimately into the Pacific Ocean. Reaches 2, 3, and 4 of the Santa Ana River are included on the 2010 Santa Ana Region 303(d) List of Water Quality Limited Segments as impaired by cadmium, copper, lead, indicator bacteria, and pathogens. The project would not alter the existing regional channels.

Project construction is subject to the requirements of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit, Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ; NPDES No. CAS000002) and any subsequent amendments in effect at the time of construction. In compliance with the Construction General Permit, the City would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and implement Construction Best Management Practices (BMPs) including, but not limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on-site, as well as Good Housekeeping BMPs to prevent spills, leaks, and discharges to receiving waters. Construction site BMPs will be detailed in and implemented via a SWPPP.

Operation of the project would be subject to the requirements of the NPDES Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Order No. 2012-0011-DWQ,NPDES No. CAS000003) (Caltrans Statewide NPDES Permit) for portions of the project within Caltrans ROW. For portions of the project outside Caltrans ROW (i.e., within City ROW), operation of the project would be subject to the NPDES Permit for WDRs for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County within the Santa Ana Region (Order No. R8-2010-0033, NPDES No. CAS618033) (Riverside County NPDES Permit). Through compliance with the Caltrans Statewide NPDES Permit, the City would be required to prepare a Storm Water Data Report (SWDR) and implement Caltrans-approved Treatment and Design

Pollution Prevention BMPs within Caltrans ROW. Through compliance with the Riverside County NPDES Permit, the City would be required to prepare a Water Quality Management Plan (WQMP) and implement Treatment Control BMPs outside Caltrans ROW. The feasibility of various operational BMPs will be documented in the SWDR and WQMP prepared for the project.

A Scoping Questionnaire for Water Quality Issues will be prepared to determine if there is the potential for water quality impacts to the project. If so, a Water Quality Assessment Report will be developed as an appendix to the Environmental Document.

8.9 Geology, Soils, Seismic and Topography: The project site and its surrounding area have been mapped by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey as being comprised of Greenfield sandy loam (2 to 8 percent slopes, eroded), Ramona sandy loam (0 to 5 percent slopes, severely eroded), Monserate sandy loam (0 to 5 percent slopes), and Delhi fine sands (2 to 15 percent slopes, wind-eroded). Generally, soils within the project site and the immediate vicinity are dominated by heavy deposits of alluvial material including coarse sands and gravels with evidence of soil compaction. According to the Riverside County General Plan, dated December 8, 2015, the project site is located within Jurupa Area Plan. There are no known seismic faults within the Jurupa planning area. However, more remote faults, such as the San Andreas and San Jacinto Faults, are capable of posing a seismic threat to life and property within the area. Threats from seismic events include ground shaking, fault rupture, liquefaction, and landslides. Based on the Figure 10, Seismic Hazards, of the Jurupa Area Plan, the potential for liquefaction within the project area is moderate with shallow groundwater. A Preliminary Geotechnical Report will be conducted to evaluate and address seismic safety issues, collapsible soils, groundwater conditions, the potential for liquefaction and soil compaction, and other soil stability issues during the PA/ED phase.

8.10 Paleontology: Based on a cursory examination of published geologic maps (Morton and Miller, 2006), the project area is underlain by Quaternary alluvium of Middle Pleistocene to Holocene age. A review of Riverside County's paleontological sensitivity map indicates that the project area has a high (High A) paleontological sensitivity (County of Riverside, 2008). In general, the potential for a given project to result in adverse impacts to fossil resources is dependent on the paleontological sensitivity of the underlying geologic unit and is directly proportional to the amount of ground disturbance associated with the project. Because Riverside County (2008) has identified the geologic units underlying the project area as having a high potential for paleontological resources, a Paleontological Identification Report (PIR), including a literature review and museum record search, is required to assess potential impacts to paleontological resources and identify appropriate mitigation measures to reduce these impacts. If the PIR identifies potential project-related impacts to paleontological resources, then a Paleontological Evaluation Report (PER) should also be prepared. The paleontological resource assessment and mitigation measure recommendations shall be prepared in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP) (2010) and with the Caltrans Standard Environmental Reference (2012).

8.11 Hazardous Waste/Materials: The analysis of existing hazardous waste/materials is based upon the *Hazardous Materials Analysis Technical Memorandum for the SR-60/Rubidoux Boulevard Interchange Project* (Technical Memorandum) dated June 2016. The Technical Memorandum included a field review of on-site conditions and a research of available

Federal, tribal, State, and local regulatory databases to verify if listed regulatory sites or hazardous wastes have been reported within or near the boundaries of the project site.

According to the Technical Memorandum, a former Chevron gasoline service station located at 3070 Rubidoux Boulevard and existing ARCO gasoline service station located at 2994 Rubidoux Boulevard would be affected by partial ROW acquisition. Releases of gasoline to the soil were reported at these two properties. The reported releases have received case closure status by the Regional Water Quality Control Board (RWQCB). However, evidence of underground storage tanks (USTs) such as monitoring wells were still noted at the ARCO gasoline service station during the visual site inspection conducted on June 9, 2016. There is potential for hazardous materials contamination at the project site from the previously reported releases. In addition, the Technical Memorandum identified the potential to encounter contaminated groundwater at the project site during grading activities as a result of other reported adjoining regulatory properties including 17055, 18560, 18791, 17092, and 19069 Van Buren Boulevard. As these on-site and off-site adjoining properties have reported the storage, handling, and release of hazardous materials, file record reviews per ASTM International (ASTM) E 1527-13 Standard Practice should be conducted to further review the potential for impacts to the project site from these sources.

During the PA/ED stage, a *Phase I Initial Site Assessment* (ISA) should be prepared for the project pursuant to the ASTM E 1527-13 Standard Practice. The Phase I ISA report will include discussion of the appropriate NPDES permits, depth of groundwater, directional flow, and how to mitigate groundwater contamination. Additionally, SR-60 is a heavily traveled freeway in Riverside County and the project vicinity. The potential for lead contamination to exist within exposed soils along SR-60 due to Aerially Deposited Lead (ADL) is likely; thus, soils within the project limits shall be tested for ADL in order to determine if any soils have been contaminated from vehicular use. There are also concerns related to on-site traffic striping materials that could be disturbed by project construction. Therefore, ADL testing, lead testing, and asbestos testing will also be required during the PA/ED phase.

8.12 Air Quality: The proposed project is located within the South Coast Air Basin (SCAB), which is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB is in attainment of most of the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS); however the SCAB is in nonattainment or maintenance for the following pollutants (Federal standards):

- Ozone (O_3);
- Particulate matter 2.5 microns in diameter or less ($PM_{2.5}$); and
- Particulate matter 10 microns in diameter or less (PM_{10}) (maintenance).

The project does not fall under the categories of exempt projects under 40 CFR 93.126, 93.127, or 93.128. Furthermore, the project does not qualify under CE assignment 23 USC 326. Therefore, an Air Quality Report as well as an Air Quality Conformity Analysis and Transportation Air Quality Conformity Checklist are required for the project.

8.13 Noise and Vibration: The proposed project would relieve congestion and improve traffic operations at the SR-60/Rubidoux Boulevard interchange by addressing increased travel

associated with existing and planned development. Currently, the closest existing noise receptors are residential uses located approximately 100 feet to the south of the proposed eastbound off-ramp improvements; Mission Middle School is located approximately 2,700 feet to the west of the project limits. Since the project meets the definition of a Type I project under the Caltrans Traffic Noise Analysis Protocol (TNAP), it is assumed that a TNAP Analysis will be required for all alternatives based on the surrounding sensitive receptors. A detailed Noise Study Report (NSR) will be conducted. The NSR will be prepared in accordance with the latest Caltrans Technical Noise Supplement and TNAP. It should be noted that prior to preparation of the NSR, coordination with Caltrans Environmental Engineering Oversight Staff will be required to confirm approach, methodology, and noise measurement locations.

8.14 **Energy and Climate Change**: The project would relieve congestion and improve travel efficiency through the project area. Energy consumption would potentially be reduced upon project completion due to improved traffic circulation. Construction energy consumption would be temporary in nature and all construction equipment would be required to operate per the equipment manuals. In addition, existing SCAQMD air quality requirements pertaining to construction equipment would also help to reduce energy consumption from construction equipment. A separate energy technical study will not be required.

8.15 **Biological Environment:** The project site has been highly disturbed through the development of roadway infrastructure and urban development immediately adjacent to site boundaries. The majority of vegetation that would be affected by the project consists of landscaping and mature trees within Caltrans ROW. In addition, a small portion of an undeveloped, vacant site south of SR-60 and east of Rubidoux Boulevard may also be affected. Within this vacant area, a Habitat Suitability Assessment for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSF), a federally endangered species, was conducted for the project to characterize existing site conditions and assess the quality of Delhi Sand soils within the survey area to support DSF. Based on the results of the DSF habitat suitability assessment, surface soils present on the survey area were determined not to contain clean Delhi Sand soils with a habitat quality rating of 1 that represents unsuitable quality. The survey area is located in an area that is primarily developed and is isolated from known populations of DSF that could fly onto the project site. As a result, the site does not support the clean Delhi Sand soils needed for suitable habitat for DSF. The vegetation on-site can be characterized as a heavily disturbed non-native grassland plant community that is vegetated with a variety of non-native and early successional weedy plant species and disturbed areas. Proposed development would not impact DSF or impede their recovery as defined by the United States Fish and Wildlife Service (USFWS) DSF Recovery Plan (1997). It is recommended that the findings of the DSF Habitat Suitability Assessment are reviewed with USFWS staff during PA/ED for concurrence.

The project is not anticipated to result in impacts to any areas subject to U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW) jurisdiction. There is an existing concrete-lined drainage feature within the vacant site south of SR-60 and east of Rubidoux Boulevard; however, it is located outside of the limits of disturbance and it is not anticipated that proposed improvements would affect this drainage feature. However, potential impacts to jurisdictional features and the requirement for regulatory permits will be verified during the PA/ED phase.

In addition, based on the Riverside County Multiple Species Habitat Conservation Plan (MSHCP) prepared by the Western Riverside County Regional Conservation Authority, no MSHCP conserved lands, Criteria Cells, or Public Quasi-Public (PQP) conserved lands are located within the project area. However, a portion of the project's study area is located within a designated survey area for burrowing owl as depicted in Figure 6-4 in Section 6.3.2 of the MSHCP, and also a designated survey area for narrow endemic plant species as depicted in Figure 6-1 in Section 6.1.3 of the MSHCP. A Natural Environment Study – Minimal Impacts (NES-MI) will be prepared as part of PA/ED to further analyze potential impacts to vegetation and undeveloped areas affected by the project, and will include a MSHCP Consistency Analysis to confirm the project is consistent with the rules and regulations of the MSHCP. A site investigation will need to be conducted in support of the NES-MI that will focus on the project site's ability to provide suitable habitat for burrowing owl and narrow endemic plant species to determine if additional surveys will be required pursuant to the MSHCP.

8.16 Cumulative Impacts: There are several proposed land development projects and numerous proposed transportation projects in the vicinity of the project. All cumulative impacts will be addressed within the Environmental Document that will be prepared for the project. All cumulative impacts will also be addressed within the individual resource technical studies identified in Sections 8.1 through 8.15 above.

8.17 Context Sensitive Solutions: Context Sensitive Solutions (CSS) is defined as "innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance and performance goals". As part of this project, public outreach efforts to engage community stakeholders will be implemented at appropriate stages of the project – this includes conducting Open House meetings during PA/ED and prior to construction to obtain feedback from community stakeholders regarding the proposed project.

Caltrans also uses CSS as an approach to plan, design, construct, maintain, and operate its transportation system. CSS employs a collaborative, interdisciplinary approach involving all stakeholders to promote concepts that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. As the project progresses through the design phase (PA/ED), the incorporation of CSS should be implemented through coordination amongst the Project Development Team (PDT). Any public outreach should also include the topic of CSS so the public can provide input regarding how the project will fit into the community.

9. Summary Statement for PSR or PSR-PDS

Based on the technical summaries described above, it is expected that impacts associated with all Build Alternatives would be mitigated to a level below significance. Therefore, an IS/EA with an MND/FONSI is the anticipated environmental document for CEQA/NEPA compliance for the proposed project. The schedule associated with the IS/EA is expected to have a duration of approximately 24 months (Attachment C: Schedule [Gantt Chart]).

As discussed above, technical studies are required in support of the environmental document for this project (Attachment A: PEAR Environmental Studies Checklist). It is not anticipated that the individual resource evaluations will identify significant environmental concerns within or adjacent to the project area that cannot be mitigated. If additional technical studies are necessary, the completion of these studies could affect schedule and cost. Construction monitoring for biological and cultural resources, if deemed necessary, could also complicate, delay, or lengthen the schedule and increase costs.

10. Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the project. It is not an environmental determination or document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in the Project Study Report (PSR). The estimates and conclusions in the PEAR are approximate and are based on cursory analyses of probable effects. A re-evaluation of the PEAR will be needed for changes in project scope or alternatives, or in environmental laws, regulations, or guidelines.

11. List of Preparers

Cultural Resources specialist Antonina M. Delu, RPA	Date: 7/29/15
Biologist Leili Namazi	Date: 7/11/16
Community Impacts specialist Renee Gleason	Date: 11/17/16
Noise and Vibration specialist Achilles Malisos	Date: 11/23/16
Air Quality specialist Achilles Malisos	Date: 11/23/16
Paleontology specialist/liaison Heather Clifford	Date: 7/29/15
Water Quality specialist Brad Losey	Date: 11/17/16
Hydrology and Floodplain specialist Brad Losey	Date: 11/17/16
Hazardous Waste/Materials specialist Kristen Bogue	Date: 7/11/16

Visual/Aesthetics specialist Kristen Bogue	Date: 11/21/16
Landscape Architect - VIA Questionnaire Cathy Johnson, CA PLA 4545	Date: 11/21/16
Energy and Climate Change specialist Achilles Malisos	Date: 11/23/16
Other:	Date:
PEAR Preparer Renee Gleason, Environmental Planner	Date: 11/23/16

12. Review and Approval

I confirm that environmental cost, scope, and schedule have been satisfactorily completed and that the PEAR meets all Caltrans requirements. Also, if the project is scoped as a routine EA, complex EA, or EIS, I verify that the HQ DEA Coordinator has concurred in the Class of Action.

Environmental Branch Chief — Date: 7/17/17

Project Manager — Date: 7/13/17

REQUIRED ATTACHMENTS:

Attachment A: PEAR Environmental Studies Checklist
Attachment B: Estimated Resources by WBS Code
Attachment C: Schedule (Gantt Chart)
Attachment D: Vicinity Map

PEAR Environmental Studies Checklist

Attachment A

Attachment A: PEAR Environmental Studies Checklist

Rev. 11/08

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	☒	☐	☐	L	
Growth	☒	☐	☐	L	First-cut screening in Environmental Document
Farmlands/Timberlands	☒	☐	☐	L	
Community Impacts	☒	☐	☐	L	Analysis in Environmental Document
Community Character and Cohesion	☒	☐	☐	L	
Relocations	☒	☐	☐	L	
Environmental Justice	☐	☒	☐	L	EJ Analysis in Environmental Document
Utilities/Emergency Services	☒	☐	☐	L	
Visual/Aesthetics	☐	☐	☒	L	Abbreviated Visual Impact Assessment (VIA)
Cultural Resources:	☐	☐	☒	L	
Archaeological Survey Report	☐	☐	☒	L	
Historic Resources Evaluation Report	☐	☐	☒	L	
Historic Property Survey Report	☐	☐	☒	L	
Historic Resource Compliance Report	☒	☐	☐	L	
Section 106 / PRC 5024 & 5024.5	☐	☐	☒	L	
Native American Coordination	☐	☐	☒	L	In Historic Property Survey Report (HPSR)
Finding of Effect	☒	☐	☐	L	
Data Recovery Plan	☒	☐	☐	L	
Memorandum of Agreement	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Hydrology and Floodplain	☒	☐	☐	L	
Water Quality and Stormwater Runoff	☒	☐	☐	L	Water Quality Scoping Questionnaire
Geology, Soils, Seismic and Topography	☐	☐	☒	M	Preliminary Geotechnical Report
Paleontology	☐	☐	☒	M	Paleontological Identification Report (PIR)
PER	☒	☐	☐	L	
PMP	☒	☐	☐	L	
Hazardous Waste/Materials:	☐	☐	☒	M	
ISA (Additional)	☐	☐	☒	M	
PSI	☒	☐	☐	L	
Other:	☐	☐	☒	M	Aerially Deposited Lead (ADL) Survey; Lead and Asbestos Testing
Air Quality	☐	☐	☒	L	Air Quality Report and Air Quality Conformity Analysis
Noise and Vibration	☐	☐	☒	L	Noise Study Report

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Energy and Climate Change	☒	☐	☐	L	
Biological Environment	☐	☐	☒	L	
Natural Environment Study	☐	☐	☒	L	Natural Environment Study – Minimal Impacts (NES-MI)
Section 7:	☒	☐	☐	L	
Formal	☒	☐	☐	L	
Informal	☒	☐	☐	L	
No effect	☒	☐	☐	L	
Section 10	☒	☐	☐	L	
USFWS Consultation	☒	☐	☐	L	
NMFS Consultation	☒	☐	☐	L	
Species of Concern (CNPS, USFS, BLM, S, F)	☒	☐	☐	L	In NES(MI), as appropriate
Wetlands & Other Waters/Delineation	☒	☐	☐	L	
404(b)(1) Alternatives Analysis	☒	☐	☐	L	
Invasive Species	☒	☐	☐	L	In NES(MI)
Wild & Scenic River Consistency	☒	☐	☐	L	
Coastal Management Plan	☒	☐	☐	L	
HMMP	☒	☐	☐	L	
DFG Consistency Determination	☒	☐	☐	L	
2081	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Cumulative Impacts	☒	☐	☐	L	In Environmental Document
Context Sensitive Solutions	☒	☐	☐	L	
Section 4(f) Evaluation	☒	☐	☐	L	
Permits:					
401 Certification Coordination	☒	☐	☐	L	
404 Permit Coordination, IP, NWP, or LOP	☒	☐	☐	L	
1602 Agreement Coordination	☒	☐	☐	L	
Local Coastal Development Permit Coordination	☒	☐	☐	L	
State Coastal Development Permit Coordination	☒	☐	☐	L	
NPDES Coordination	☐	☐	☒	L	Caltrans Statewide NPDES Permit; Riverside County NPDES Permit; NPDES General Construction Permit
US Coast Guard (Section 10)	☒	☐	☐	L	
TRPA	☒	☐	☐	L	
BCDC	☒	☐	☐	L	

Storm Water Data Report

Attachment F

Caltrans

Dist-County-Route: 08-RIV-60
Post Mile Limits: 9.56
Type of Work: Interchange Improvements
Project ID (EA): 0815000228 (EA1G400K)
Program Identification: 800.100(HE11)
Phase: ☒ PID ☐ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Santa Ana

Total Disturbed Soil Area: 8.50 (Alt 2); 11.05 (Alt 3)

Post Construction Treatment Area: 3.81 (Alt 2) and 4.82 (Alt 3)

Alternative Compliance (acres): TBD at PS&E

Estimated Const. Start Date: 01/01/2020

Estimated Const. Completion Date: 12/31/2021

Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ Other: _____

Is the Project within a TMDL watershed? Yes ☐ No ☒

TMDL Compliance Units (acres): Not Applicable

Notification of ADL reuse (if yes, provide date): Yes ☐ Date: TBD at PS&E No ☐

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Ankita Vyas, Registered Project Engineer — Date: 5/4/17

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Nader Naguib, Project Manager — Date: 6/6/17

Leonard Estrella, Designated Maintenance Representative — Date: 6/8/2017

Tom Yi, Designated Landscape Representative (Acting) — Date: 6/13/2017

[Stamp Required at PS&E only] ~~*Patrick J. Hally*~~, *District SW Coordinator* — Date: 6-13-17

Jon Bumps

AN 6/13/2017

Transportation Planning Scoping Information Sheet

Attachment G

ARTICLE 4 Transportation Planning Scoping Information Sheet

PROJECT INFORMATION

District	County	Route	Post Miles	Project ID No/ Expenditure Authorization No.
8	Riverside	60	9.33/9.87	#0815000228/ EA 1G400

Project Name and Description: SR-60/Rubidoux Blvd Interchange - Reconstruct/widen interchange, ramps and channelization improvements.

Prepared by:

District Information Sheet Point of Contact*:	Name: Diane Morales	Functional Unit:	Planning Division

* The District Information Sheet Point of Contact is responsible for completing Project Information, PDT Team and Stakeholder Information, and coordinating the completion of project-related information with the Transportation Planning Stakeholders. Upon completion, provides the Transportation Planning PDT Representative and Project Manager with a copy of the Information Sheet.

Project Development Team (PDT) Information		
Title	**Name**	**Phone Number**
Project Manager	Tim Haile	909-974-4922
Project Engineer	Brandon Reyes	909-974-4967
Transportation Planning PDT Representative**	Matthew Maestas	909-383-4825

Transportation Planning Stakeholder Information		
Title	**Name**	**Phone Number**
Regional Planner		
System Planner		
Local Development-Intergovernmental Review (LD-IGR) Planner		
Community Planner		
Goods Movement Planner		
Transit Planner		
Bicycle and Pedestrian Coordinator		
Park and Ride Coordinator		
Native American Liaison		
Other Coordinators:		

Project Purpose and Need** –

Purpose:

- Relieve congestion and improve traffic operations at the State Route 60 (SR-60)/Rubidoux Boulevard interchange;
- Address increased travel associated with existing and planned development anticipated in the City of Jurupa Valley and surrounding areas; and
- Improve existing geometric deficiencies.

Need:

- The SR-60/Rubidoux Boulevard interchange currently experiences queuing at the ramps to and from Rubidoux Boulevard, resulting in delay of travel time at the interchange area – the condition is expected to continue to decline as forecasted volumes increase in this area resulting in deterioration of traffic operations to level of service F by the design year 2045;

- Planned developments within the vicinity of the of the interchange are expected to increase the local population and truck traffic resulting in local and regional traffic demands; and

- Without the proposed project, the SR-60/Rubidoux Boulevard interchange will continue to operate with existing geometric deficiencies; specifically vertical clearance on a National Network truck route and non-standard ramp intersection configurations at the westbound exit and eastbound entrance ramps.

** The Transportation Planning PDT Representative is responsible for providing the PDT with the system-wide and corridor level deficiencies identified by Transportation Planning. The PDT uses the information provided by Transportation Planning to develop the purpose and need with contributions from other Caltrans functional units and external stakeholders at the initiation of the PID and is refined throughout the PID process. As the project moves past the project initiation stage and more data becomes available, the purpose and need is refined. For additional information on purpose and need see: www.dot.ca.gov/hq/env/emo/purpose_need.htm

1. Project Funding:

a	List all known and potential funding sources and percent splits: (ie. State Transportation Improvement Program (STIP)/State Highway Operations and Protection Program (SHOPP)/Transportation Enhancement (TE)/Environmental Enhancement and Mitigation (EEM)/Safe Routes to School (SR2S)/etc.).
	STIP
b	Is this a measure project? Yes__/No_x_. If yes, name and describe the measure.

2. Regional Planning:

a	Name of and contact information for Metropolitan Planning Organization (MPO) or Regional Transportation Planning Agency (RTPA).
	SCAG
b	Name of and contact information for local jurisdiction (City or County)
	County of Riverside, City of Jurupa Valley.
c	Provide the page number and project description as identified in the Regional Transportation Plan (RTP) and the date of adoption, or provide an explanation if not in RTP.
	RTP/SCS Adopted April 2016, Financially-Constrained RTP/SCS Projects, page #236 – Reconstruct/widen interchange, ramps and channelization improvements.
d	Provide nexus between the RTP objectives and the project to establish the basis for the project purpose and need.
e	Is the project located in an area susceptible to sea-level rise?
	No
f	Name of Air Quality Management District (AQMD)
	South Coast AQMD

g	If the project is located in a federal non-attainment or attainment-maintenance area is the project:
	• Regionally Significant? (per 40 (Code of Federal Regulations (CFR) 93.101) Y_x_/N__
	• Exempt from conformity? (per 40 CFR 93.126 and 93.128) Y__/N_x_
	• Exempt from regional analysis? (per 40 CFR 93.127) Y__/N_x_
	• Not exempt from conformity (must meet all requirements)? Y_x_/N__

3. Native American Consultation and Coordination:

a	If project is within or near an Indian Reservation or Rancheria? If so, provide the name of Tribe.
	No, while no tribal/trust lands are near the project, Native American consultation may be required on the project for unknown artifacts, sacred lands and other cultural landscapes.
b	Has/have the Tribal Government(s) been consulted? Y___/N_x_. If no, why not?
	There are no nearby Indian Reservations or Rancherias.
c	If the project requires Caltrans to use right-of-way on trust or allotted lands, this information needs to be included as soon as possible as a key topic in the consultation with the Tribe(s). Has the Tribe been consulted on this topic? Y___/N_x_. If no, why not?
	See 3a.
d	Has the Bureau of Indian Affairs (BIA) been notified? Y__/N_x_
	See 3a.
e	Have all applicable Tribal laws, ordinances and regulations [Tribal Employment Rights Ordinances (TERO), etc.] been reviewed for required contract language and coordination?
	See 3a.
f	If the Tribe has a TERO, is there a related Memorandum of Understanding between the District and the Tribe?
	See 3a.
g	Has the area surrounding the project been checked for prehistoric, archeological, cultural, spiritual, or ceremonial sites, or areas of potentially high sensitivity? If such areas exist, has the Tribe, Native American Heritage Commission or other applicable persons or entities been consulted?
	See 3a.
h	If a Native American monitor is required for this project, will this cost be reflected in cost estimates?
	Yes
i	In the event of project redesign, will the changes impact a Native American community as described above in d, e, or h?
	No

4. System Planning:

a	Is the project consistent with the DSMP? Y_x_/N__. If yes document approval date. If no, explain.
	Yes, the project is consistent with the 2016 DSMP Route Concept
b	Is the project identified in the TSDP? Y__/N__? If yes, document approval date____. If no, explain.
	N/A, TSDP not available per California Corridor Mobility Website
c	Is the project identified in the TCR/RCR or CSMP? Y_x_/N__. If yes, document approval date 09/2012__. If no, explain. Is the project consistent with the future route concept? Y_x_/N__. If no, explain.
d	Provide the Concept Level of Service (LOS) through project area.
	D
e	Provide the Concept Facility – include the number of lanes. Does the Concept Facility include High Occupancy Vehicle lanes? Y_x_/N__.
	8 Mixed Flow, 2 Managed Lanes.
f	Provide the Ultimate Transportation Corridor (UTC) – include the number of lanes. Does the UTC include High Occupancy Vehicle Lanes? Y__/N__.
	N/A
g	Describe the physical characteristics of the corridor through the project area (i.e. flat, rolling or

	mountainous terrain...).
	Level
h	Is the highway in an urban or rural area? Urban_x_/Rural__. Provide Functional Classification.
	Urbanized
i	Is facility a freeway, expressway or conventional highway?
	Freeway and Expressway
j	Provide Route Designations: (i.e. Interregional Transportation Strategic Plan (ITSP) High Emphasis or Focus Route, Surface Transportation Assistance Act (STAA) Route, Scenic Route…).
	Goods Movement Route, Surface Transportation Assistance Act (STAA), Transportation Gateways of Statewide Significance, Intermodal Corridors of Economic Significance (ICES), Caltrans Interregional Transportation Strategic Plan (ITSP).
k	Describe the land uses adjacent to project limits (i.e. agricultural, industrial…).
	Commercial retail, residential, light industrial.
l	Describe any park and ride facility needs identified in the TCR/CSMP, local plans, and RTP.
	No nearby park and ride facilities.
m	Describe the Forecasted 10 and 20-year Vehicle Miles Traveled (VMT), Annual Average Daily Traffic (AADT), and Peak Hour truck data in the TCR. Include the source and year of Forecast, and names and types of traffic and travel demand analysis tools used.
	Per TCR Concept Summary Table – 2008 Corridor Performance: AADT=137,400. VMT=1,677,700 - 2035 Concept Facility: AADT = 177,400. VMT= 2,166,100. Peak Hour=13,100. Truck Peak Hour=900. (based on 2008 Caltrans traffic data and SCAG Model 2035)
n	Has analysis on Daily Vehicle Hours of Delay (DVHD) from the Highway Congestion Monitoring Program (HICOMP) been completed and included? Y_x_/N__.
	DVHD 2008 – 26,257 (Per 2008 HICOMP).

5. Local Development – Intergovernmental Review (LD-IGR):

List LD-IGR projects that may directly or indirectly impact the proposed Caltrans project or that the proposed Caltrans project may impact. (Attach additional project information if needed.)

LD-IGR Project Information		Project
a	County-Route-Postmile & Distance to Development.	
b	Development name, type, and size.	
c	Local agency and/or private sponsor, and contact information.	
d	California Environmental Quality Act (CEQA) status and Implementation Date.	
e	If project includes federal funding, National Environmental Policy Act (NEPA) status.	
f	All vehicular and non-vehicular unmitigated impacts and planned mitigation measures including Transportation Demand Management (TDM) and Transportation	

	System Management (TSM) that would affect Caltrans facilities.	
g	Approved mitigation measures and implementing party.	
h	Value of constructed mitigation and/or amount of funds provided.	
i	Encroachment Permit, Transportation Permit, Traffic Management Plan, or California Transportation Commission (CTC) Access approvals needed.	
j	Describe relationship to Regional Blueprint, General Plans, or County Congestion Management Plans.	
k	Inclusion in a Regional Transportation Plan Sustainable Community Strategy or Alternative Planning Strategy?	
l	Regional or local mitigation fee program in place?	

6. Community Planning:

	INITIAL PID INFORMATION
a	Has lead agency staff worked with any neighborhood/community groups in the area of the proposed improvements? Y__/N_x_. If yes, summarize the process and its results including any commitments made to the community. If no, why not?
	N/A
b	Are any active/completed/proposed Environmental Justice (EJ) or Community-Based Transportation (CBTP) Planning Grants in the project area? Y__/N_x_. If yes, summarize the project, its location, and whether/how it may interact with the proposed project.
c	Describe any community participation plans for this PID including how recommendations will be incorporated and/or addressed. Has a context sensitive solutions (CSS) approach been applied? Y_x_/N__
	FINAL PID INFORMATION
d	How will the proposed transportation improvements impact the local community? Is the project likely to create or exacerbate existing environmental or other issues, including public health and safety, air quality, water quality, noise, environmental justice or social equity? Y__/N_x_. Describe issues, concerns, and recommendations (from sources including neighborhood/community groups) and what measures will be taken to reduce existing or potential negative effects.
e	Does this highway serve as a main street? Y__/N_x_. If yes, what main street functions and features need to be protected or preserved?
	N/A

7. Freight Planning:

	INITIAL PID INFORMATION
a	Identify all modal and intermodal facilities that may affect or be affected by the project.
	SR-60, Ontario International Airport (ONT)
	FINAL PID INFORMATION
b	Describe how the design of this project could facilitate or impede Goods Movement and relieve choke points both locally and statewide through grade separations, lane separations, or other measures (e.g., special features to accommodate truck traffic and at-grade railroad crossings).

	This project facilitates goods movement through ramp improvements and the addition of turn pockets.
c	Describe how the project integrates and interconnects with other modes (rail, maritime, air, etc.). Do possibilities exist for an intermodal facility or other features to improve long-distance hauling, farm-to-market transportation and/or accessibility between warehouses, storage facilities, and terminals?
d	Is the project located in a high priority goods movement area, included in the Goods Movement Action Plan (GMAP) or on a Global Gateways Development Program (GGDP) route? Y_x_/N__. If yes, describe.
	State Route 60 is classified as a Major International Trade Highway Route as per the GMAP Priority Regions and Corridors in California Map.
e	Is the project on a current and/or projected high truck volume route [e.g., Average Annual Daily Truck Traffic (AADTT) of 5 axle trucks is greater than 3000]? Y_x_/N__. If yes, describe how the project addresses this demand.
	5+ Axle Trucks AADTT 2008 = 4,200.
f	If the project is located near an airport, seaport, or railroad depot, describe how circulation (including truck parking) needs are addressed.
	N/A
g	Describe any other freight issues.
	Close Proximity to Ontario International Airport (ONT). There are industrial and warehousing facilities adjacent to SR-60 at various locations. These facilities add freight traffic to SR-60. This project is in between ONT and the planned World Logistics Center which will add significant trucks to the corridor.

8. Transit (bus, light rail, commuter rail, intercity rail, high speed rail):

	INITIAL PID INFORMATION
a	List all local transit providers that operate within the corridor.
	Bus: Riverside Transit Agency. Rail: Metrolink.
b	Have transit agencies been contacted for possible project coordination? Y__/N_x_. If no, why not?
c	Describe existing transit services and transit features (bus stops, train crossings, and transit lines) within the corridor.
	Riverside Transit Agency Bus Route 29 – travels north and south on Rubidoux Blvd from 42nd street/Tilton Ave to Market St.
d	Describe transit facility needs identified in short- and long-range transit plans and RTP. Describe how these future plans affect the corridor.
	N/A
	FINAL PID INFORMATION
e	Describe how the proposed project integrates transit and addresses impacts to transit services and transit facilities.
	This project facilitates bus movement through ramp improvement and the addition of turn pockets.
f	Have transit alternatives and improvement features been considered in this project? Y__/N_x_ If yes, describe. If no, why not?
	Transit improvements are not within the scope of the project.

9. Bicycle:

	INITIAL PID INFORMATION
a	Does the facility provide for bicyclist safety and mobility needs? If no, please explain.
	Per the Jurupa Area Plan - Trails and Bikeway System, dated December 2015, no bicycle facilities exist or are planned on Rubidoux Blvd within the project limits.

b	Are any improvements for bicyclist safety and mobility proposed for this facility by any local agencies or included in bicycle master plans? If yes, describe (including location, time frame, funding, etc.).
	See 9a.
c	Are there any external bicycle advocacy groups and bicycle advisory committees that should be included in the project stakeholder list? If so, provide contact information.
	No
	FINAL PID INFORMATION
d	Will bicycle travel deficiencies be corrected? How or why not?
	See 9a.
e	How will this project affect local agency plans for bicycle safety and mobility improvements?
	See 9a.
f	If the project is the construction of a new freeway or modification to an existing freeway, will it sever or destroy existing provisions for bicycle travel? If yes, describe how bicycle travel provisions will be included in this project.
	See 9a.

10. Pedestrian including Americans with Disabilities Act (ADA):

	INITIAL PID INFORMATION
a	Does this facility provide for pedestrian safety and mobility needs? If so, describe pedestrian facilities. Do continuous and well-maintained sidewalks exist? Are pedestrians forced to walk in the roadway at any locations due to lack of adequate pedestrian facilities? Please explain.
	The local facility is missing curb ramps/returns, has discontinuous sidewalks, and needs ADA updates to existing facilities in place. Per Caltrans safety and mobility requirements, many aspects of the pedestrian facilities need to be improved.
b	Are pedestrian crossings located at reasonable intervals?
	Yes
c	Are all pedestrian facilities within the corridor ADA accessible and in compliance with Federal and State ADA laws and regulations?
	No
	FINAL PID INFORMATION
d	Will pedestrian travel deficiencies be corrected? How or why not?
	Yes, pedestrian deficiencies will be resolved by providing continuous sidewalks and ADA compliant curb ramps.
e	How will this project affect local agency plans for pedestrian safety and mobility improvements?
	Project will improve pedestrian safety and mobility
f	If the project is the construction of a new freeway or modification to an existing freeway, will it sever or destroy existing provisions for pedestrian travel? If yes, describe how pedestrian travel provisions will be included in this project.
	Project will not sever or destroy existing pedestrian travel. Improvements included in the project will resolve existing pedestrian deficiencies
g	Are there any external pedestrian advocacy groups and advisory committees that should be included in the project stakeholder list? If so, provide contact information.
	TBD
h	Have ADA barriers as noted in the District's ADA Transition Plan been identified within the project limits? If not included in the project, provide justification and indicate whether District Design coordinator approval was obtained.
	No

11. Equestrian:

	INITIAL PID INFORMATION
a	If this corridor accommodates equestrian traffic, describe any project features that are being considered to improve safety for equestrian and vehicular traffic?

	N/A, corridor does not accommodate equestrian traffic.
	FINAL PID INFORMATION
b	Have features that accommodate equestrian traffic been identified? If so, are they included a part of this project? Describe. If no, why not?
	N/A, corridor does not accommodate equestrian traffic.

12. Intelligent Transportation Systems (ITS):

	INITIAL PID INFORMATION
a	Have ITS features such as closed-circuit television cameras, signal timing, multi-jurisdictional or multimodal system coordination been considered in the project? Y__/N__. If yes, describe. If no, explain.
	TBD
	FINAL PID INFORMATION
b	Have ITS features been identified? If so, are they included a part of this project? Describe. If no, why not?
	TBD

Conceptual Cost Estimate – Right-of-Way Component

Attachment H

CONCEPTUAL COST ESTIMATE – RIGHT OF WAY COMPONENT
Alternative 2

To: Nader Naguib
Project Manager
Caltrans

From: Josh Cosper, P.E., P.L.S.
Project Manager
Overland, Pacific & Cutler

Date: October 12, 2016
08-Riv-60-PM
Project ID 08-15000228
EA 1G400
SR-60/Rubidoux Blvd
Interchange Project

A Field Review was conducted ✓ Yes ___ No

Scope of the Right of Way

The SR-60 / Rubidoux Blvd. Interchange Project (Alternative 2) consists a tight diamond interchange design and impacts properties on both the north and south side of the 60 freeway on Rubidoux Boulevard. The approximate total of larger parcels impacted is 4, consisting of Commercial property types. Right of way required for acquisition includes 7,830 SF for Temporary Construction Easements and 5,895 SF for Fee acquisitions.

Right of Way Required ✓ Yes ___ No
Number of Parcels ✓ 1-10 ___ 11-25 ___ 26-50 ___ 51-100 ___ >100
✓ Urban ___ Rural

Land Area: Fee: 5,895 SF TCE: 7,830 SF
Displaced Persons/Businesses ___ Yes ✓ No
Demolition/Clearance ___ Yes ✓ No
Railroad Involvement ___ Yes ✓ No
Utility Involvements ✓ Yes ___No 1-5 Number of Utilities in area

Cost Estimates

Support Costs
___$0-$25,000
___$25,001-$100,000
✓ $100,001-$250,000
___$250,001-$500,000
___$500,001-$1,000,000
___$1,000,001-$5,000,000
___$5,000,001-$10,000,000
___>$10,000,000

Capital Costs
___$0-$100,000
✓ $100,001-$500,000
___$500,001-$1,000,000
___$1,000,001-$5,000,000
___$5,000,001-$15,000,000
___$15,000,001-$50,000,000
___$50,000,001-$100,000,000
___>$100,000,000

Schedule

Right of Way will require 16 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 1/1/2020.

Areas of Concern

Arco gas station, located at the northwest quadrant of the project intersection, must maintain access to all the gas pumps during business hours throughout the duration of the construction. Assume the proposed retaining wall along the back of the sidewalk and TCE will not impact traffic flow and access to the gas pumps.

Jack in the Box restaurant, located at the northwest quadrant of the project intersection, must maintain drive through access during business hours throughout the duration of the construction. Assume TCE will not impact the drive through lane.

Along Rubidoux Boulevard there are several access points to businesses; it is assumed access will be maintained during construction.

The project design is based on preliminary schematic plans and aerial topographic survey, property impacts should be expected to change slightly with more precise information as the design progresses and could potentially impact Utility / Right of Way costs.

Assumptions and Limiting Conditions

The right of way limits assumed were located using available county GIS parcel data. Visual impacts to properties were analyzed through available aerial photography and photogrammetric topographic survey. R/W will be surveyed during final design.

Assumptions

- Assumed improvements within the Temporary Construction Easement area are protected in place
- Assumed repair work performed by the highway contractor is part of the TCE construction

Contact

Brandon Reyes, P.E.
Project Engineer
Michael Baker International
909-974-4967

SR-60/Rubidoux Boulevard Interchange Project
Alternative 2

OPC ID	APN	OWNER	SITE ADDRESS	OWNER ADDRESS	PROPERTY TYPE	PRESENT USE	ZONING	TOTAL PARCEL AREA (SQ FT)	FEE AREA REQ'D (SF)	BLDG. AREA (SF)	BLDG. IMPACT?	TCE AREA (SF)	$/SQ. FT. (LAND)	TCE DURATION (YEARS)	SITE IMPVMTS.	TOTAL ACQ. COST	TOTAL R/W CAPITAL COST	TOTAL SUPPORT COSTS	COMMENTS/ACQUISITION IMPACTS
1	179-130-004	GM Gabrych Family Limited Partnership	3260 Rubidoux Blvd., Riverside, CA	12671 High Bluff Drive, Suite 150, San Diego, CA 92130, Attn: Gregory P. Lansing	Vacant	Vacant Commercial	SP Zone	337,590	1,500		No	1,530	35.00	2.00		64,281.00	$64,281	$23,700	Vacant land Assume 10 ft TCE
2.1	179-130-003	RTE 60, LLC, a Nevada limited liability company	3200 Rubidoux Blvd., Riverside, CA	RTE 60, LLC, 1770 N. Buffalo Dr., Ste. 101, Las Vegas, NV 89128, Attn: Tom Thorn	Vacant	Vacant Commercial	SP Zone	18,731	2,050		No	1,300	35.00	2.00		81,760.00	$101,010	$23,800	Vacant land Assume 10 ft TCE
2.2	179-130-007	RTE 60, LLC, a Nevada limited liability company	Rubidoux Blvd., Riverside, CA	RTE 60, LLC, 1770 N. Buffalo Dr., Ste. 101, Las Vegas, NV 89128, Attn: Tom Thorn	Vacant	Vacant Commercial	SP Zone	195,149			No	625	35.00	2.00		4,812.50	$0	$0	Vacant land Assume 10 ft TCE
2.3	179-130-008	RTE 60, LLC, a Nevada limited liability company	3070 Rubidoux Blvd., Riverside, CA	RTE 60, LLC, 1770 N. Buffalo Dr., Ste. 101, Las Vegas, NV 89128, Attn: Tom Thorn	Vacant	Vacant Commercial	SP Zone	15,246			No	1,875	35.00	2.00		14,437.50	$0	$0	Vacant land Assume 10 ft TCE
3	178-202-023	Young He Kim	2985 Rubidoux Blvd., Riverside, CA	C/O Kim's Arco AM/PM, 2985 Rubidoux Blvd., Riverside, CA 92509	Commercial	Gas Station	C-1/C-P	63,162	1,870	4,600	No	2,000	35.00	2.00	31,200.00	112,050.00	$112,050	$27,900	Arco Gas Station & AmPm Mart Privately owned improvements within acquisition area are small monument sign, large monument sign, 2 light standards, 3 small trees, several small shrubs, plants and lawn area (appx 2,000 sf). Assumed privately owned improvements within TCE area are either protected in place or replaced in kind. Assumed access to all gas pumps are maintained during business hours. Assume TCE will be modified to avoid impacting the traffic flow and access to the gas pumps. *Note: signal controller and dual meter boxes impacted within acquisition area.*
4	178-201-011	Lawrence M. Scarpace, Barletta S. Hansen, and Marilyn E.S. Hansen	5642 30th St., Riverside, CA	P.O. Box 3073, Shell Beach, CA 93448	Commercial	Restaurant	C-1/C-P	53,579	475	4,525	No	500	35.00	2.00	1,200.00	21,675.00	$21,675	$27,600	Jack in the Box Restaurant Privately owned improvements within acquisition area is lawn area. Assumed privately owned improvements within TCE area are either protected in place or replaced in kind. Assumed access to drive through lane is maintained during business hours. Assume TCE will be modified to avoid impacting the drive through lane. *Note: small drainage channel also impacted within acquisition area.*
6	**Totals**							**683,457**	**5,895**			**7,830**			**$32,400**	**$299,016**	**$299,016**	**$103,000**	

CONCEPTUAL COST ESTIMATE – RIGHT OF WAY COMPONENT
Alternative 3

To: Nader Naguib
Project Manager
Caltrans

From: Josh Cosper, P.E., P.L.S.
Project Manager
Overland, Pacific & Cutler

Date: October 12, 2016
08-Riv-60-PM
Project ID 08-15000228
EA 1G400
SR-60/Rubidoux Blvd
Interchange Project

A Field Review was conducted ✓ Yes ___ No

Scope of the Right of Way

The SR-60/Rubidoux Blvd. Interchange Project (Alternative 3) consists a single point uban interchange design and impacts properties on both the north and south side of the 60 freeway on Rubidoux Boulevard. The approximate total of larger parcels impacted is 6, consisting of Commercial property types. Right of way required for acquisition includes 9,475 SF for Temporary Construction Easements and 5,630 SF for Fee acquisitions.

Right of Way Required ✓ Yes ___ No
Number of Parcels ✓ 1-10 ___ 11-25 ___ 26-50 ___ 51-100 ___ >100
✓ Urban ___ Rural

Land Area: Fee: 5,630 SF TCE: 9,475 SF
Displaced Persons/Businesses ___ Yes ✓ No
Demolition/Clearance ___ Yes ✓ No
Railroad Involvement ___ Yes ✓ No
Utility Involvements ✓ Yes ___No 1-5 Number of Utilities in area

Cost Estimates

Support Costs
___$0-$25,000
___$25,001-$100,000
✓ $100,001-$250,000
___$250,001-$500,000
___$500,001-$1,000,000
___$1,000,001-$5,000,000
___$5,000,001-$10,000,000
___>$10,000,000

Capital Costs
___$0-$100,000
✓ $100,001-$500,000
___$500,001-$1,000,000
___$1,000,001-$5,000,000
___$5,000,001-$15,000,000
___$15,000,001-$50,000,000
___$50,000,001-$100,000,000
___>$100,000,000

Schedule

Right of Way will require 16 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 1/1/2020.

Areas of Concern

Arco gas station, located at the northwest quadrant of the project intersection, must maintain access to all the gas pumps during business hours throughout the duration of the construction. Assume the proposed retaining wall along the back of the sidewalk and TCE will not impact traffic flow and access to the gas pumps.

Jack in the Box restaurant, located at the northwest quadrant of the project intersection, must maintain drive through access during business hours throughout the duration of the construction. Assume TCE will not impact the drive through lane.

Kim's Sports Bar & Grill restaurant, located at the northeast quadrant of the project intersection, must maintain access to parking spaces and drive through lane during business hours throughout the duration of the construction. Assume TCE will not impact the drive through lane.

Along Rubidoux Boulevard there are several access points to businesses; it is assumed access will be maintained during construction.

Existing highway drainage ditch will require additional analysis of the underground culvert needs to convey northerly Rubidoux Boulevard runoff to downstream inlet structure or existing retention basin.

The project design is based on preliminary schematic plans and aerial topographic survey, property impacts should be expected to change slightly with more precise information as the design progresses and could potentially impact Utility / Right of Way costs.

Assumptions and Limiting Conditions

The right of way limits assumed were located using available county GIS parcel data. Visual impacts to properties were analyzed through available aerial photography and photogrammetric topographic survey. R/W will be surveyed during final design.

Assumptions

- Assumed improvements within the Temporary Construction Easement area are protected in place
- Assumed repair work performed by the highway contractor is part of the TCE construction

Contact

Brandon Reyes, P.E.
Project Engineer
Michael Baker International
909-974-4967

SR-60/Rubidoux Boulevard Interchange Project
Alternative 3

OPC ID	APN	OWNER	SITE ADDRESS	OWNER ADDRESS	PROPERTY TYPE	PRESENT USE	ZONING	TOTAL PARCEL AREA (SQ FT)	FEE AREA REQ'D (SF)	BLDG. AREA (SF)	BLDG. IMPACT?	TCE AREA (SF)	$/SQ. FT. (LAND)	TCE DURATION (YEARS)	SITE IMPVMTS.	TOTAL ACQ. COST	TOTAL R/W CAPITAL COST	TOTAL SUPPORT COSTS	COMMENTS/ACQUISITION IMPACTS
1	179-130-004	GM Gabrych Family Limited Partnership	3260 Rubidoux Blvd., Riverside, CA	12671 High Bluff Drive, Suite 150, San Diego, CA 92130, Attn: Gregory P. Lansing	Vacant	Vacant Commercial	SP Zone	337,590	600		No	620	35.00	2.00		25,774.00	$25,774	$23,600	Vacant land Assume 10 ft TCE
2.1	179-130-003	RTE 60, LLC, a Nevada limited liability company	3200 Rubidoux Blvd., Riverside, CA	RTE 60, LLC, 1770 N. Buffalo Dr., Ste. 101, Las Vegas, NV 89128, Attn: Tom Thorn	Vacant	Vacant Commercial	SP Zone	18,731	1,950		No	1,300	35.00	2.00		78,260.00	$103,723	$23,800	Vacant land Assume 10 ft TCE
2.2	179-130-007	RTE 60, LLC, a Nevada limited liability company	Rubidoux Blvd., Riverside, CA	RTE 60, LLC, 1770 N. Buffalo Dr., Ste. 101, Las Vegas, NV 89128, Attn: Tom Thorn	Vacant	Vacant Commercial	SP Zone	195,149			No	625	35.00	2.00		4,812.50	$0	$0	Vacant land Assume 10 ft TCE
2.3	179-130-008	RTE 60, LLC, a Nevada limited liability company	3070 Rubidoux Blvd., Riverside, CA	RTE 60, LLC, 1770 N. Buffalo Dr., Ste. 101, Las Vegas, NV 89128, Attn: Tom Thorn	Vacant	Vacant Commercial	SP Zone	15,246	150		No	2,000	35.00	2.00		20,650.00	$0	$0	Vacant land Assume 10 ft TCE
3	178-251-011	Young He Kim	2994 Rubidoux Blvd., Riverside, CA	2985 Rubidoux Blvd, Ste A, Riverside, CA 92509	Commercial	Restaurant	C-1/C-P	17859.6		5,539	No	650	35.00	2.00		5,005.00	$5,005	$21,600	Kim's Sports Bar & Grill (with a drive through) Assumed 10 ft TCE Assumed privately owned improvements within TCE area are either protected in place or replaced in kind. Assumed access to drive through lane and parking area are maintained during business hours. Assume TCE will be modified to avoid impacting the drive through lane and parking along the off-ramp.
4	178-202-023	Young He Kim	2985 Rubidoux Blvd., Riverside, CA	C/O Kim's Arco AM/PM, 2985 Rubidoux Blvd., Riverside, CA 92509	Commercial	Gas Station	C-1/C-P	63,162	1,125	4,600	No	1,660	35.00	2.00	12,000.00	64,157.00	$64,157	$27,700	Arco Gas Station & AmPm Mart Privately owned improvements within acquisition area are 2 light standards, 2 small trees, several small shrubs, plants and lawn area. Assumed privately owned improvements within TCE area are either protected in place or replaced in kind. Assumed access to all gas pumps are maintained during business hours. Assume TCE will be modified to avoid impacting the traffic flow and access to the gas pumps. *Note: signal controller and dual meter boxes impacted within acquisition area.*
5	178-201-011	Lawrence M. Scarpace, Barletta S. Hansen, and Marilyn E.S. Hansen	5642 30th St., Riverside, CA	P.O. Box 3073, Shell Beach, CA 93448	Commercial	Restaurant	C-1/C-P	53,579	1,590	4,525	No	2,220	35.00	2.00	21,700.00	94,444.00	$94,444	$27,800	Jack in the Box Restaurant Privately owned improvements within acquisition area are large monument sign, shrubs and lawn area. Assumed privately owned improvements within TCE area are either protected in place or replaced in kind. Assumed access to drive through lane is maintained during business hours. Assume TCE will be modified to avoid impacting the drive through lane. *Note: small drainage channel also impacted within acquisition area.*
6	179-083-018	Mina Fanar Inc	3071 Rubidoux Blvd, Riverside	3071 Rubidoux Blvd, Riverside	Commercial	Gas Station	C-1/C-P	26136	215	1,768	No	400	35.00	2.00	9,100.00	19,705.00	$19,705	$27,600	Shell Gas Station Privately owned improvements within acquisition area are 2 small monument signs, 2 small palm trees and lawn area. Assumed privately owned improvements within TCE area are either protected in place or replaced in kind. Assumed access is maintained during business hours.
	8	**Totals**						**727,452**	**5,630**			**9,475**			**$42,800**	**$312,808**	**$312,808**	**$152,100**	

Risk Register

Attachment I

LEVEL 1 - RISK REGISTER		Project Name:	SR-60/Rubidoux Blvd Interchange			DIST- EA	1G400	Project Manager	Nader Naguib		
Risk Identification						Risk Rating		Risk Response			
Status	ID #	Type	Category	Title	Risk Statement	Current status/assumptions	Priority Rating	Rationale for Rating	Strategy	Response Actions	Risk Owner	Updated
Active	1	Threat	Design	Emerald Meadows Ranch	As a result of the Emeralds Meadow Ranch Development, changes to the interchange alternative(s) may occur, which would lead to a delay in the completion of the PID phase.	Meetings with developer in progress.	Medium	Complete design overhaul would have a high impact, it has a low probability.	Mitigate	Understand scope and funding impacts and take measures to move forward with a successful project.	City of Jurupa Valley	5/9/2016
Active	2	Threat	Design	Interchange Skew	As a result of the Interchange skew, geometric challenges may occur, which would lead to a delay in the completion of the PID phase.	Skew has already introduced issues with early SPUI design.	Medium	The skew creates moderate complications that have a moderate possibility of happening.	Mitigate		Design Team	5/9/2016
Active	3	Threat	Design	30th Street	As a result of the 30th Street location, difficulties of the interchange design may occur, which would lead to a delay in the completion of the PID phase.	The required traffic studies will help understand 30th street impacts.	Medium	The proximity and high demands of 30th street create moderate complications to the design, and have a moderate probability of happening.	Mitigate	Find solutions to change 30th street configuration, perhaps with a separate project, to aid interchange objectives.	Design/Traffic Team	5/9/2016
Active	4	Threat	Design	Ramp Intersection Spacing	As a result of the Ramp Intersection Spacing, interchange design restrictions may occur, which would lead to a delay in the completion of the PID phase.	The required traffic studies will clarify the storage demands.	Medium	Spacing challenges have medium probability, with moderate impacts to project alternatives.	Mitigate	Understand scope and funding impacts and take measures to move forward with a successful project.	Design Team	5/9/2016
Active	5	Threat	ROW	Property Access	As a result of property access locations, driveway elimination may occur, which would lead to a delay in the completion of the PID phase.	SPUI alternative will most likely have the biggest impact to the driveways.	High	Access challenges have medium probability, with high impact to project	Avoid	Develop plan to move driveways to not disrupt circulation of businesses.	Design Team	5/9/2016
Active	6	Threat	ROW	Right of Way Acquisition Delays	As a result of property acquisitions required from adjacent properties, acquisition delays may occur, which would lead to overall project delays.	The SPUI alternative will most likely have the biggest impact to adjacent properties.	Low		Mitigate	Resolve objections to Right of Way acquisition in a timely manner.	Project Manager	5/9/2016
Active	7	Threat	PM	Lack of Project Funding	As a result of timing and prioritization for allocation of funds for the project, funding shortfalls may occur, which would lead to overall project delays or cancellation.	The PA/ED phase is not yet funded.	Medium	Project funding challenges have low probability, with high impact to the project.	Accept	Accept funding changes and rescope project if possible.	Project Manager	5/9/2016
Active	8	Threat	PM	Delay of Locally Preferred Alternative	As a result of the PDT requiring an additional Alternative, delays in selecting the Locally Preferred Alternative may occur, which would lead to overall project delays or increase in project cost.		Medium	LPA delay probability is low, but impact to project is high.	Mitigate	Work as a PDT to select LPA.	Project Manager	5/9/2016
Active	9	Threat	Construction	Utility Relocation Difficulties	As a result of relocating utilities, delays in coordination with utility companies may occur, which would lead to overall project delays or increase in project cost.	Overhead lines on SE and NW quadrants.	Medium	Utility coordination challenges have a moderate probability with moderate impacts to project.	Mitigate	Proactively coordinate with utility agency to find solution and/or agreement.	Project Manager	5/9/2016
Active	10	Threat	ROW	Right of Way	As a result of inadequate mapping and right of way in PID phase, footprint changes may occur, which would lead to overall project delays or increase in project cost.		Low		Mitigate	Understand footprint changes, specifically impact to cost, scope and environmental; and take action.	Project Manager	5/9/2016
Active	11	Threat	Design	Design Constraints	As a result of right of way or other physical constraints, design exceptions may occur, which would lead to overall project delays or increase in project cost.		Medium	Unanticipated design exceptions have a moderate probability, the impacts to the project are moderate.	Mitigate	Develop fact sheets to apply for design exceptions, otherwise change design to avoid design exceptions.	Project Manager	5/9/2016

LEVEL 1 - RISK REGISTER		Project Name:	SR-60/Rubidoux Blvd Interchange			DIST- EA	1G400	Project Manager	Nader Naguib		
Risk Identification						Risk Rating		Risk Response			
Status	ID #	Type	Category	Title	Risk Statement	Current status/assumptions	Priority Rating	Rationale for Rating	Strategy	Response Actions	Risk Owner	Updated
Active	12	Threat	Environmental	Environmental Regulations	As a result of changes made to environmental regulations, plan changes may occur, which would lead to overall project delays or increase in project cost.		Low		Accept	Understand environmental impacts due to change, update design and supporting documents in a timely fashion.	Project Manager	5/9/2016
Active	13	Threat	Design	Public Support	As a result of public and stakeholder objections, project scope changes may occur, which would lead to overall project delays or increase in project cost.		Medium	Major scope changes have a low probability, with a high impact.	Accept	Redevelop design based on scope change, and understand next steps to get project back on track.	Project Manager	5/9/2016
Active	14	Threat	Environmental	Environmental Assessment	As a result of the initial site assessment, environmental concerns may occur, which would lead to overall project delays or increase in project cost.		Low		Accept	Understand environmental impacts due to change, update design and supporting documents in a timely fashion.	Project Manager	5/9/2016
Active	15	Threat	Design	Bridge Habitat	As a result of the bridge retrofit/replacement, species habitat findings may occur, which would lead to overall project delays or increase in project cost.		Low		Accept	Develop plan to handle habitat according to environmental standards.	Project Manager	5/9/2016

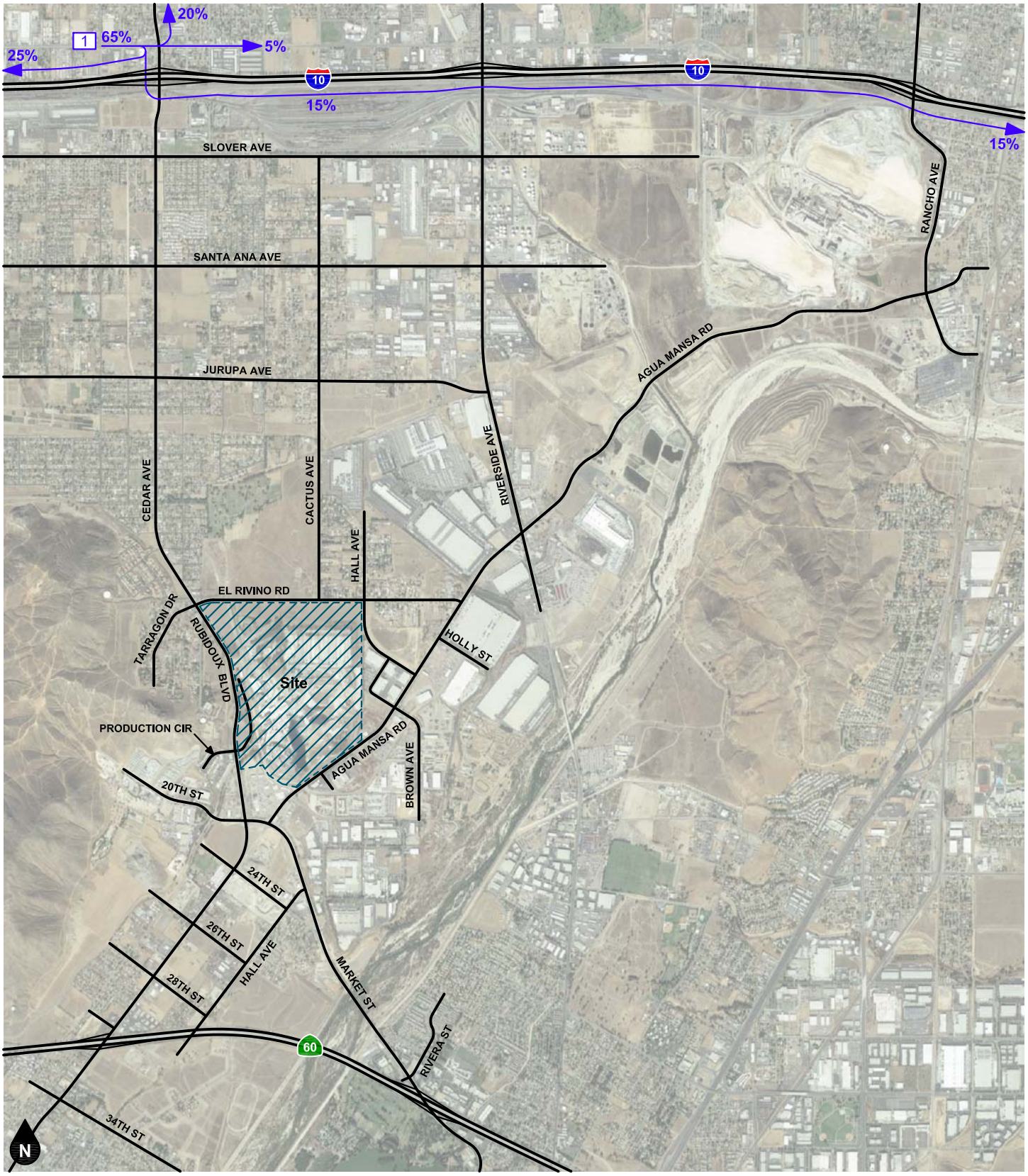
Design Exception Risk Register

Attachment J

Design Exception Risk Assessment					Project Name:		SR-60/Rubidoux Blvd Interchange				DIST- EA:	08-1G400	9/6/2017
Design Standard Information					Location Information						Assessment		
ID#	M/A	HDM Index	HDM Index Heading	Design Standard	Alt #	Facility	Limits	Standard	Proposed	Existing Condition	Justification	Probability of Approval	Notes
1	M	302.1	Shoulder Width	The shoulder widths given in Table 302.1 shall be the minimum continuous usable width of paved shoulder on highways.	2,3	Mainline	SR-60 Mainline beneath Rubidoux Blvd Overcrossing	10 ft.	2 ft inside & 8 ft outside.	Y	Existing substandard inside and outside shoulder width on SR-60 is proposed to remain on Alt 2, and Alt 3. Changing the shoulder width on the mainline would require substantial construction costs and staging efforts.	High	
2	M	309.1 (3)	Horizontal Clearances (1)	The following minimum horizontal clearances shall apply to all objects that are closer to the edge of traveled way than the clear recovery zone distances listed above: (a) The minimum horizontal clearance to all objects, such as bridge rails and safety-shaped concrete barriers, as well as sand-filled barrels, metal beam guardrail, etc., on all freeway and expressway facilities, including auxiliary lanes, ramps, and collector-distributor roads, shall be equal to the standard shoulder width of the highway facility as stated in Table 302.1. A minimum clearance of 4 feet shall be provided where the standard shoulder is less than 4 feet.	2,3	Mainline	SR-60 Mainline beneath Rubidoux Blvd Overcrossing	10 ft.	2 ft.	Y	Existing substandard horizontal clearance from the median concrete barrier on SR-60 is proposed to remain on Alt 2, and Alt 3. Changing the horizontal clearance on the mainline would require substantial construction costs and staging efforts.	High	
3	M	504.3 (3)	Distance Between Ramp Intersection and Local Road Intersection (1)	The minimum distance (curb return to curb return) between ramp intersections and local road intersections shall be 400 feet.	2	Local	Rubidoux Blvd.	400 ft minimum from curb return to curb return.	Approx. 125ft between 30th St and the WB On-Ramp.	Y	Existing substandard intersection spacing is proposed to remain on Alt 2. Changing the existing intersection spacing between Rubidoux Blvd and ramps would require substantial construction costs, R/W impacts, and staging efforts.	High	
4	A	403.3	Angle of Intersection	When a right angle cannot be provided due to physical constraints, the interior angle should be designed as close to 90 degrees as is practical, but should not be less than 75 degrees. Mitigation should be considered for the affected intersection design features.	2	Local	Rubidoux Blvd & Ramps	75 degree minimum.	Approx. 50 degrees.	Y	Existing substandard intersection angle is proposed to remain on Alt 2. Changing the existing angle of intersection between Rubidoux Blvd and ramps would require substantial construction costs, R/W impacts, and staging efforts.	Medium	
5	A	504.8	Access Control at Ramp Terminal	At such junctions, for new construction, access control should extend 100 feet beyond the end of the curb return or ramp radius in urban areas and 300 feet in rural areas, or as far as necessary to ensure that entry onto the facility does not impair operational characteristics.	2,3	Local	Rubidoux Blvd.	100 ft beyond end of curb return	Approx. 50 ft.	Y	Existing substandard access control is proposed to remain on Alt 2, and Alt 3. Extending access control south of the EB off ramp would require substantial right of way impacts and permanent closure of a local driveway.	Medium	

APPENDIX I

OTHER DEVELOPMENT TRIP DISTRIBUTIONS



Legend

10% Percent To/From Project

Figure A
Other Development Traffic Analysis Zone 1 Trip Distribution

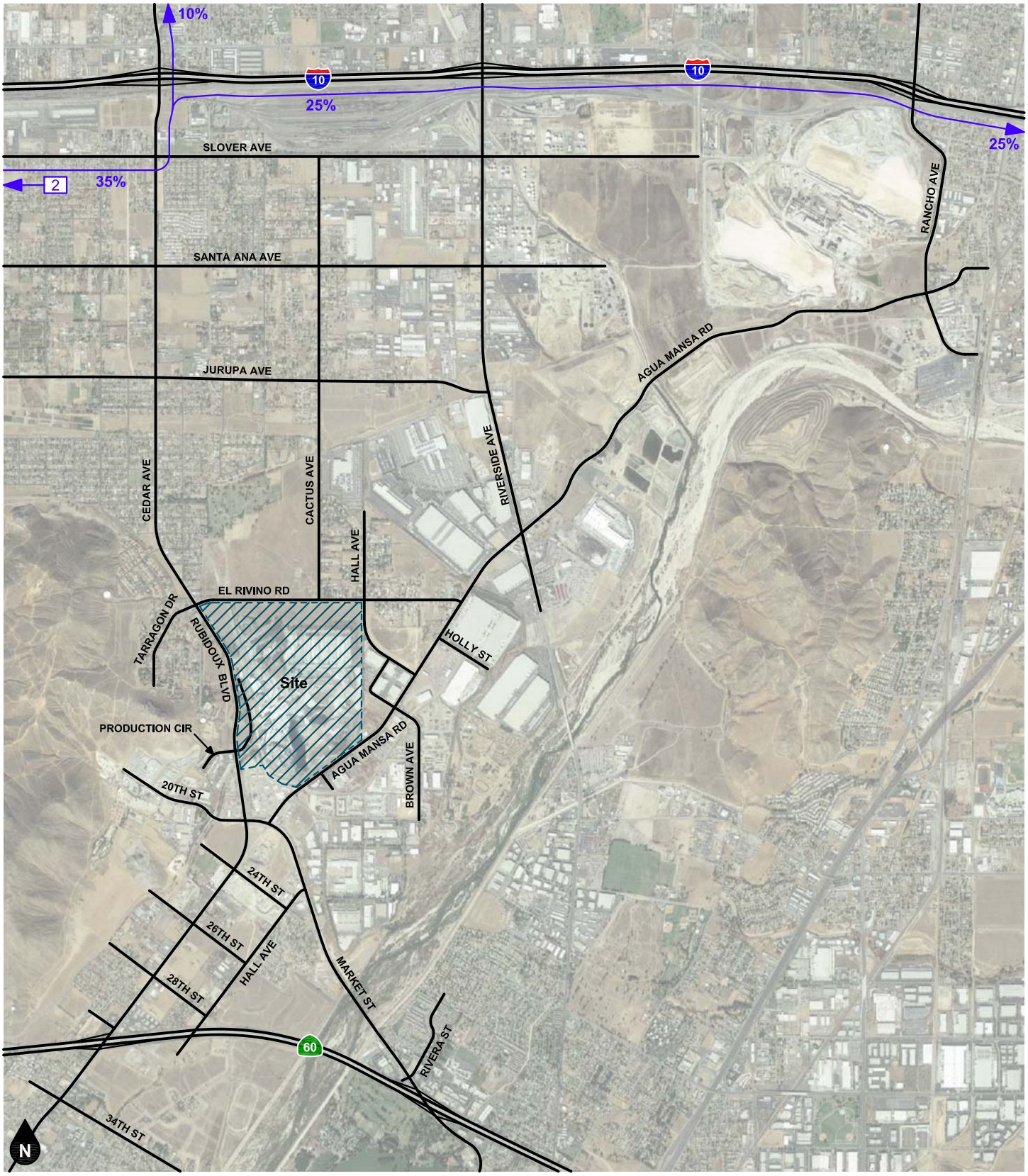


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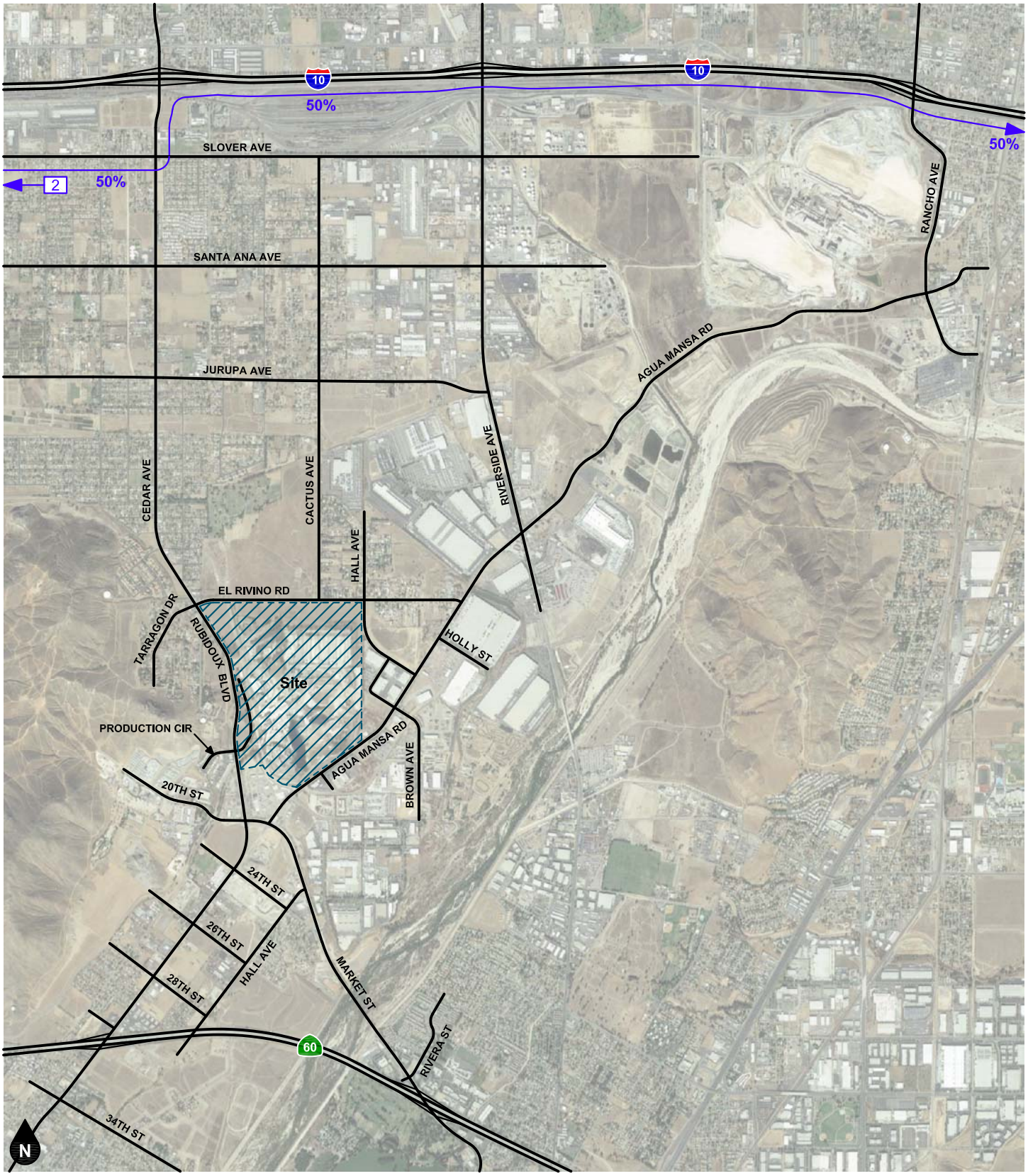
Figure B
Other Development Traffic Analysis Zone 2 Trip Distribution - Cars



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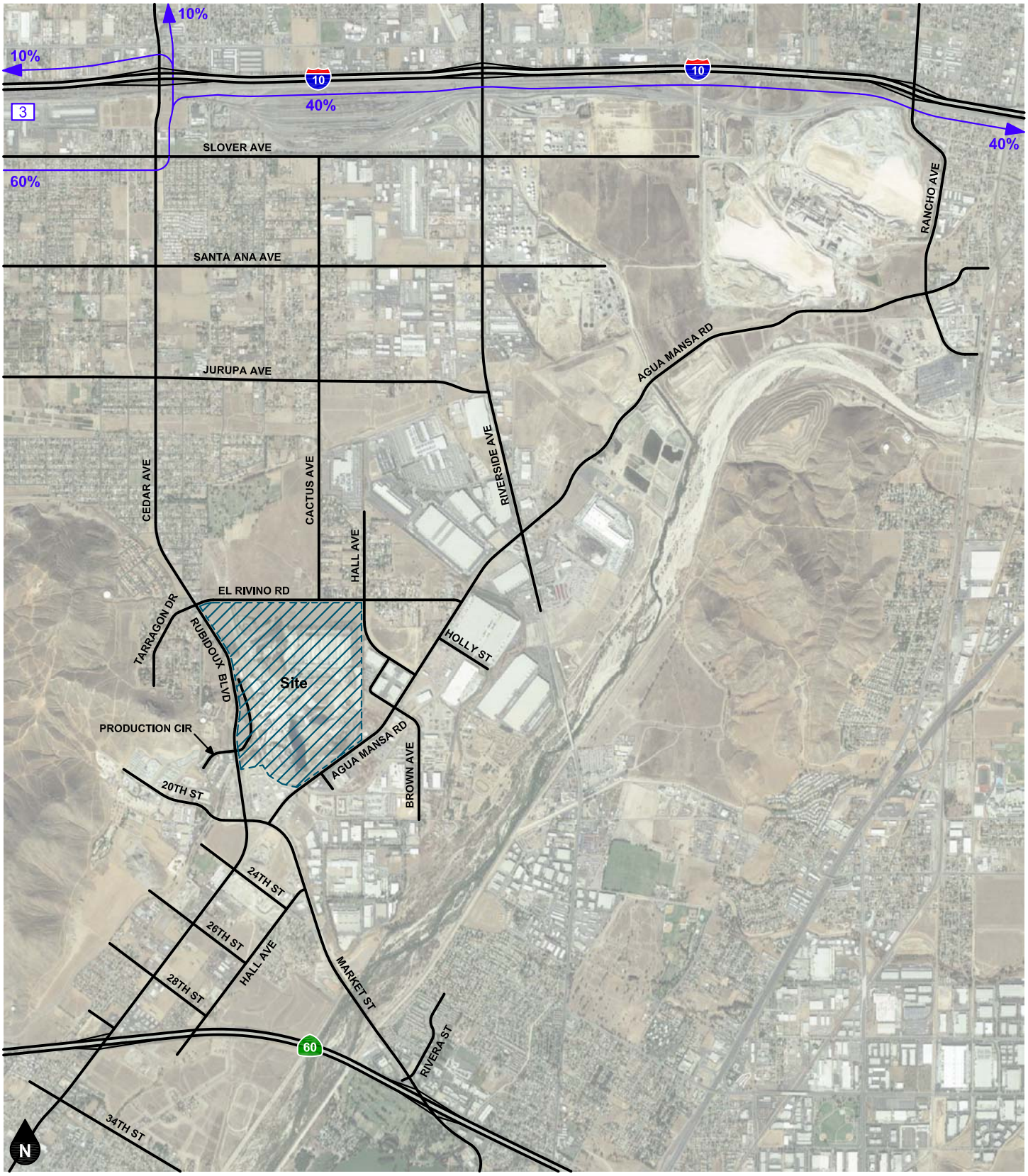
10% Percent To/From Project

Figure C
Other Development Traffic Analysis Zone 2 Trip Distribution - Trucks



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10% Percent To/From Project

Figure D
Other Development Traffic Analysis Zone 3 Trip Distribution - Cars

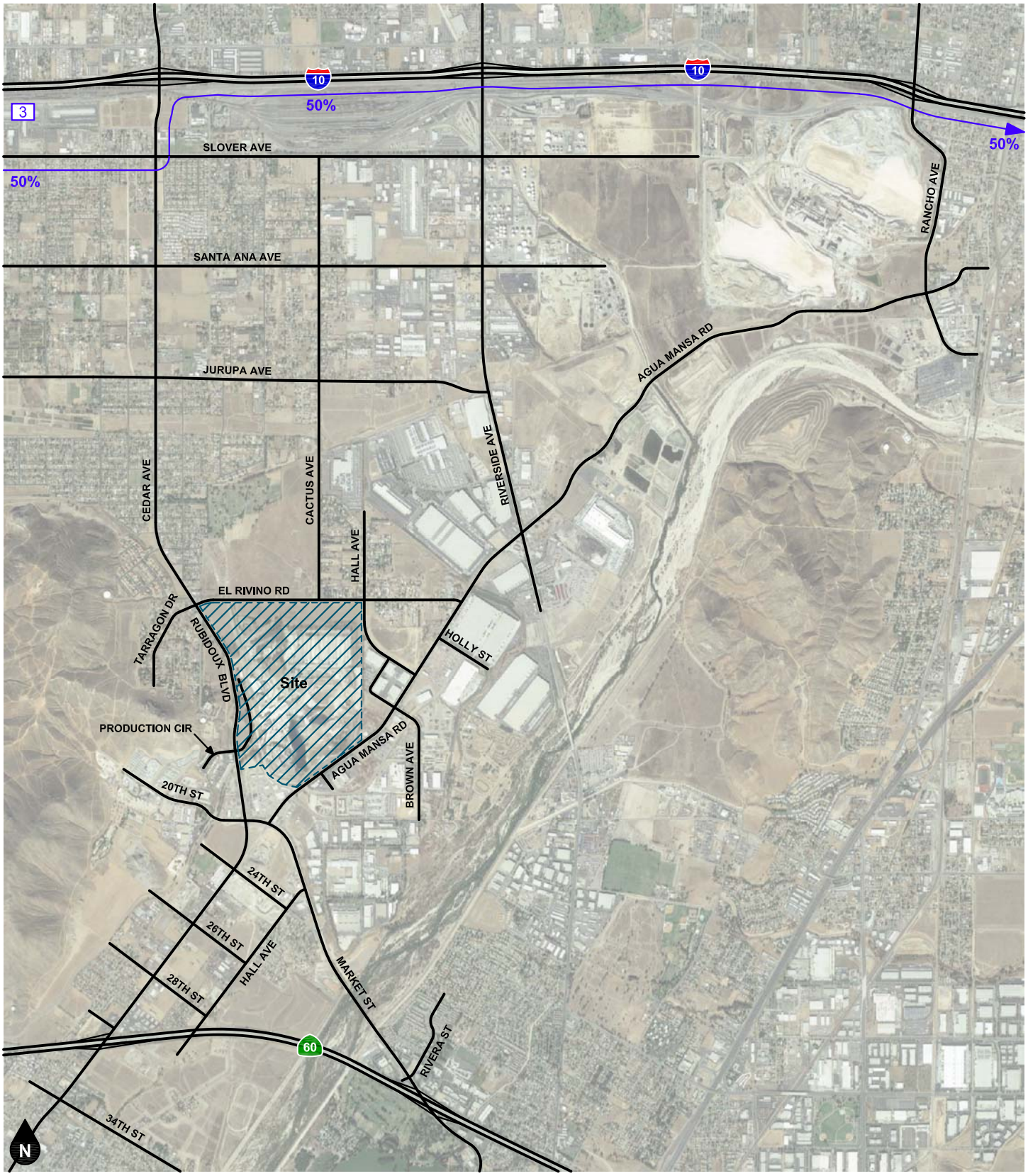

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Figure E
Other Development Traffic Analysis Zone 3 Trip Distribution - Trucks

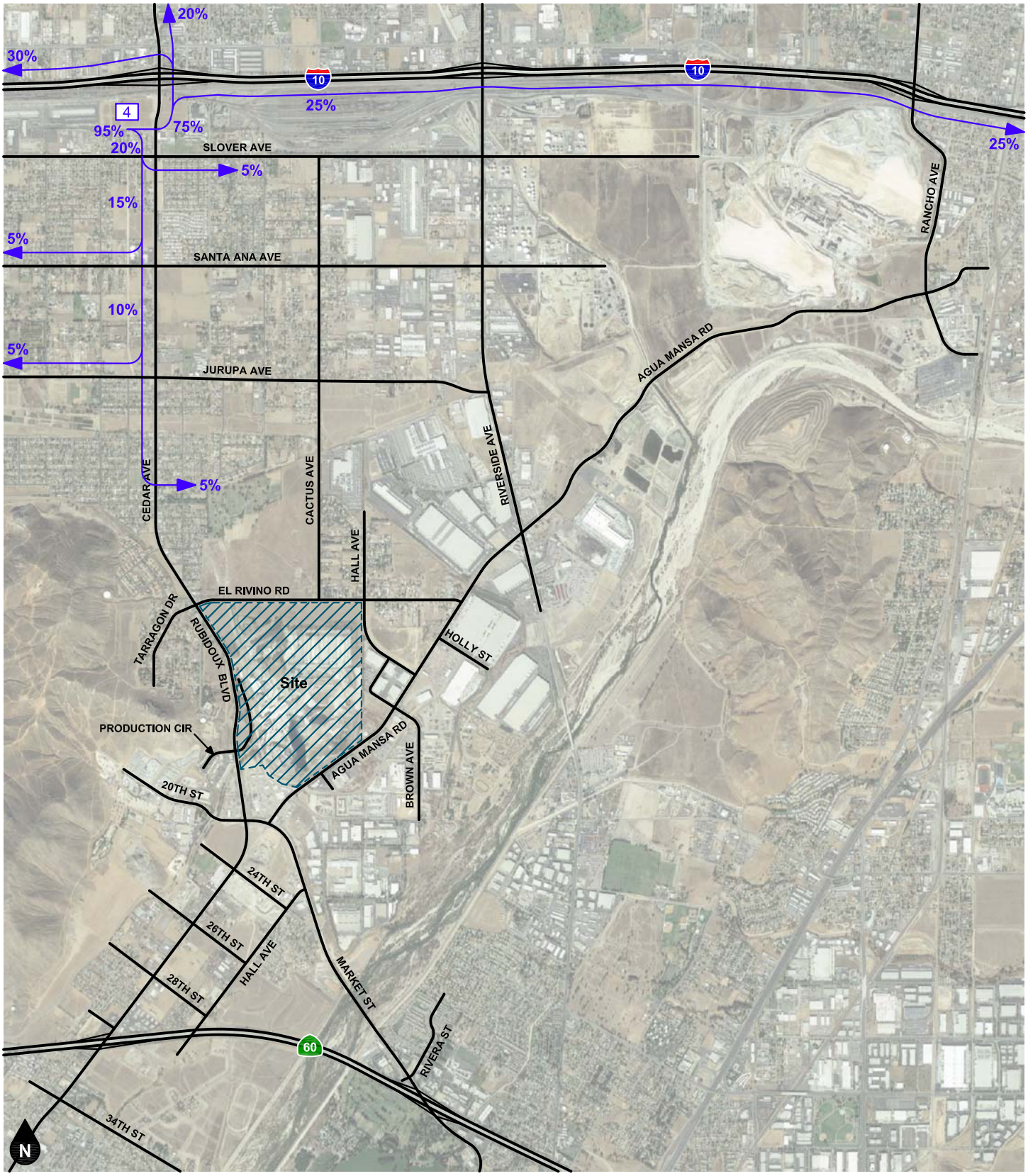

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Figure F
Other Development Traffic Analysis Zone 4 Trip Distribution - Cars

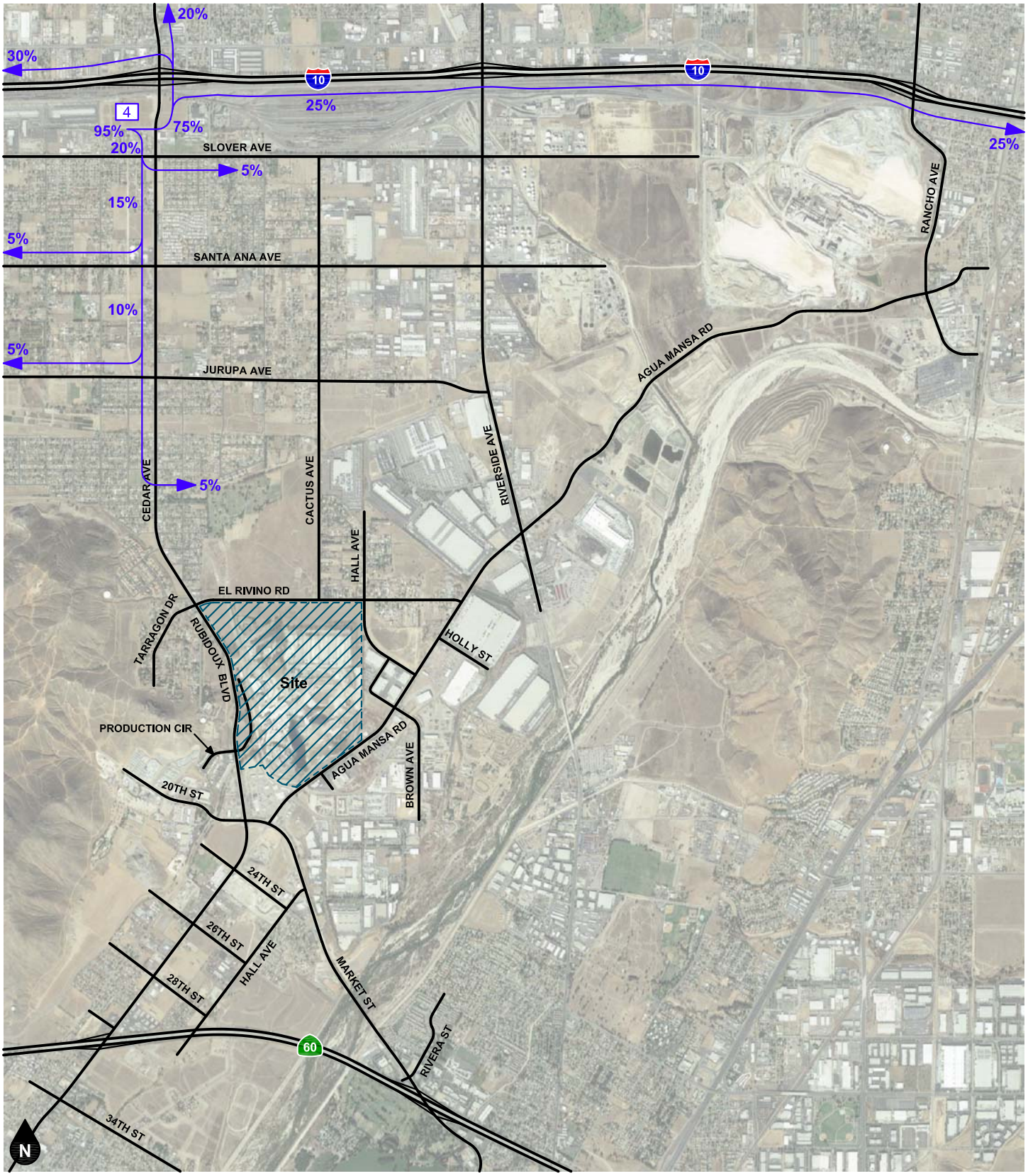

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Figure G
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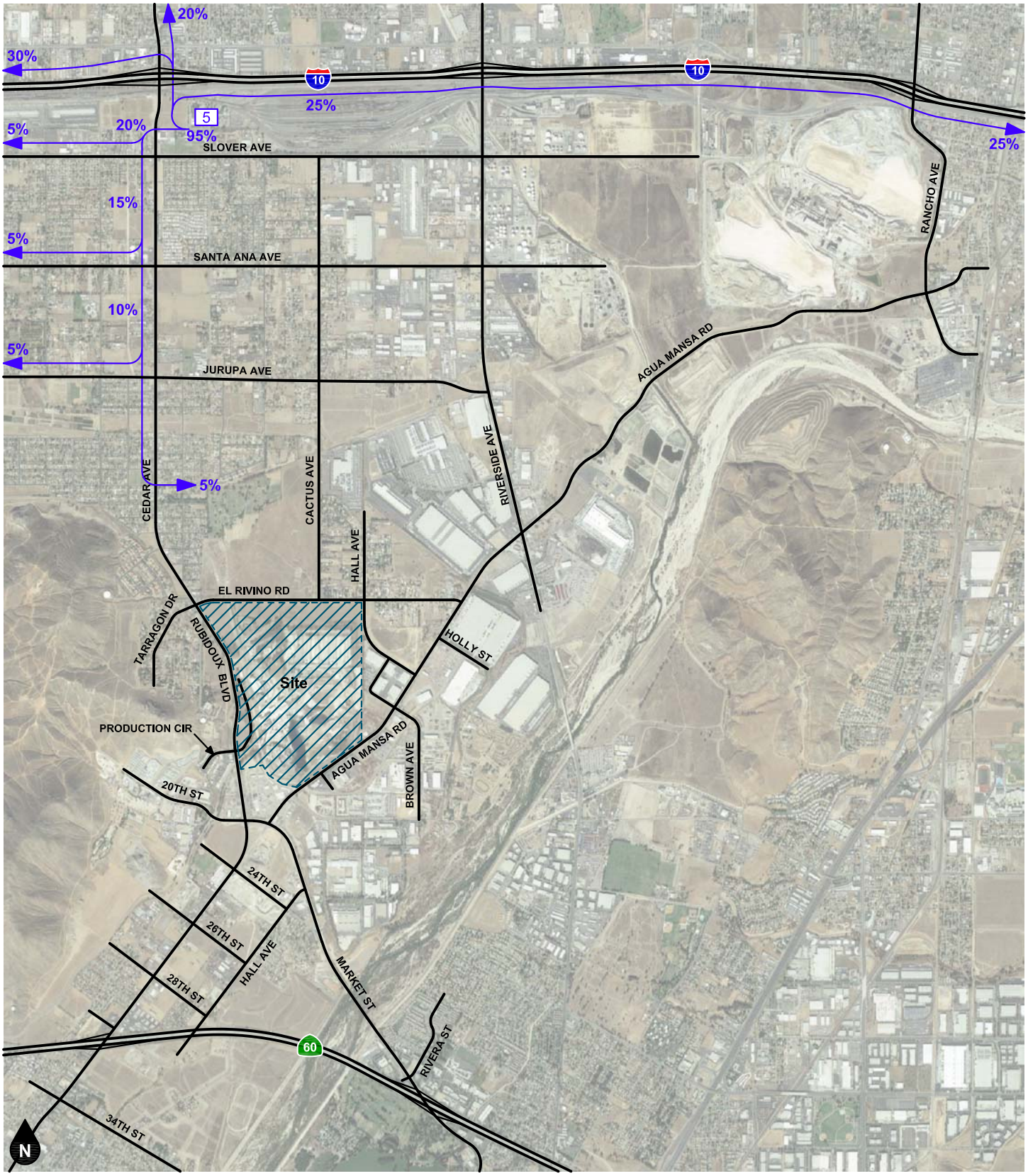

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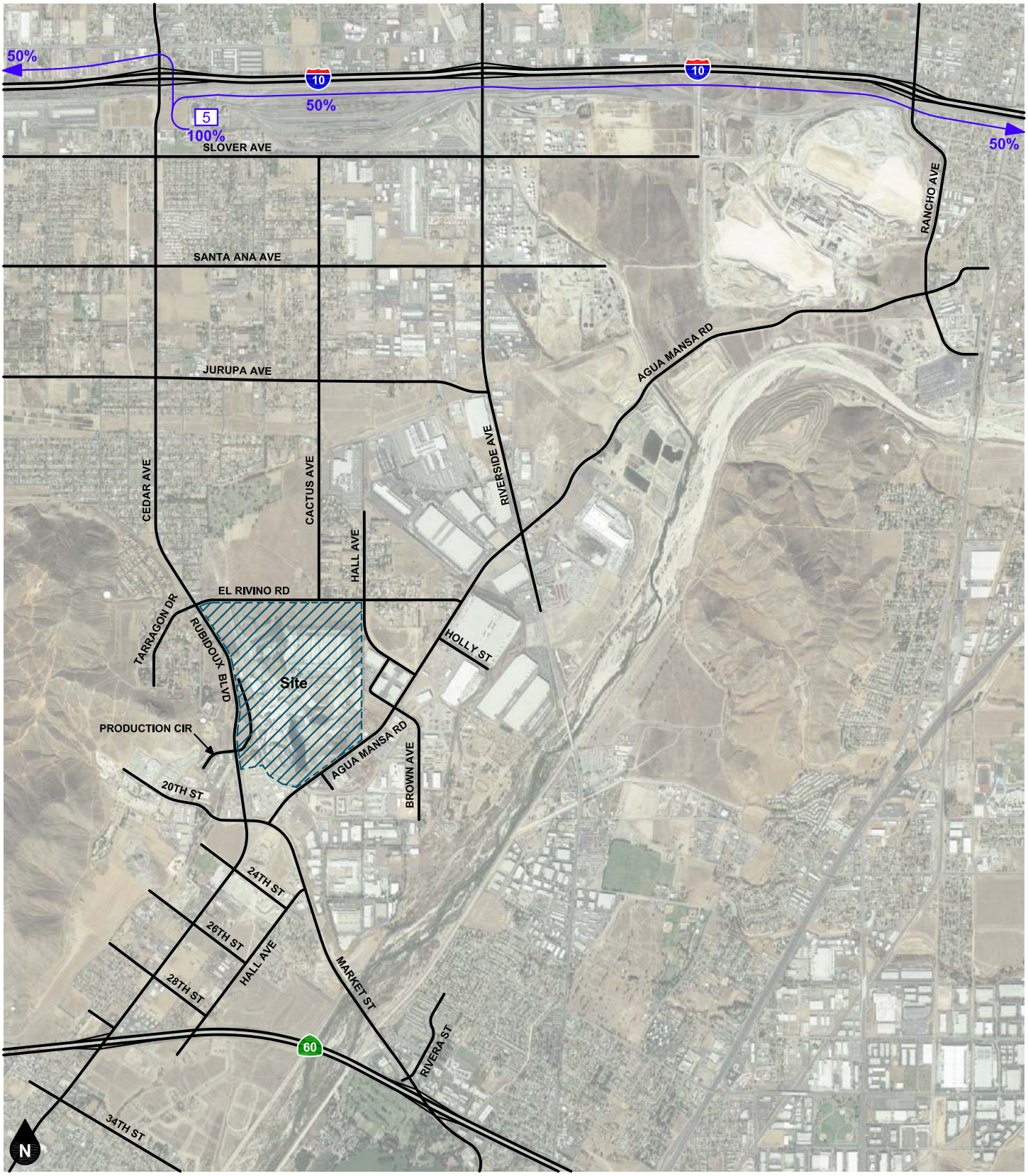
Figure H
Other Development Traffic Analysis Zone 5 Trip Distribution - Cars



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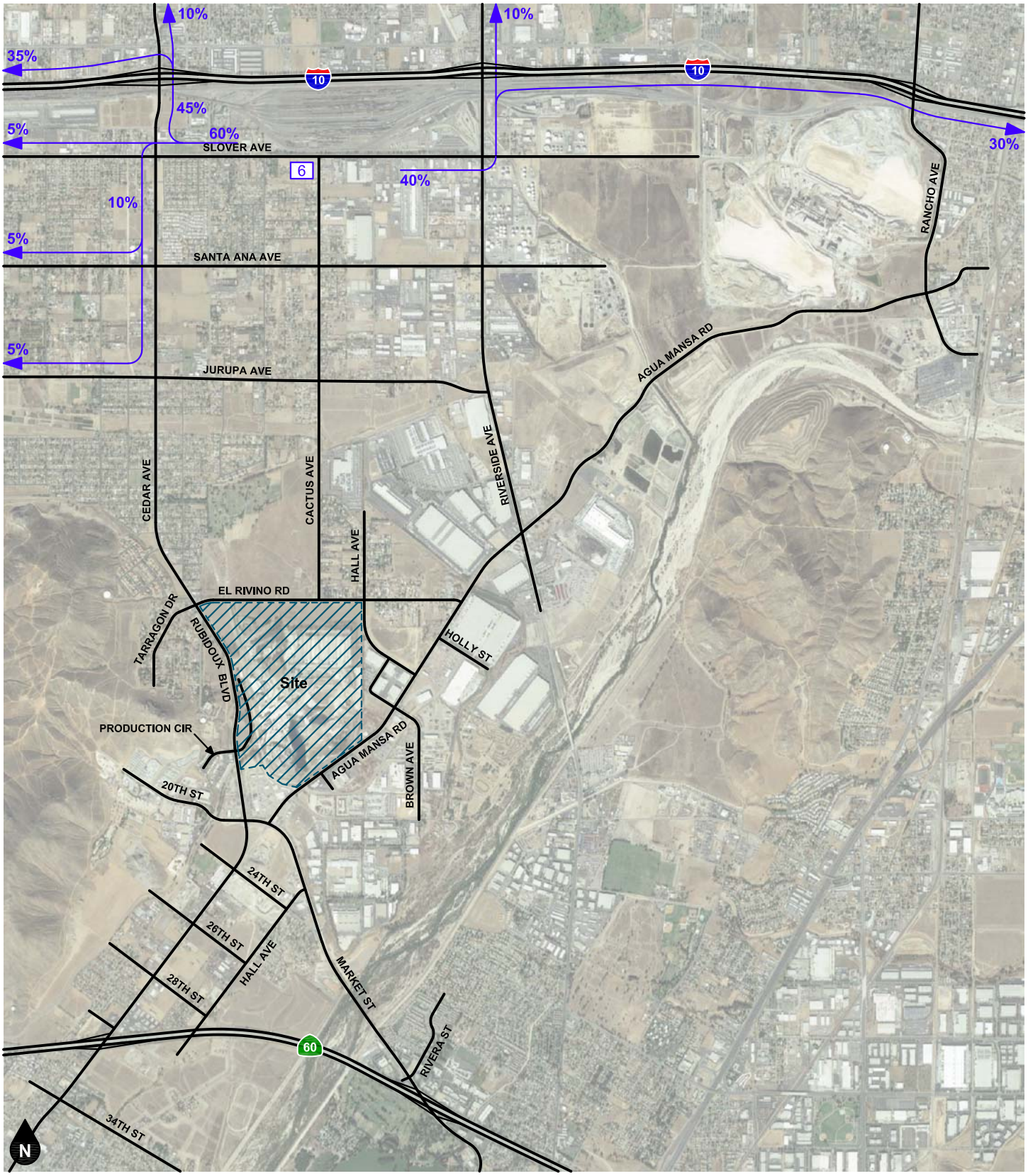
10% Percent To/From Project

Figure I
Other Development Traffic Analysis Zone 5 Trip Distribution - Trucks



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10% Percent To/From Project

Figure J
Other Development Traffic Analysis Zone 6 Trip Distribution - Cars

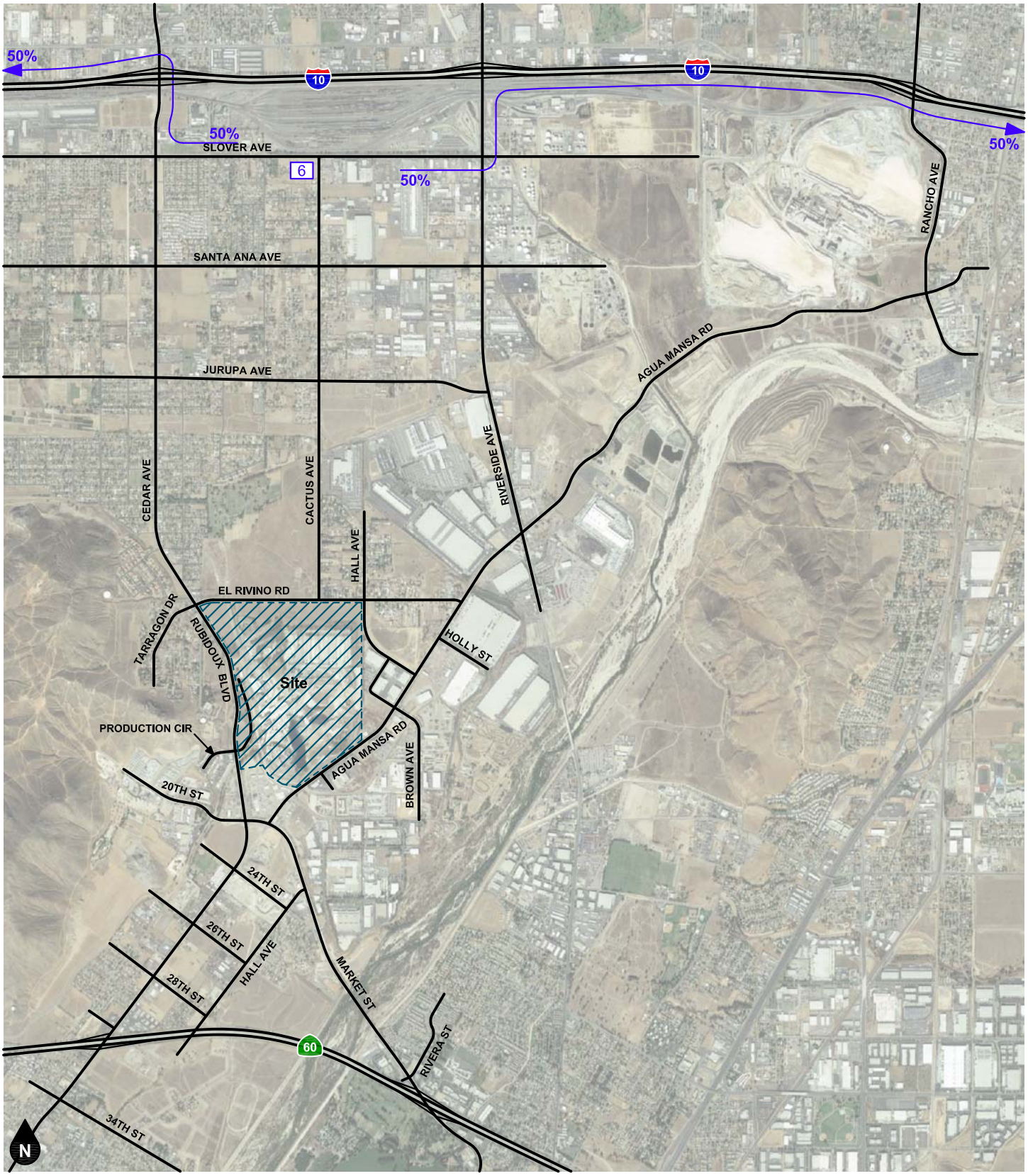

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Figure K
Other Development Traffic Analysis Zone 6 Trip Distribution - Trucks

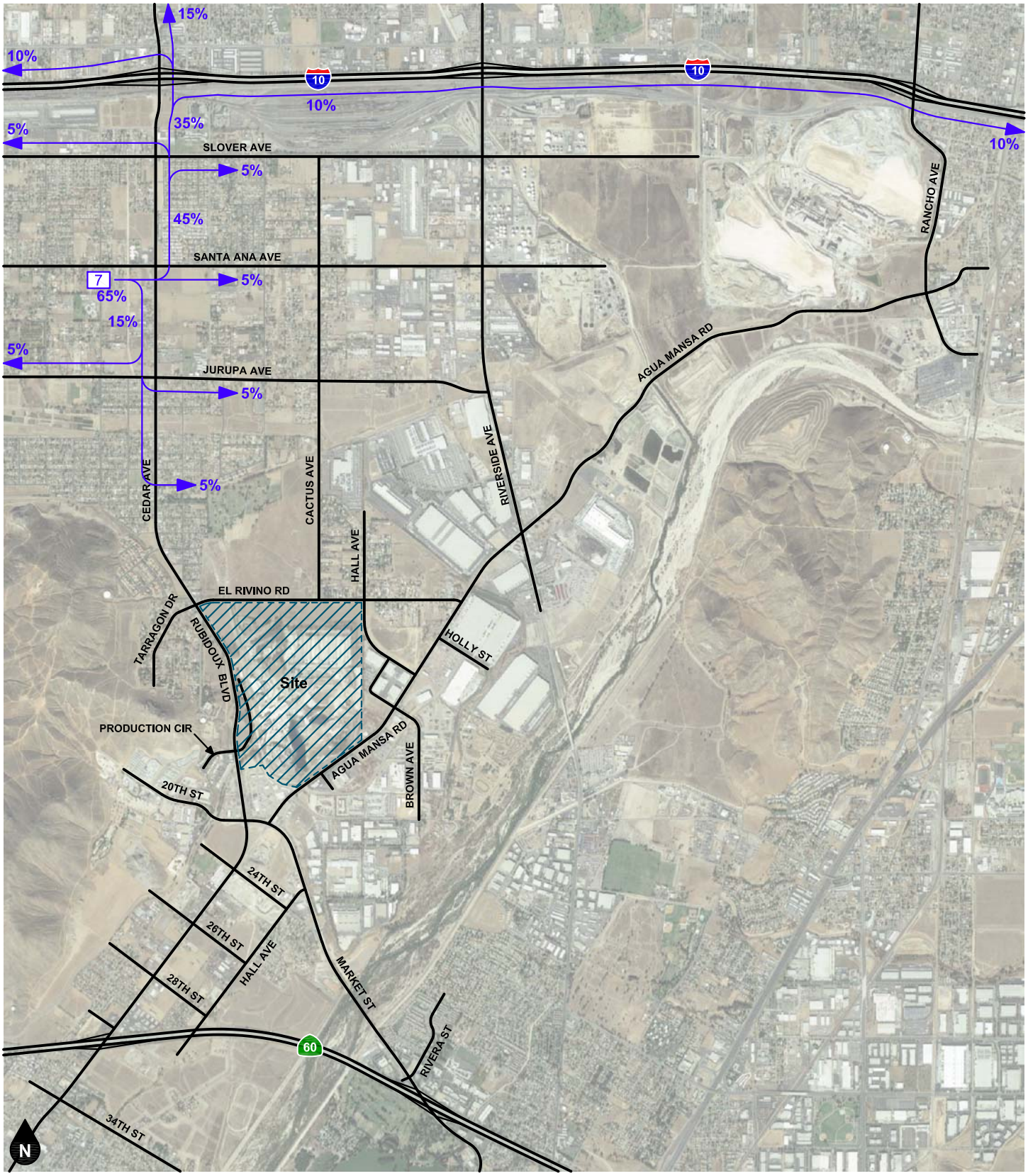

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Figure L
Other Development Traffic Analysis Zone 7 Trip Distribution

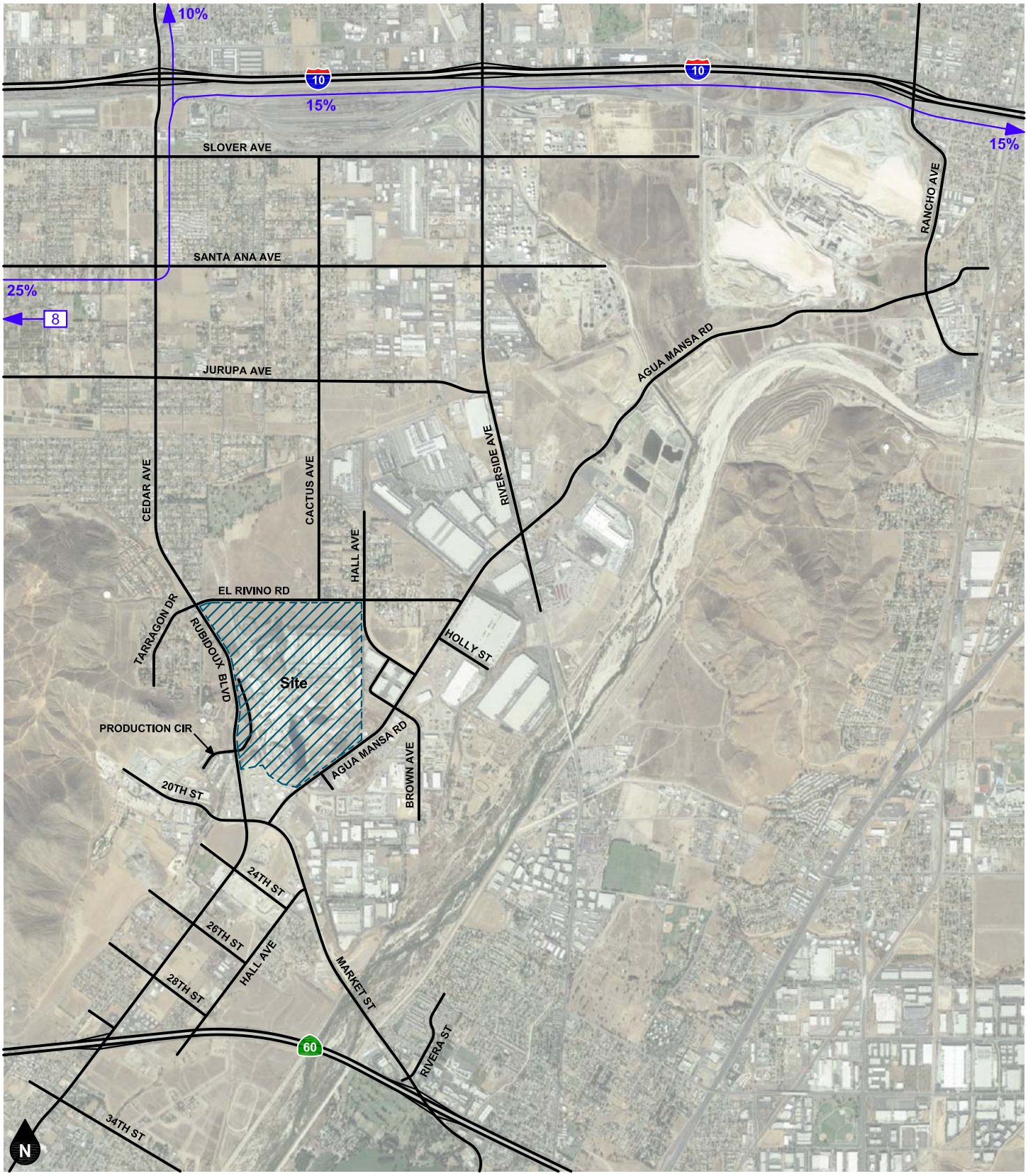

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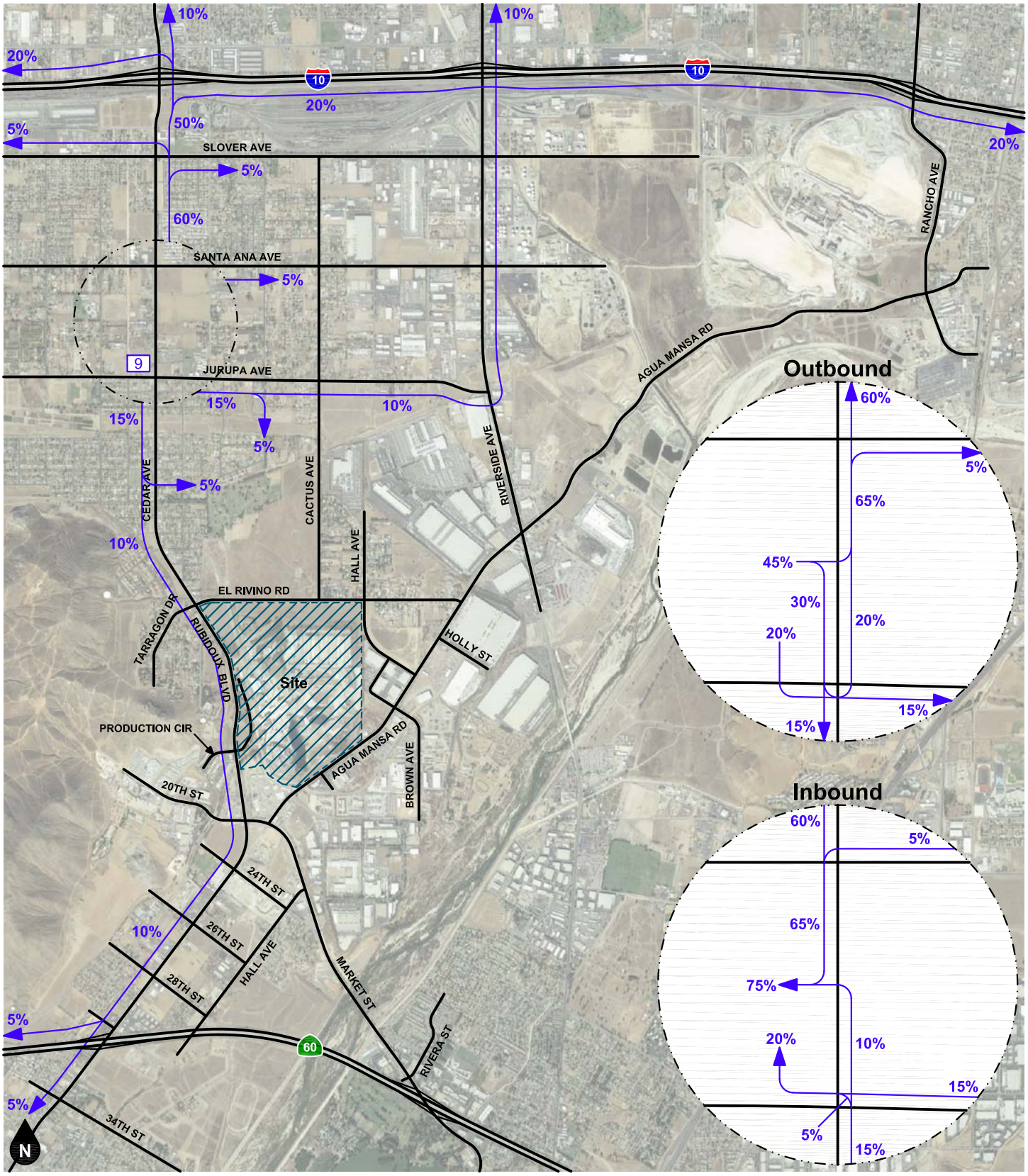
Figure M
Other Development Traffic Analysis Zone 8 Trip Distribution



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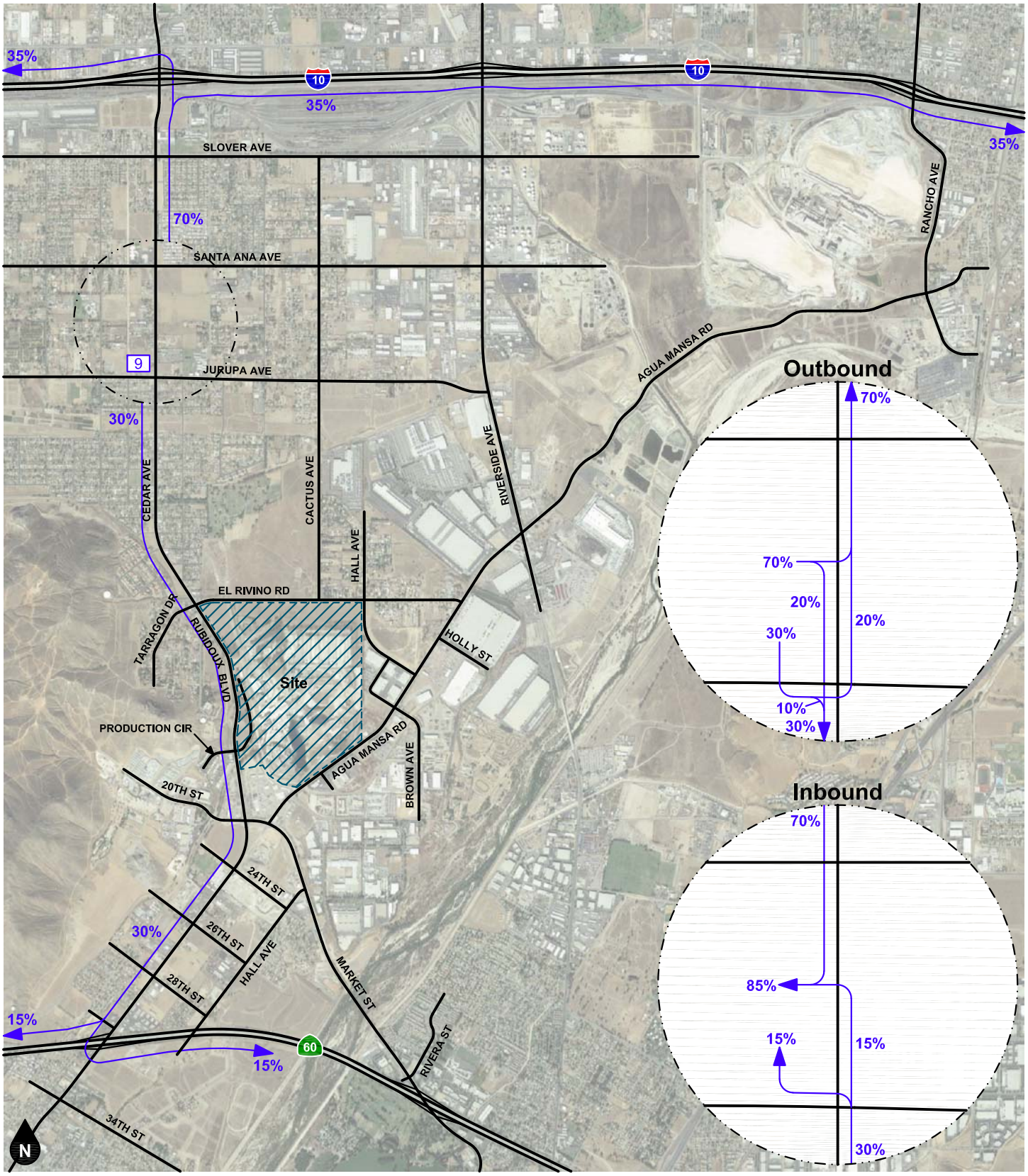
10% Percent To/From Project

Figure N
Other Development Traffic Analysis Zone 9 Trip Distribution - Cars



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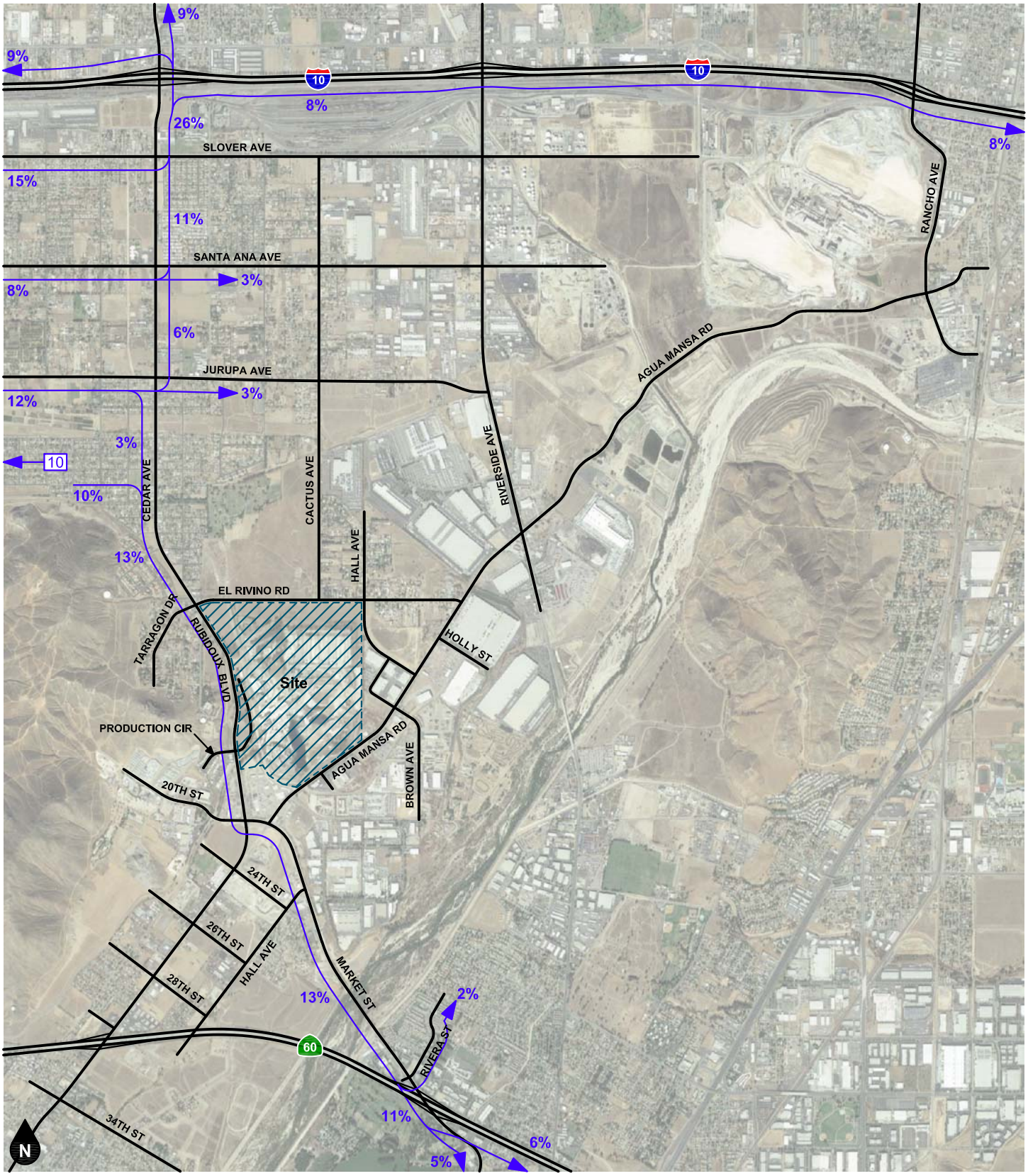
10% Percent To/From Project

Figure O
Other Development Traffic Analysis Zone 9 Trip Distribution - Trucks



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Other Development Traffic Analysis Zone 10 Trip Distribution

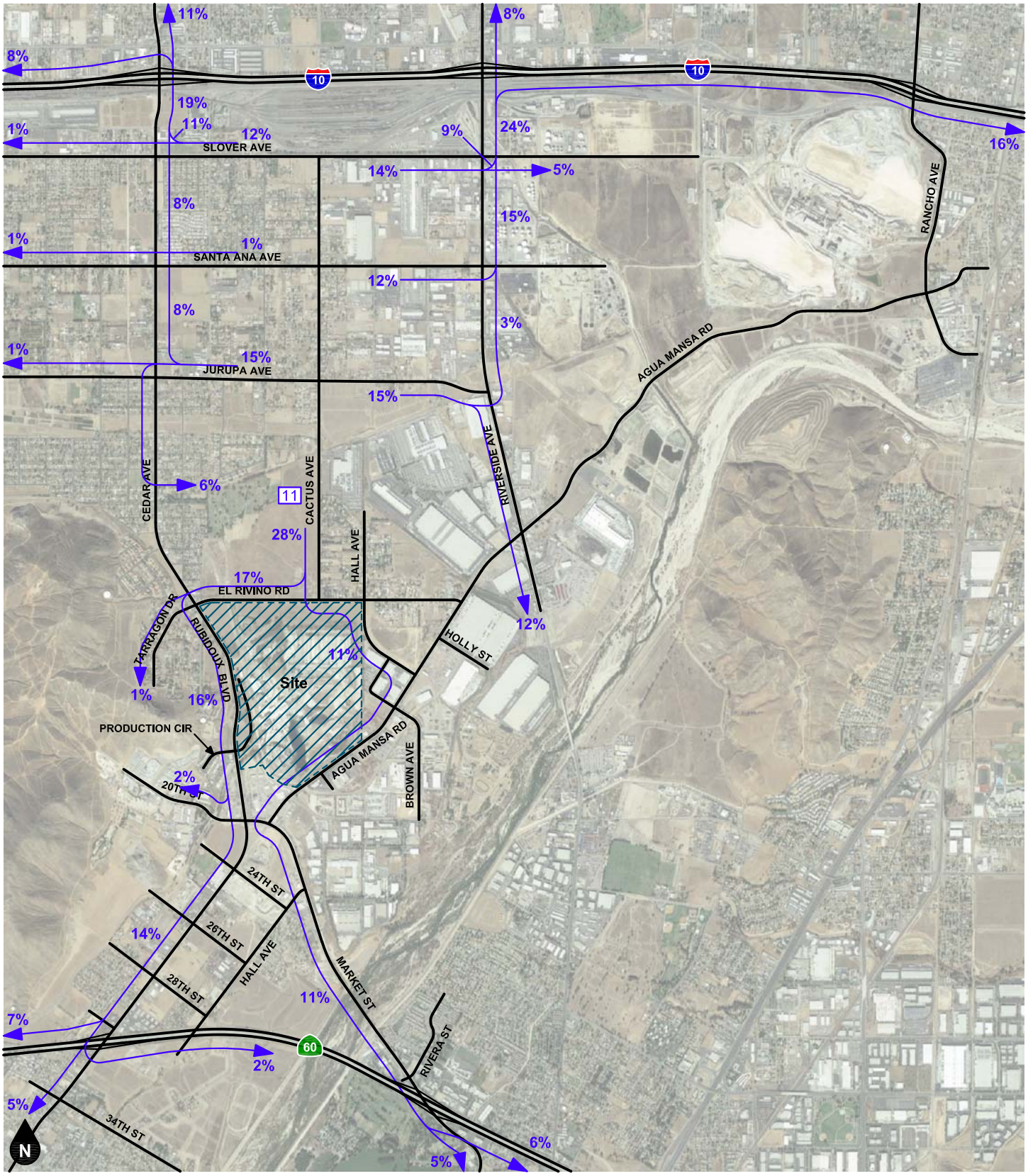

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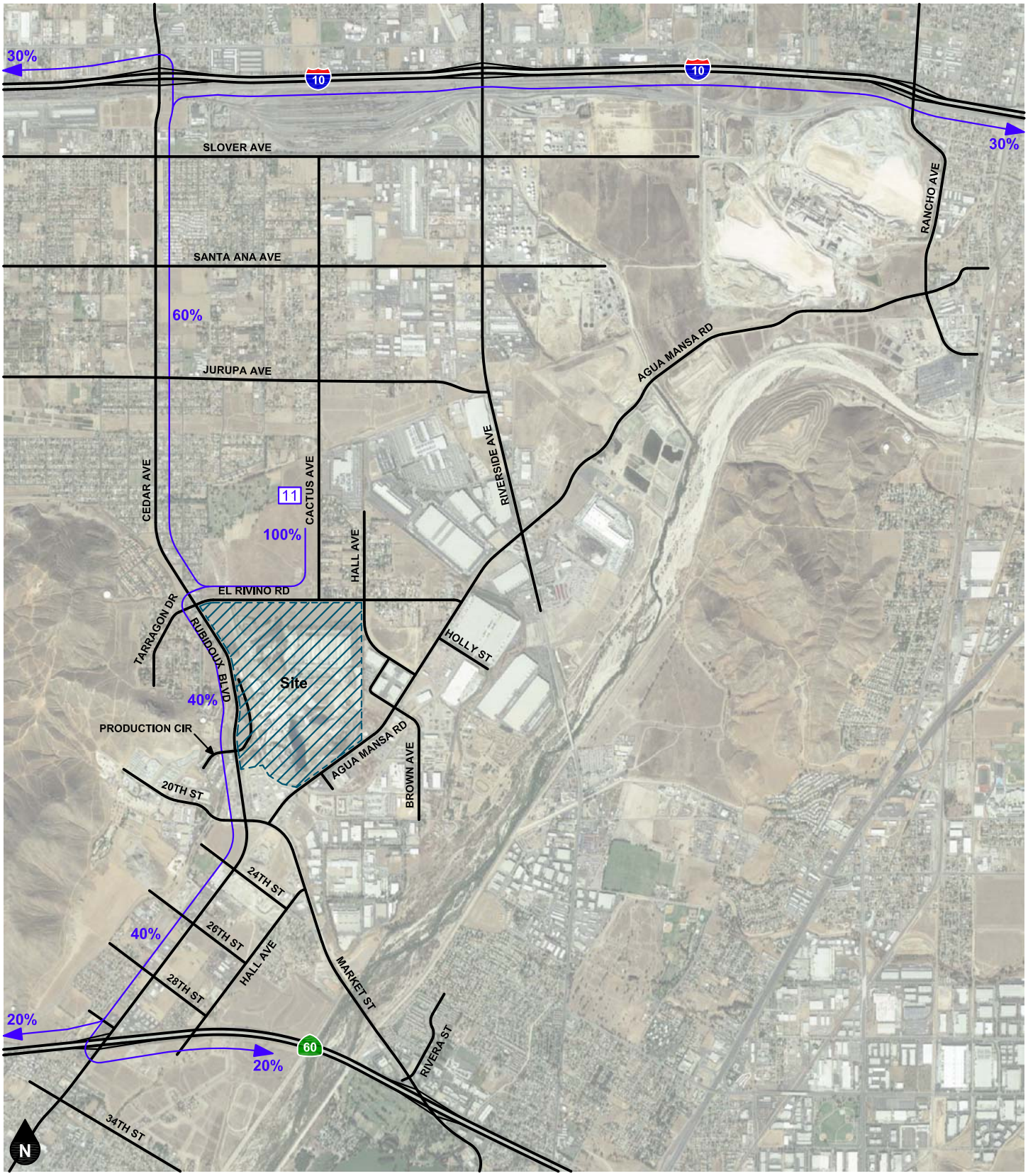
Figure Q
Other Development Traffic Analysis Zone 11 Trip Distribution - Cars



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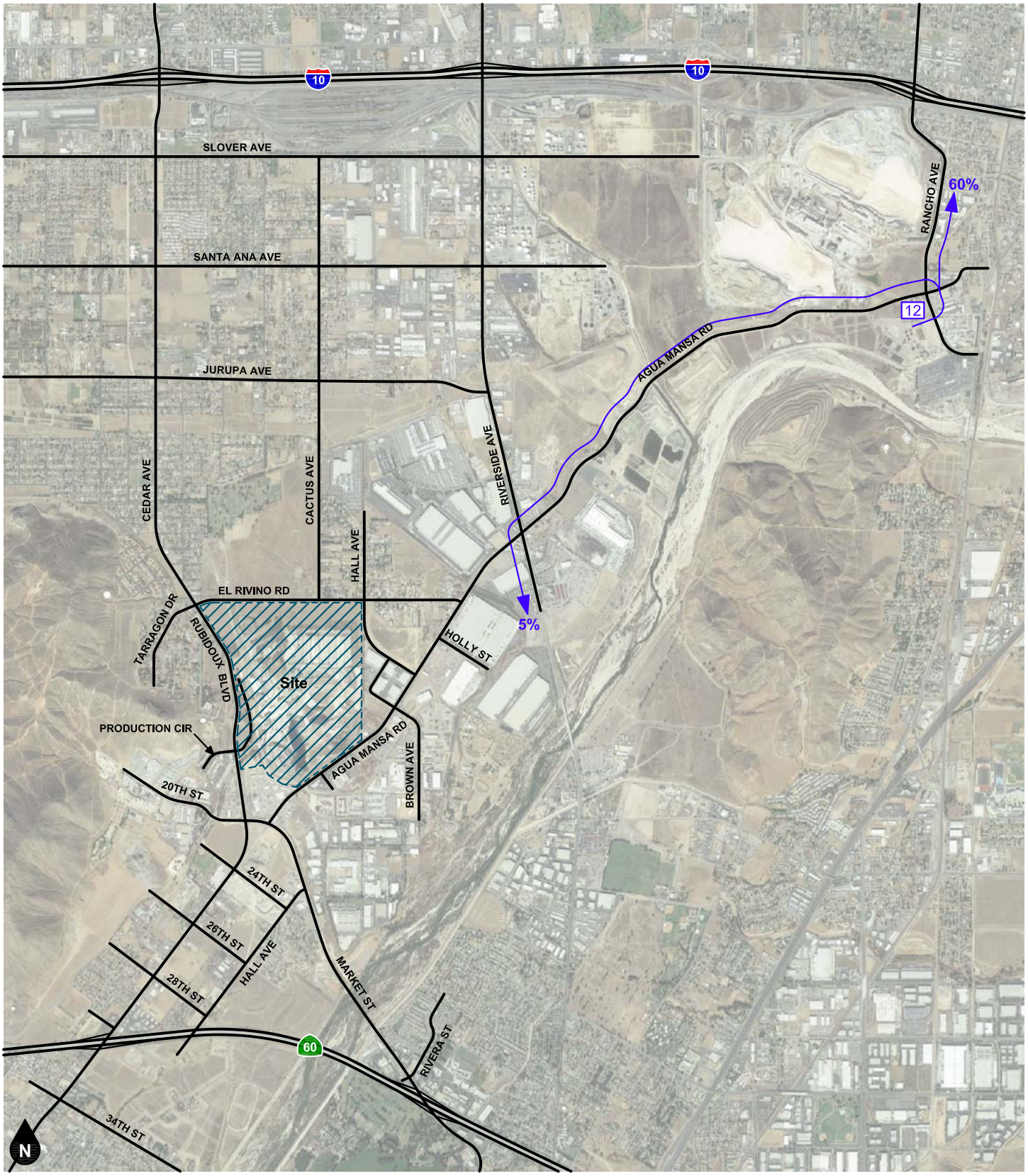
10% Percent To/From Project

Figure R
Other Development Traffic Analysis Zone 11 Trip Distribution - Trucks



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10% Percent To/From Project

Figure S
Other Development Traffic Analysis Zone 12 Trip Distribution - Cars

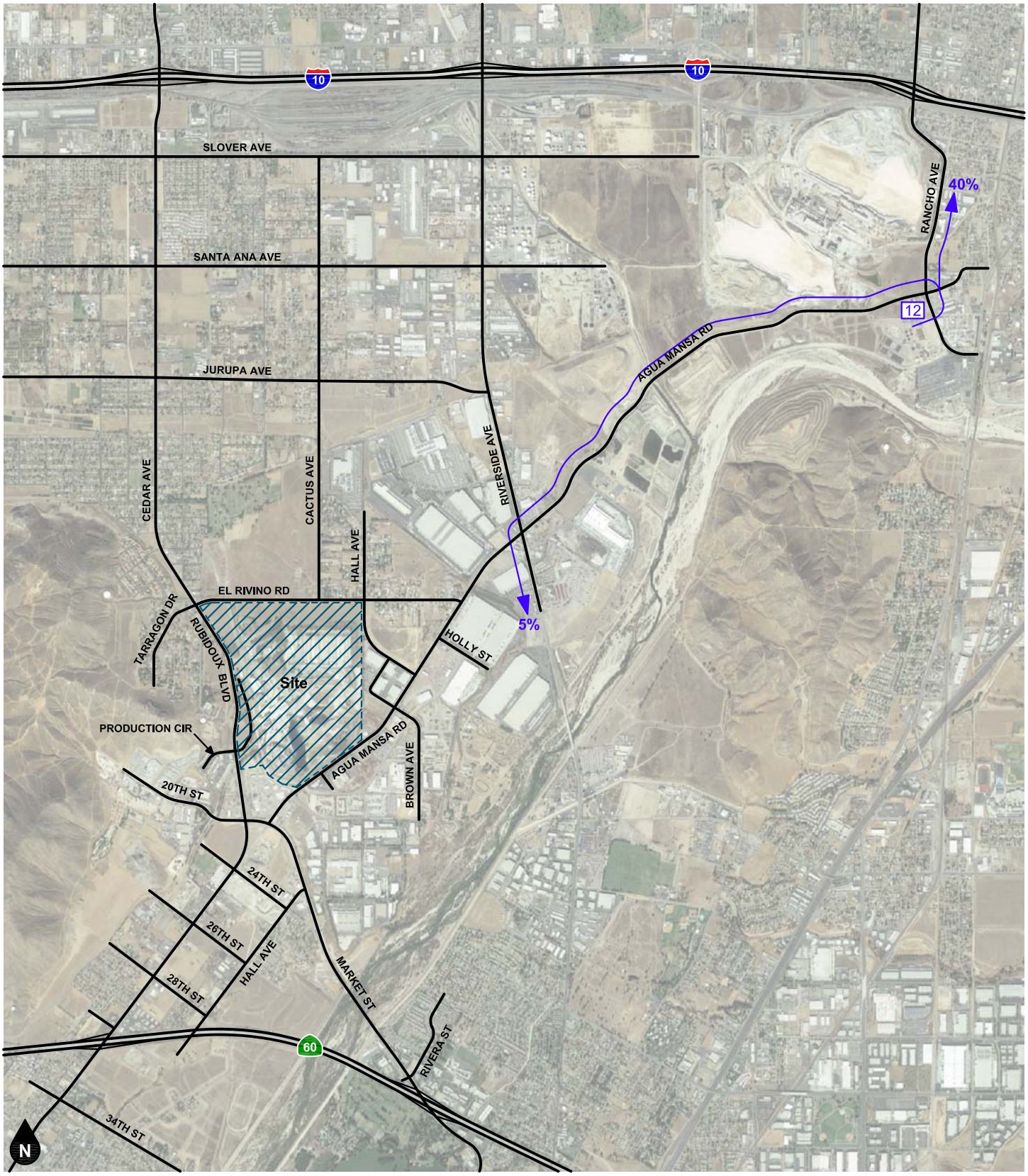

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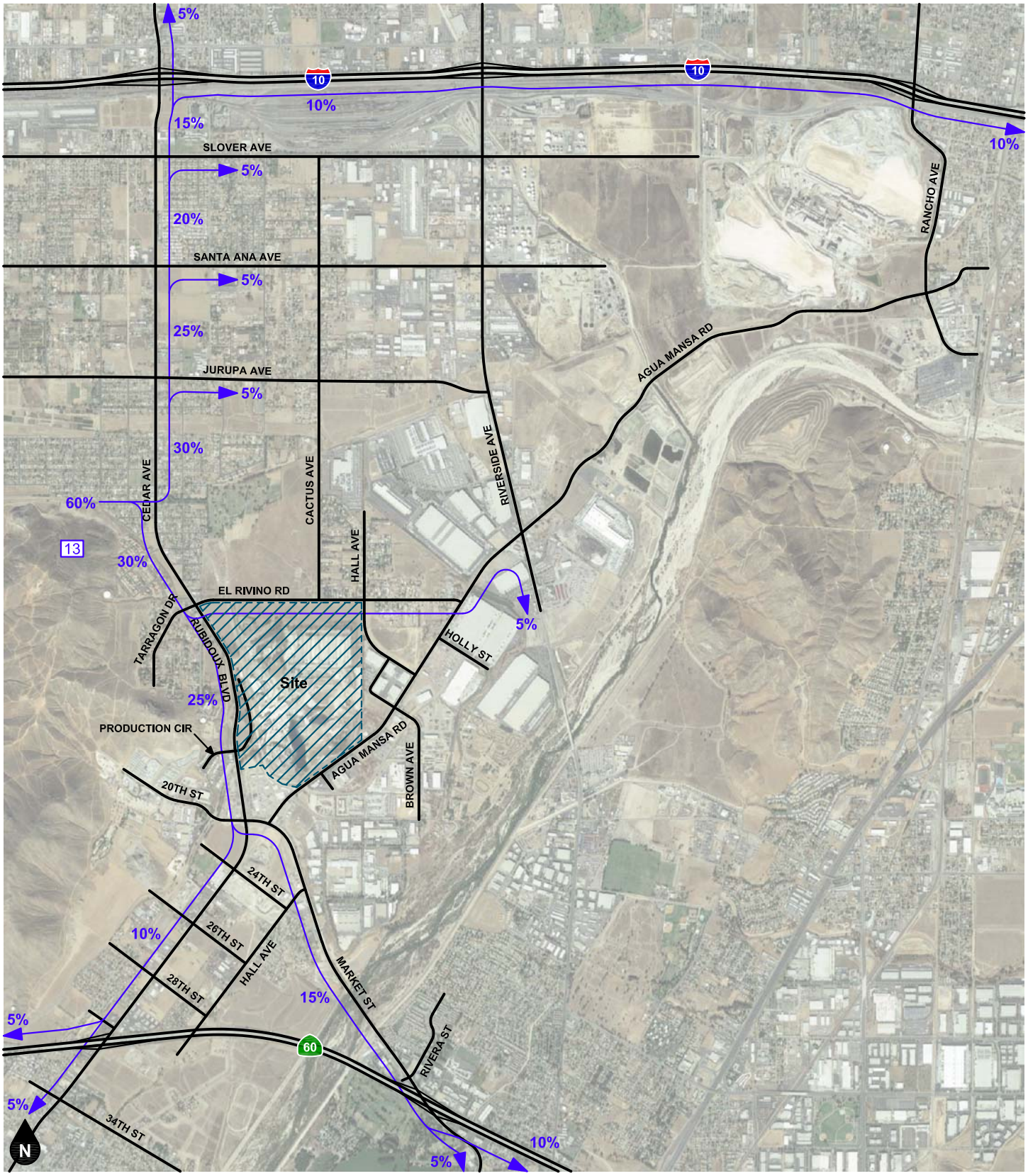
Figure T
Other Development Traffic Analysis Zone 12 Trip Distribution - Trucks



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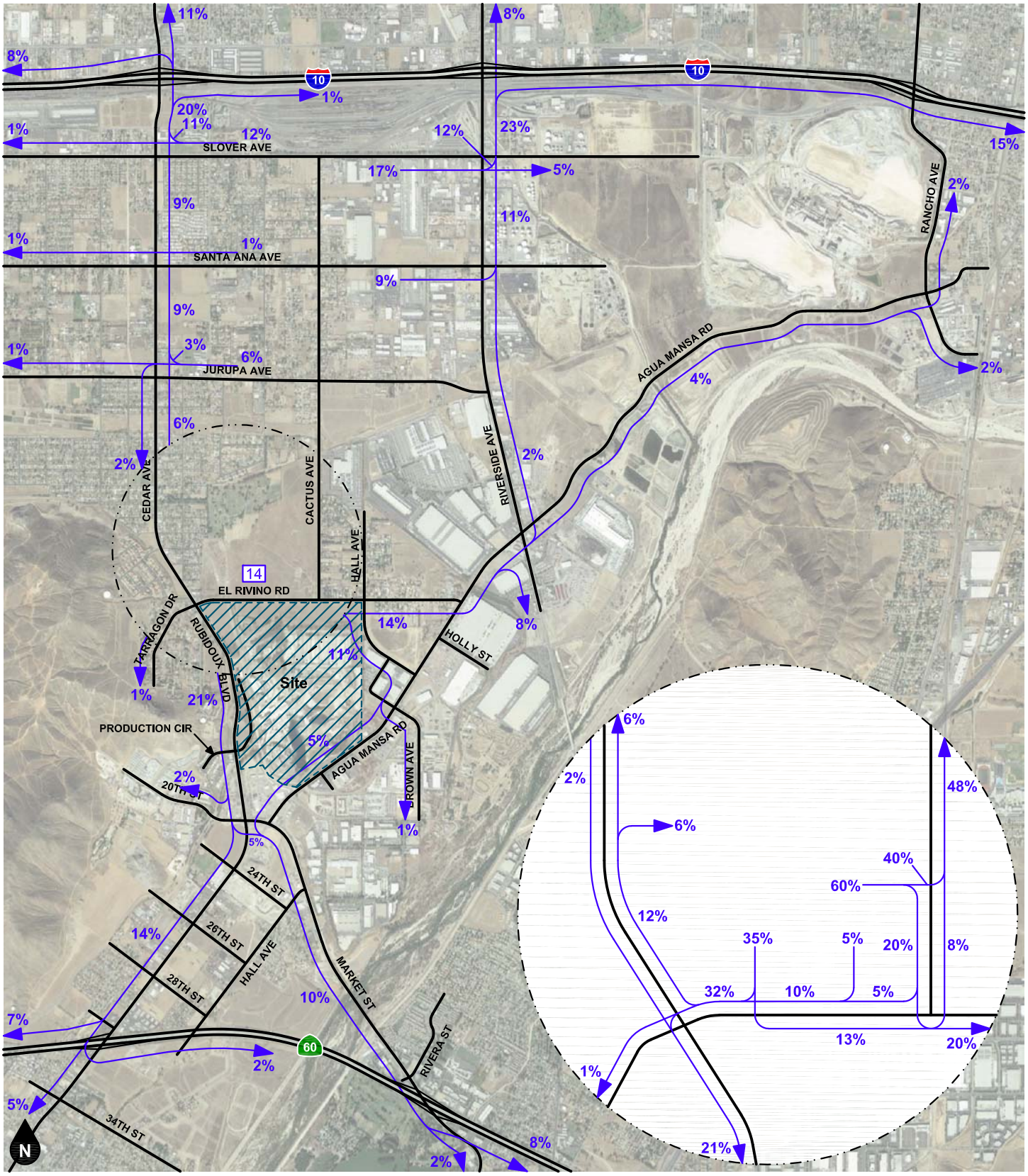
10% Percent To/From Project

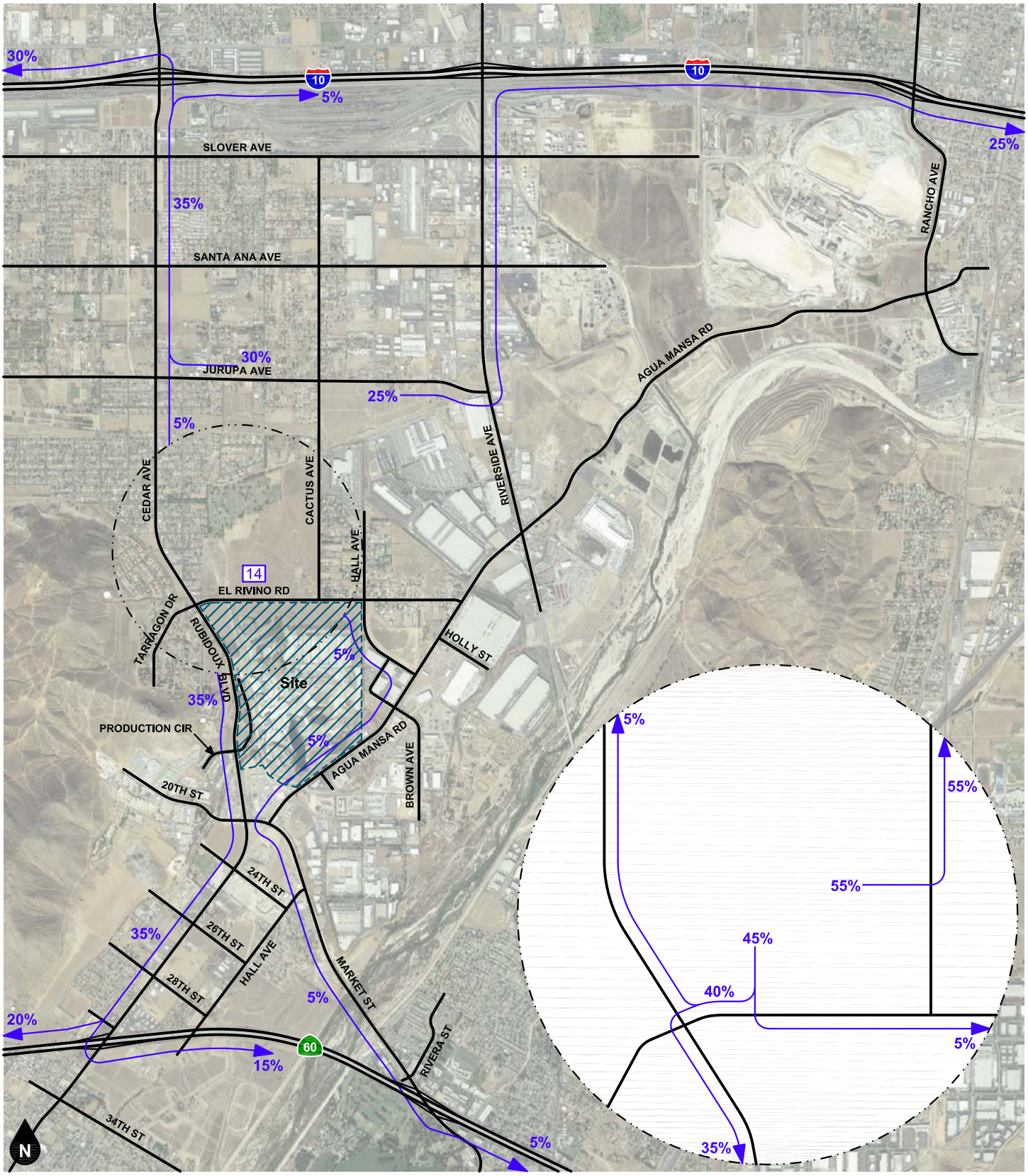
Figure U
Other Development Traffic Analysis Zone 13 Trip Distribution - Trucks



Legend

10% Percent To/From Project

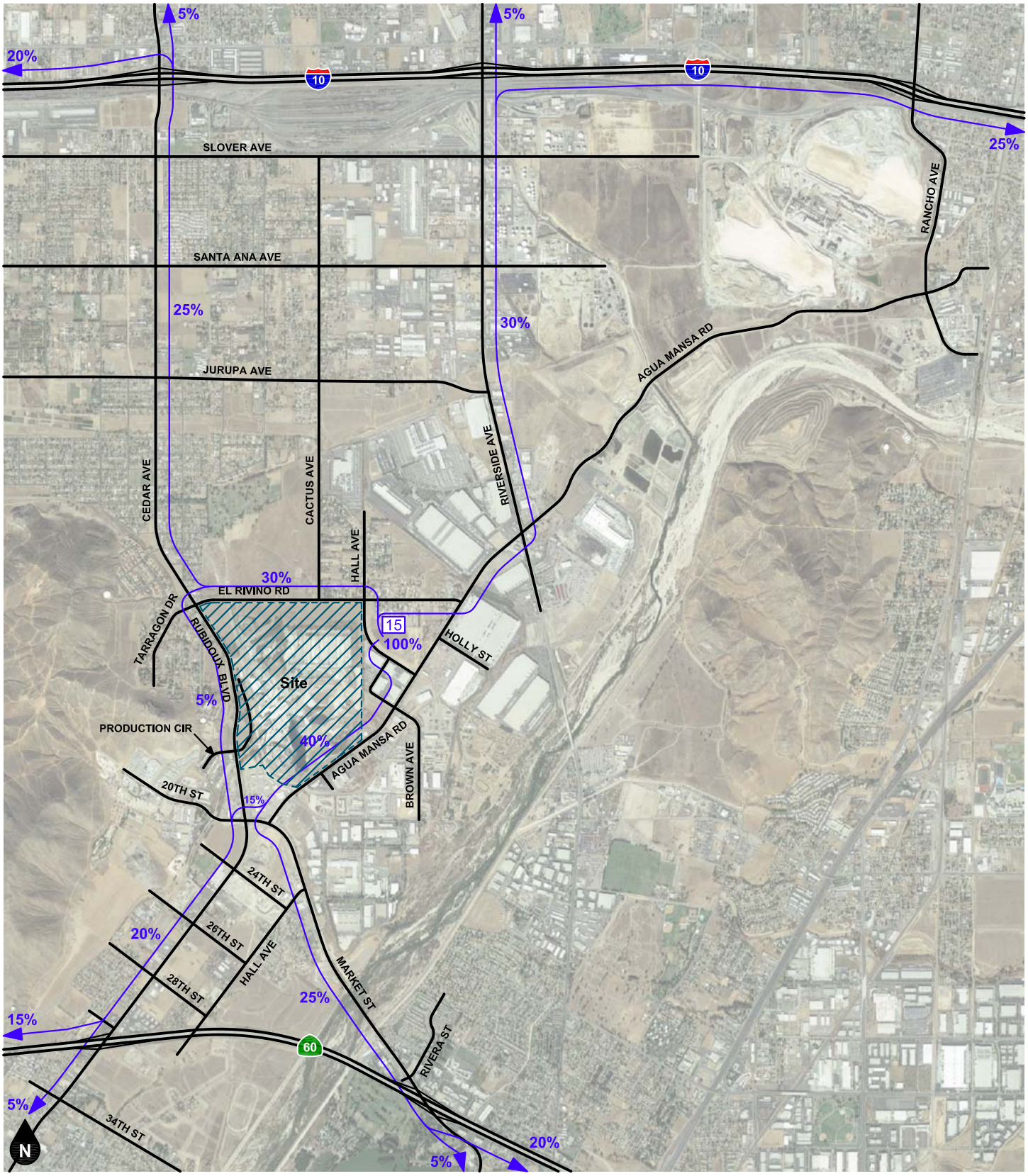
Figure V
Other Development Traffic Analysis Zone 14 Trip Distribution - Cars



Legend

10% Percent To/From Project

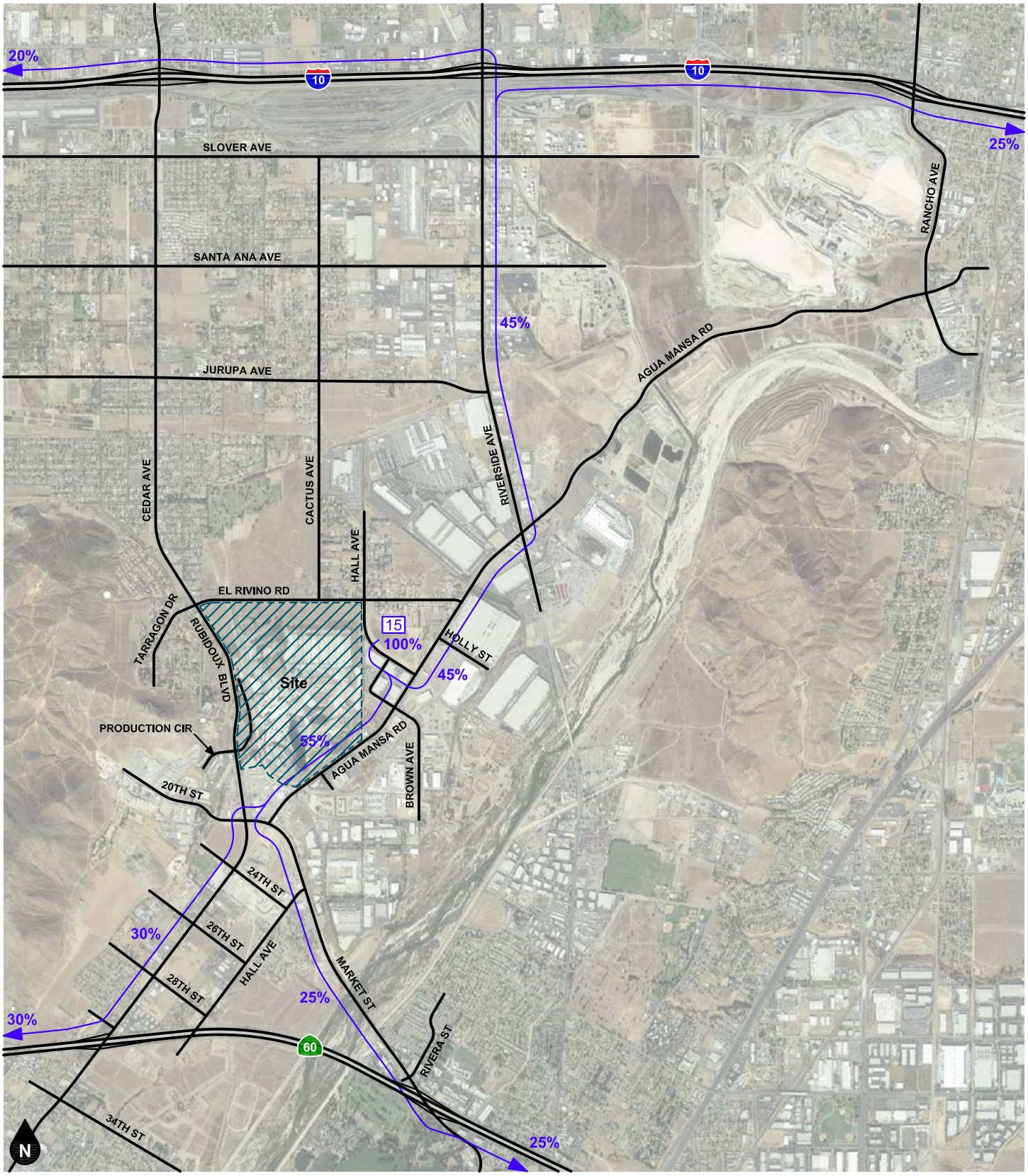
Figure W
Other Development Traffic Analysis Zone 14 Trip Distribution - Trucks



Legend

10% Percent To/From Project

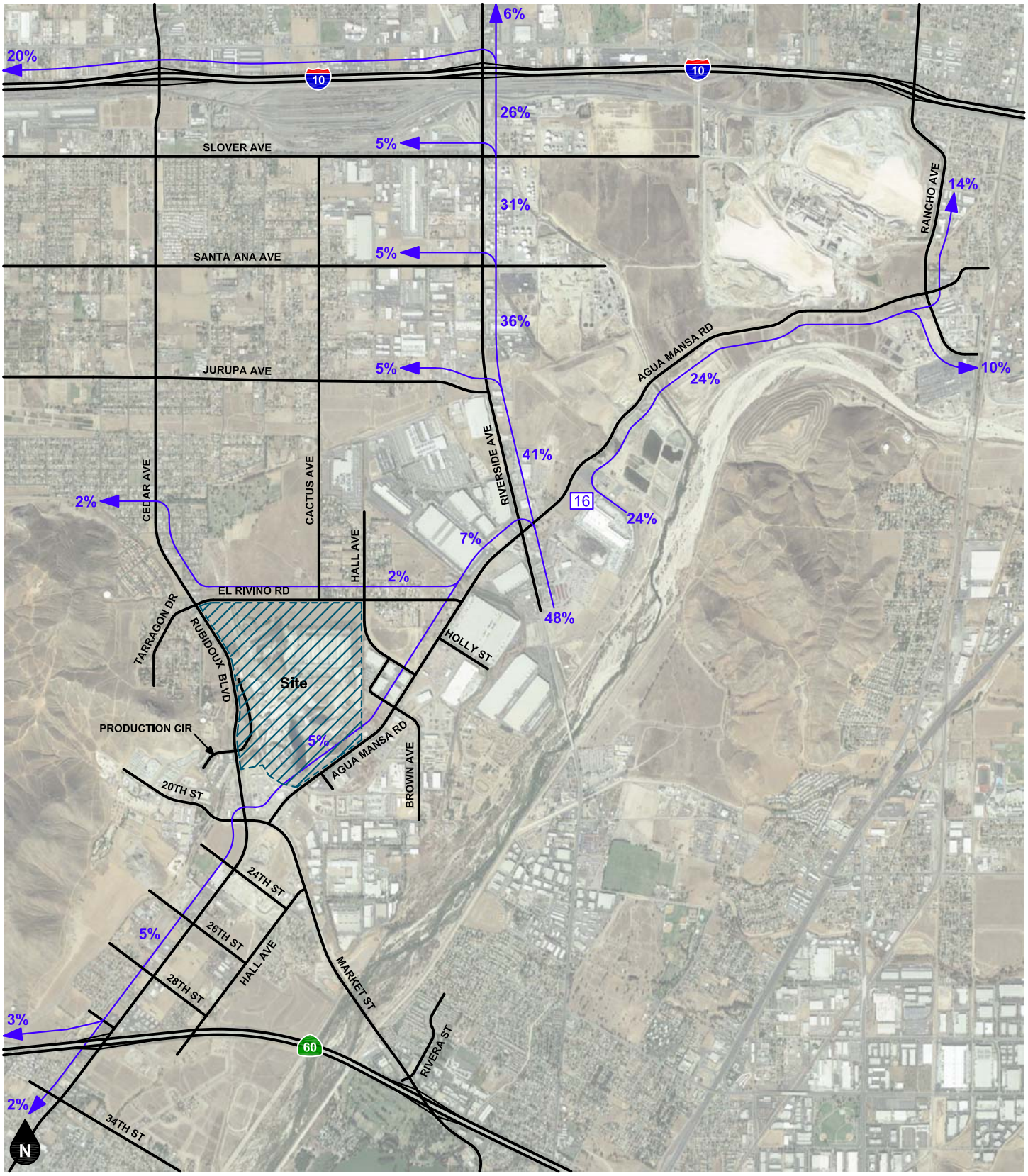
Figure X
Other Development Traffic Analysis Zone 15 Trip Distribution - Cars



Legend

10% Percent To/From Project

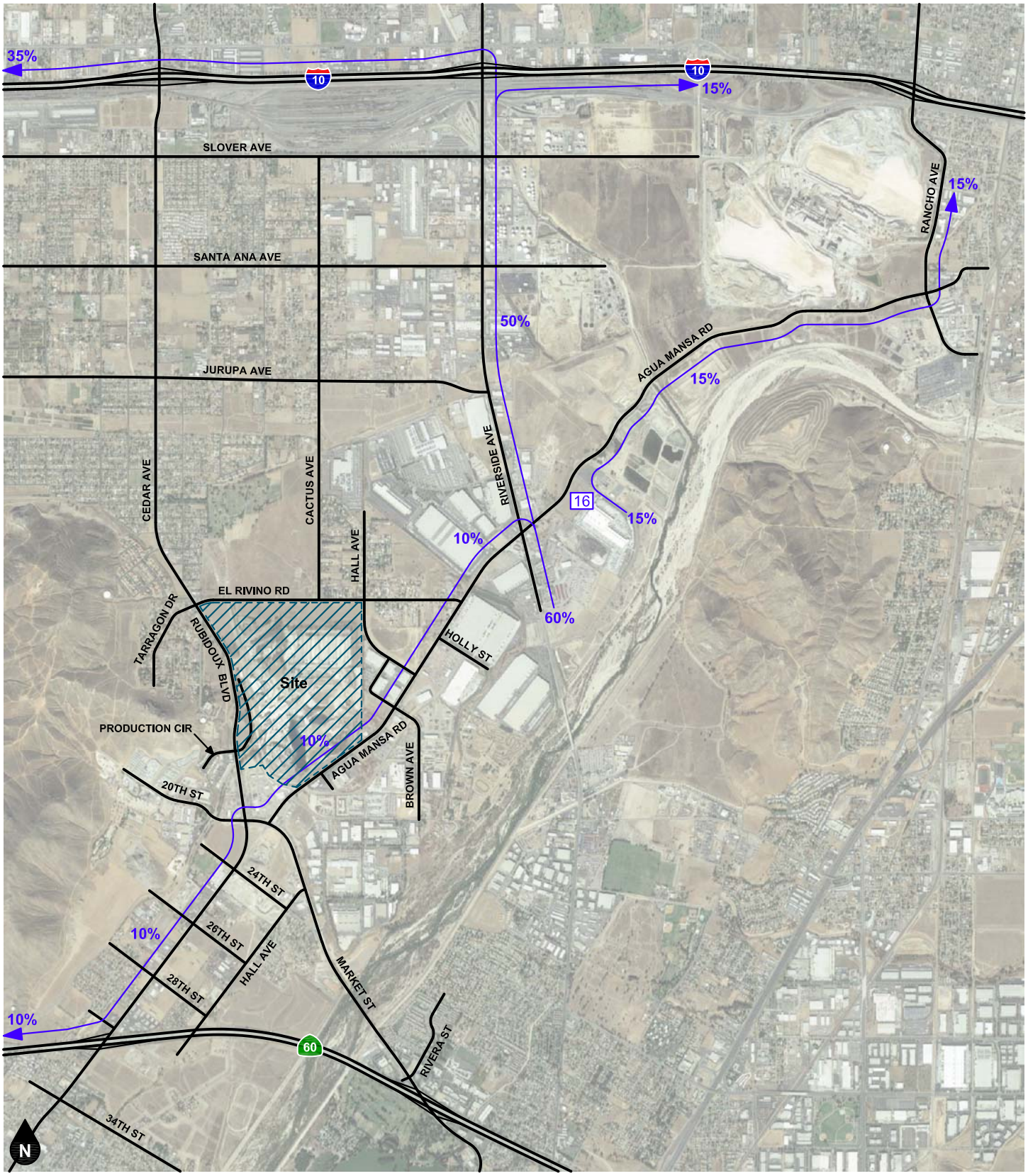
Figure Y
Other Development Traffic Analysis Zone 15 Trip Distribution - Trucks



Legend

10% Percent To/From Project

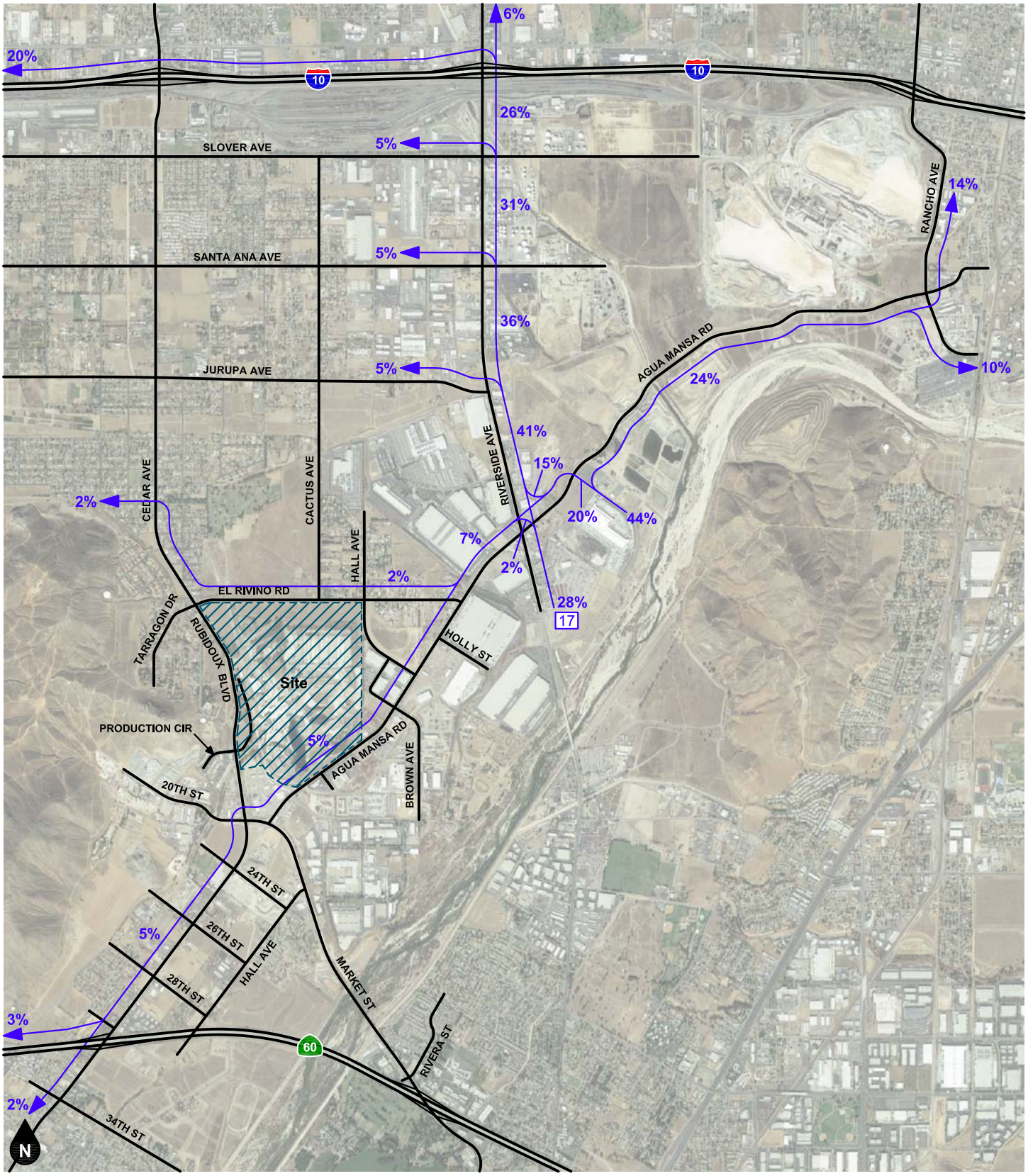
Figure Z
Other Development Traffic Analysis Zone 16 Trip Distribution - Cars



Legend

10% Percent To/From Project

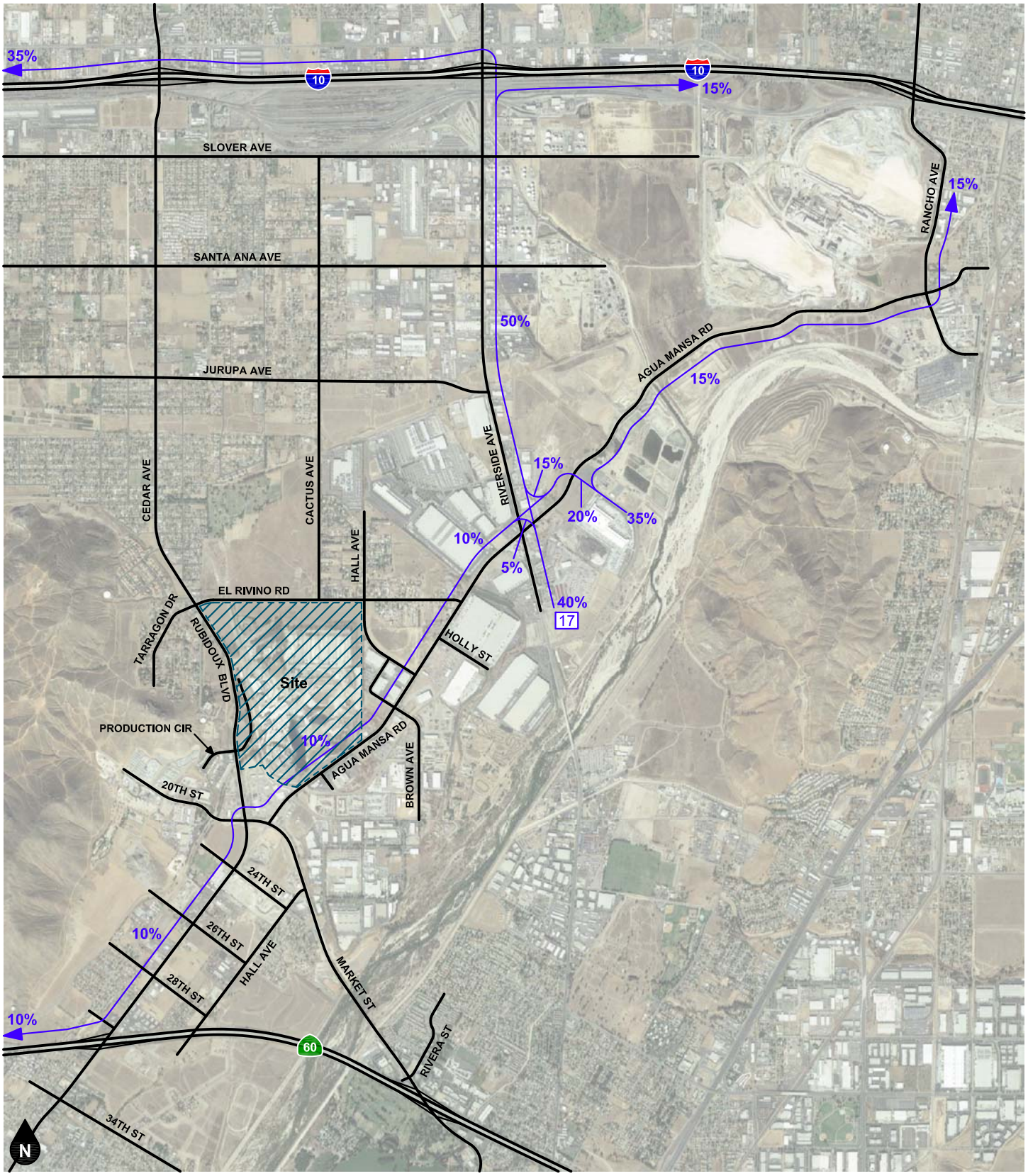
Figure AA
Other Development Traffic Analysis Zone 16 Trip Distribution - Trucks



Legend

10% Percent To/From Project

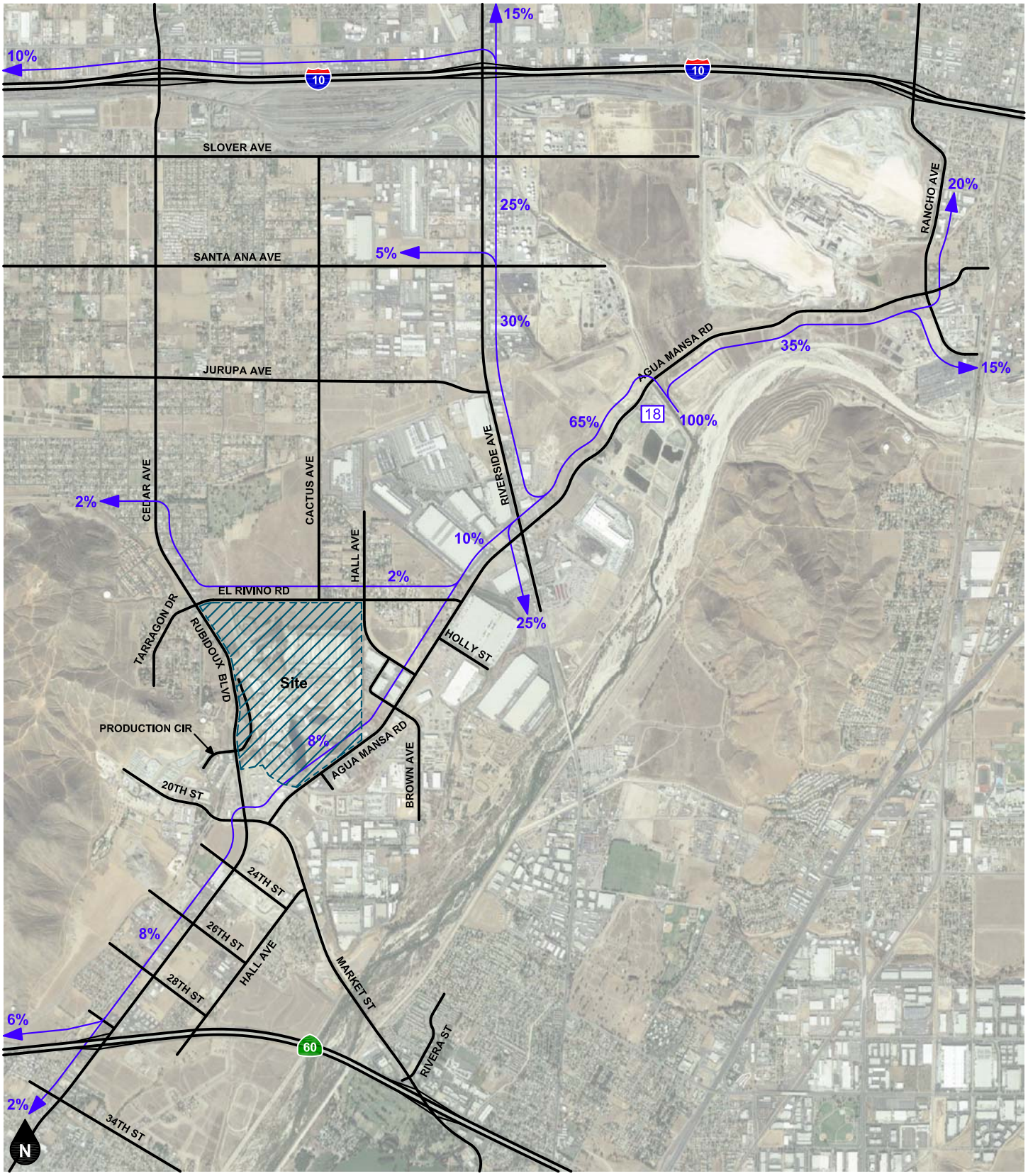
Figure AB
Other Development Traffic Analysis Zone 17 Trip Distribution - Cars



Legend

10% Percent To/From Project

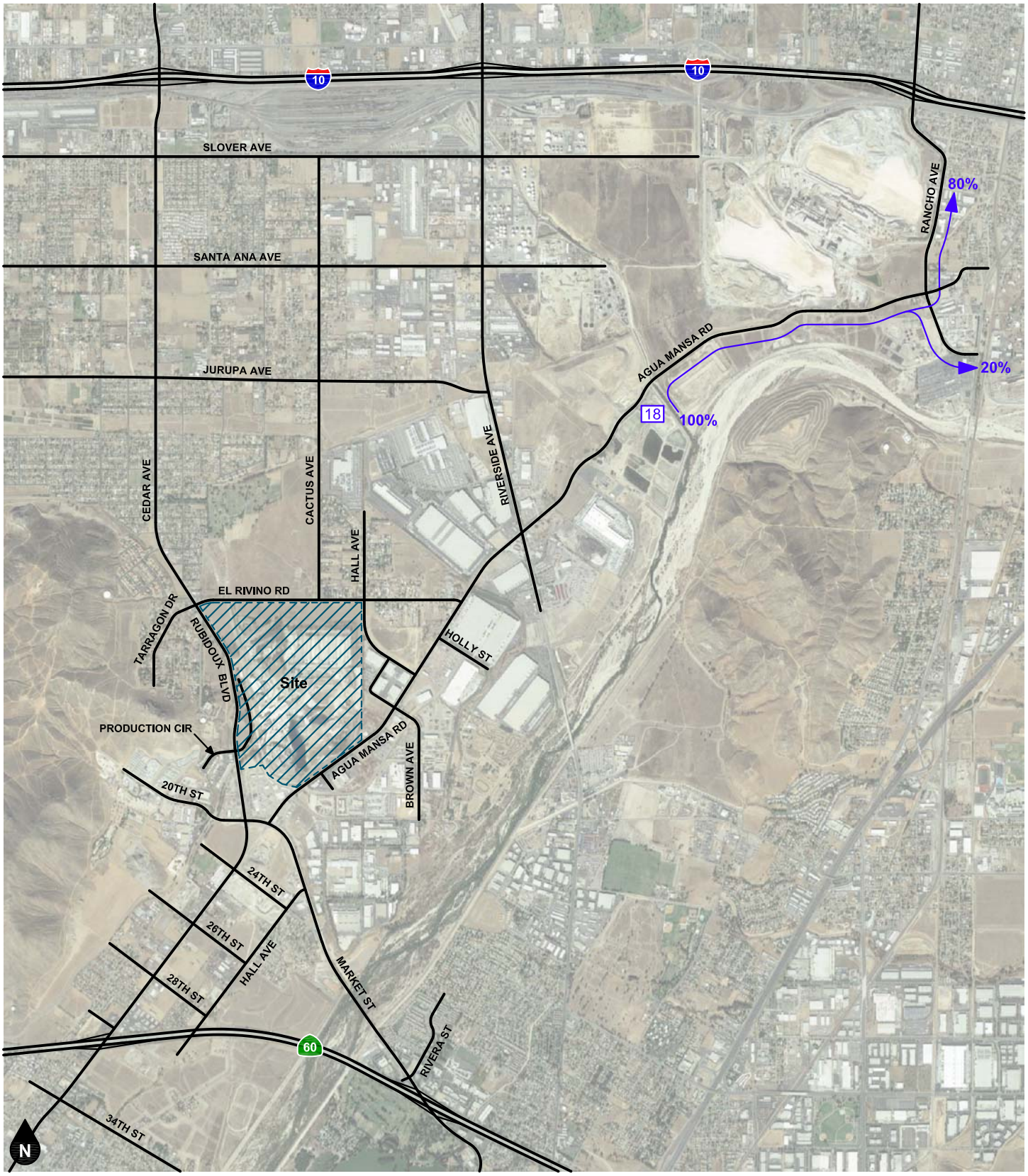
Figure AC
Other Development Traffic Analysis Zone 17 Trip Distribution - Trucks



Legend

10% Percent To/From Project

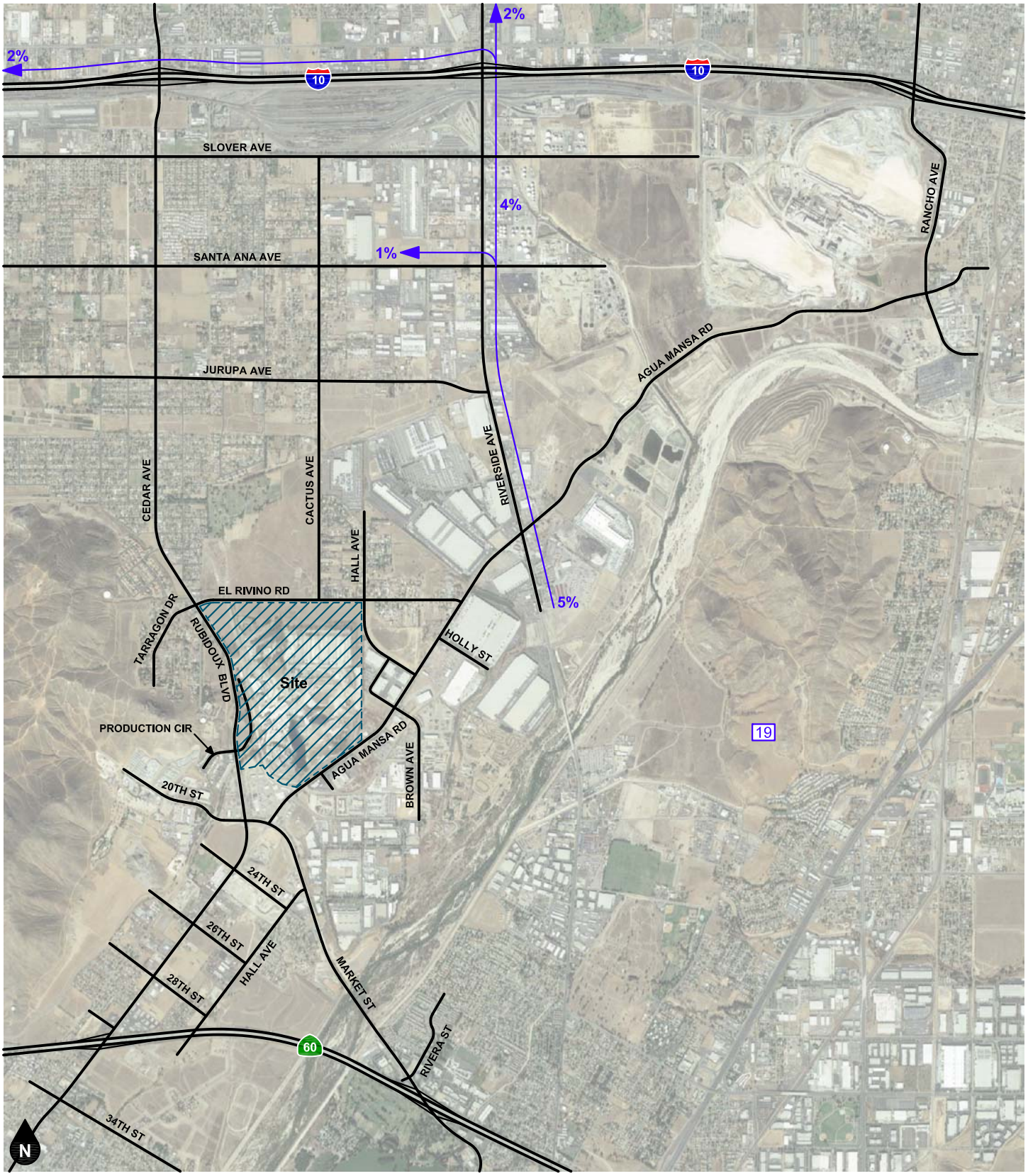
Figure AD
Other Development Traffic Analysis Zone 18 Trip Distribution - Cars



Legend

10% Percent To/From Project

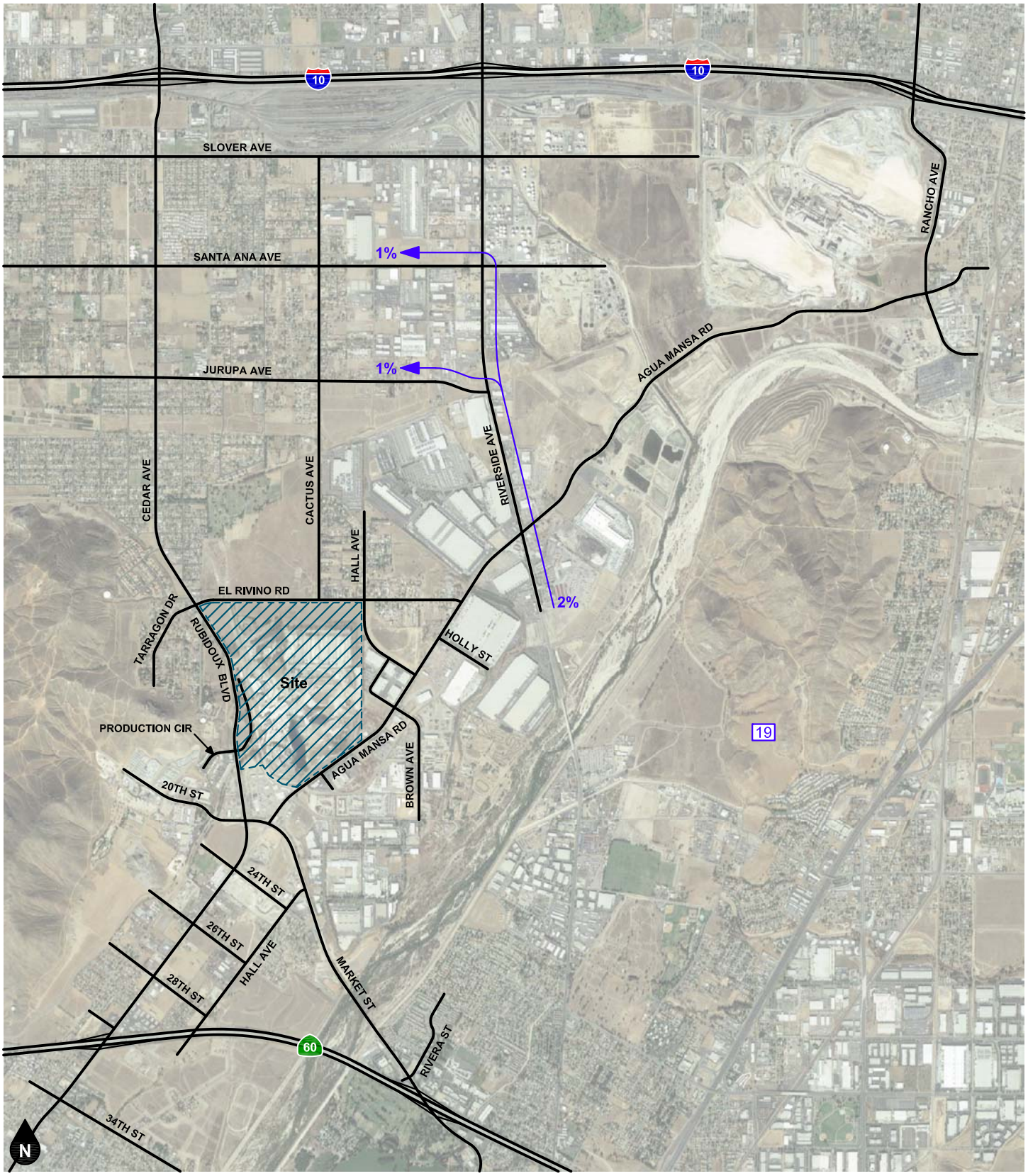
Figure AE
Other Development Traffic Analysis Zone 18 Trip Distribution - Trucks



Legend

10% Percent To/From Project

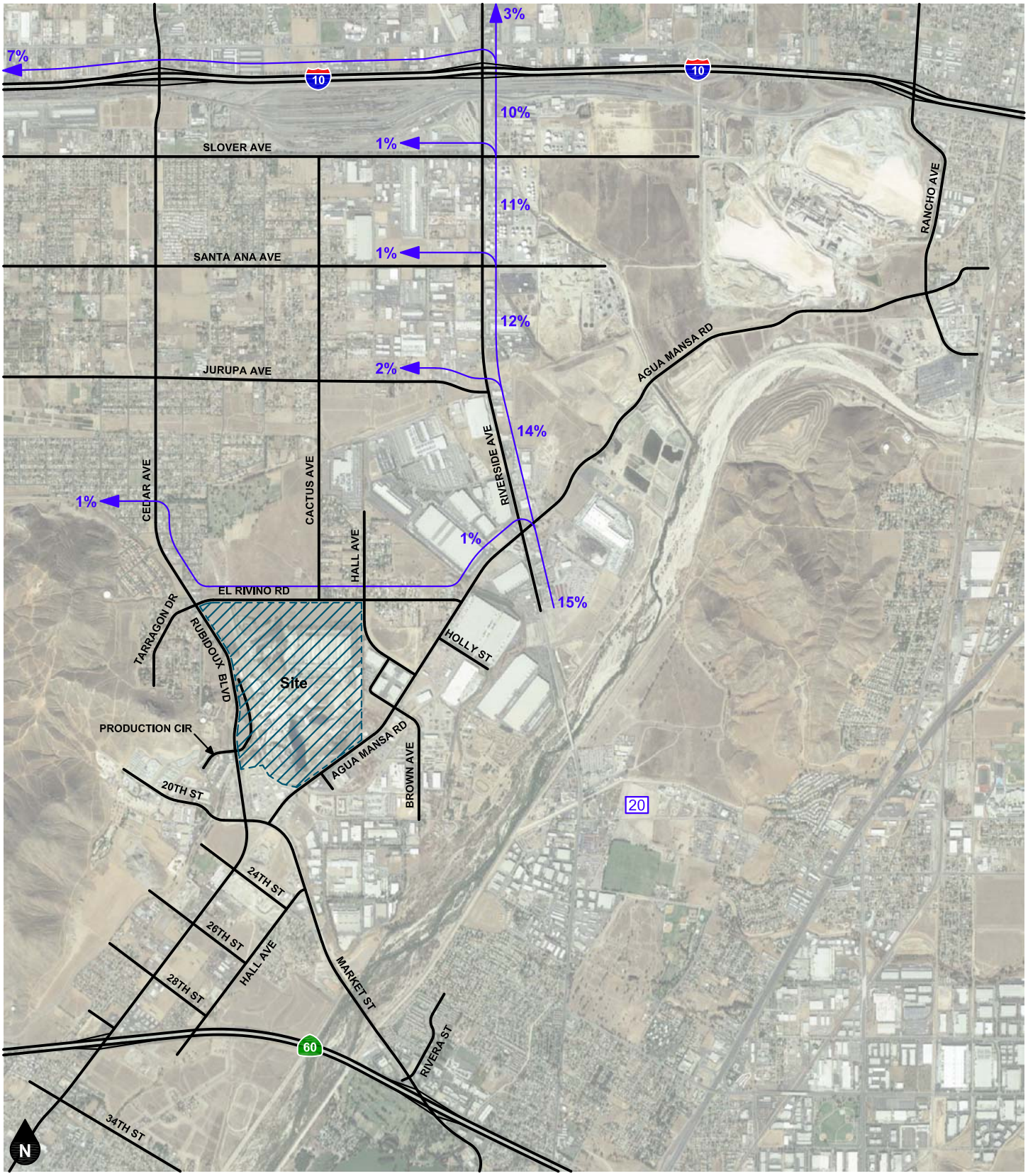
Figure AF
Other Development Traffic Analysis Zone 19 Trip Distribution
- Residential / Parks



Legend

10% Percent To/From Project

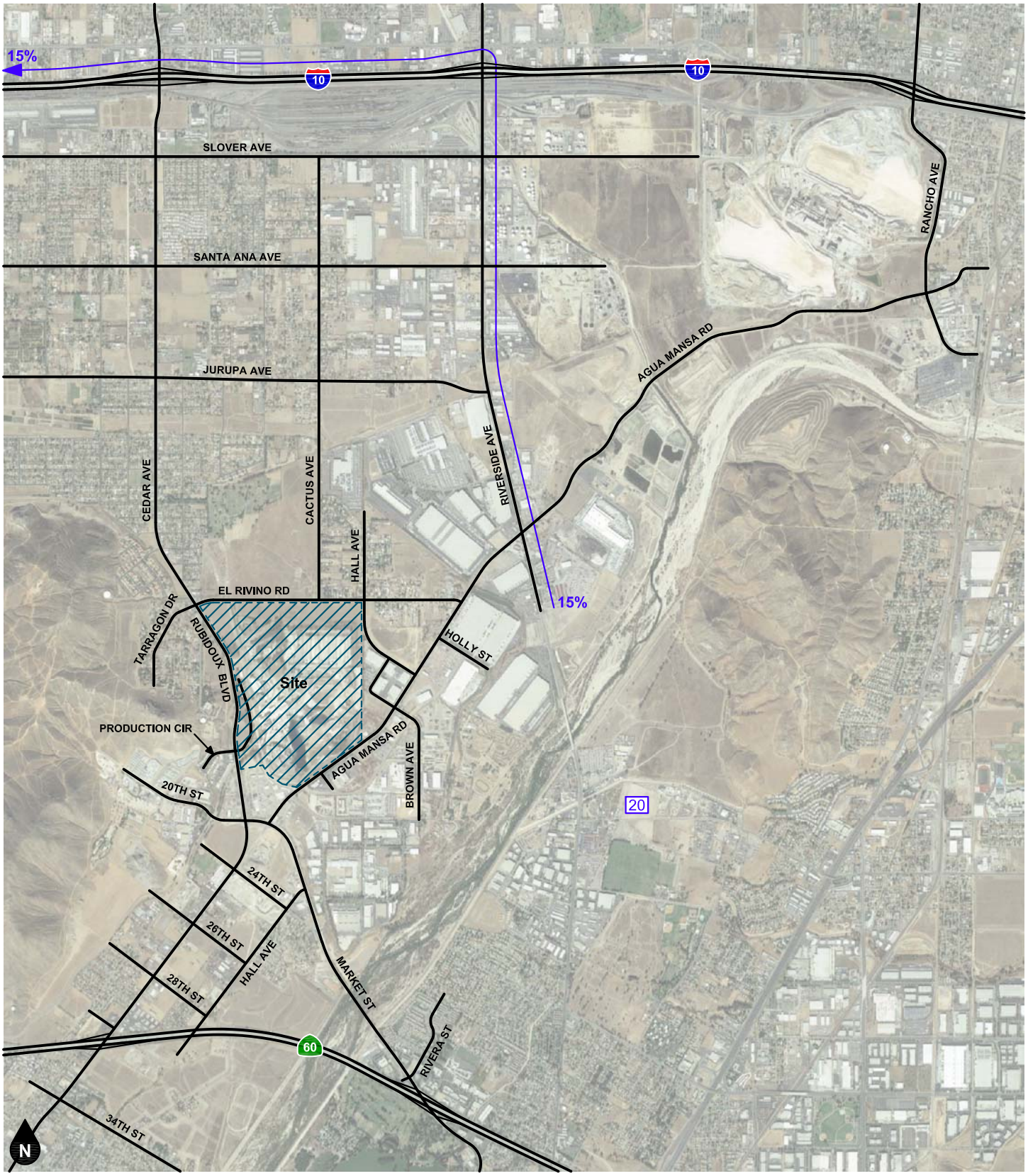
Figure AF
Other Development Traffic Analysis Zone 19 Trip Distribution - Commercial



Legend

10% Percent To/From Project

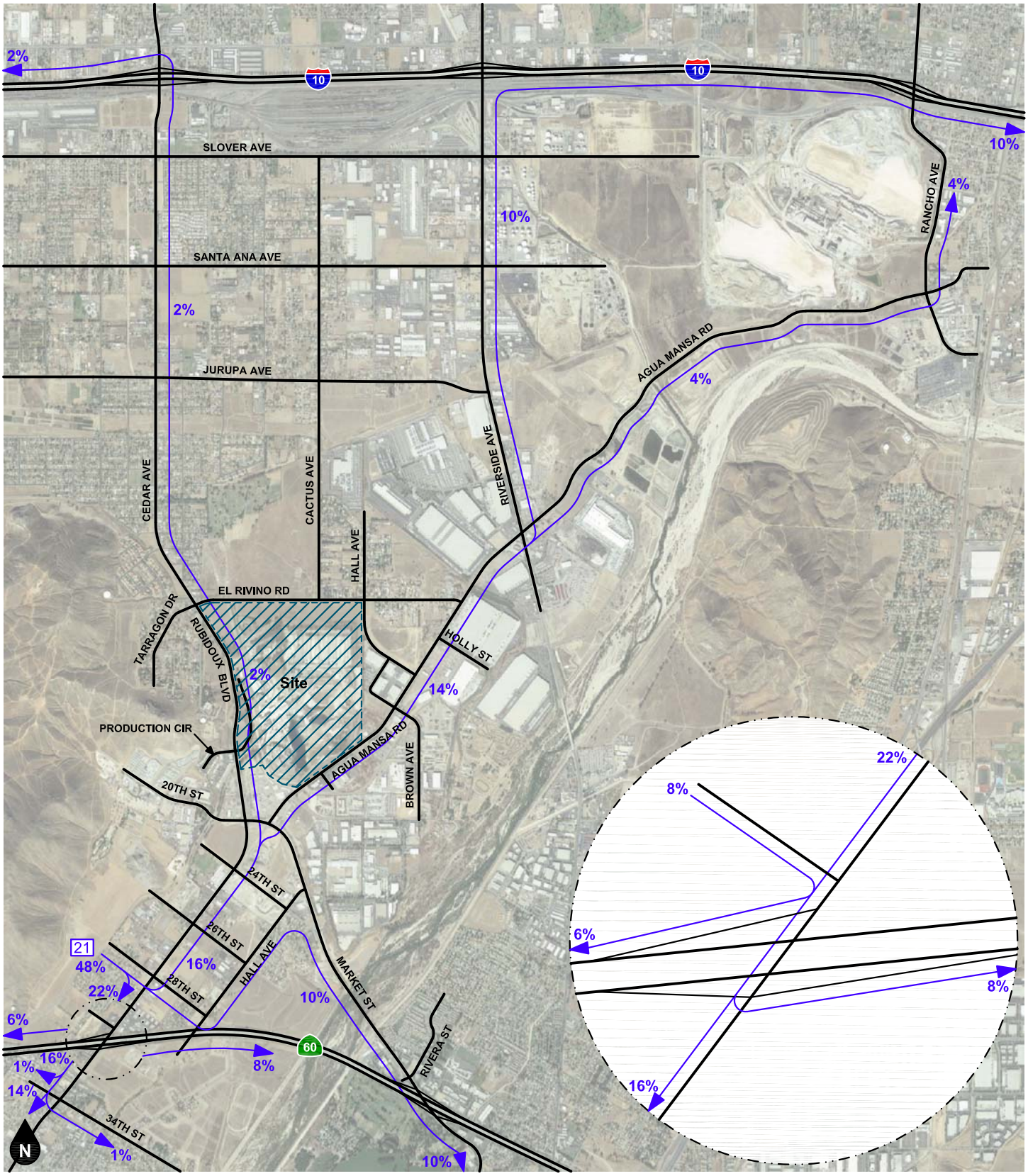
Figure AH
Other Development Traffic Analysis Zone 20 Trip Distribution - Cars



Legend

10% Percent To/From Project

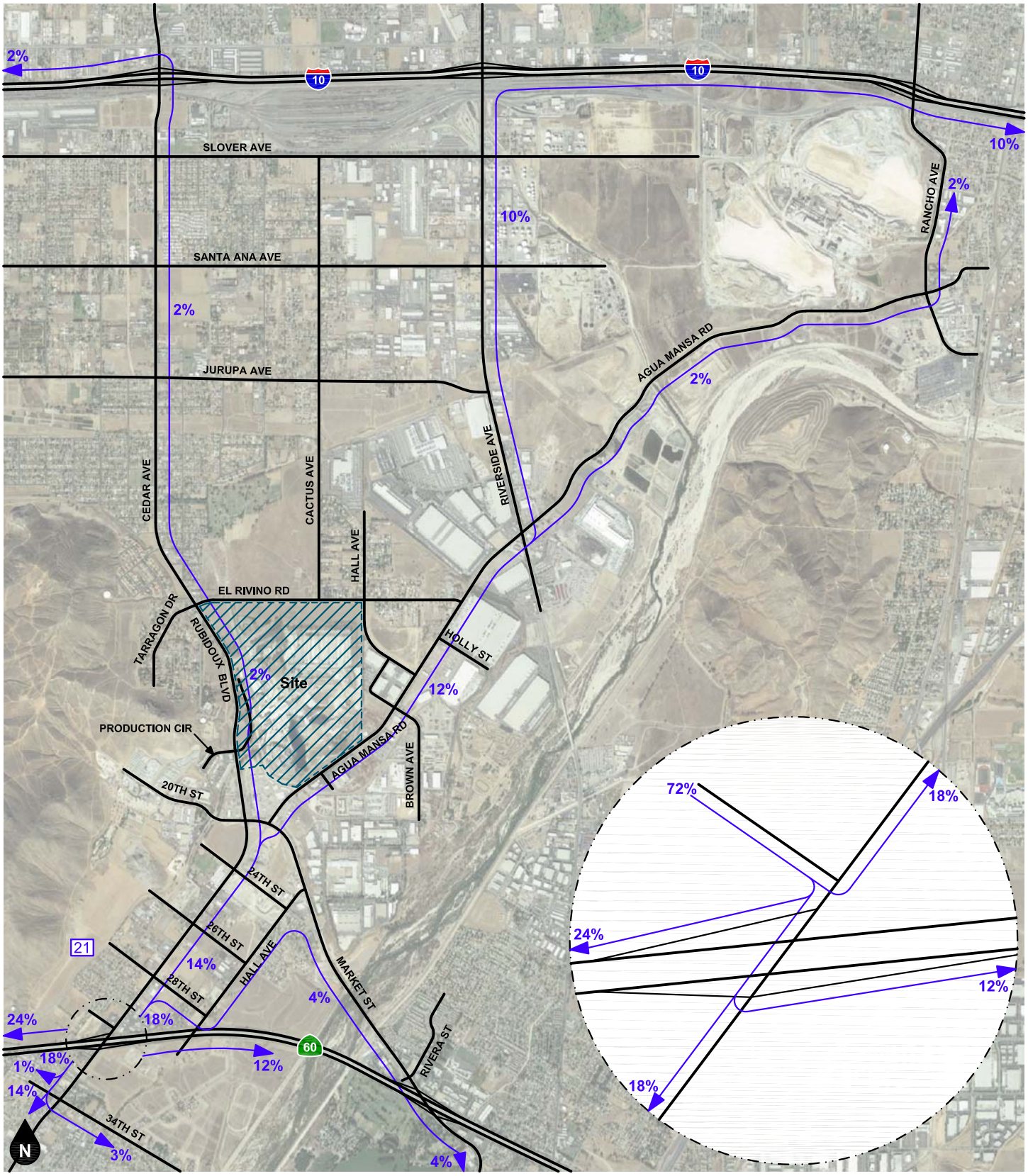
Figure AI
Other Development Traffic Analysis Zone 20 Trip Distribution - Trucks



Legend

10% Percent To/From Project

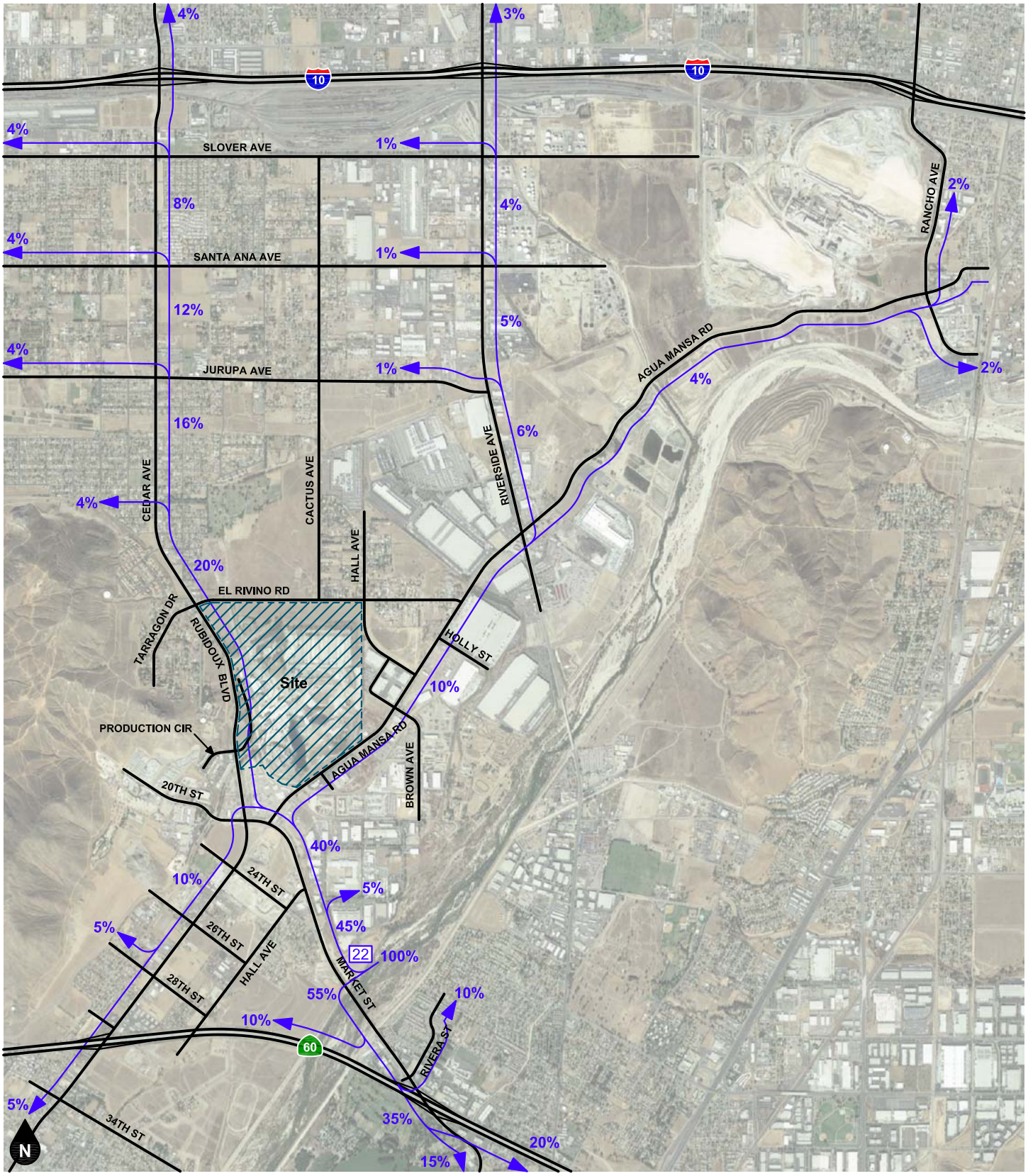
Figure AJ
Other Development Traffic Analysis Zone 21 Trip Distribution
- Single Family Residential



Legend

10% Percent To/From Project

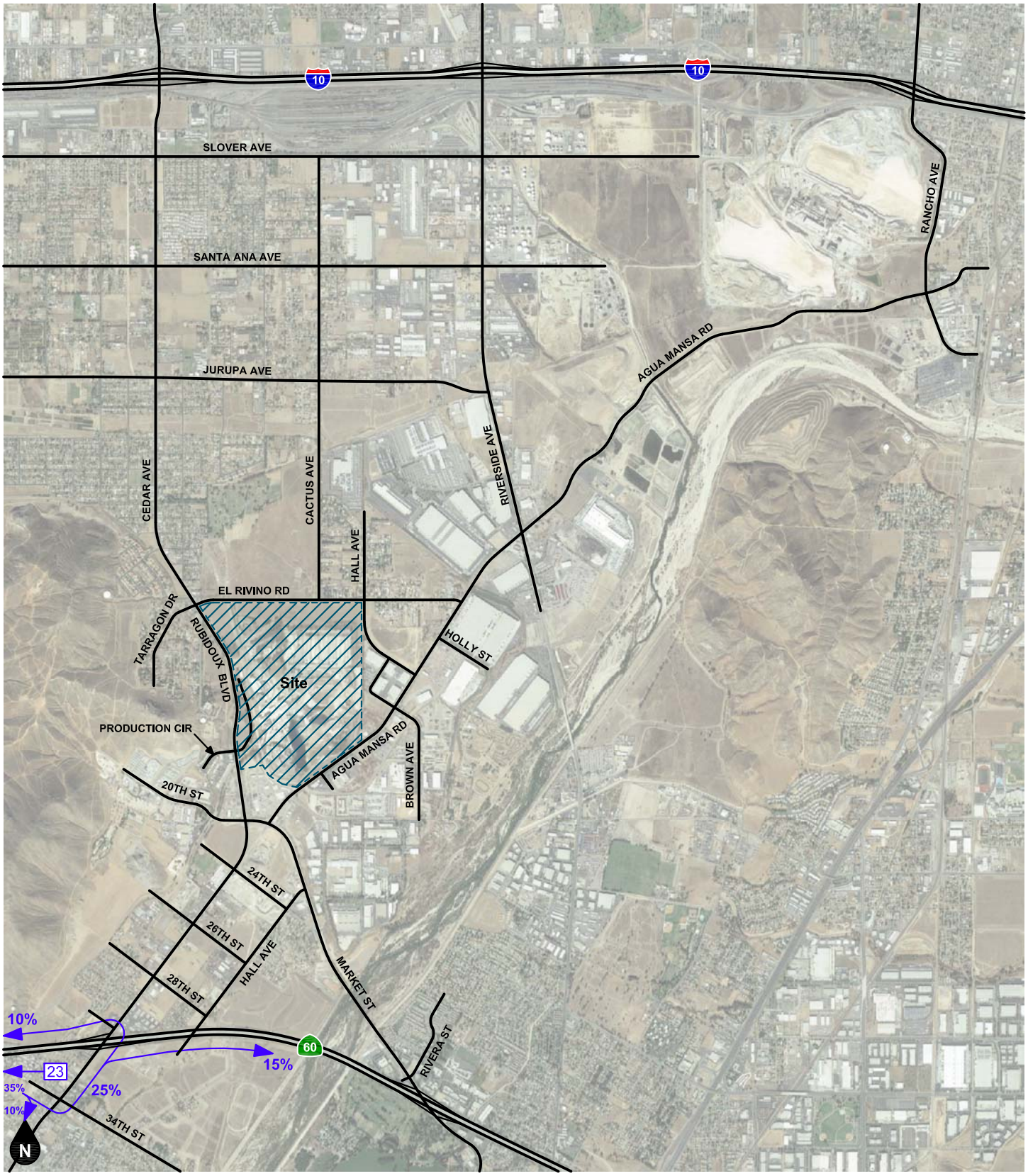
Figure AK
Other Development Traffic Analysis Zone 21 Trip Distribution - C/T



Legend

10% Percent To/From Project

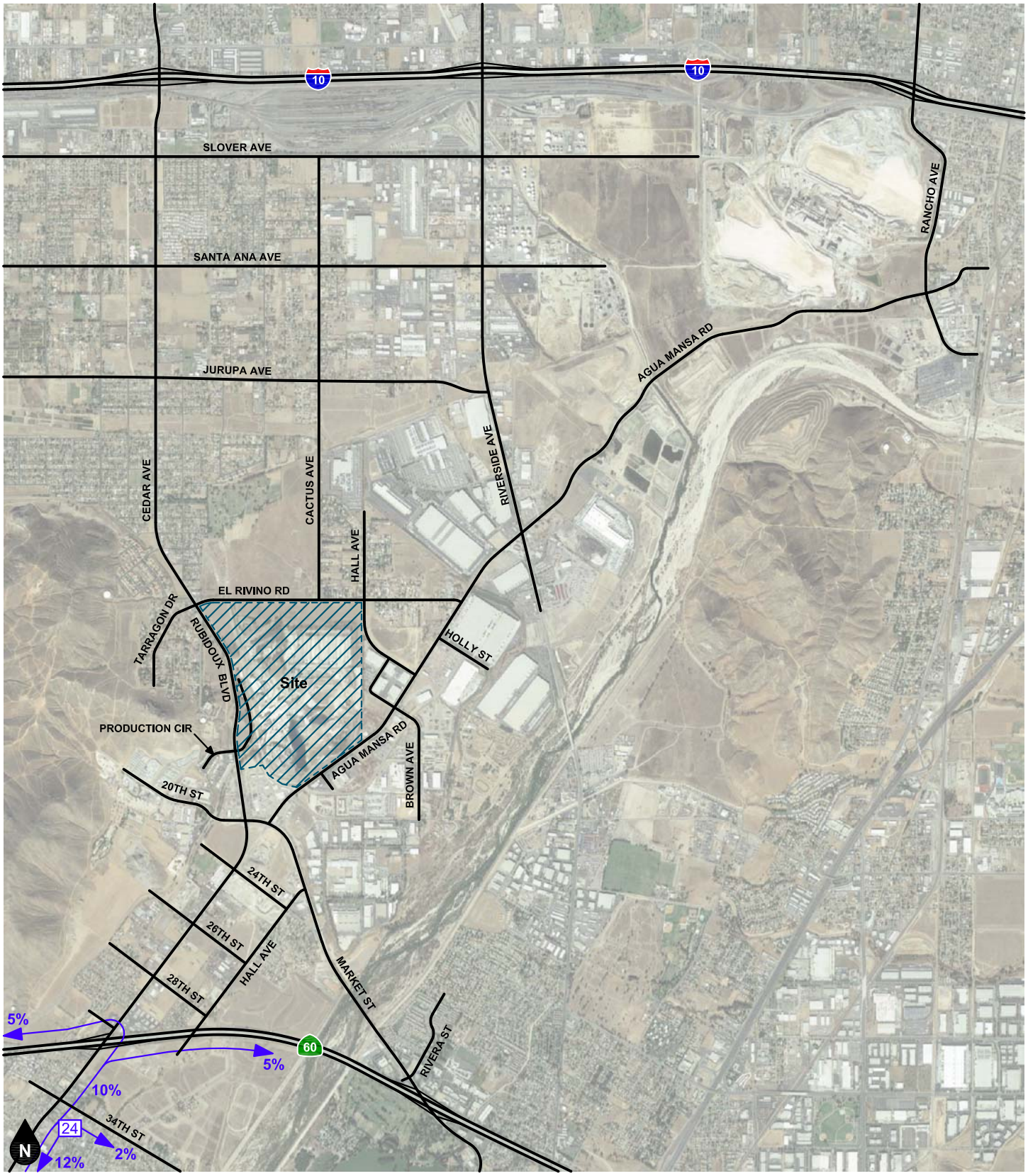
Figure AL
Other Development Traffic Analysis Zone 22 Trip Distribution - Cars



Legend

10% Percent To/From Project

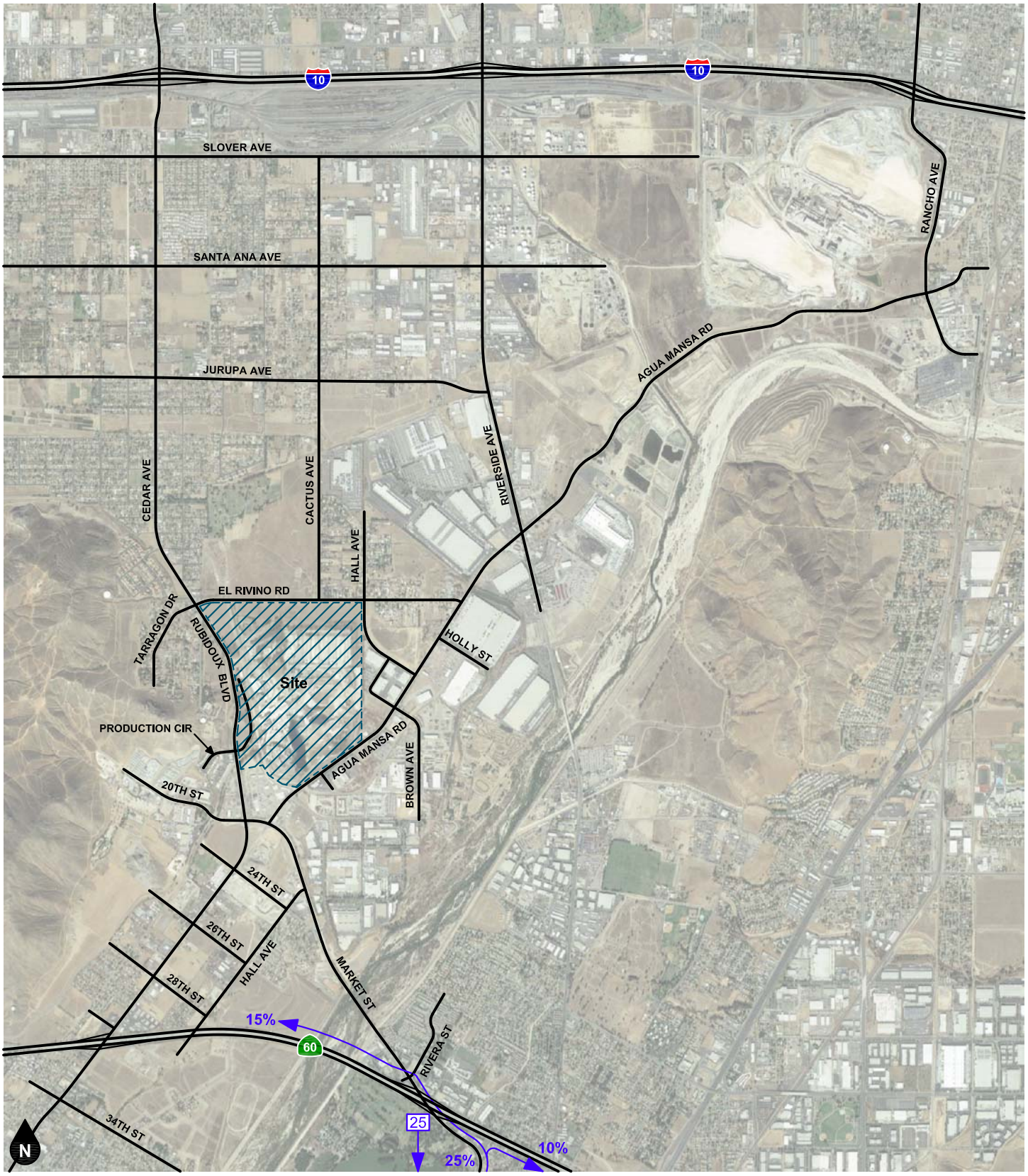
Figure AM
Other Development Traffic Analysis Zone 23 Trip Distribution



Legend

10% Percent To/From Project

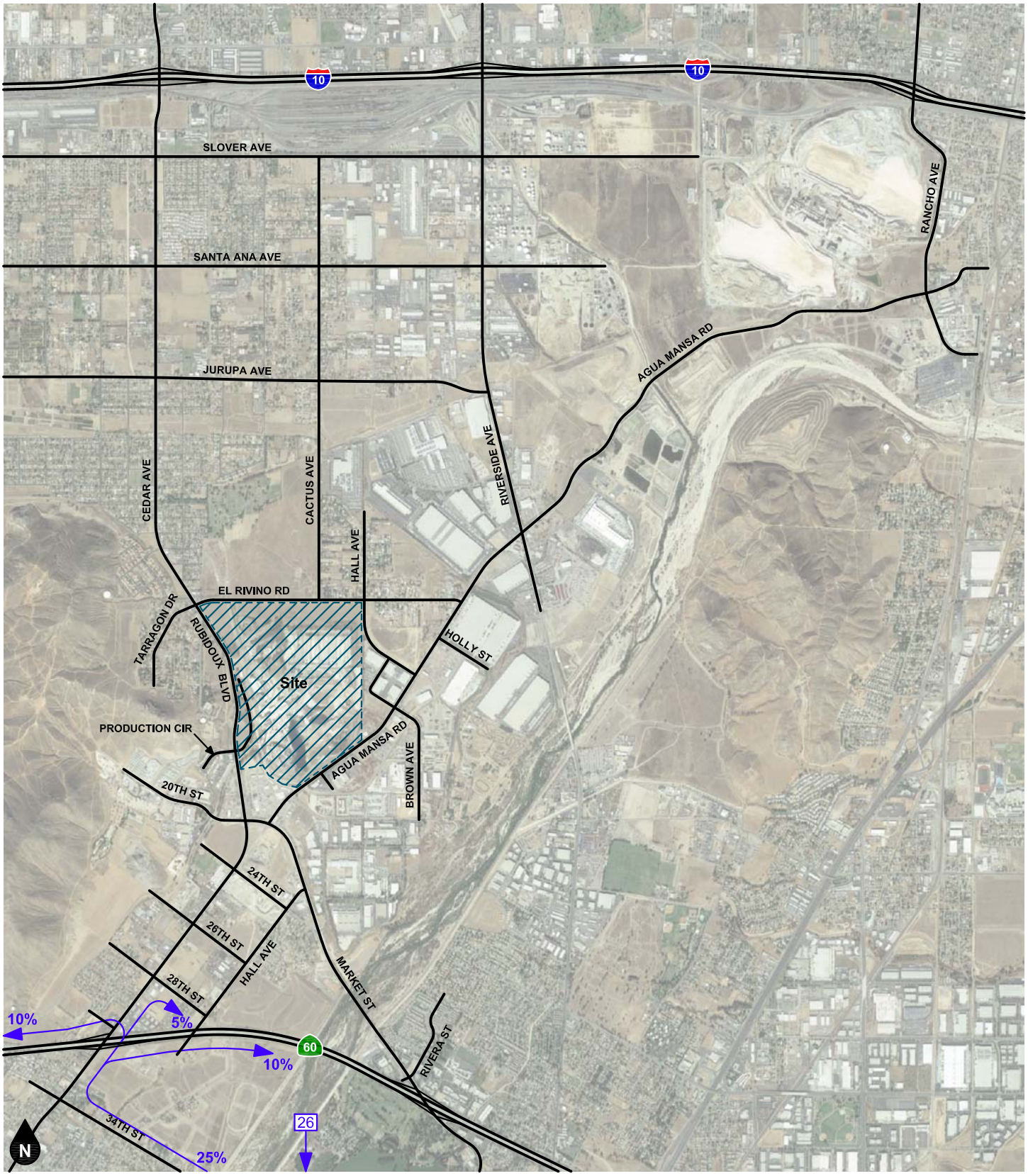
Figure AN
Other Development Traffic Analysis Zone 24 Trip Distribution



Legend

10% Percent To/From Project

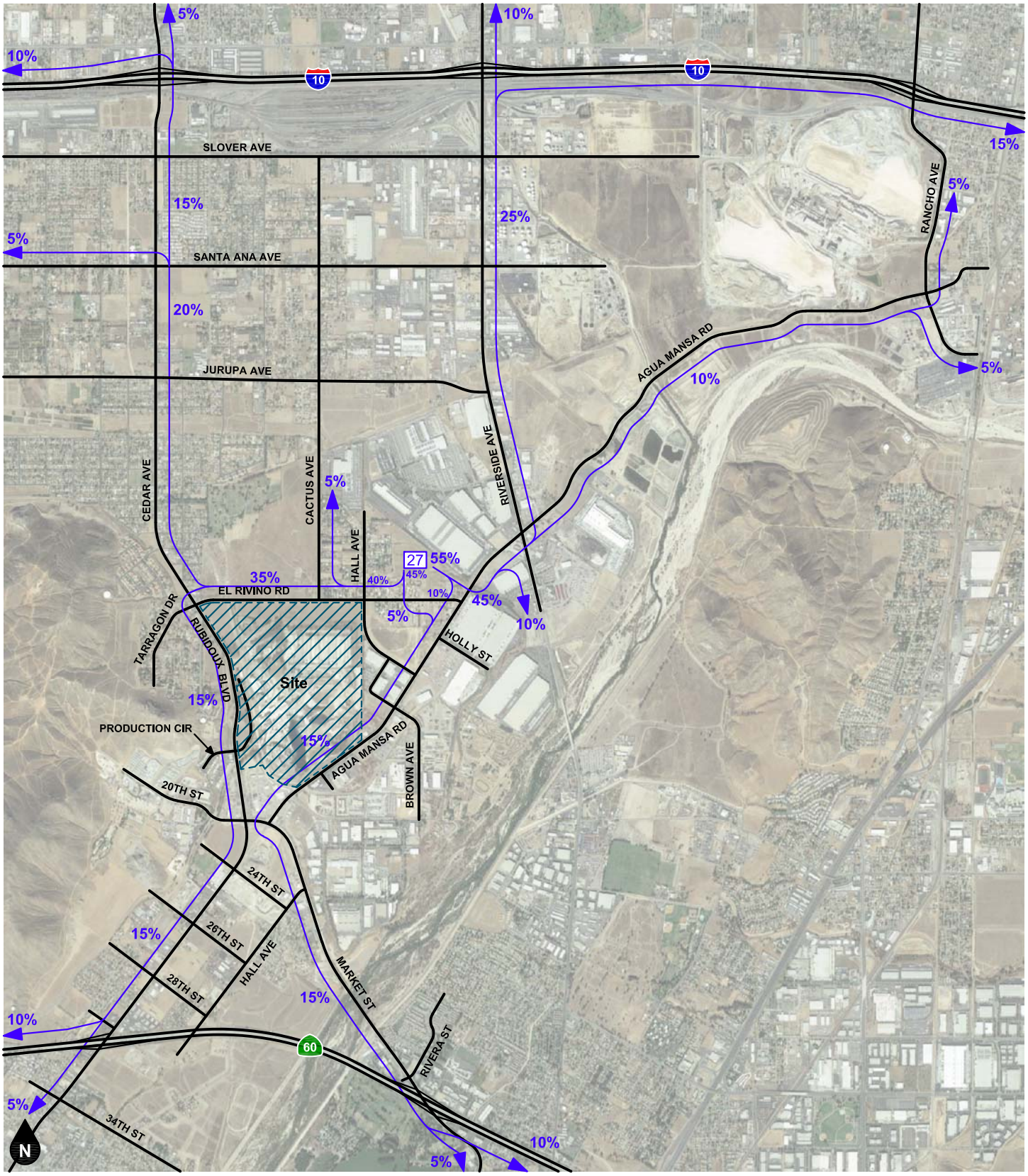
Figure AO
Other Development Traffic Analysis Zone 25 Trip Distribution



Legend

10% Percent To/From Project

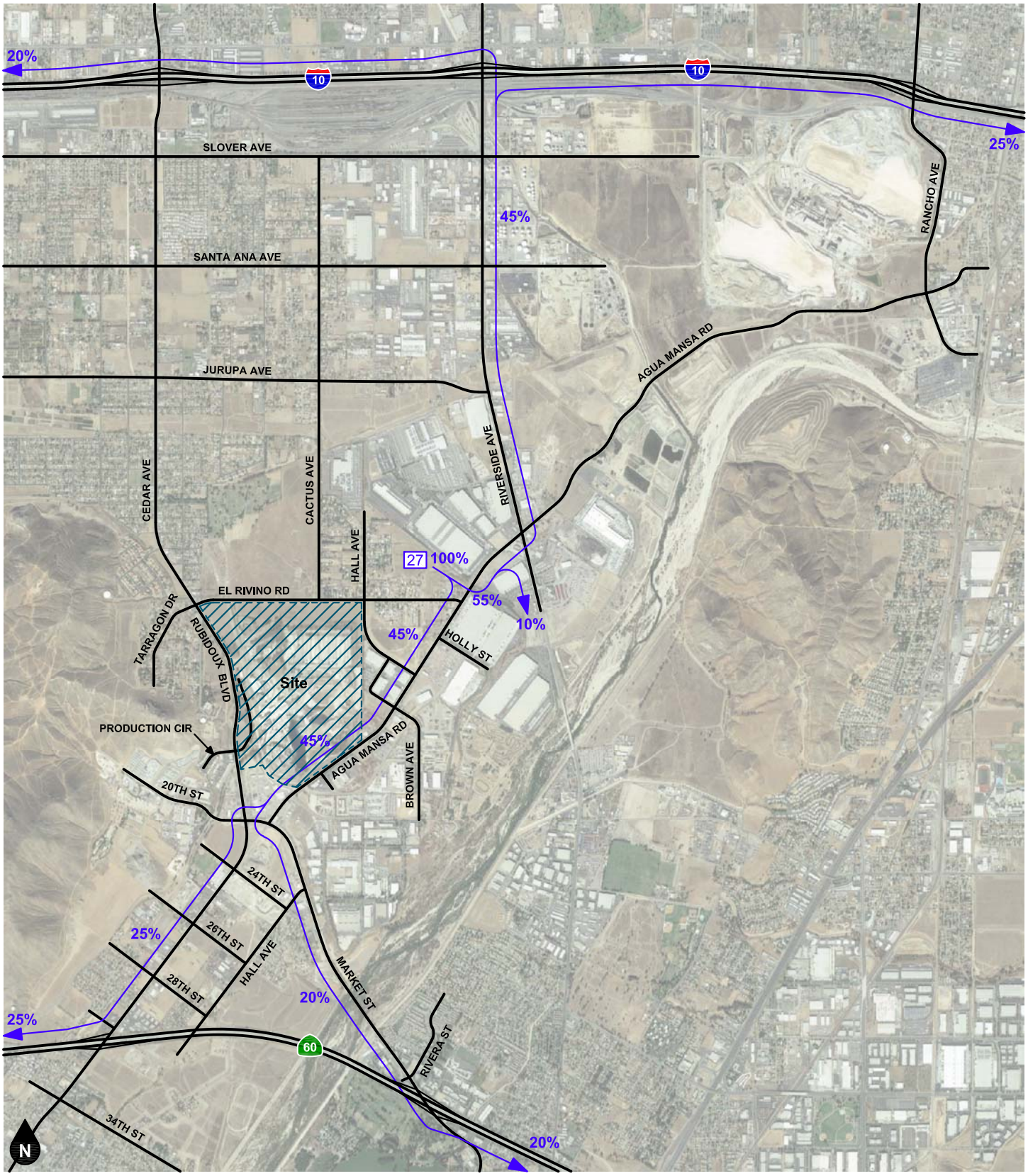
Figure AP
Other Development Traffic Analysis Zone 26 Trip Distribution



Legend

10% Percent To/From Project

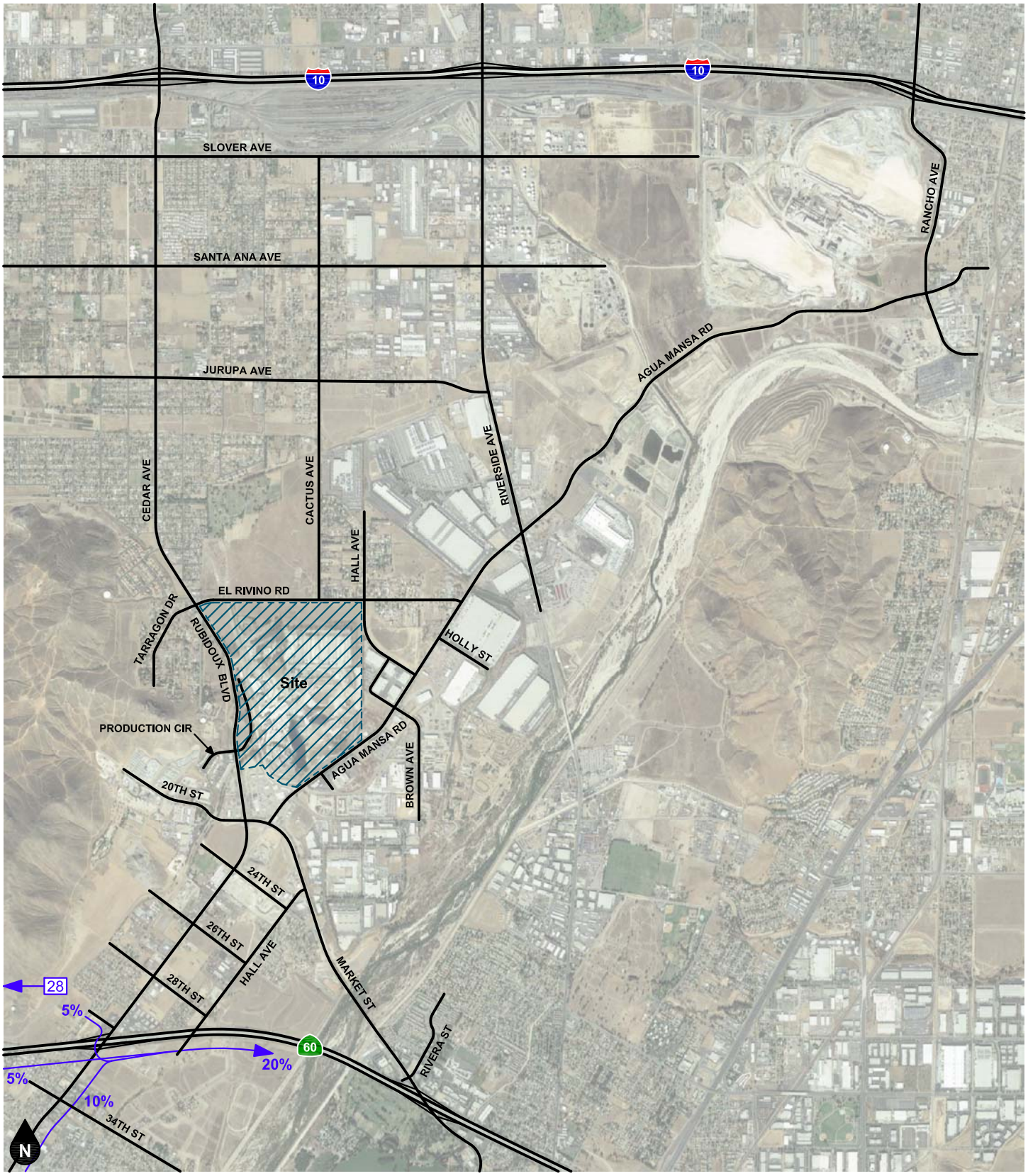
Figure AQ
Other Development Traffic Analysis Zone 27 Trip Distribution - Cars



Legend

10% Percent To/From Project

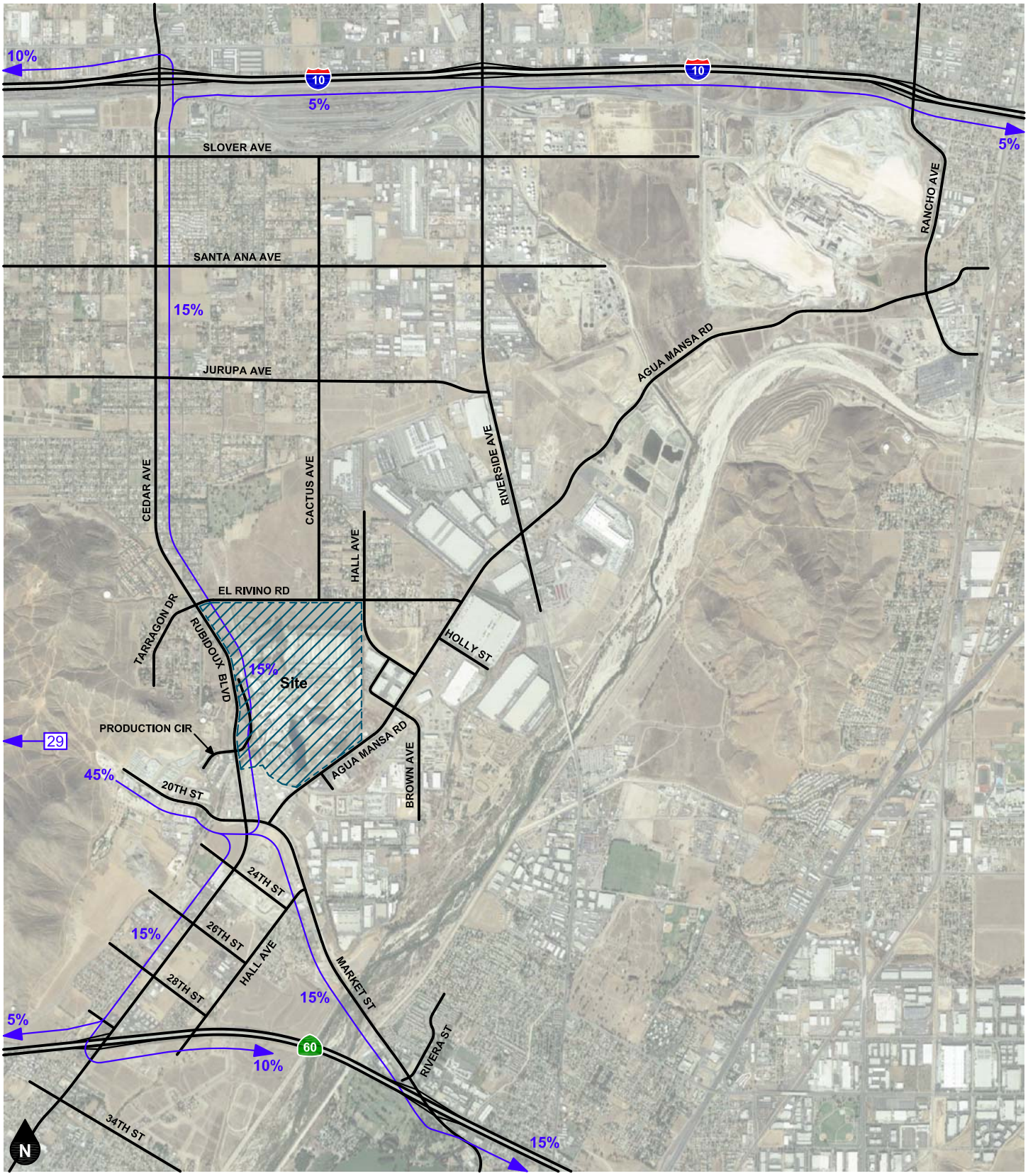
Figure AR
Other Development Traffic Analysis Zone 27 Trip Distribution - Trucks



Legend

10% Percent To/From Project

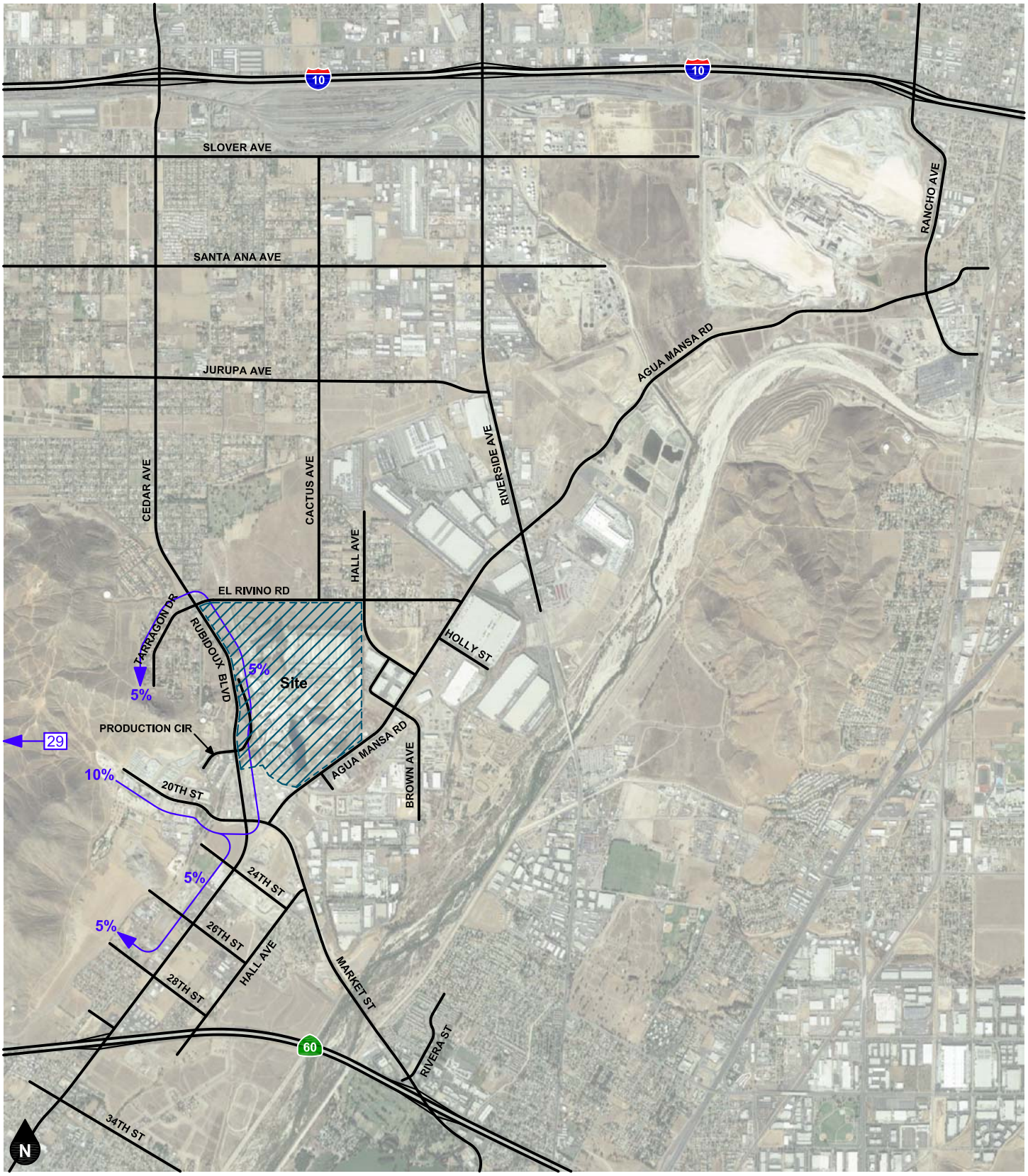
Figure AS
Other Development Traffic Analysis Zone 28 Trip Distribution



Legend

10% Percent To/From Project

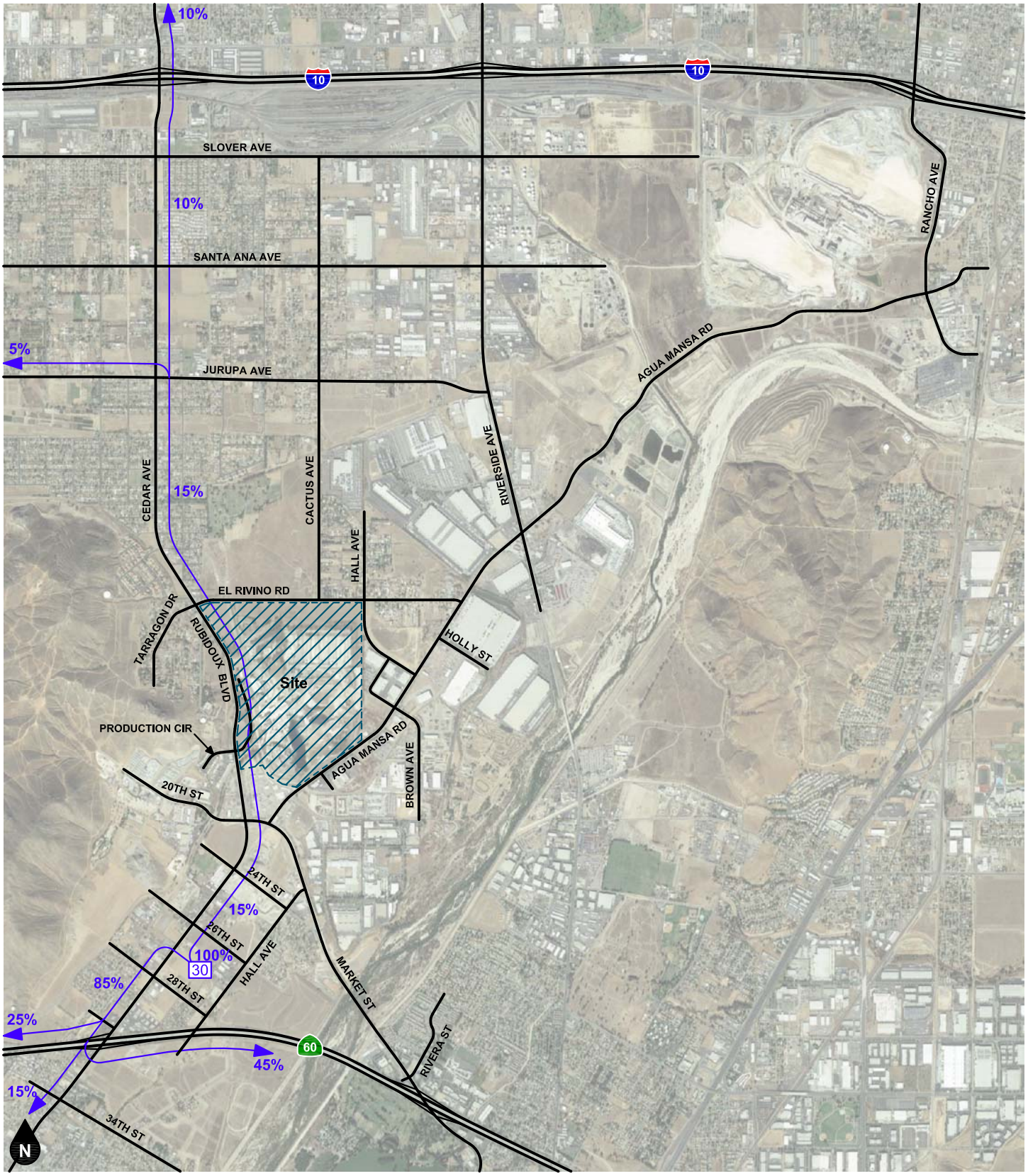
Figure AT
Other Development Traffic Analysis Zone 29 Trip Distribution - Residential



Legend

10% Percent To/From Project

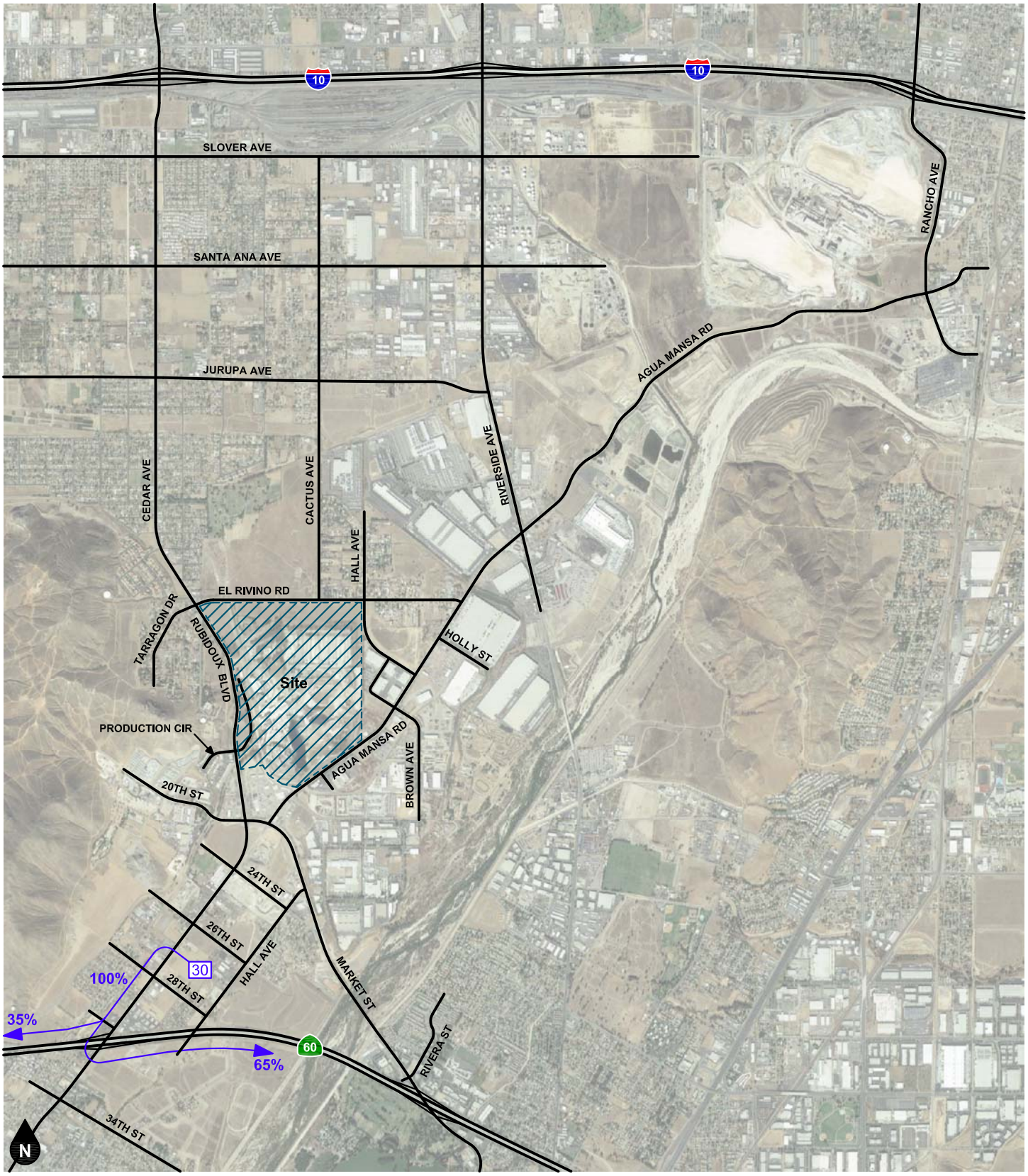
Figure AU
Other Development Traffic Analysis Zone 29 Trip Distribution - School



Legend

10% Percent To/From Project

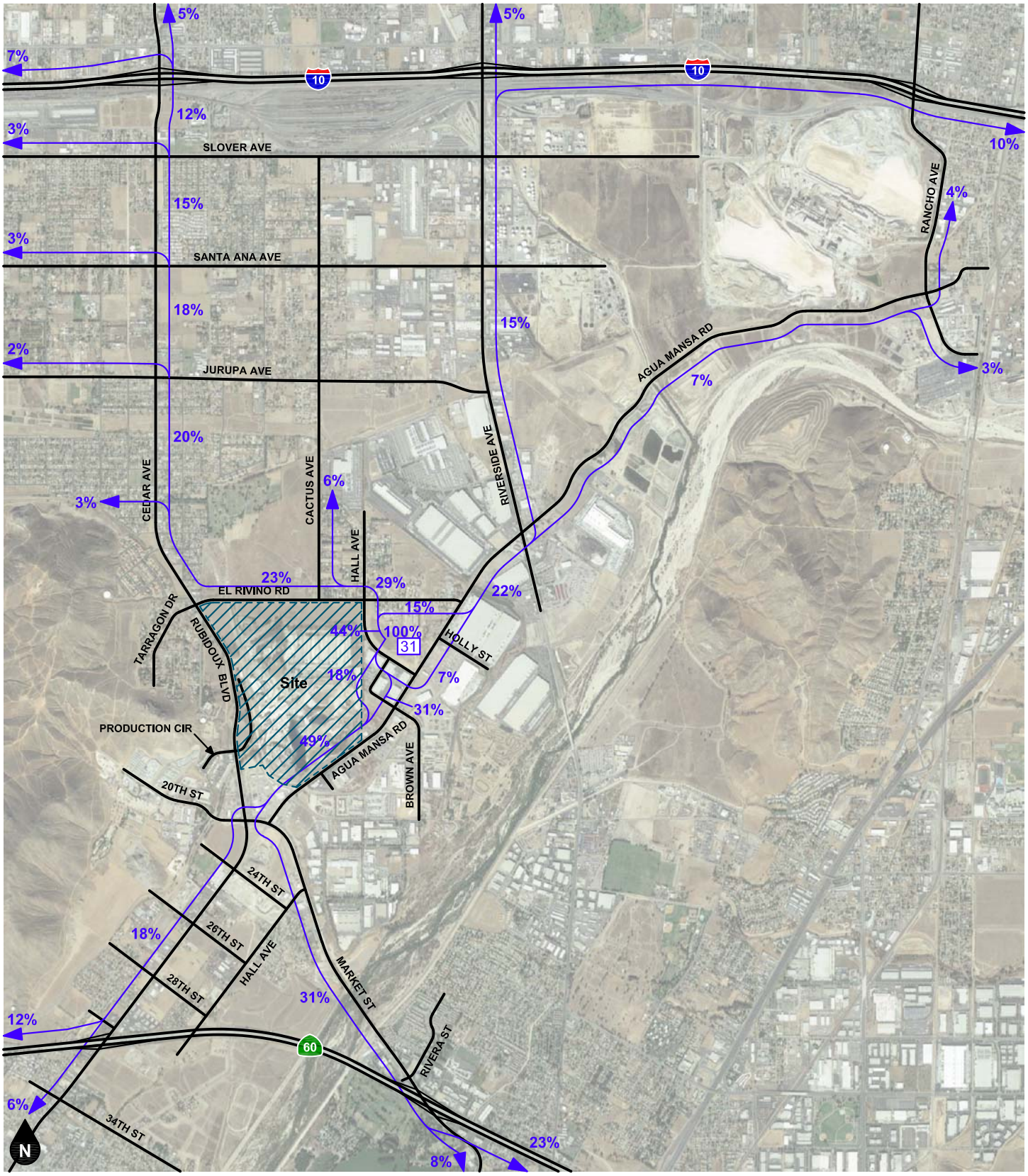
Figure AV
Other Development Traffic Analysis Zone 30 Trip Distribution - Cars



Legend

10% Percent To/From Project

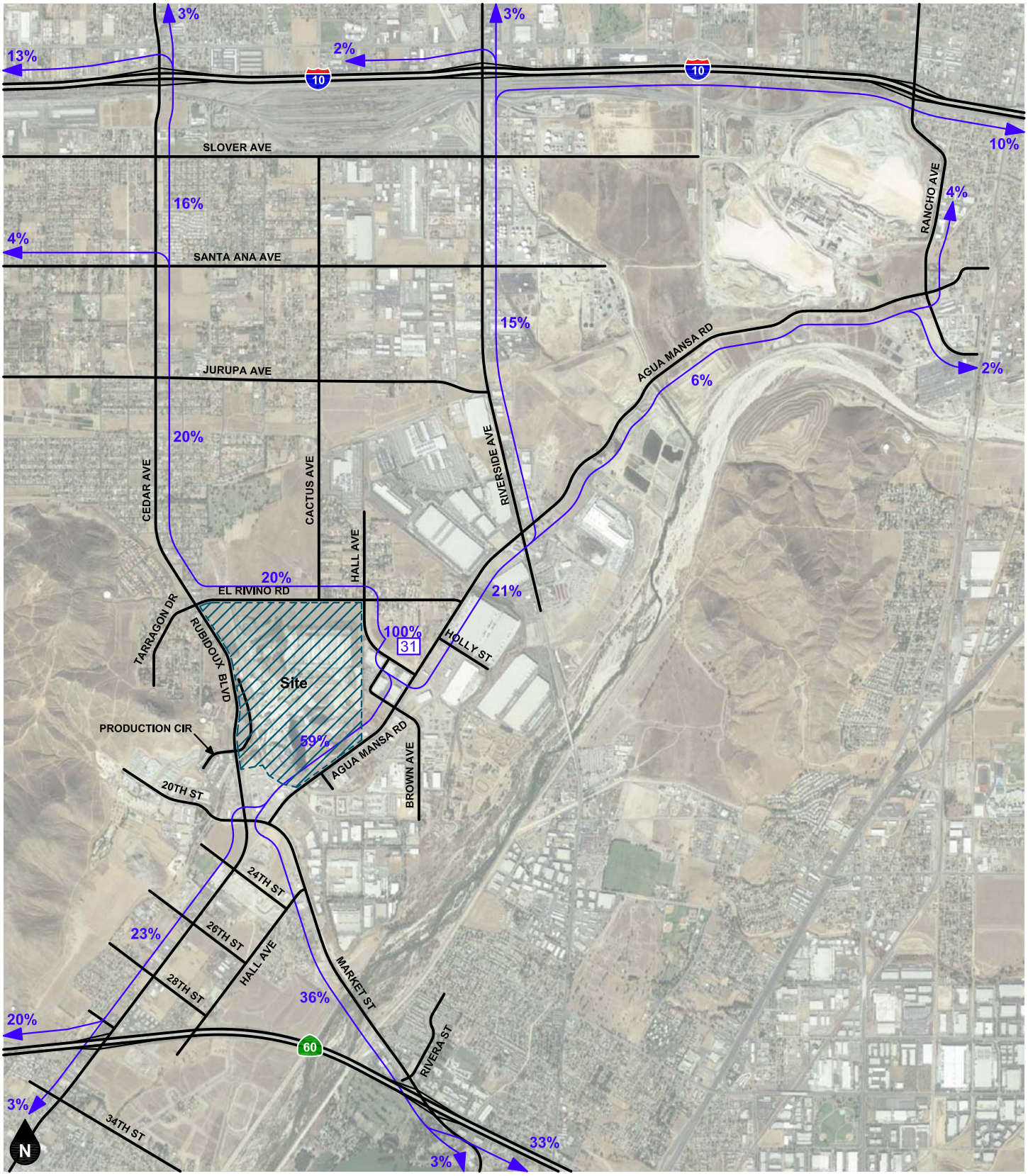
Figure AW
Other Development Traffic Analysis Zone 30 Trip Distribution - Trucks



Legend

10% Percent To/From Project

Figure AX
Other Development Traffic Analysis Zone 31 Trip Distribution - Cars



Legend

10% Percent To/From Project

Figure AY
Other Development Traffic Analysis Zone 31 Trip Distribution - Trucks

APPENDIX J

MERGE / DIVERGE WORKSHEETS

YEAR 2035 WITHOUT PROJECT

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9804	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1234	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9804	1234		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2451	309		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9804	1234	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.064 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 623 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	11038	9400	Yes
v_3 or v_{av34}	4590 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3921	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	11038	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 38.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.902	
Space mean speed in ramp influence area,	S_R = 44.2	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 49.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5674	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1202	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5674	1202		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1419	301		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5674	1202	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.068 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 383 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6876	9400	No
$v_{3 \text{ or } av34}$	2645 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2269		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6876	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.352	
Space mean speed in ramp influence area,	S_R = 56.9	mph
Space mean speed in outer lanes,	S_0 = 60.7	mph
Space mean speed for all vehicles,	S = 58.7	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9604	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1164	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9604	1164		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2401	291		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9604	1164	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4007 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7684	9400	No
$v_{FO} = v_F - v_R$	6520	9400	No
v_R	1164	2100	No
$v_{3 \text{ or } av34}$	1838 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4007		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4007	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.403

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5558	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	988	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5558	988		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1390	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5558	988	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2617 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4725	9400	No
$v_{FO} = v_F - v_R$	3737	9400	No
v_R	988	2100	No
v_3 or v_{av34}	1054 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2617		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2617	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 13.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.387

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.1 mph

Space mean speed for all vehicles, S = 61.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	3/5/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4486	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1208	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4486	1208		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1122	302		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4486	1208	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2442 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4038	9400	No
$v_{FO} = v_F - v_R$	2830	9400	No
v_R	1208	2100	No
$v_{3 \text{ or } av34}$	798 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2442 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2442	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 11.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.407

Space mean speed in ramp influence area, S_R = 55.6 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 60.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9812	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1096	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9812	1096		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2453	274		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9812	1096	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4041 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7850	9400	No
$v_{FO} = v_F - v_R$	6754	9400	No
v_R	1096	2100	No
v_3 or v_{av34}	1904 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4041		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4041	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.397

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 67.8 mph

Space mean speed for all vehicles, S = 61.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1008	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	1008		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099	252		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	1008	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.092 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 403 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5402	9400	No
v_3 or v_{av34}	1995 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	Yes	
If yes, v_{12A} = 1757		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5402	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 57.8	mph
Space mean speed in outer lanes,	S_0 = 62.1	mph
Space mean speed for all vehicles,	S = 59.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9611	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	964	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9611	964		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2403	241		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9611	964	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 935 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10575	9400	Yes
v_3 or v_{av34}	4338 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3844	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10575	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 37.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.729	
Space mean speed in ramp influence area,	S_R = 48.2	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 51.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9604	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	917	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9604	917		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2401			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Rolling	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5		
Recreational vehicle PCE, ER	2.0	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9604	917	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.103 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 733 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8021	9400	No
v_3 or v_{av34}	3185 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2841		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8021	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.353	
Space mean speed in ramp influence area,	S_R = 56.9	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 58.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5558	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	962	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5558	962		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1390	241		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5558	962	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.098 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 412 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5187	9400	No
$v_{3 \text{ or } av34}$	1906 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1690		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5187	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 16.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.241
Space mean speed in ramp influence area,	S_R = 59.4 mph
Space mean speed in outer lanes,	S_0 = 62.2 mph
Space mean speed for all vehicles,	S = 60.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9653	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	924	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9653	924		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		231		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9653	924	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4730 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9653	9400	Yes
$v_{FO} = v_F - v_R$	8729	9400	No
v_R	924	2100	No
$v_{3 \text{ or } av34}$	2461 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4730 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4730	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.381

Space mean speed in ramp influence area, S_R = 56.2 mph

Space mean speed in outer lanes, S_0 = 65.6 mph

Space mean speed for all vehicles, S = 60.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5586	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1062	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5586	1062		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1397	266		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5586	1062	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3034 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5586	9400	No
$v_{FO} = v_F - v_R$	4524	9400	No
v_R	1062	2100	No
v_3 or v_{av34}	1276 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3034		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3034	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.394

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 70.2 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	982	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	982		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099	246		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	982	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2470 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4394	9400	No
$v_{FO} = v_F - v_R$	3412	9400	No
v_R	982	2100	No
v_3 or v_{av34}	962 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2470		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2470	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 61.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9611	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1160	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9611	1160		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2403	290		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9611	1160	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4845 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9611	9400	Yes
$v_{FO} = v_F - v_R$	8451	9400	No
v_R	1160	2100	No
$v_{3 \text{ or } av34}$	2383 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4845 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4845	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.402

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 65.9 mph

Space mean speed for all vehicles, S = 60.4 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4417	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1063	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4417	1063		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		266		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4417	1063	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 375 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5480	9400	No
$v_{3 \text{ or } av34}$	2021 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1766		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5480	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 22.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.315	
Space mean speed in ramp influence area,	S_R = 57.8	mph
Space mean speed in outer lanes,	S_0 = 62.0	mph
Space mean speed for all vehicles,	S = 59.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9661	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1203	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9661	1203		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		301		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9661	1203	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.067 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 651 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10864	9400	Yes

$v_{3 \text{ or } av34}$ = 4505 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3864 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10864	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 39.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.868	
Space mean speed in ramp influence area,	S_R = 45.0	mph
Space mean speed in outer lanes,	S_0 = 54.9	mph
Space mean speed for all vehicles,	S = 49.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7648	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1188	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7648	1188		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1912	297		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7648	1188	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.069 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 530 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8836	9400	No
v_3 or v_{av34}	3559 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3059		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8836	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 35.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.558	
Space mean speed in ramp influence area,	S_R = 52.2	mph
Space mean speed in outer lanes,	S_0 = 58.5	mph
Space mean speed for all vehicles,	S = 55.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7448	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	959	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7448	959		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1862	240		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7448	959	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.098 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 729 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8407	9400	No
v_3 or v_{av34}	3359 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2979	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8407	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.485	
Space mean speed in ramp influence area,	S_R = 53.8	mph
Space mean speed in outer lanes,	S_0 = 58.8	mph
Space mean speed for all vehicles,	S = 56.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	640	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7833		640			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			160			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	640	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3776 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7833	9400	No
$v_{FO} = v_F - v_R$	7193	9400	No
v_R	640	2100	No
$v_{3 \text{ or } av34}$	2028 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3776 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3776	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 34.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.356	
Space mean speed in ramp influence area,	S_R = 56.8	mph
Space mean speed in outer lanes,	S_0 = 67.3	mph
Space mean speed for all vehicles,	S = 61.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	753	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7933		753			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			186			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	753	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3883 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7933	9400	No
$v_{FO} = v_F - v_R$	7180	9400	No
v_R	753	2100	No
v_3 or v_{av34}	2025 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3883 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3883	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.366	
Space mean speed in ramp influence area,	S_R = 56.6	mph
Space mean speed in outer lanes,	S_0 = 67.3	mph
Space mean speed for all vehicles,	S = 61.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7435	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	854	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7435	854		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1859	214		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7435	854	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3723 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7435	9400	No
$v_{FO} = v_F - v_R$	6581	9400	No
v_R	854	2100	No
$v_{3 \text{ or } av34}$	1856 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3723		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3723	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 33.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.375

Space mean speed in ramp influence area, S_R = 56.4 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 61.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8206	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1244	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8206	1244		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2052	311		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8206	1244	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4279 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8206	9400	No
$v_{FO} = v_F - v_R$	6962	9400	No
v_R	1244	2100	No
v_3 or v_{av34}	1963 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4279		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4279	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 38.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.410

Space mean speed in ramp influence area, S_R = 55.6 mph

Space mean speed in outer lanes, S_0 = 67.5 mph

Space mean speed for all vehicles, S = 60.7 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	878	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	878		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889	220		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	878	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.108 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 816 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8434	9400	No
v_3 or v_{av34}	3370 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3022		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8434	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 33.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.482	
Space mean speed in ramp influence area,	S_R = 53.9	mph
Space mean speed in outer lanes,	S_0 = 58.6	mph
Space mean speed for all vehicles,	S = 56.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	519	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8405	519		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		130		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	519	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.153 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1285 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8924	9400	No
v_3 or v_{av34}	3560 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3362		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8924	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 33.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.479	
Space mean speed in ramp influence area,	S_R = 54.0	mph
Space mean speed in outer lanes,	S_0 = 57.1	mph
Space mean speed for all vehicles,	S = 55.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7833	449		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		112		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	449	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.162 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1266 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8282	9400	No
v_3 or v_{av34}	3283 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 3133		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8282	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.432	
Space mean speed in ramp influence area,	S_R = 55.1	mph
Space mean speed in outer lanes,	S_0 = 58.2	mph
Space mean speed for all vehicles,	S = 56.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7933	1060		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		265		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	1060	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 677 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8993	9400	No

$v_{3 \text{ or } av34}$ = 3628 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3173 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8993	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.561	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 58.0	mph
Space mean speed for all vehicles,	S = 55.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8017	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1002	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8017		1002			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			251			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8017	1002	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4061 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8017	9400	No
$v_{FO} = v_F - v_R$	7015	9400	No
v_R	1002	2100	No
v_3 or v_{av34}	1978 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4061		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4061	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 36.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.388	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = 67.5	mph
Space mean speed for all vehicles,	S = 61.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7982	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	827	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7982		827			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15	1996		207			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7982	827	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3947 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7982	9400	No
$v_{FO} = v_F - v_R$	7155	9400	No
v_R	827	2100	No
$v_{3 \text{ or } av34}$	2017 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3947		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3947	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.372

Space mean speed in ramp influence area, S_R = 56.4 mph

Space mean speed in outer lanes, S_0 = 67.3 mph

Space mean speed for all vehicles, S = 61.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	1145		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889	305		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	1145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3940 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7556	9400	No
$v_{FO} = v_F - v_R$	6411	9400	No
v_R	1145	2100	No
$v_{3 \text{ or } av34}$	1808 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3940		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3940	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.401

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 68.2 mph

Space mean speed for all vehicles, S = 61.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1108	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8405		1108			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			277			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	1108	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4289 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8405	9400	No
$v_{FO} = v_F - v_R$	7297	9400	No
v_R	1108	2100	No
v_3 or v_{av34}	2058 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4289 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4289	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.398	
Space mean speed in ramp influence area,	S_R = 55.9	mph
Space mean speed in outer lanes,	S_0 = 67.2	mph
Space mean speed for all vehicles,	S = 60.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Markete Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7572	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	729	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7572	729		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1893	182		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7572	729	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.127 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 959 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8301	9400	No
v_3 or v_{av34}	3306 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 3028		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8301	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.459	
Space mean speed in ramp influence area,	S_R = 54.4	mph
Space mean speed in outer lanes,	S_0 = 58.6	mph
Space mean speed for all vehicles,	S = 56.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8601	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	829	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8601	829		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		205		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8601	829	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.114 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 982 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9430	9400	Yes
v_3 or v_{av34}	3809 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3440	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9430	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.570	
Space mean speed in ramp influence area,	S_R = 51.9	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 54.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9804	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1234	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9804	1234		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2451	309		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9804	1234	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.064 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 464 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8538	9400	No
v_3 or v_{av34}	3420 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2921		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8538	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.475	
Space mean speed in ramp influence area,	S_R = 54.1	mph
Space mean speed in outer lanes,	S_0 = 58.9	mph
Space mean speed for all vehicles,	S = 56.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5674	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1202	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5674	1202		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1419	301		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5674	1202	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.068 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 291 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5515	9400	No
$v_{3 \text{ or } av34}$	2011 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1725		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5515	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.299	
Space mean speed in ramp influence area,	S_R = 58.1	mph
Space mean speed in outer lanes,	S_0 = 62.1	mph
Space mean speed for all vehicles,	S = 59.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1008	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	1008		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099	252		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	1008	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.092 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 315 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4436	9400	No
$v_{3 \text{ or } av34}$	1556 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1371		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4436	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.293	
Space mean speed in ramp influence area,	S_R = 58.3	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 60.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9611	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	964	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9611	964		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2403	241		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9611	964	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 692 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8075	9400	No
v_3 or v_{av34}	3209 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2844	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8075	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.427
Space mean speed in ramp influence area,	S_R = 55.2 mph
Space mean speed in outer lanes,	S_0 = 59.1 mph
Space mean speed for all vehicles,	S = 57.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9653	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	924	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9653	924		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		231		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9653	924	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3888 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7723	9400	No
$v_{FO} = v_F - v_R$	6799	9400	No
v_R	924	2100	No
v_3 or v_{av34}	1917 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3888		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3888	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 29.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.381

Space mean speed in ramp influence area, S_R = 56.2 mph

Space mean speed in outer lanes, S_0 = 67.7 mph

Space mean speed for all vehicles, S = 61.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5586	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1062	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5586	1062		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1397	266		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5586	1062	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v - v_F) P_{FD}$ = 2670 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4749	9400	No
$v_{FO} = v - v_F - v_R$	3687	9400	No
v_R	1062	2100	No
v_3 or v_{av34}	1039 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2670		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2670	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 18.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.394

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 71.2 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	982	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	982		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099	246		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	982	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2278 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3955	9400	No
$v_{FO} = v_F - v_R$	2973	9400	No
v_R	982	2100	No
v_3 or v_{av34}	838 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 2278	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2278	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9611	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1160	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9611	1160		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2403	290		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9611	1160	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4007 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7689	9400	No
$v_{FO} = v_F - v_R$	6529	9400	No
v_R	1160	2100	No
$v_{3 \text{ or } av34}$	1841 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4007 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4007	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.402	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = 68.0	mph
Space mean speed for all vehicles,	S = 61.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4417	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1063	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4417	1063		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		266		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4417	1063	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 293 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4509	9400	No
v_3 or v_{av34}	1576 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 1378		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4509	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.294	
Space mean speed in ramp influence area,	S_R = 58.2	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 60.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9661	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1203	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9661	1203		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		301		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9661	1203	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.067 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 483 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8364	9400	No
v_3 or v_{av34}	3339 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2864		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8364	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 31.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.477	
Space mean speed in ramp influence area,	S_R = 54.0	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 56.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7648	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1188	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7648	1188		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1912	297		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7648	1188	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.069 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 379 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6657	9400	No
v_3 or v_{av34}	2545 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2187		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6657	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.399	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 60.9	mph
Space mean speed for all vehicles,	S = 58.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7448	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	959	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7448	959		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1862	240		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7448	959	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.098 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 533 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6397	9400	No
v_3 or v_{av34}	2452 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2175		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6397	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.375	
Space mean speed in ramp influence area,	S_R = 56.4	mph
Space mean speed in outer lanes,	S_0 = 60.9	mph
Space mean speed for all vehicles,	S = 58.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	640	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7833		640			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			160			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	640	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3093 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6267	9400	No
$v_{FO} = v_F - v_R$	5627	9400	No
v_R	640	2100	No
v_3 or v_{av34}	1587 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3093		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3093	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.356	
Space mean speed in ramp influence area,	S_R = 56.8	mph
Space mean speed in outer lanes,	S_0 = 69.0	mph
Space mean speed for all vehicles,	S = 62.4	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	753	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7933		753			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15						v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	753	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3192 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6347	9400	No
$v_{FO} = v_F - v_R$	5594	9400	No
v_R	753	2100	No
v_3 or v_{av34}	1577 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3192		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3192	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.366

Space mean speed in ramp influence area, S_R = 56.6 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 62.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7435	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	854	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7435	854		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1859	214		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7435	854	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3075 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5948	9400	No
$v_{FO} = v_F - v_R$	5094	9400	No
v_R	854	2100	No
v_3 or v_{av34}	1436 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 3075	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3075	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 28.0- pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.375

Space mean speed in ramp influence area, S_R = 56.4 mph

Space mean speed in outer lanes, S_0 = 69.6 mph

Space mean speed for all vehicles, S = 62.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8206	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1244	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8206	1244		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2052	311		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8206	1244	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3564 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6565	9400	No
$v_{FO} = v_F - v_R$	5321	9400	No
v_R	1244	2100	No
v_3 or v_{av34}	1500 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3564		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3564	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.410

Space mean speed in ramp influence area, S_R = 55.6 mph

Space mean speed in outer lanes, S_0 = 69.4 mph

Space mean speed for all vehicles, S = 61.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7833	449		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	449	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.162 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 906 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6050	9400	No
v_3 or v_{av34}	2347 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2240		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6050	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 57.0	mph
Space mean speed in outer lanes,	S_0 = 60.8	mph
Space mean speed for all vehicles,	S = 59.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7933	1060		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		265		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	1060	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 484 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6733	9400	No
$v_{3 \text{ or } av34}$	2594 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2269		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6733	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.401	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 60.7	mph
Space mean speed for all vehicles,	S = 58.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8017	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1002	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8017	1002		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		251		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8017	1002	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3362 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6414	9400	No
$v_{FO} = v_F - v_R$	5412	9400	No
v_R	1002	2100	No
v_3 or v_{av34}	1526 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3362		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3362	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.388

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 69.3 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7982	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	827	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7982		827			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15	1996		207			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7982	827	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3251 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6386	9400	No
$v_{FO} = v_F - v_R$	5559	9400	No
v_R	827	2100	No
v_3 or v_{av34}	1567 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 3251	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3251	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 30.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.372

Space mean speed in ramp influence area, S_R = 56.4 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 62.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	1145		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	1145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3281 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6045	9400	No
$v_{FO} = v_F - v_R$	4900	9400	No
v_R	1145	2100	No
$v_{3 \text{ or } av34}$	1382 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3281		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3281	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.401

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 69.8 mph

Space mean speed for all vehicles, S = 61.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1108	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8405		1108			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			277			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	1108	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3557 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6724	9400	No
$v_{FO} = v_F - v_R$	5616	9400	No
v_R	1108	2100	No
$v_{3 \text{ or } av34}$	1583 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3557 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3557	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.398	
Space mean speed in ramp influence area,	S_R = 55.9	mph
Space mean speed in outer lanes,	S_0 = 69.0	mph
Space mean speed for all vehicles,	S = 61.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Markete Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7572	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	729	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7572	729		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1893			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7572	729	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.127 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 686 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6143	9400	No
v_3 or v_{av34}	2364 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2165		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6143	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.362	
Space mean speed in ramp influence area,	S_R = 56.7	mph
Space mean speed in outer lanes,	S_0 = 61.0	mph
Space mean speed for all vehicles,	S = 58.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 Without Project
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8601	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	829	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8601	829		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8601	829	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.114 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 697 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6930	9400	No
v_3 or v_{av34}	2702 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2440	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6930	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.394	
Space mean speed in ramp influence area,	S_R = 55.9	mph
Space mean speed in outer lanes,	S_0 = 60.2	mph
Space mean speed for all vehicles,	S = 58.1	mph

YEAR 2035 WITH PROJECT – ALTERNATIVE 1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9830	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1250	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9830	1250		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2458	313		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9830	1250	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.062 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 605 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	11080	9400	Yes
v_3 or v_{av34}	4612 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3932	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	11080	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 38.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.921	
Space mean speed in ramp influence area,	S_R = 43.8	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 49.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5751	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1268	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5751	1268		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1438	317		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5751	1268	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.059 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 341 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7019	9400	No
v_3 or v_{av34}	2705 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2300	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7019	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 56.6	mph
Space mean speed in outer lanes,	S_0 = 60.6	mph
Space mean speed for all vehicles,	S = 58.5	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9606	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1166	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9606	1166		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2402	292		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9606	1166	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4008 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7685	9400	No
$v_{FO} = v_F - v_R$	6519	9400	No
v_R	1166	2100	No
$v_{3 \text{ or } av34}$	1838 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 4008	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4008	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.403

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5558	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	988	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5558	988		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1390	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5558	988	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2617 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4725	9400	No
$v_{FO} = v_F - v_R$	3737	9400	No
v_R	988	2100	No
v_3 or v_{av34}	1054 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 2617	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2617	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 13.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.387	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = 71.1	mph
Space mean speed for all vehicles,	S = 61.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4566	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1269	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4566	1269		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1142	335		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4566	1269	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2508 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4110	9400	No
$v_{FO} = v_F - v_R$	2841	9400	No
v_R	1269	2100	No
$v_{3 \text{ or } av34}$	801 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2508		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2508	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.412

Space mean speed in ramp influence area, S_R = 55.5 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 60.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9844	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1121	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9844	1121		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2461	289		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9844	1121	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4066 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7876	9400	No
$v_{FO} = v_F - v_R$	6755	9400	No
v_R	1121	2100	No
v_3 or v_{av34}	1905 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 4066	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4066	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.399

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 67.8 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1009	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	1009		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099	258		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	1009	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.092 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 403 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5403	9400	No
v_3 or v_{av34}	1995 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	Yes	
If yes, v_{12A} = 1757		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5403	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 57.8	mph
Space mean speed in outer lanes,	S_0 = 62.1	mph
Space mean speed for all vehicles,	S = 59.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	967	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	967		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		242		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	967	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 932 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10580	9400	Yes

$v_{3 \text{ or } av34}$ = 4340 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3845 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10580	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.731	
Space mean speed in ramp influence area,	S_R = 48.2	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 51.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9607	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	920	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9607	920		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2402	230		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9607	920	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.103 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 731 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8027	9400	No
v_3 or v_{av34}	3188 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2842		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8027	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.354	
Space mean speed in ramp influence area,	S_R = 56.9	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 58.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5564	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	968	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5564	968		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1391	242		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5564	968	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 409 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5197	9400	No
v_3 or v_{av34}	1910 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	Yes	
If yes, v_{12A} = 1691		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5197	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 16.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.242	
Space mean speed in ramp influence area,	S_R = 59.4	mph
Space mean speed in outer lanes,	S_0 = 62.2	mph
Space mean speed for all vehicles,	S = 60.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9726	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	981	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9726	981		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2432			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9726	981	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4794 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9726	9400	Yes
$v_{FO} = v_F - v_R$	8745	9400	No
v_R	981	2100	No
$v_{3 \text{ or } av34}$	2466 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4794 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4794	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 37.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 65.6 mph

Space mean speed for all vehicles, S = 60.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5616	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1085	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5616	1085		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1404			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5616	1085	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3061 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5616	9400	No
$v_{FO} = v_F - v_R$	4531	9400	No
v_R	1085	2100	No
$v_{3 \text{ or } av34}$	1277 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3061		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3061	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 22.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.396

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 70.2 mph

Space mean speed for all vehicles, S = 61.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4398	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	986	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4398	986		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1100	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4398	986	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2474 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4398	9400	No
$v_{FO} = v_F - v_R$	3412	9400	No
v_R	986	2100	No
v_3 or v_{av34}	962 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2474		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2474	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.387

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 61.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1162	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	1162		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		291		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	1162	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4847 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9613	9400	Yes
$v_{FO} = v_F - v_R$	8451	9400	No
v_R	1162	2100	No
$v_{3 \text{ or } av34}$	2383 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4847 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4847	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.403	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = 65.9	mph
Space mean speed for all vehicles,	S = 60.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4441	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1080	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4441	1080		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		270		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4441	1080	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.083 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 368 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5521	9400	No
v_3 or v_{av34}	2036 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 1776		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5521	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 22.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.317	
Space mean speed in ramp influence area,	S_R = 57.7	mph
Space mean speed in outer lanes,	S_0 = 62.0	mph
Space mean speed for all vehicles,	S = 59.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9735	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1265	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9735	1265		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2434			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9735	1265	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.060 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 581 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	11000	9400	Yes
v_3 or v_{av34}	4577 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3894	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	11000	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 40.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.928	
Space mean speed in ramp influence area,	S_R = 43.7	mph
Space mean speed in outer lanes,	S_0 = 54.8	mph
Space mean speed for all vehicles,	S = 48.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7688	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1215	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7688	1215		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1922	304		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7688	1215	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.066 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 507 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8903	9400	No

$v_{3 \text{ or } av34}$ = 3590 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3075 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8903	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.570	
Space mean speed in ramp influence area,	S_R = 51.9	mph
Space mean speed in outer lanes,	S_0 = 58.4	mph
Space mean speed for all vehicles,	S = 55.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7571	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1062	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7571	1062		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1893	266		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7571	1062	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 644 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8633	9400	No
v_3 or v_{av34}	3463 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3028		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8633	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.518	
Space mean speed in ramp influence area,	S_R = 53.1	mph
Space mean speed in outer lanes,	S_0 = 58.6	mph
Space mean speed for all vehicles,	S = 55.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7838	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	645	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7838	645		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1960			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7838	645	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3781 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7838	9400	No
$v_{FO} = v_F - v_R$	7193	9400	No
v_R	645	2100	No
$v_{3 \text{ or } av34}$	2028 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3781		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3781	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 34.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.356

Space mean speed in ramp influence area, S_R = 56.8 mph

Space mean speed in outer lanes, S_0 = 67.3 mph

Space mean speed for all vehicles, S = 61.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7935	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	756	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7935	756		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1984	189		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7935	756	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3886 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7935	9400	No
$v_{FO} = v_F - v_R$	7179	9400	No
v_R	756	2100	No
$v_{3 \text{ or } av34}$	2024 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3886 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3886	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086 v_{12} - 0.009 L_D$ = 35.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.366	
Space mean speed in ramp influence area,	S_R = 56.6	mph
Space mean speed in outer lanes,	S_0 = 67.3	mph
Space mean speed for all vehicles,	S = 61.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7558	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	948	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7558	948		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1890	237		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7558	948	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3830 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7558	9400	No
$v_{FO} = v_F - v_R$	6610	9400	No
v_R	948	2100	No
$v_{3 \text{ or } av34}$	1864 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3830		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3830	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 34.5 pc/mi/ln D

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.383	
Space mean speed in ramp influence area,	S_R = 56.2	mph
Space mean speed in outer lanes,	S_0 = 67.9	mph
Space mean speed for all vehicles,	S = 61.4	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8259	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1282	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8259	1282		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2065	321		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8259	1282	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4324 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8259	9400	No
$v_{FO} = v_F - v_R$	6977	9400	No
v_R	1282	2100	No
v_3 or v_{av34}	1967 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4324		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4324	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 38.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.413

Space mean speed in ramp influence area, S_R = 55.5 mph

Space mean speed in outer lanes, S_0 = 67.5 mph

Space mean speed for all vehicles, S = 60.6 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7558	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	878	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7558	878		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1890	220		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7558	878	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.108 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 817 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8436	9400	No
v_3 or v_{av34}	3370 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 3023		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8436	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.482	
Space mean speed in ramp influence area,	S_R = 53.9	mph
Space mean speed in outer lanes,	S_0 = 58.6	mph
Space mean speed for all vehicles,	S = 56.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8411	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	525	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8411	525		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2103	126		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8411	525	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.152 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1280 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8936	9400	No
v_3 or v_{av34}	3565 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3364	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8936	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.480	
Space mean speed in ramp influence area,	S_R = 54.0	mph
Space mean speed in outer lanes,	S_0 = 57.1	mph
Space mean speed for all vehicles,	S = 55.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7833	449		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		112		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	449	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.162 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1266 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8282	9400	No
v_3 or v_{av34}	3283 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3133	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8282	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.432	
Space mean speed in ramp influence area,	S_R = 55.1	mph
Space mean speed in outer lanes,	S_0 = 58.2	mph
Space mean speed for all vehicles,	S = 56.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7933	1060		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		265		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	1060	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 677 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8993	9400	No
v_3 or v_{av34}	3628 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3173	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8993	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.561	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 58.0	mph
Space mean speed for all vehicles,	S = 55.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8225	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1157	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8225		1157			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			306			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8225	1157	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4239 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8225	9400	No
$v_{FO} = v_F - v_R$	7068	9400	No
v_R	1157	2100	No
v_3 or v_{av34}	1993 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4239		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4239	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.402

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 67.4 mph

Space mean speed for all vehicles, S = 60.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8078	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	890	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8078	890		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2020	223		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8078	890	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4024 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8078	9400	No
$v_{FO} = v_F - v_R$	7188	9400	No
v_R	890	2100	No
v_3 or v_{av34}	2027 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 4024	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4024	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.378

Space mean speed in ramp influence area, S_R = 56.3 mph

Space mean speed in outer lanes, S_0 = 67.3 mph

Space mean speed for all vehicles, S = 61.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	1145		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889	305		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	1145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3940 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7556	9400	No
$v_{FO} = v_F - v_R$	6411	9400	No
v_R	1145	2100	No
$v_{3 \text{ or } av34}$	1808 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 3940	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3940	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.401

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 68.2 mph

Space mean speed for all vehicles, S = 61.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1108	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8405	1108		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		277		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	1108	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4289 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8405	9400	No
$v_{FO} = v_F - v_R$	7297	9400	No
v_R	1108	2100	No
v_3 or v_{av34}	2058 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4289 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4289	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.398

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 67.2 mph

Space mean speed for all vehicles, S = 60.9 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Markete Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7646	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	774	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7646	774		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1912	194		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7646	774	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.121 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 926 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8420	9400	No
v_3 or v_{av34}	3360 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3058		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8420	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.472	
Space mean speed in ramp influence area,	S_R = 54.1	mph
Space mean speed in outer lanes,	S_0 = 58.5	mph
Space mean speed for all vehicles,	S = 56.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8815	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	994	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8815	994		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2204	249		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8815	994	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.094 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 825 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9809	9400	Yes
v_3 or v_{av34}	3995 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3526	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9809	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 38.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.650	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 56.4	mph
Space mean speed for all vehicles,	S = 53.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9830	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1250	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9830	1250		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2458	313		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9830	1250	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.062 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 451 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8580	9400	No
v_3 or v_{av34}	3439 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2932		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8580	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.482	
Space mean speed in ramp influence area,	S_R = 53.9	mph
Space mean speed in outer lanes,	S_0 = 58.9	mph
Space mean speed for all vehicles,	S = 56.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5751	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1268	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5751	1268		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1438	317		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5751	1268	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.059 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 259 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5639	9400	No
$v_{3 \text{ or } av34}$	2056 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	

If yes, v_{12A} = 1748 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5639	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.306
Space mean speed in ramp influence area,	S_R = 58.0 mph
Space mean speed in outer lanes,	S_0 = 62.1 mph
Space mean speed for all vehicles,	S = 59.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1009	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	1009		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	1009	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.092 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 314 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4437	9400	No
v_3 or v_{av34}	1557 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 1371		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4437	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.293	
Space mean speed in ramp influence area,	S_R = 58.3	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 60.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	967	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	967		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		242		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	967	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 689 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8080	9400	No
$v_{3 \text{ or } av34}$	3212 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		Yes	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2845		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8080	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.428	
Space mean speed in ramp influence area,	S_R = 55.2	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 57.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9726	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	981	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9726	981		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2432			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9726	981	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3946 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7781	9400	No
$v_{FO} = v_F - v_R$	6800	9400	No
v_R	981	2100	No
$v_{3 \text{ or } av34}$	1917 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3946 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3946	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 67.7 mph

Space mean speed for all vehicles, S = 61.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5616	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1085	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5616	1085		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1404			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5616	1085	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2693 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4774	9400	No
$v_{FO} = v_F - v_R$	3689	9400	No
v_R	1085	2100	No
$v_{3 \text{ or } av34}$	1040 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2693		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2693	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.396

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 71.1 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4398	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	986	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4398	986		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1100	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4398	986	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2282 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3959	9400	No
$v_{FO} = v_F - v_R$	2973	9400	No
v_R	986	2100	No
$v_{3 \text{ or } av34}$	838 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2282 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2282	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.387	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = 71.3	mph
Space mean speed for all vehicles,	S = 61.7	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1162	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	1162		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		291		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	1162	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4009 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7691	9400	No
$v_{FO} = v_F - v_R$	6529	9400	No
v_R	1162	2100	No
v_3 or v_{av34}	1841 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	No	
If yes, v_{12A} = 4009		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4009	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.403

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4441	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1080	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4441	1080		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		270		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4441	1080	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.083 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 287 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4544	9400	No
$v_{3 \text{ or } av34}$	1588 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1385		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4544	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.295	
Space mean speed in ramp influence area,	S_R = 58.2	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 60.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9735	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1265	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9735	1265		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2434			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9735	1265	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.060 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 432 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8500	9400	No
v_3 or v_{av34}	3401 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2894		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8500	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.499	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = 59.0	mph
Space mean speed for all vehicles,	S = 56.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7688	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1215	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7688	1215		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1922	304		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7688	1215	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.066 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 362 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6712	9400	No
$v_{3 \text{ or } av34}$	2567 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2198		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6712	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.403	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = 60.9	mph
Space mean speed for all vehicles,	S = 58.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7571	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1062	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7571	1062		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1893	266		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7571	1062	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 460 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6476	9400	No
$v_{3 \text{ or } av34}$	2477 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2165		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6476	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.383	
Space mean speed in ramp influence area,	S_R = 56.2	mph
Space mean speed in outer lanes,	S_0 = 61.0	mph
Space mean speed for all vehicles,	S = 58.5	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7838	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	645	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7838	645		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1960			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7838	645	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3098 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6271	9400	No
$v_{FO} = v_F - v_R$	5626	9400	No
v_R	645	2100	No
$v_{3 \text{ or } av34}$	1586 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3098		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3098	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 28.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.356

Space mean speed in ramp influence area, S_R = 56.8 mph

Space mean speed in outer lanes, S_0 = 69.0 mph

Space mean speed for all vehicles, S = 62.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7935	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	756	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7935	756		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1984	189		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7935	756	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3194 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6348	9400	No
$v_{FO} = v_F - v_R$	5592	9400	No
v_R	756	2100	No
$v_{3 \text{ or } av34}$	1577 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3194		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3194	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.366

Space mean speed in ramp influence area, S_R = 56.6 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 62.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7558	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	948	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7558	948		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1890	237		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7558	948	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3171 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6047	9400	No
$v_{FO} = v_F - v_R$	5099	9400	No
v_R	948	2100	No
$v_{3 \text{ or } av34}$	1438 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3171		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3171	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.383	
Space mean speed in ramp influence area,	S_R = 56.2	mph
Space mean speed in outer lanes,	S_0 = 69.6	mph
Space mean speed for all vehicles,	S = 61.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8259	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1282	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8259	1282		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2065	321		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8259	1282	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3604 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6608	9400	No
$v_{FO} = v_F - v_R$	5326	9400	No
v_R	1282	2100	No
v_3 or v_{av34}	1502 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3604 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3604	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.413

Space mean speed in ramp influence area, S_R = 55.5 mph

Space mean speed in outer lanes, S_0 = 69.3 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7833	449		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	449	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.162 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 906 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6050	9400	No
v_3 or v_{av34}	2347 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2240		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6050	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 57.0	mph
Space mean speed in outer lanes,	S_0 = 60.8	mph
Space mean speed for all vehicles,	S = 59.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7933	1060		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		265		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	1060	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 484 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6733	9400	No
v_3 or v_{av34}	2594 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2269		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6733	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.401	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 60.7	mph
Space mean speed for all vehicles,	S = 58.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8225	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1157	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8225		1157			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15						v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8225	1157	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3521 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6580	9400	No
$v_{FO} = v_F - v_R$	5423	9400	No
v_R	1157	2100	No
$v_{3 \text{ or } av34}$	1529 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3521 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3521	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 32.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.402	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 69.2	mph
Space mean speed for all vehicles,	S = 61.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8078	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	890	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8078	890		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2020	223		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8078	890	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3320 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6463	9400	No
$v_{FO} = v_F - v_R$	5573	9400	No
v_R	890	2100	No
$v_{3 \text{ or } av34}$	1571 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3320 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3320	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.378

Space mean speed in ramp influence area, S_R = 56.3 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 61.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	1145		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	1145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3281 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6045	9400	No
$v_{FO} = v_F - v_R$	4900	9400	No
v_R	1145	2100	No
$v_{3 \text{ or } av34}$	1382 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3281		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3281	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.401

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 69.8 mph

Space mean speed for all vehicles, S = 61.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1108	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8405		1108			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			277			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	1108	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3557 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6724	9400	No
$v_{FO} = v_F - v_R$	5616	9400	No
v_R	1108	2100	No
$v_{3 \text{ or } av34}$	1583 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3557 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3557	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 32.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.398

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 69.0 mph

Space mean speed for all vehicles, S = 61.4 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Markete Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7646	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	774	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7646	774		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1912	194		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7646	774	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.121 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 662 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6241	9400	No
$v_{3 \text{ or } av34}$	2402 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2186		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6241	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.367	
Space mean speed in ramp influence area,	S_R = 56.6	mph
Space mean speed in outer lanes,	S_0 = 60.9	mph
Space mean speed for all vehicles,	S = 58.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 1
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8815	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	994	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8815	994		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2204	249		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8815	994	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.094 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 591 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7309	9400	No
v_3 or v_{av34}	2862 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2526 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7309	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.424	
Space mean speed in ramp influence area,	S_R = 55.3	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 57.6	mph

YEAR 2035 WITH PROJECT – ALTERNATIVE 2

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9829	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1249	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9829	1249		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		325		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9829	1249	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.062 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 606 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	11078	9400	Yes
v_3 or v_{av34}	4611 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 3931		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	11078	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 38.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.919	
Space mean speed in ramp influence area,	S_R = 43.9	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 49.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5743	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1259	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5743	1259		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1436	315		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5743	1259	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.060 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 347 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7002	9400	No
$v_{3 \text{ or } av34}$	2698 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2297		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7002	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.363	
Space mean speed in ramp influence area,	S_R = 56.6	mph
Space mean speed in outer lanes,	S_0 = 60.6	mph
Space mean speed for all vehicles,	S = 58.5	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9606	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1166	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9606	1166		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2402	292		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9606	1166	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4008 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7685	9400	No
$v_{FO} = v_F - v_R$	6519	9400	No
v_R	1166	2100	No
$v_{3 \text{ or } av34}$	1838 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 4008	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4008	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.403

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5558	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	988	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5558	988		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1390	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5558	988	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2617 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4725	9400	No
$v_{FO} = v_F - v_R$	3737	9400	No
v_R	988	2100	No
v_3 or v_{av34}	1054 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2617		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2617	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 13.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.387

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.1 mph

Space mean speed for all vehicles, S = 61.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4560	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1256	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4560	1256		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1140	314		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4560	1256	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2498 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4104	9400	No
$v_{FO} = v_F - v_R$	2848	9400	No
v_R	1256	2100	No
v_3 or v_{av34}	803 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2498 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2498	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.411

Space mean speed in ramp influence area, S_R = 55.5 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 60.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9845	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1121	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9845	1121		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9845	1121	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4066 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7876	9400	No
$v_{FO} = v_F - v_R$	6755	9400	No
v_R	1121	2100	No
$v_{3 \text{ or } av34}$	1905 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4066 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4066	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.399	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 67.8	mph
Space mean speed for all vehicles,	S = 61.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1009	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	1009		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099	258		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	1009	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.092 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 403 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5403	9400	No
v_3 or v_{av34}	1995 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	Yes	
If yes, v_{12A} = 1757		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5403	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 57.8	mph
Space mean speed in outer lanes,	S_0 = 62.1	mph
Space mean speed for all vehicles,	S = 59.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	967	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	967		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		242		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	967	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 932 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10580	9400	Yes

$v_{3 \text{ or } av34}$ = 4340 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3845 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10580	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.731	
Space mean speed in ramp influence area,	S_R = 48.2	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 51.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9607	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	920	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9607	920		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2402	230		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9607	920	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.103 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 731 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8027	9400	No
v_3 or v_{av34}	3188 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2842	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8027	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.354	
Space mean speed in ramp influence area,	S_R = 56.9	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 58.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5564	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	968	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5564	968		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1391	242		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5564	968	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 409 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5197	9400	No
$v_{3 \text{ or } av34}$	1910 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1691		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5197	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.242	
Space mean speed in ramp influence area,	S_R = 59.4	mph
Space mean speed in outer lanes,	S_0 = 62.2	mph
Space mean speed for all vehicles,	S = 60.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9725	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	969	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9725	969		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		252		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9725	969	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4787 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9725	9400	Yes
$v_{FO} = v_F - v_R$	8756	9400	No
v_R	969	2100	No
$v_{3 \text{ or } av34}$	2469 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4787 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4787	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 37.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.385	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = 65.6	mph
Space mean speed for all vehicles,	S = 60.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5619	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1087	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5619	1087		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1405	272		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5619	1087	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3063 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5619	9400	No
$v_{FO} = v_F - v_R$	4532	9400	No
v_R	1087	2100	No
v_3 or v_{av34}	1278 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3063		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3063	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 22.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.396

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 70.2 mph

Space mean speed for all vehicles, S = 61.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4398	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	986	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4398	986		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1100	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4398	986	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2474 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4398	9400	No
$v_{FO} = v_F - v_R$	3412	9400	No
v_R	986	2100	No
v_3 or v_{av34}	962 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 2474	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2474	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.387

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 61.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1162	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	1162		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		291		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	1162	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4847 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9613	9400	Yes
$v_{FO} = v_F - v_R$	8451	9400	No
v_R	1162	2100	No
$v_{3 \text{ or } av34}$	2383 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4847 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4847	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.403	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = 65.9	mph
Space mean speed for all vehicles,	S = 60.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4441	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1081	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4441	1081		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		271		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4441	1081	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.083 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 367 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5522	9400	No
$v_{3 \text{ or } av34}$	2037 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1776		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5522	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 22.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.317	
Space mean speed in ramp influence area,	S_R = 57.7	mph
Space mean speed in outer lanes,	S_0 = 62.0	mph
Space mean speed for all vehicles,	S = 59.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9730	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1257	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9730	1257		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2433	319		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9730	1257	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.061 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 590 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10987	9400	Yes

$v_{3 \text{ or } av34}$ = 4570 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3892 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10987	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 40.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.921	
Space mean speed in ramp influence area,	S_R = 43.8	mph
Space mean speed in outer lanes,	S_0 = 54.8	mph
Space mean speed for all vehicles,	S = 49.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7689	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1215	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7689	1215		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		304		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7689	1215	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.066 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 507 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8904	9400	No
v_3 or v_{av34}	3591 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3075	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8904	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.570	
Space mean speed in ramp influence area,	S_R = 51.9	mph
Space mean speed in outer lanes,	S_0 = 58.4	mph
Space mean speed for all vehicles,	S = 55.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7562	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1051	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7562	1051		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1891	263		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7562	1051	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.086 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 654 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8613	9400	No
v_3 or v_{av34}	3454 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 3024		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8613	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.515	
Space mean speed in ramp influence area,	S_R = 53.2	mph
Space mean speed in outer lanes,	S_0 = 58.6	mph
Space mean speed for all vehicles,	S = 55.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7840	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	644	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7840	644		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1960	161		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7840	644	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3781 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7840	9400	No
$v_{FO} = v_F - v_R$	7196	9400	No
v_R	644	2100	No
$v_{3 \text{ or } av34}$	2029 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3781 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3781	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.356	
Space mean speed in ramp influence area,	S_R = 56.8	mph
Space mean speed in outer lanes,	S_0 = 67.3	mph
Space mean speed for all vehicles,	S = 61.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7936	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	757	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7936	757		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1984			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7936	757	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3887 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7936	9400	No
$v_{FO} = v_F - v_R$	7179	9400	No
v_R	757	2100	No
$v_{3 \text{ or } av34}$	2024 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3887		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3887	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.366

Space mean speed in ramp influence area, S_R = 56.6 mph

Space mean speed in outer lanes, S_0 = 67.3 mph

Space mean speed for all vehicles, S = 61.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7552	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	930	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7552	930		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1888	233		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7552	930	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3817 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7552	9400	No
$v_{FO} = v_F - v_R$	6622	9400	No
v_R	930	2100	No
$v_{3 \text{ or } av34}$	1867 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3817		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3817	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.382

Space mean speed in ramp influence area, S_R = 56.2 mph

Space mean speed in outer lanes, S_0 = 67.9 mph

Space mean speed for all vehicles, S = 61.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8264	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1285	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8264	1285		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2066	319		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8264	1285	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4328 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8264	9400	No
$v_{FO} = v_F - v_R$	6979	9400	No
v_R	1285	2100	No
$v_{3 \text{ or } av34}$	1968 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4328 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4328	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.414	
Space mean speed in ramp influence area,	S_R = 55.5	mph
Space mean speed in outer lanes,	S_0 = 67.5	mph
Space mean speed for all vehicles,	S = 60.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7559	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	879	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7559	879		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1890	220		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7559	879	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.108 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 816 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8438	9400	No
v_3 or v_{av34}	3371 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3023	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8438	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.483	
Space mean speed in ramp influence area,	S_R = 53.9	mph
Space mean speed in outer lanes,	S_0 = 58.6	mph
Space mean speed for all vehicles,	S = 56.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8412	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	524	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8412	524		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2103	131		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8412	524	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.152 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1281 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8936	9400	No
v_3 or v_{av34}	3565 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 3364	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8936	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.480	
Space mean speed in ramp influence area,	S_R = 54.0	mph
Space mean speed in outer lanes,	S_0 = 57.1	mph
Space mean speed for all vehicles,	S = 55.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	3/5/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7833	449		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		112		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	449	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.162 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1266 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8282	9400	No
v_3 or v_{av34}	3283 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3133		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8282	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.432	
Space mean speed in ramp influence area,	S_R = 55.1	mph
Space mean speed in outer lanes,	S_0 = 58.2	mph
Space mean speed for all vehicles,	S = 56.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7933	1060		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		265		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	1060	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 677 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8993	9400	No

$v_{3 \text{ or } av34}$ = 3628 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 3173 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8993	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.561	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 58.0	mph
Space mean speed for all vehicles,	S = 55.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8218	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1127	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8218	1127		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2055	282		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8218	1127	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4219 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8218	9400	No
$v_{FO} = v_F - v_R$	7091	9400	No
v_R	1127	2100	No
v_3 or v_{av34}	1999 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 4219	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4219	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.399

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 67.4 mph

Space mean speed for all vehicles, S = 60.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8083	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	894	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8083	894		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2021	224		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8083	894	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4028 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8083	9400	No
$v_{FO} = v_F - v_R$	7189	9400	No
v_R	894	2100	No
$v_{3 \text{ or } av34}$	2027 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 4028		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4028	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.378

Space mean speed in ramp influence area, S_R = 56.3 mph

Space mean speed in outer lanes, S_0 = 67.3 mph

Space mean speed for all vehicles, S = 61.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	1145		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889	305		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	1145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3940 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7556	9400	No
$v_{FO} = v_F - v_R$	6411	9400	No
v_R	1145	2100	No
$v_{3 \text{ or } av34}$	1808 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 3940	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3940	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.401

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 68.2 mph

Space mean speed for all vehicles, S = 61.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1108	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	8405		1108			vph
Peak-hour factor, PHF	1.00		1.00			
Peak 15-min volume, v15			277			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Grade		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	1108	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4289 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8405	9400	No
$v_{FO} = v_F - v_R$	7297	9400	No
v_R	1108	2100	No
v_3 or v_{av34}	2058 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4289 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4289	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.398

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 67.2 mph

Space mean speed for all vehicles, S = 60.9 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Markete Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7642	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	772	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7642	772		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1911	193		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7642	772	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.121 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 927 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8414	9400	No
v_3 or v_{av34}	3357 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 3056		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8414	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.471	
Space mean speed in ramp influence area,	S_R = 54.2	mph
Space mean speed in outer lanes,	S_0 = 58.5	mph
Space mean speed for all vehicles,	S = 56.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8798	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	973	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8798	973		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2200			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8798	973	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.096 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 846 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9771	9400	Yes
v_3 or v_{av34}	3976 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 3519		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9771	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 38.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.640	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 56.4	mph
Space mean speed for all vehicles,	S = 53.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9829	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1249	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9829	1249		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9829	1249	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.062 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 452 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8578	9400	No
v_3 or v_{av34}	3438 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2931	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8578	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.481	
Space mean speed in ramp influence area,	S_R = 53.9	mph
Space mean speed in outer lanes,	S_0 = 58.9	mph
Space mean speed for all vehicles,	S = 56.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5743	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1259	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5743	1259		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1436	315		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5743	1259	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.060 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 264 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5624	9400	No
v_3 or v_{av34}	2050 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 1746		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5624	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.305	
Space mean speed in ramp influence area,	S_R = 58.0	mph
Space mean speed in outer lanes,	S_0 = 62.1	mph
Space mean speed for all vehicles,	S = 59.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4394	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1009	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	1009		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1099			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4394	1009	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.092 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 314 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4437	9400	No
$v_{3 \text{ or } av34}$	1557 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 1371		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4437	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.293	
Space mean speed in ramp influence area,	S_R = 58.3	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 60.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Cedar Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	967	vph
Length of first accel/decel lane	775	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	967		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		242		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	967	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.097 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 689 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8080	9400	No
v_3 or v_{av34}	3212 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2845	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8080	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.428	
Space mean speed in ramp influence area,	S_R = 55.2	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 57.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9725	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	969	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9725	969		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9725	969	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3939 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7780	9400	No
$v_{FO} = v_F - v_R$	6811	9400	No
v_R	969	2100	No
$v_{3 \text{ or } av34}$	1920 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3939		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3939	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.385

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 67.7 mph

Space mean speed for all vehicles, S = 61.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway WB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5619	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1087	vph
Length of first accel/decel lane	925	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5619	1087		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1405	272		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5619	1087	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2696 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4777	9400	No
$v_{FO} = v_F - v_R$	3690	9400	No
v_R	1087	2100	No
v_3 or v_{av34}	1040 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A}	= 2696	(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2696	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.396

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 71.1 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4398	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	986	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4398	986		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1100	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4398	986	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2282 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3959	9400	No
$v_{FO} = v_F - v_R$	2973	9400	No
v_R	986	2100	No
$v_{3 \text{ or } av34}$	838 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 2282		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2282	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.387

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 61.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB Off-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9613	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1162	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9613	1162		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		291		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9613	1162	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4009 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7691	9400	No
$v_{FO} = v_F - v_R$	6529	9400	No
v_R	1162	2100	No
v_3 or v_{av34}	1841 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4009 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4009	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.403

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 61.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4441	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1081	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4441	1081		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4441	1081	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.083 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 286 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4545	9400	No
$v_{3 \text{ or } av34}$	1589 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 1385		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4545	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.295	
Space mean speed in ramp influence area,	S_R = 58.2	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 60.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	I-10 Freeway EB On-Ramp
Junction:	Riverside Avenue
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9730	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1257	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9730	1257		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2433			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	9730	1257	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.061 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 439 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8487	9400	No
v_3 or v_{av34}	3395 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2892	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8487	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.496	
Space mean speed in ramp influence area,	S_R = 53.6	mph
Space mean speed in outer lanes,	S_0 = 59.0	mph
Space mean speed for all vehicles,	S = 56.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7689	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1215	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7689	1215		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		304		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7689	1215	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.066 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 362 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6713	9400	No
v_3 or v_{av34}	2568 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2199		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6713	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.404	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = 60.9	mph
Space mean speed for all vehicles,	S = 58.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7562	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1051	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7562	1051		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1891	263		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7562	1051	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.086 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 467 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6458	9400	No
v_3 or v_{av34}	2470 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2162		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6458	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.382	
Space mean speed in ramp influence area,	S_R = 56.2	mph
Space mean speed in outer lanes,	S_0 = 61.0	mph
Space mean speed for all vehicles,	S = 58.5	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7840	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	644	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7840	644		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1960	161		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7840	644	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3098 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6272	9400	No
$v_{FO} = v_F - v_R$	5628	9400	No
v_R	644	2100	No
$v_{3 \text{ or } av34}$	1587 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3098 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3098	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.356

Space mean speed in ramp influence area, S_R = 56.8 mph

Space mean speed in outer lanes, S_0 = 69.0 mph

Space mean speed for all vehicles, S = 62.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7936	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	757	vph
Length of first accel/decel lane	280	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7936	757		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1984			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7936	757	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3195 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6349	9400	No
$v_{FO} = v_F - v_R$	5592	9400	No
v_R	757	2100	No
$v_{3 \text{ or } av34}$	1577 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3195		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3195	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.366

Space mean speed in ramp influence area, S_R = 56.6 mph

Space mean speed in outer lanes, S_0 = 69.1 mph

Space mean speed for all vehicles, S = 62.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7552	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	930	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7552	930		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1888	233		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7552	930	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3159 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6042	9400	No
$v_{FO} = v_F - v_R$	5112	9400	No
v_R	930	2100	No
v_3 or v_{av34}	1441 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3159		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3159	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.382	
Space mean speed in ramp influence area,	S_R = 56.2	mph
Space mean speed in outer lanes,	S_0 = 69.6	mph
Space mean speed for all vehicles,	S = 61.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Rubidoux Boulevard
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8264	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1285	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8264	1285		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2066			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8264	1285	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3608 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6612	9400	No
$v_{FO} = v_F - v_R$	5327	9400	No
v_R	1285	2100	No
v_3 or v_{av34}	1502 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3608 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3608	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.414	
Space mean speed in ramp influence area,	S_R = 55.5	mph
Space mean speed in outer lanes,	S_0 = 69.3	mph
Space mean speed for all vehicles,	S = 61.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	3/5/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7833	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7833	449		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15				v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7833	449	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.162 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 906 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6050	9400	No
v_3 or v_{av34}	2347 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2240		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6050	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 57.0	mph
Space mean speed in outer lanes,	S_0 = 60.8	mph
Space mean speed for all vehicles,	S = 59.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7933	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7933	1060		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		265		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7933	1060	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.085 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 484 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6733	9400	No
$v_{3 \text{ or } av34}$	2594 pc/h	(Equation 25-4 or 25-5)	
Is $v_{3 \text{ or } av34}$ > 2700 pc/h?		No	
Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2		Yes	
If yes, v_{12A} = 2269		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6733	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.401	
Space mean speed in ramp influence area,	S_R = 55.8	mph
Space mean speed in outer lanes,	S_0 = 60.7	mph
Space mean speed for all vehicles,	S = 58.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8218	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1127	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8218	1127		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2055	282		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8218	1127	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3502 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6575	9400	No
$v_{FO} = v_F - v_R$	5448	9400	No
v_R	1127	2100	No
v_3 or v_{av34}	1536 pc/h	(Equation 25-15 or 25-16)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	
If yes, v_{12A} = 3502		(Equation 25-18)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3502	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.399

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 69.2 mph

Space mean speed for all vehicles, S = 61.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway WB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8083	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	894	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8083	894		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2021	224		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8083	894	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3324 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6467	9400	No
$v_{FO} = v_F - v_R$	5573	9400	No
v_R	894	2100	No
$v_{3 \text{ or } av34}$	1571 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3324 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3324	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.378	
Space mean speed in ramp influence area,	S_R = 56.3	mph
Space mean speed in outer lanes,	S_0 = 69.1	mph
Space mean speed for all vehicles,	S = 61.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7556	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7556	1145		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1889			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7556	1145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3281 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6045	9400	No
$v_{FO} = v_F - v_R$	4900	9400	No
v_R	1145	2100	No
$v_{3 \text{ or } av34}$	1382 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3281 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3281	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.401

Space mean speed in ramp influence area, S_R = 55.8 mph

Space mean speed in outer lanes, S_0 = 69.8 mph

Space mean speed for all vehicles, S = 61.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB Off-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8405	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1108	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8405	1108		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15		277		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Grade	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8405	1108	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3557 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6724	9400	No
$v_{FO} = v_F - v_R$	5616	9400	No
v_R	1108	2100	No
$v_{3 \text{ or } av34}$	1583 pc/h	(Equation 25-15 or 25-16)	
Is $v_{3 \text{ or } av34}$	> 2700 pc/h?	No	
Is $v_{3 \text{ or } av34}$	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3557 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3557	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.398	
Space mean speed in ramp influence area,	S_R = 55.9	mph
Space mean speed in outer lanes,	S_0 = 69.0	mph
Space mean speed for all vehicles,	S = 61.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Morning Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Markete Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7642	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	772	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7642	772		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	1911	193		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7642	772	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.121 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 663 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6237	9400	No
v_3 or v_{av34}	2401 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A} = 2186		(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6237	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.367	
Space mean speed in ramp influence area,	S_R = 56.6	mph
Space mean speed in outer lanes,	S_0 = 60.9	mph
Space mean speed for all vehicles,	S = 58.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	BDC
Agency/Co.:	Kunzman Associates, Inc.
Date performed:	10/7/18
Analysis time period:	Evening Peak Hour
Freeway/Dir of Travel:	SR-60 Freeway EB On-Ramp
Junction:	Market Street
Jurisdiction:	Caltrans
Analysis Year:	Year 2035 With Project - Alt 2
Description:	- With Improvements

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8798	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	973	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8798	973		vph
Peak-hour factor, PHF	1.00	1.00		
Peak 15-min volume, v15	2200			v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8798	973	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.096 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 606 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7271	9400	No
v_3 or v_{av34}	2846 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	
If yes, v_{12A}	= 2519	(Equation 25-8)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7271	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 30.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

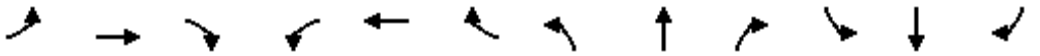
Speed Estimation

Intermediate speed variable,	M_S = 0.420	
Space mean speed in ramp influence area,	S_R = 55.3	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 57.7	mph

APPENDIX K

SYNCHRO WORKSHEETS

OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 1

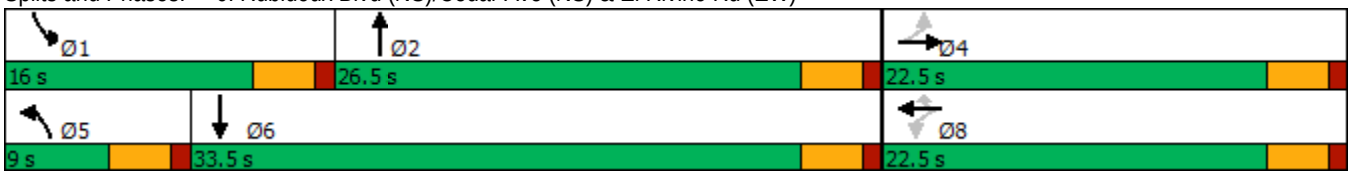


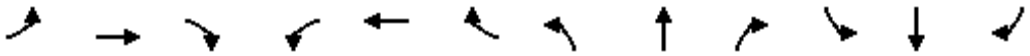
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	10	24	83	4	95	15	645	131	220	992	7
Future Volume (vph)	19	10	24	83	4	95	15	645	131	220	992	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.939				0.850		0.975			0.999	
Flt Protected		0.983			0.955		0.950			0.950		
Satd. Flow (prot)	0	1609	0	0	1463	1302	1597	3115	0	1671	3339	0
Flt Permitted		0.872			0.817		0.950			0.950		
Satd. Flow (perm)	0	1427	0	0	1252	1302	1597	3115	0	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28				151		40			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	22	12	28	98	5	112	18	759	154	259	1167	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	103	112	18	913	0	259	1175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	26.5		16.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%	34.6%	13.8%	40.8%		24.6%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	5.0	22.5		12.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		10.5			10.5	10.5	5.0	24.5		11.6	39.4	
Actuated g/C Ratio		0.19			0.19	0.19	0.09	0.43		0.21	0.70	
v/c Ratio		0.22			0.44	0.31	0.13	0.66		0.76	0.50	
Control Delay		14.1			26.5	4.4	28.2	17.4		39.4	7.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		14.1			26.5	4.4	28.2	17.4		39.4	7.9	
LOS		B			C	A	C	B		D	A	
Approach Delay		14.1			15.0			17.7			13.6	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	10	24	83	4	95	15	645	131	220	992	7
Future Volume (veh/h)	19	10	24	83	4	95	15	645	131	220	992	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	22	12	28	98	5	112	18	759	154	259	1167	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	139	81	106	315	12	232	37	1162	236	367	2084	14
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.02	0.42	0.42	0.21	0.60	0.60
Sat Flow, veh/h	320	537	706	1224	82	1544	1707	2768	562	1781	3450	24
Grp Volume(v), veh/h	62	0	0	103	0	112	18	445	468	259	572	603
Grp Sat Flow(s),veh/h/ln	1564	0	0	1306	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	3.6	0.6	11.8	11.8	7.2	10.8	10.8
Cycle Q Clear(g_c), s	3.3	0.0	0.0	3.3	0.0	3.6	0.6	11.8	11.8	7.2	10.8	10.8
Prop In Lane	0.35		0.45	0.95		1.00	1.00		0.33	1.00		0.01
Lane Grp Cap(c), veh/h	326	0	0	327	0	232	37	681	717	367	1022	1076
V/C Ratio(X)	0.19	0.00	0.00	0.31	0.00	0.48	0.48	0.65	0.65	0.70	0.56	0.56
Avail Cap(c_a), veh/h	621	0	0	550	0	533	159	681	717	399	1022	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	0.0	0.0	20.7	0.0	20.9	25.9	12.4	12.4	19.8	6.3	6.3
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.5	0.0	1.6	9.3	4.8	4.6	5.1	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	1.1	0.0	1.3	0.3	3.9	4.0	2.9	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	0.0	21.3	0.0	22.4	35.2	17.3	17.0	24.8	8.6	8.5
LnGrp LOS	C	A	A	C	A	C	D	B	B	C	A	A
Approach Vol, veh/h		62			215			931			1434	
Approach Delay, s/veh		20.3			21.9			17.5			11.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	26.5		12.0	5.2	36.4		12.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	22.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	11.2	15.8		5.3	4.6	14.8		7.6				
Green Ext Time (p_c), s	0.1	2.8		0.2	0.0	6.0		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		14.6	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	788	20	0	1099
Future Volume (vph)	0	2	788	20	0	1099
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.996			
Flt Protected						
Satd. Flow (prot)	0	1644	3182	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3182	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	2	829	21	0	1157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	850	0	0	1157
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	788	20	0	1099
Future Vol, veh/h	0	2	788	20	0	1099
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	2	829	21	0	1157

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	425	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	583	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	583	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	583	-
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	11.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

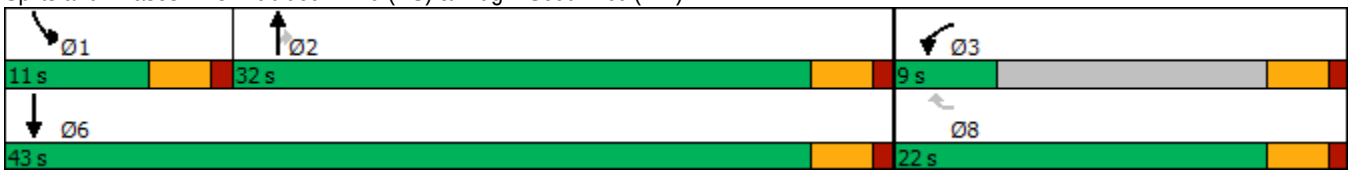


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	68	17	792	241	74	1025
Future Volume (vph)	68	17	792	241	74	1025
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		18		254		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	72	18	834	254	78	1079
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	18	834	254	78	1079
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	9.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	13.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	5.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)		7.0	7.0	7.0		7.0
Flash Dont Walk (s)		11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)		0	0	0		0
Act Effct Green (s)	5.7	5.9	39.4	39.4	6.7	46.3
Actuated g/C Ratio	0.10	0.11	0.72	0.72	0.12	0.84
v/c Ratio	0.39	0.10	0.36	0.23	0.39	0.39
Control Delay	28.6	12.4	6.5	1.8	27.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	12.4	6.5	1.8	27.5	2.5
LOS	C	B	A	A	C	A
Approach Delay	25.3		5.4			4.2
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 55			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 5.6		Intersection LOS: A	
Intersection Capacity Utilization 40.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

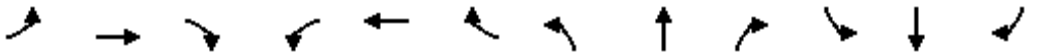




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	68	17	792	241	74	1025
Future Volume (veh/h)	68	17	792	241	74	1025
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	72	18	834	254	78	1079
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	135	135	2031	1069	116	2588
Arrive On Green	0.07	0.07	0.63	0.63	0.07	0.77
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	72	18	834	254	78	1079
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	1.9	0.4	6.5	3.3	2.2	5.5
Cycle Q Clear(g_c), s	1.9	0.4	6.5	3.3	2.2	5.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	135	135	2031	1069	116	2588
V/C Ratio(X)	0.53	0.13	0.41	0.24	0.67	0.42
Avail Cap(c_a), veh/h	188	188	2031	1069	244	2588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	22.0	4.8	4.2	23.1	2.0
Incr Delay (d2), s/veh	3.3	0.4	0.6	0.5	6.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	1.0	0.9	1.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.0	22.5	5.4	4.7	29.6	2.5
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	90		1088			1157
Approach Delay, s/veh	25.3		5.2			4.3
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.3	35.7			43.0	7.6
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	5.0
Max Q Clear Time (g_c+I1), s	4.2	8.5			7.5	3.9
Green Ext Time (p_c), s	0.0	5.8			8.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

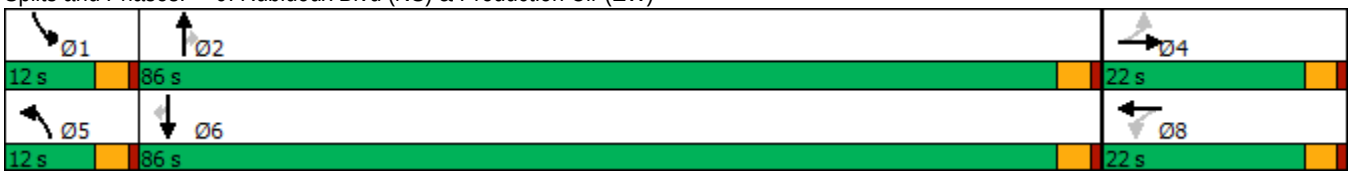


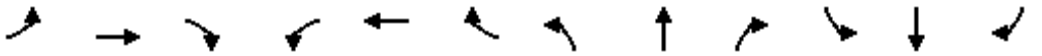
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1087	1	1	1130	11
Future Volume (vph)	5	0	15	1	0	0	19	1087	1	1	1130	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		174							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	6	0	17	1	0	0	22	1264	1	1	1314	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	17	0	1	0	0	22	1264	1	1	1314	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	22.0	22.0		22.0	22.0		12.0	86.0	86.0	12.0	86.0	86.0
Total Split (%)	18.3%	18.3%		18.3%	18.3%		10.0%	71.7%	71.7%	10.0%	71.7%	71.7%
Maximum Green (s)	18.0	18.0		18.0	18.0		8.0	82.0	82.0	8.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.3	6.3		6.2			6.8	98.7	98.7	5.7	96.2	96.2
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.07	0.07		0.01			0.21	0.42	0.00	0.01	0.44	0.01
Control Delay	51.0	0.6		49.0			53.7	2.2	0.0	51.0	3.2	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	0.6		49.0			53.7	2.2	0.0	51.0	3.2	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.7			49.0			3.1			3.2	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 106.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 3.3		Intersection LOS: A	
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

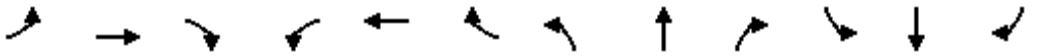




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1087	1	1	1130	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1087	1	1	1130	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	6	0	17	1	0	0	22	1264	1	1	1314	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1418	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	6	0	17	1	0	0	22	1264	1	1	1314	13
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1418	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.6	0.0	1.2	0.1	0.0	0.0	1.2	9.2	0.0	0.1	10.7	0.1
Cycle Q Clear(g_c), s	0.6	0.0	1.2	1.3	0.0	0.0	1.2	9.2	0.0	0.1	10.7	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
V/C Ratio(X)	0.06	0.00	0.52	0.01	0.00	0.00	0.56	0.45	0.00	0.41	0.47	0.01
Avail Cap(c_a), veh/h	258	0	244	314	347	0	140	2790	1410	143	2789	1409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	47.6	48.2	0.0	0.0	47.7	1.7	1.1	49.2	2.3	1.4
Incr Delay (d2), s/veh	0.3	0.0	12.2	0.0	0.0	0.0	11.7	0.5	0.0	85.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.0	0.0	0.0	0.6	0.5	0.0	0.1	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	59.8	48.3	0.0	0.0	59.4	2.3	1.1	134.7	2.9	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		23			1			1287			1328	
Approach Delay, s/veh		56.6			48.3			3.3			3.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	88.1		6.4	6.3	86.0		6.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	82.0		18.0	8.0	82.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	11.2		3.2	3.2	12.7		3.3				
Green Ext Time (p_c), s	0.0	11.6		0.0	0.0	12.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		3.6	
HCM 6th LOS		A	



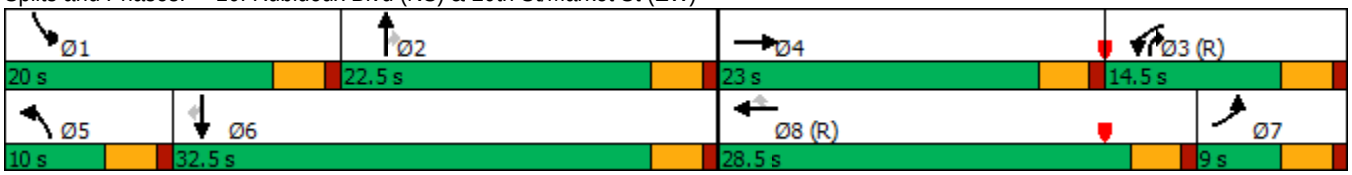
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	59	47	245	39	553	23	411	299	613	588	30
Future Volume (vph)	54	59	47	245	39	553	23	411	299	613	588	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.933				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				459			322			177
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	58	63	51	263	42	595	25	442	322	659	632	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	114	0	263	42	595	25	442	322	659	632	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

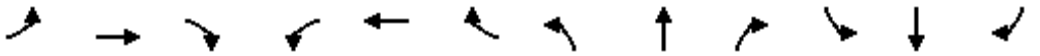
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	9.0	23.0		14.5	28.5	28.5	10.0	22.5	14.5	20.0	32.5	32.5
Total Split (%)	11.3%	28.8%		18.1%	35.6%	35.6%	12.5%	28.1%	18.1%	25.0%	40.6%	40.6%
Maximum Green (s)	5.0	19.0		10.5	24.5	24.5	6.0	18.5	10.5	16.0	28.5	28.5
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	5.0	11.0		20.4	24.5	24.5	5.9	18.5	39.7	16.0	34.5	34.5
Actuated g/C Ratio	0.06	0.14		0.26	0.31	0.31	0.07	0.23	0.50	0.20	0.43	0.43
v/c Ratio	0.88	0.62		0.34	0.08	0.79	0.22	0.61	0.38	0.98	0.42	0.04
Control Delay	123.1	33.5		35.6	19.7	24.7	39.8	31.9	2.4	63.8	18.0	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	123.1	33.5		35.6	19.7	24.7	39.8	31.9	2.4	63.8	18.0	0.1
LOS	F	C		D	B	C	D	C	A	E	B	A
Approach Delay		63.7			27.7			20.1			40.3	
Approach LOS		E			C			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 33.0 Intersection LOS: C
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

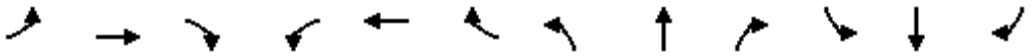




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	59	47	245	39	553	23	411	299	613	588	30
Future Volume (veh/h)	54	59	47	245	39	553	23	411	299	613	588	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	58	63	51	263	42	595	25	442	322	659	632	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	55	75	61	704	518	518	46	731	741	714	1412	743
Arrive On Green	0.06	0.15	0.15	0.21	0.31	0.31	0.03	0.23	0.23	0.20	0.40	0.40
Sat Flow, veh/h	877	485	393	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	58	0	114	263	42	595	25	442	322	659	632	32
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	5.0	0.0	10.1	5.5	1.4	13.9	1.2	10.0	4.8	14.5	10.5	0.6
Cycle Q Clear(g_c), s	5.0	0.0	10.1	5.5	1.4	13.9	1.2	10.0	4.8	14.5	10.5	0.6
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	0	135	704	518	518	46	731	741	714	1412	743
V/C Ratio(X)	1.06	0.00	0.84	0.37	0.08	1.15	0.54	0.60	0.43	0.92	0.45	0.04
Avail Cap(c_a), veh/h	55	0	208	704	518	518	125	731	741	714	1412	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.73	0.73	0.73	0.93	0.93	0.93	0.90	0.90	0.90
Uniform Delay (d), s/veh	37.5	0.0	32.9	26.8	19.7	8.9	38.4	27.5	5.2	31.4	17.4	7.7
Incr Delay (d2), s/veh	138.6	0.0	16.7	0.2	0.2	82.4	9.0	3.4	1.7	16.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	2.6	2.0	0.5	15.7	0.6	3.8	1.9	7.3	3.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	176.1	0.0	49.6	27.1	20.0	91.4	47.4	30.9	6.9	47.6	18.3	7.8
LnGrp LOS	F	A	D	C	B	F	D	C	A	D	B	A
Approach Vol, veh/h		172			900			789			1323	
Approach Delay, s/veh		92.2			69.3			21.6			32.6	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	22.5	21.2	16.3	6.2	36.3	9.0	28.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	18.5	10.5	19.0	6.0	28.5	5.0	24.5
Max Q Clear Time (g_c+I1), s	18.5	14.0	7.5	12.1	5.2	14.5	9.0	17.9
Green Ext Time (p_c), s	0.0	1.5	0.2	0.2	0.0	3.3	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

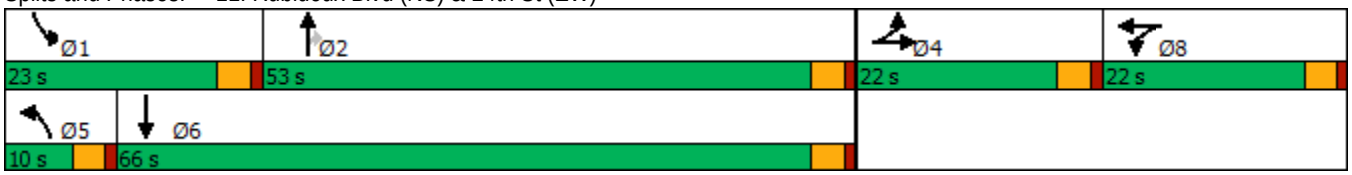


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	14	6	2	12	17	722	33	113	780	1
Future Volume (vph)	2	5	14	6	2	12	17	722	33	113	780	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.908			0.916				0.850			
Flt Protected		0.995			0.986		0.950			0.950		
Satd. Flow (prot)	0	1047	0	0	1430	0	1530	3059	1186	1570	3139	0
Flt Permitted		0.995			0.986		0.950			0.950		
Satd. Flow (perm)	0	1047	0	0	1430	0	1530	3059	1186	1570	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			13				118			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	64%	64%	64%	20%	20%	20%	18%	18%	18%	15%	15%	15%
Adj. Flow (vph)	2	5	15	6	2	13	18	768	35	120	830	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	21	0	18	768	35	120	831	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		10.0	53.0	53.0	23.0	66.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		8.3%	44.2%	44.2%	19.2%	55.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		6.0	49.0	49.0	19.0	62.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)		6.7			6.4		6.0	56.6	56.6	11.8	71.8	
Actuated g/C Ratio		0.08			0.08		0.07	0.67	0.67	0.14	0.85	
v/c Ratio		0.23			0.17		0.17	0.38	0.04	0.55	0.31	
Control Delay		30.2			29.9		45.5	10.0	0.1	45.0	5.4	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		30.2			29.9		45.5	10.0	0.1	45.0	5.4	
LOS		C			C		D	A	A	D	A	
Approach Delay		30.2			29.9			10.3			10.4	
Approach LOS		C			C			B			B	

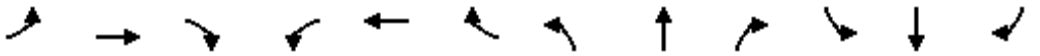
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 84.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 40.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)

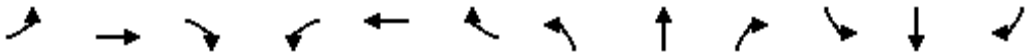
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	5	14	6	2	12	17	722	33	113	780	1
Future Volume (veh/h)	2	5	14	6	2	12	17	722	33	113	780	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	952	952	913	1604	1604	1539	1633	1633	1568	1678	1678	1611
Adj Flow Rate, veh/h	2	5	15	6	2	13	18	768	35	120	830	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	64	64	64	20	20	20	18	18	18	15	15	15
Cap, veh/h	2	5	16	11	4	23	33	2084	1053	151	2422	3
Arrive On Green	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.67	0.67	0.09	0.74	0.74
Sat Flow, veh/h	87	216	649	458	153	993	1633	3103	1568	1678	3268	4
Grp Volume(v), veh/h	22	0	0	21	0	0	18	768	35	120	405	426
Grp Sat Flow(s),veh/h/ln	952	0	0	1604	0	0	1633	1552	1568	1678	1594	1678
Q Serve(g_s), s	1.9	0.0	0.0	1.1	0.0	0.0	0.9	9.0	0.6	5.9	7.4	7.4
Cycle Q Clear(g_c), s	1.9	0.0	0.0	1.1	0.0	0.0	0.9	9.0	0.6	5.9	7.4	7.4
Prop In Lane	0.09		0.68	0.29		0.62	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	23	0	0	37	0	0	33	2084	1053	151	1181	1244
V/C Ratio(X)	0.97	0.00	0.00	0.57	0.00	0.00	0.54	0.37	0.03	0.79	0.34	0.34
Avail Cap(c_a), veh/h	205	0	0	345	0	0	117	2084	1053	381	1181	1244
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	0.0	40.4	0.0	0.0	40.6	6.0	4.6	37.3	3.8	3.8
Incr Delay (d2), s/veh	79.0	0.0	0.0	12.9	0.0	0.0	12.9	0.5	0.1	9.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.6	0.0	0.0	0.5	2.1	0.2	2.6	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.8	0.0	0.0	53.4	0.0	0.0	53.4	6.5	4.7	46.2	4.5	4.5
LnGrp LOS	F	A	A	D	A	A	D	A	A	D	A	A
Approach Vol, veh/h		22			21			821			951	
Approach Delay, s/veh		119.8			53.4			7.5			9.8	
Approach LOS		F			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	60.2		6.0	5.7	66.0		5.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	49.0		18.0	6.0	62.0		18.0				
Max Q Clear Time (g_c+I1), s	7.9	11.0		3.9	2.9	9.4		3.1				
Green Ext Time (p_c), s	0.2	5.5		0.0	0.0	5.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		10.6	
HCM 6th LOS		B	

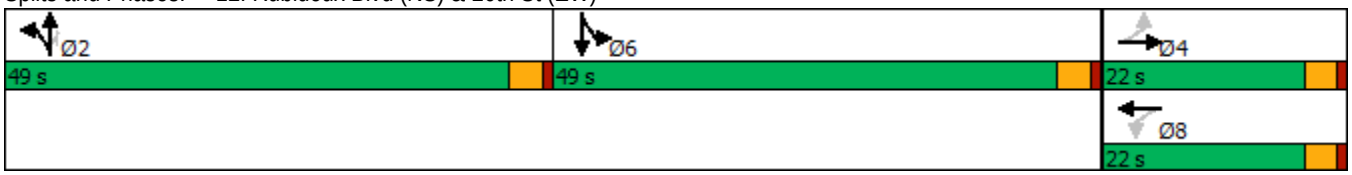


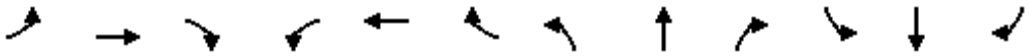
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	11	2	7	8	768	17	13	799	0
Future Volume (vph)	0	0	3	11	2	7	8	768	17	13	799	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Frt		0.865			0.955				0.850			
Flt Protected					0.972			0.999			0.999	
Satd. Flow (prot)	0	1644	0	0	1225	0	0	3056	1186	0	3031	0
Flt Permitted					0.952			0.999			0.999	
Satd. Flow (perm)	0	1644	0	0	1200	0	0	3056	1186	0	3031	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		572			7				45			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	44%	44%	44%	18%	18%	18%	19%	19%	19%
Adj. Flow (vph)	0	0	3	12	2	7	9	817	18	14	850	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	21	0	0	826	18	0	864	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Split	NA	Perm	Split	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		40.8%	40.8%	40.8%	40.8%	40.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		45.0	45.0	45.0	45.0	45.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		6.8			7.0			45.2	45.2		45.2	
Actuated g/C Ratio		0.07			0.07			0.44	0.44		0.44	
v/c Ratio		0.00			0.24			0.62	0.03		0.65	
Control Delay		0.0			42.9			25.8	0.9		26.6	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		0.0			42.9			25.8	0.9		26.6	
LOS		A			D			C	A		C	
Approach Delay					42.9			25.2			26.6	
Approach LOS					D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 26.1		Intersection LOS: C	
Intersection Capacity Utilization 45.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)

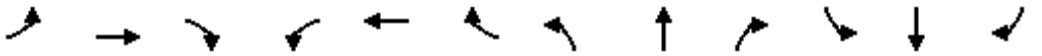




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	11	2	7	8	768	17	13	799	0
Future Volume (veh/h)	0	0	3	11	2	7	8	768	17	13	799	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1248	1248	1248	1633	1633	1568	1618	1618	1554
Adj Flow Rate, veh/h	0	0	3	12	2	7	9	817	18	14	850	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	44	44	44	18	18	18	19	19	19
Cap, veh/h	0	0	46	68	2	8	14	1357	675	21	1338	0
Arrive On Green	0.00	0.00	0.02	0.02	0.02	0.02	0.43	0.43	0.43	0.43	0.43	0.00
Sat Flow, veh/h	0	0	1900	563	94	329	33	3152	1568	49	3188	0
Grp Volume(v), veh/h	0	0	3	21	0	0	443	383	18	463	401	0
Grp Sat Flow(s),veh/h/ln	0	0	1900	986	0	0	1633	1552	1568	1618	1537	0
Q Serve(g_s), s	0.0	0.0	0.2	2.1	0.0	0.0	22.1	19.5	0.7	23.9	21.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.2	2.2	0.0	0.0	22.1	19.5	0.7	23.9	21.0	0.0
Prop In Lane	0.00		1.00	0.57		0.33	0.02		1.00	0.03		0.00
Lane Grp Cap(c), veh/h	0	0	46	78	0	0	703	668	675	697	662	0
V/C Ratio(X)	0.00	0.00	0.07	0.27	0.00	0.00	0.63	0.57	0.03	0.66	0.61	0.00
Avail Cap(c_a), veh/h	0	0	327	234	0	0	703	668	675	697	662	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	49.9	50.9	0.0	0.0	23.2	22.5	17.1	23.7	22.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	1.8	0.0	0.0	4.2	3.6	0.1	5.0	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.6	0.0	0.0	8.6	7.1	0.2	9.2	7.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	50.5	52.8	0.0	0.0	27.5	26.0	17.2	28.7	27.0	0.0
LnGrp LOS	A	A	D	D	A	A	C	C	B	C	C	A
Approach Vol, veh/h		3			21			844			864	
Approach Delay, s/veh		50.5			52.8			26.6			27.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	49.0	6.5	49.0	6.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	45.0	18.0	45.0	18.0
Max Q Clear Time (g_c+I1), s	24.1	2.2	25.9	4.2
Green Ext Time (p_c), s	4.6	0.0	4.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	42	61	62	33	6	40	753	23	6	770	49
Future Volume (vph)	60	42	61	62	33	6	40	753	23	6	770	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.996			0.991	
Flt Protected		0.972			0.969		0.950			0.950		
Satd. Flow (prot)	0	1664	1261	0	1615	1228	1543	3073	0	1543	3058	0
Flt Permitted		0.762			0.737		0.950			0.950		
Satd. Flow (perm)	0	1304	1261	0	1228	1228	1543	3073	0	1543	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		6			13	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	11%	11%	14%	14%	14%	17%	17%	17%	17%	17%	17%
Adj. Flow (vph)	65	46	66	67	36	7	43	818	25	7	837	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	66	0	103	7	43	843	0	7	890	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	9.0	28.4		9.0	28.4	
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	37.7%	15.0%	47.3%		15.0%	47.3%	
Maximum Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	5.0	24.4		5.0	24.4	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		9.1	9.1		9.0	9.0	5.1	30.8		5.1	29.2	
Actuated g/C Ratio		0.20	0.20		0.19	0.19	0.11	0.66		0.11	0.63	
v/c Ratio		0.44	0.21		0.43	0.02	0.26	0.41		0.04	0.46	
Control Delay		22.7	4.8		23.0	0.2	25.6	7.0		22.3	8.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		22.7	4.8		23.0	0.2	25.6	7.0		22.3	8.7	
LOS		C	A		C	A	C	A		C	A	
Approach Delay		16.0			21.5			7.9			8.8	
Approach LOS		B			C			A			A	

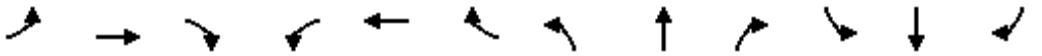
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)

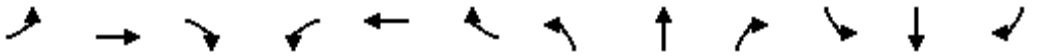
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	42	61	62	33	6	40	753	23	6	770	49
Future Volume (veh/h)	60	42	61	62	33	6	40	753	23	6	770	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1668	1693	1693	1625	1648	1648	1648	1648	1648	1648
Adj Flow Rate, veh/h	65	46	66	67	36	7	43	818	25	7	837	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	11	11	11	14	14	14	17	17	17	17	17	17
Cap, veh/h	99	43	537	103	32	524	78	1437	44	15	1277	81
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.05	0.46	0.46	0.01	0.42	0.42
Sat Flow, veh/h	0	132	1668	0	98	1625	1648	3118	95	1648	3022	191
Grp Volume(v), veh/h	111	0	66	103	0	7	43	411	432	7	434	456
Grp Sat Flow(s),veh/h/ln	132	0	1668	98	0	1625	1648	1566	1648	1648	1566	1648
Q Serve(g_s), s	0.0	0.0	1.6	0.0	0.0	0.2	1.5	11.1	11.1	0.2	12.8	12.8
Cycle Q Clear(g_c), s	18.6	0.0	1.6	18.6	0.0	0.2	1.5	11.1	11.1	0.2	12.8	12.8
Prop In Lane	0.59		1.00	0.65		1.00	1.00		0.06	1.00		0.12
Lane Grp Cap(c), veh/h	141	0	537	134	0	524	78	721	759	15	662	697
V/C Ratio(X)	0.78	0.00	0.12	0.77	0.00	0.01	0.55	0.57	0.57	0.46	0.66	0.66
Avail Cap(c_a), veh/h	141	0	537	134	0	524	143	721	759	143	662	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	13.8	23.3	0.0	13.3	26.9	11.4	11.4	28.5	13.3	13.3
Incr Delay (d2), s/veh	24.5	0.0	0.1	22.8	0.0	0.0	6.0	3.2	3.1	20.3	5.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.6	2.2	0.0	0.1	0.6	3.4	3.5	0.2	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	0.0	13.9	46.2	0.0	13.3	32.9	14.6	14.5	48.8	18.3	18.1
LnGrp LOS	D	A	B	D	A	B	C	B	B	D	B	B
Approach Vol, veh/h		177			110			886			897	
Approach Delay, s/veh		34.4			44.1			15.4			18.4	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	30.6		22.6	6.7	28.4		22.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.4		18.6	5.0	24.4		18.6				
Max Q Clear Time (g_c+I1), s	4.2	15.1		20.6	5.5	16.8		20.6				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	3.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		19.9	
HCM 6th LOS		B	

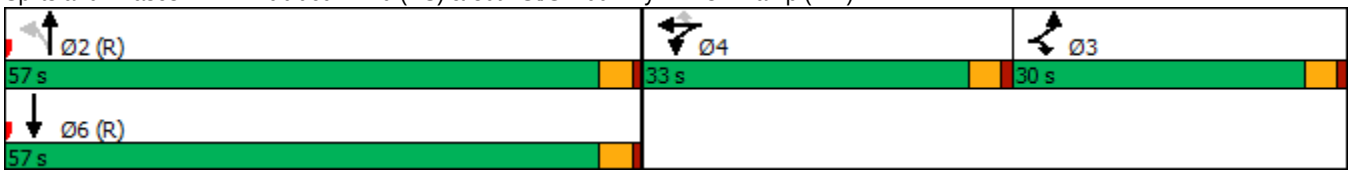


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	195	367	97	124	37	720	0	0	842	24
Future Volume (vph)	19	0	195	367	97	124	37	720	0	0	842	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	77		0	0		0
Storage Lanes	1		1	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850					0.996	
Flt Protected	0.950			0.950	0.972		0.950					
Satd. Flow (prot)	1703	0	1320	1649	1687	1346	1556	3112	0	0	3127	0
Flt Permitted	0.950			0.950	0.972		0.215					
Satd. Flow (perm)	1703	0	1320	1649	1687	1346	352	3112	0	0	3127	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81			72					3	
Link Speed (mph)		30			30			40			50	
Link Distance (ft)		785			262			178			1593	
Travel Time (s)		17.8			6.0			3.0			21.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	16%	16%	16%	15%	15%	15%
Adj. Flow (vph)	21	0	219	412	109	139	42	809	0	0	946	27
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	21	0	219	260	261	139	42	809	0	0	973	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2			2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)	20		20	20	100	20	20	100			100	
Trailing Detector (ft)	0		0	0	0	0	0	0			0	
Detector 1 Position(ft)	0		0	0	0	0	0	0			0	
Detector 1 Size(ft)	20		20	20	6	20	20	6			6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		Prot	Split	NA	Perm	Perm	NA			NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3		3	4	4			2			6	
Permitted Phases						4	2					
Detector Phase	3		3	4	4	4	2	2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0	5.0			5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5	22.5	22.5			22.5	
Total Split (s)	30.0		30.0	33.0	33.0	33.0	57.0	57.0			57.0	
Total Split (%)	25.0%		25.0%	27.5%	27.5%	27.5%	47.5%	47.5%			47.5%	
Maximum Green (s)	26.0		26.0	29.0	29.0	29.0	53.0	53.0			53.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	4.0	4.0			4.0	
Lead/Lag	Lag		Lag	Lead	Lead	Lead						
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
Recall Mode	None		None	None	None	None	C-Max	C-Max			C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0		0	0	0	0	0	0			0	
Act Effct Green (s)	18.1		18.1	24.3	24.3	24.3	65.6	65.6			65.6	
Actuated g/C Ratio	0.15		0.15	0.20	0.20	0.20	0.55	0.55			0.55	
v/c Ratio	0.08		0.82	0.78	0.77	0.42	0.22	0.48			0.57	
Control Delay	40.8		53.5	61.2	59.7	23.6	9.4	8.0			21.7	
Queue Delay	0.0		2.6	0.0	0.0	0.0	1.1	1.5			0.1	
Total Delay	40.8		56.2	61.2	59.7	23.6	10.6	9.5			21.8	
LOS	D		E	E	E	C	B	A			C	
Approach Delay		54.8			52.7			9.6			21.8	
Approach LOS		D			D			A			C	

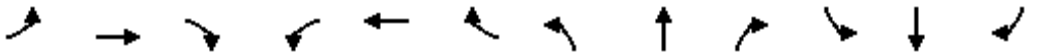
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 28.4		Intersection LOS: C	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)



HCM 6th Signalized Intersection Summary
14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)

10/08/2018



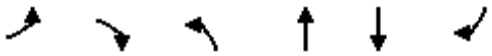
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	0	195	367	97	124	37	720	0	0	842	24
Future Volume (veh/h)	19	0	195	367	97	124	37	720	0	0	842	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1739	1841	1841	1767	1663	1663	0	0	1678	1678
Adj Flow Rate, veh/h	21	0	219	260	321	139	42	809	0	0	946	27
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	0	6	4	4	4	16	16	0	0	15	15
Cap, veh/h	0	0	0	370	370	355	378	2314	0	0	2330	66
Arrive On Green	0.00	0.00	0.00	0.20	0.20	0.20	1.00	1.00	0.00	0.00	0.73	0.73
Sat Flow, veh/h		0		1841	1841	1767	514	3243	0	0	3265	91
Grp Volume(v), veh/h		0.0		260	321	139	42	809	0	0	474	499
Grp Sat Flow(s),veh/h/ln				1841	1841	1767	514	1580	0	0	1594	1678
Q Serve(g_s), s				15.8	20.3	8.2	1.7	0.0	0.0	0.0	13.6	13.6
Cycle Q Clear(g_c), s				15.8	20.3	8.2	15.3	0.0	0.0	0.0	13.6	13.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h				370	370	355	378	2314	0	0	1167	1229
V/C Ratio(X)				0.70	0.87	0.39	0.11	0.35	0.00	0.00	0.41	0.41
Avail Cap(c_a), veh/h				445	445	427	378	2314	0	0	1167	1229
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.97	0.97	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh				44.6	46.4	41.6	1.2	0.0	0.0	0.0	6.1	6.1
Incr Delay (d2), s/veh				3.9	14.5	0.7	0.6	0.4	0.0	0.0	0.9	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.6	10.7	3.7	0.1	0.1	0.0	0.0	3.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.5	61.0	42.3	1.8	0.4	0.0	0.0	7.1	7.0
LnGrp LOS				D	E	D	A	A	A	A	A	A
Approach Vol, veh/h					720			851			973	
Approach Delay, s/veh					52.9			0.5			7.0	
Approach LOS					D			A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	91.9	28.1	91.9
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	53.0	29.0	53.0
Max Q Clear Time (g_c+I1), s	17.3	22.3	15.6
Green Ext Time (p_c), s	6.9	1.8	6.4

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

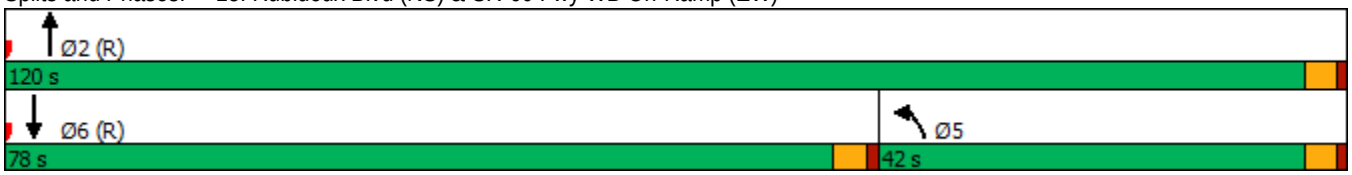


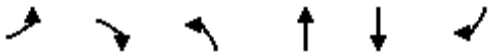
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	334	755	886	538
Future Volume (vph)	0	0	334	755	886	538
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	105			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.943	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1612	3223	3039	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1612	3223	3039	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					199	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1099			374	178	
Travel Time (s)	25.0			6.4	3.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	12%	12%	12%	12%
Adj. Flow (vph)	0	0	384	868	1018	618
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	384	868	1636	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors			1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)			20	100	100	
Trailing Detector (ft)			0	0	0	
Detector 1 Position(ft)			0	0	0	
Detector 1 Size(ft)			20	6	6	
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)			0.0	0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases						
Detector Phase			5	2	6	
Switch Phase						
Minimum Initial (s)			5.0	5.0	5.0	
Minimum Split (s)			9.0	22.0	22.0	
Total Split (s)			42.0	120.0	78.0	
Total Split (%)			35.0%	100.0%	65.0%	
Maximum Green (s)			38.0	116.0	74.0	
Yellow Time (s)			3.0	3.0	3.0	
All-Red Time (s)			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)			3.0	3.0	3.0	
Recall Mode			None	C-Max	C-Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)			38.0	120.0	74.0	
Actuated g/C Ratio			0.32	1.00	0.62	
v/c Ratio			0.75	0.27	0.84	
Control Delay			45.4	0.2	16.7	
Queue Delay			10.8	0.0	1.6	
Total Delay			56.2	0.2	18.3	
LOS			E	A	B	
Approach Delay				17.4	18.3	
Approach LOS				B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 17.9		Intersection LOS: B	
Intersection Capacity Utilization 66.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

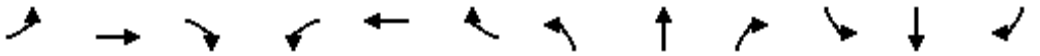




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	334	755	886	538
Future Volume (veh/h)	0	0	334	755	886	538
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Work Zone On Approach				No	No	
Adj Sat Flow, veh/h/ln			1722	1722	1722	1722
Adj Flow Rate, veh/h			384	868	1018	618
Peak Hour Factor			0.87	0.87	0.87	0.87
Percent Heavy Veh, %			12	12	12	12
Cap, veh/h			545	3163	1289	782
Arrive On Green			0.63	1.00	0.62	0.62
Sat Flow, veh/h			1722	3358	2176	1269
Grp Volume(v), veh/h			384	868	797	839
Grp Sat Flow(s),veh/h/ln			1722	1636	1636	1722
Q Serve(g_s), s			17.7	0.0	43.7	43.7
Cycle Q Clear(g_c), s			17.7	0.0	43.7	43.7
Prop In Lane			1.00			0.74
Lane Grp Cap(c), veh/h			545	3163	1009	1062
V/C Ratio(X)			0.70	0.27	0.79	0.79
Avail Cap(c_a), veh/h			545	3163	1009	1062
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.82	0.82	0.72	0.72
Uniform Delay (d), s/veh			18.3	0.0	17.2	17.2
Incr Delay (d2), s/veh			3.4	0.2	4.6	4.4
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			5.1	0.1	15.9	16.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			21.6	0.2	21.8	21.6
LnGrp LOS			C	A	C	C
Approach Vol, veh/h				1252	1636	
Approach Delay, s/veh				6.8	21.7	
Approach LOS				A	C	

Timer - Assigned Phs	2			5	6
Phs Duration (G+Y+Rc), s	120.0			42.0	78.0
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	116.0			38.0	74.0
Max Q Clear Time (g_c+I1), s	2.0			19.7	45.7
Green Ext Time (p_c), s	7.1			1.0	14.1

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

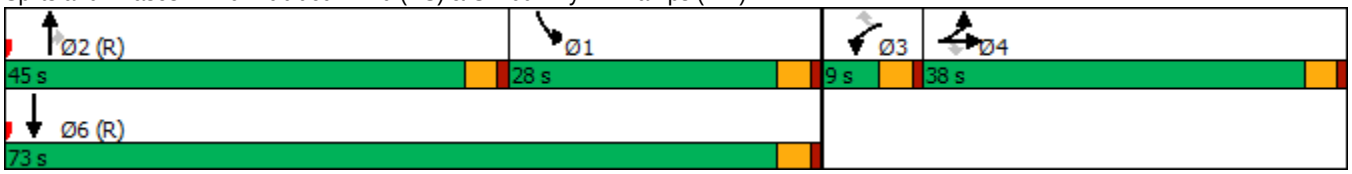


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	452	26	257	11	0	3	0	601	576	195	684	0
Future Volume (vph)	452	26	257	11	0	3	0	601	576	195	684	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.957		0.950						0.950		
Satd. Flow (prot)	1478	1489	1207	1805	0	1615	0	3471	1553	1703	3406	0
Flt Permitted	0.950	0.957		0.950						0.950		
Satd. Flow (perm)	1478	1489	1207	1805	0	1615	0	3471	1553	1703	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			82			655			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	16%	16%	16%	0%	0%	0%	4%	4%	4%	6%	6%	6%
Adj. Flow (vph)	514	30	292	13	0	3	0	683	655	222	777	0
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	272	272	292	13	0	3	0	683	655	222	777	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		3				2		1	6	
Permitted Phases			4			3			2			
Detector Phase	4	4	4	3		3		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	9.0		9.0		22.5	22.5	9.5	22.5	
Total Split (s)	38.0	38.0	38.0	9.0		9.0		45.0	45.0	28.0	73.0	
Total Split (%)	31.7%	31.7%	31.7%	7.5%		7.5%		37.5%	37.5%	23.3%	60.8%	
Maximum Green (s)	34.0	34.0	34.0	5.0		5.0		41.0	41.0	24.0	69.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0					11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0					0	0		0	
Act Effct Green (s)	28.4	28.4	28.4	5.0		5.0		52.0	52.0	24.0	80.0	
Actuated g/C Ratio	0.24	0.24	0.24	0.04		0.04		0.43	0.43	0.20	0.67	
v/c Ratio	0.78	0.77	0.73	0.17		0.02		0.45	0.63	0.65	0.34	
Control Delay	58.0	57.4	29.9	60.9		0.3		27.1	5.3	38.1	6.3	
Queue Delay	1.6	1.5	0.0	0.0		0.0		0.0	0.0	0.2	0.4	
Total Delay	59.6	58.9	29.9	60.9		0.3		27.1	5.3	38.3	6.7	
LOS	E	E	C	E		A		C	A	D	A	
Approach Delay		49.0			49.6			16.4			13.7	
Approach LOS		D			D			B			B	

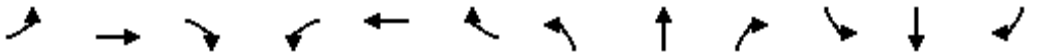
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	26	257	11	0	3	0	601	576	195	684	0
Future Volume (veh/h)	452	26	257	11	0	3	0	601	576	195	684	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1596	1900	0	1900	0	1841	1841	1811	1811	0
Adj Flow Rate, veh/h	535	0	292	12	0	3	0	683	655	222	777	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	16	16	16	0	0	0	0	4	4	6	6	0
Cap, veh/h	747	0	359	0	0	0	0	1195	629	604	2438	0
Arrive On Green	0.22	0.00	0.22	0.00	0.00	0.00	0.00	0.34	0.34	0.67	1.00	0.00
Sat Flow, veh/h	3326	0	1596		0		0	3589	1841	1811	3532	0
Grp Volume(v), veh/h	535	0	292		0.0		0	683	655	222	777	0
Grp Sat Flow(s),veh/h/ln	1663	0	1596				0	1749	1841	1811	1721	0
Q Serve(g_s), s	17.8	0.0	20.8				0.0	19.2	38.9	6.5	0.0	0.0
Cycle Q Clear(g_c), s	17.8	0.0	20.8				0.0	19.2	38.9	6.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	747	0	359				0	1195	629	604	2438	0
V/C Ratio(X)	0.72	0.00	0.81				0.00	0.57	1.04	0.37	0.32	0.00
Avail Cap(c_a), veh/h	942	0	452				0	1195	629	604	2438	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.87	0.87	0.43	0.43	0.00
Uniform Delay (d), s/veh	43.0	0.0	44.1				0.0	32.3	35.6	14.4	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	8.8				0.0	1.7	44.7	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.0	9.1				0.0	8.2	25.0	2.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.9	0.0	53.0				0.0	34.0	80.3	14.5	0.1	0.0
LnGrp LOS	D	A	D				A	C	F	B	A	A
Approach Vol, veh/h		827						1338			999	
Approach Delay, s/veh		47.7						56.7			3.3	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	44.0	45.0		31.0		89.0
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	24.0	41.0		34.0		69.0
Max Q Clear Time (g_c+I1), s	10.5	40.9		24.8		4.0
Green Ext Time (p_c), s	0.5	0.1		2.1		6.0

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

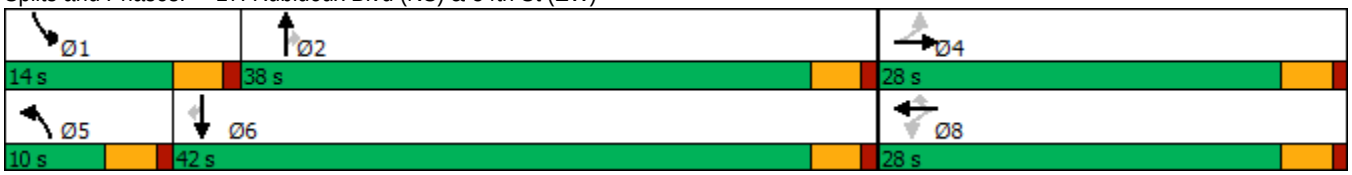
User approved volume balancing among the lanes for turning movement.

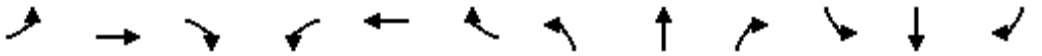
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	33	20	12	18	126	25	827	53	74	683	73
Future Volume (vph)	155	33	20	12	18	126	25	827	53	74	683	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.987				0.850			0.850			0.850
Flt Protected		0.964			0.980		0.950			0.950		
Satd. Flow (prot)	0	1722	0	0	1862	1400	1719	3438	1333	1703	3406	1320
Flt Permitted		0.760			0.894		0.950			0.950		
Satd. Flow (perm)	0	1357	0	0	1699	1400	1719	3438	1333	1703	3406	1320
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				135			68			68
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	5%	5%	5%	6%	6%	6%
Adj. Flow (vph)	167	35	22	13	19	135	27	889	57	80	734	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	224	0	0	32	135	27	889	57	80	734	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	28.0	28.0		28.0	28.0	28.0	10.0	38.0	38.0	14.0	42.0	42.0
Total Split (%)	35.0%	35.0%		35.0%	35.0%	35.0%	12.5%	47.5%	47.5%	17.5%	52.5%	52.5%
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	6.0	34.0	34.0	10.0	38.0	38.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		16.2			16.2	16.2	5.9	36.6	36.6	8.2	43.0	43.0
Actuated g/C Ratio		0.23			0.23	0.23	0.08	0.52	0.52	0.12	0.61	0.61
v/c Ratio		0.71			0.08	0.32	0.19	0.50	0.08	0.41	0.36	0.09
Control Delay		37.3			21.4	6.6	36.6	14.7	3.4	37.2	9.6	4.0
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		37.3			21.4	6.6	36.6	14.7	3.4	37.2	9.6	4.0
LOS		D			C	A	D	B	A	D	A	A
Approach Delay		37.3			9.4			14.7			11.6	
Approach LOS		D			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 70.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	33	20	12	18	126	25	827	53	74	683	73
Future Volume (veh/h)	155	33	20	12	18	126	25	827	53	74	683	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1824	1826	1826	1753	1811	1811	1739
Adj Flow Rate, veh/h	167	35	22	13	19	135	27	889	57	80	734	78
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	0	0	0	5	5	5	6	6	6
Cap, veh/h	285	55	27	199	262	408	54	1795	907	144	1953	987
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.52	0.52	0.08	0.57	0.57
Sat Flow, veh/h	852	244	119	552	1170	1824	1826	3469	1753	1811	3441	1739
Grp Volume(v), veh/h	224	0	0	32	0	135	27	889	57	80	734	78
Grp Sat Flow(s),veh/h/ln	1215	0	0	1722	0	1824	1826	1735	1753	1811	1721	1739
Q Serve(g_s), s	10.1	0.0	0.0	0.0	0.0	4.2	1.0	11.1	1.1	2.8	7.9	1.4
Cycle Q Clear(g_c), s	12.1	0.0	0.0	0.9	0.0	4.2	1.0	11.1	1.1	2.8	7.9	1.4
Prop In Lane	0.75		0.10	0.41		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	0	0	461	0	408	54	1795	907	144	1953	987
V/C Ratio(X)	0.61	0.00	0.00	0.07	0.00	0.33	0.50	0.50	0.06	0.55	0.38	0.08
Avail Cap(c_a), veh/h	543	0	0	682	0	654	164	1795	907	270	1953	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	0.0	20.5	0.0	21.8	32.0	10.5	8.1	29.7	8.0	6.6
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.1	0.0	0.5	7.1	1.0	0.1	3.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	0.4	0.0	1.8	0.5	3.6	0.4	1.3	2.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	0.0	0.0	20.6	0.0	22.2	39.1	11.5	8.2	33.0	8.5	6.7
LnGrp LOS	C	A	A	C	A	C	D	B	A	C	A	A
Approach Vol, veh/h		224			167			973			892	
Approach Delay, s/veh		27.0			21.9			12.0			10.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	38.6		19.0	6.0	42.0		19.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	34.0		24.0	6.0	38.0		24.0				
Max Q Clear Time (g_c+I1), s	6.8	15.1		14.1	5.0	11.9		8.2				
Green Ext Time (p_c), s	0.0	5.9		0.9	0.0	5.3		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		13.7	
HCM 6th LOS		B	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	349	12	35	183	0	5
Future Volume (vph)	349	12	35	183	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	367	13	37	193	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	367	13	37	193	0	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	349	12	35	183	0	5
Future Vol, veh/h	349	12	35	183	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	367	13	37	193	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	380	0	-	184
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	1032	-	0	833
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1032	-	-	833
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	833	-	-	1032	-
HCM Lane V/C Ratio	0.006	-	-	0.036	-
HCM Control Delay (s)	9.3	-	-	8.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	337	17	14	211	7	10
Future Volume (vph)	337	17	14	211	7	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3282	1468	1456	2911	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	355	18	15	222	7	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	355	18	15	222	7	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	337	17	14	211	7	10
Future Vol, veh/h	337	17	14	211	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	355	18	15	222	7	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	373	0	496	178
Stage 1	-	-	-	-	355	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	-	-	4.58	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.44	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1039	-	508	841
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	877	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1039	-	501	841
Mov Cap-2 Maneuver	-	-	-	-	501	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10.5
HCM LOS			B

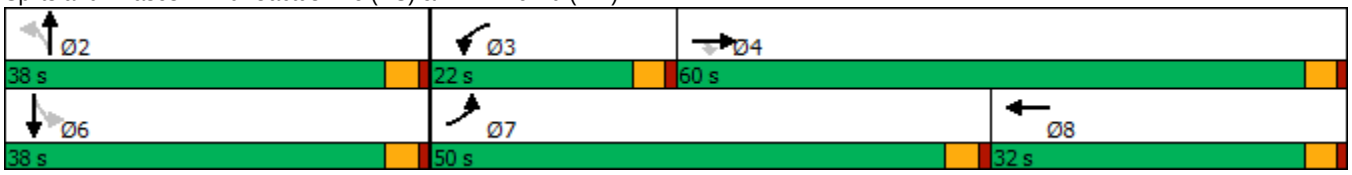
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	501	841	-	-	1039	-
HCM Lane V/C Ratio	0.015	0.013	-	-	0.014	-
HCM Control Delay (s)	12.3	9.3	-	-	8.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

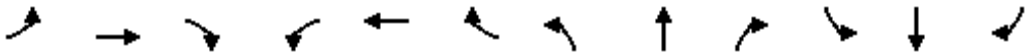
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	127	20	47	126	100	6	3	15	84	6	81
Future Volume (vph)	204	127	20	47	126	100	6	3	15	84	6	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.934			0.872			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2810	0	1805	1657	0	1626	1474	0
Flt Permitted	0.950			0.950			0.694			0.744		
Satd. Flow (perm)	1583	3167	1417	1504	2810	0	1319	1657	0	1274	1474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		112			17			91	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	229	143	22	53	142	112	7	3	17	94	7	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	229	143	22	53	254	0	7	20	0	94	98	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.0	60.0	60.0	22.0	32.0		38.0	38.0		38.0	38.0	
Total Split (%)	41.7%	50.0%	50.0%	18.3%	26.7%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	46.0	56.0	56.0	18.0	28.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	15.6	21.4	21.4	8.0	9.3		34.3	34.3		34.3	34.3	
Actuated g/C Ratio	0.22	0.30	0.30	0.11	0.13		0.48	0.48		0.48	0.48	
v/c Ratio	0.66	0.15	0.05	0.31	0.55		0.01	0.02		0.15	0.13	
Control Delay	35.4	20.5	2.9	35.8	21.5		12.8	7.2		13.5	4.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.4	20.5	2.9	35.8	21.5		12.8	7.2		13.5	4.4	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		28.2			24.0			8.6			8.8	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 71.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	127	20	47	126	100	6	3	15	84	6	81
Future Volume (veh/h)	204	127	20	47	126	100	6	3	15	84	6	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	229	143	22	53	142	112	7	3	17	94	7	91
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	285	803	422	76	225	177	757	148	839	775	64	838
Arrive On Green	0.17	0.25	0.25	0.05	0.13	0.13	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1693	3216	1693	1604	1748	1379	1318	285	1615	1293	124	1613
Grp Volume(v), veh/h	229	143	22	53	124	130	7	0	20	94	0	98
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1318	0	1900	1293	0	1737
Q Serve(g_s), s	8.5	2.3	0.6	2.1	5.0	5.0	0.2	0.0	0.3	2.5	0.0	1.9
Cycle Q Clear(g_c), s	8.5	2.3	0.6	2.1	5.0	5.0	2.1	0.0	0.3	2.8	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.86	1.00		0.85	1.00		0.93
Lane Grp Cap(c), veh/h	285	803	422	76	196	206	757	0	987	775	0	903
V/C Ratio(X)	0.80	0.18	0.05	0.70	0.63	0.63	0.01	0.00	0.02	0.12	0.00	0.11
Avail Cap(c_a), veh/h	1190	2753	1449	441	652	686	757	0	987	775	0	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	19.3	18.7	30.7	27.0	27.0	8.5	0.0	7.6	8.3	0.0	8.0
Incr Delay (d2), s/veh	5.3	0.1	0.1	11.0	3.3	3.2	0.0	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.8	0.2	1.0	1.9	2.0	0.0	0.0	0.1	0.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	19.4	18.7	41.7	30.4	30.2	8.5	0.0	7.7	8.6	0.0	8.2
LnGrp LOS	C	B	B	D	C	C	A	A	A	A	A	A
Approach Vol, veh/h		394			307			27			192	
Approach Delay, s/veh		26.4			32.3			7.9			8.4	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.0	7.1	20.3		38.0	15.0	12.4				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		34.0	18.0	56.0		34.0	46.0	28.0				
Max Q Clear Time (g_c+I1), s		4.1	4.1	4.3		4.8	10.5	7.0				
Green Ext Time (p_c), s		0.1	0.1	1.1		0.8	0.7	1.4				

Intersection Summary	
HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	222	4	5	272	0	3
Future Volume (vph)	222	4	5	272	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	234	4	5	286	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	234	4	5	286	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.1%		ICU Level of Service A	
Analysis Period (min) 15			

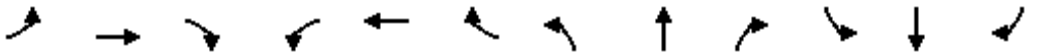
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	222	4	5	272	0	3
Future Vol, veh/h	222	4	5	272	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	234	4	5	286	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	238	0	-	117
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1205	-	0	919
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	-	919
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	919	-	-	1205	-
HCM Lane V/C Ratio	0.003	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

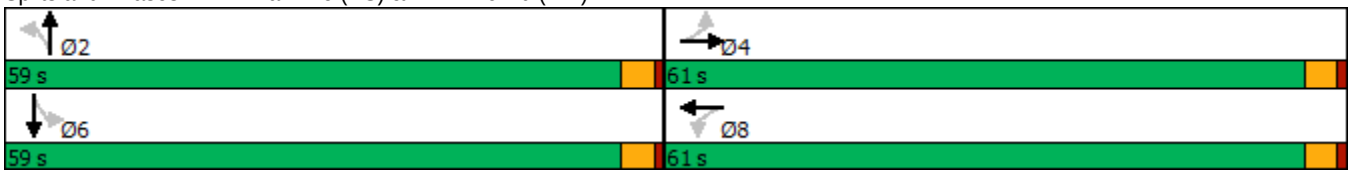


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	132	81	15	161	5	112	3	4	9	8	11
Future Volume (vph)	2	132	81	15	161	5	112	3	4	9	8	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943			0.996			0.917			0.912	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1644	0	1583	1660	0	1410	1361	0	1736	1666	0
Flt Permitted	0.470			0.347			0.742			0.752		
Satd. Flow (perm)	819	1644	0	578	1660	0	1101	1361	0	1374	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			2			5			14	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	2	163	100	19	199	6	138	4	5	11	10	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	263	0	19	205	0	138	9	0	11	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	16.3	16.3		16.3	16.3		55.2	55.2		55.2	55.2	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.69	0.69		0.69	0.69	
v/c Ratio	0.01	0.72		0.16	0.60		0.18	0.01		0.01	0.02	
Control Delay	24.0	37.0		28.5	35.8		5.8	4.0		5.1	3.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.0	37.0		28.5	35.8		5.8	4.0		5.1	3.4	
LOS	C	D		C	D		A	A		A	A	
Approach Delay		36.9			35.2			5.7			3.9	
Approach LOS		D			D			A			A	

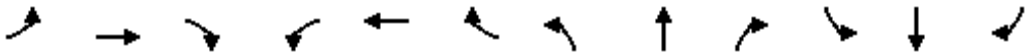
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 79.5	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 27.8	Intersection LOS: C
Intersection Capacity Utilization 32.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)

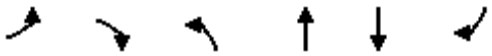
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	132	81	15	161	5	112	3	4	9	8	11
Future Volume (veh/h)	2	132	81	15	161	5	112	3	4	9	8	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	2	163	100	19	199	6	138	4	5	11	10	14
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	190	218	134	151	327	10	857	462	577	1057	536	751
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1112	1095	672	1010	1643	50	1101	660	825	1384	767	1074
Grp Volume(v), veh/h	2	0	263	19	0	205	138	0	9	11	0	24
Grp Sat Flow(s),veh/h/ln	1112	0	1767	1010	0	1693	1101	0	1485	1384	0	1841
Q Serve(g_s), s	0.1	0.0	11.0	1.4	0.0	8.7	3.4	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	8.8	0.0	11.0	12.4	0.0	8.7	3.7	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.38	1.00		0.03	1.00		0.56	1.00		0.58
Lane Grp Cap(c), veh/h	190	0	351	151	0	337	857	0	1039	1057	0	1287
V/C Ratio(X)	0.01	0.00	0.75	0.13	0.00	0.61	0.16	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	775	0	1280	682	0	1227	857	0	1039	1057	0	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.7	0.0	29.6	35.5	0.0	28.7	4.2	0.0	3.6	3.6	0.0	3.6
Incr Delay (d2), s/veh	0.0	0.0	3.2	0.4	0.0	1.8	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.6	0.3	0.0	3.4	0.7	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	0.0	32.8	35.9	0.0	30.5	4.6	0.0	3.6	3.6	0.0	3.6
LnGrp LOS	C	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		265			224			147			35	
Approach Delay, s/veh		32.8			30.9			4.5			3.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		19.6		59.0		19.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		55.0		57.0		55.0		57.0				
Max Q Clear Time (g_c+I1), s		5.7		13.0		2.3		14.4				
Green Ext Time (p_c), s		0.7		1.5		0.1		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			24.5									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	13	14	115	95	9
Future Volume (vph)	4	13	14	115	95	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1410	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1410	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	28%	28%	11%	11%
Adj. Flow (vph)	4	14	15	121	100	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	14	15	121	100	9
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.4%		ICU Level of Service A	
Analysis Period (min) 15			

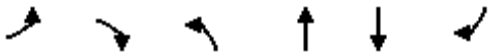
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	13	14	115	95	9
Future Vol, veh/h	4	13	14	115	95	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	28	28	11	11
Mvmt Flow	4	14	15	121	100	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	251	100	109	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.452	-	-	-
Pot Cap-1 Maneuver	742	961	1334	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	734	961	1334	-	-	-
Mov Cap-2 Maneuver	734	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	882	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1334	-	734	961	-	-
HCM Lane V/C Ratio	0.011	-	0.006	0.014	-	-
HCM Control Delay (s)	7.7	-	9.9	8.8	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

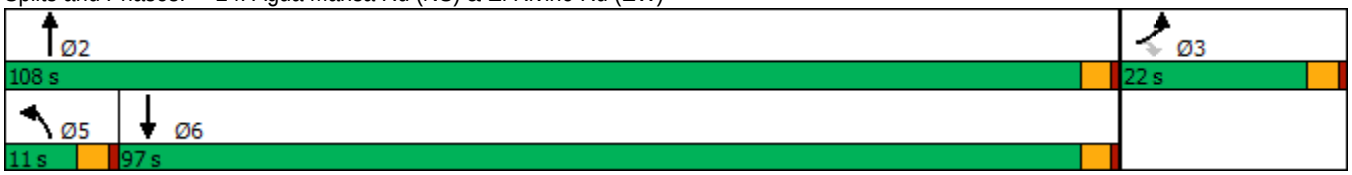


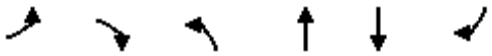
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	86	31	21	367	486	150
Future Volume (vph)	86	31	21	367	486	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.968	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	1380	1456	1532	1559	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	1380	1456	1532	1559	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		39			30	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	17%	17%	24%	24%	18%	18%
Adj. Flow (vph)	109	39	27	465	615	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	39	27	465	805	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	22.0	22.0	11.0	108.0	97.0	
Total Split (%)	16.9%	16.9%	8.5%	83.1%	74.6%	
Maximum Green (s)	18.0	18.0	7.0	104.0	93.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	13.7	13.7	6.6	104.1	97.6	
Actuated g/C Ratio	0.11	0.11	0.05	0.83	0.78	
v/c Ratio	0.65	0.21	0.36	0.37	0.66	
Control Delay	71.7	17.5	71.8	3.9	11.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.7	17.5	71.8	3.9	11.1	
LOS	E	B	E	A	B	
Approach Delay	57.4			7.6	11.1	
Approach LOS	E			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 125.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 46.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	86	31	21	367	486	150
Future Volume (veh/h)	86	31	21	367	486	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1648	1648	1544	1544	1633	1633
Adj Flow Rate, veh/h	109	39	27	465	615	190
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	17	17	24	24	18	18
Cap, veh/h	136	136	38	1316	992	306
Arrive On Green	0.08	0.08	0.02	0.85	0.79	0.79
Sat Flow, veh/h	1648	1648	1544	1544	1248	385
Grp Volume(v), veh/h	109	39	27	465	0	805
Grp Sat Flow(s),veh/h/ln	1648	1648	1544	1544	0	1633
Q Serve(g_s), s	7.9	2.7	2.1	7.8	0.0	24.4
Cycle Q Clear(g_c), s	7.9	2.7	2.1	7.8	0.0	24.4
Prop In Lane	1.00	1.00	1.00			0.24
Lane Grp Cap(c), veh/h	136	136	38	1316	0	1298
V/C Ratio(X)	0.80	0.29	0.71	0.35	0.00	0.62
Avail Cap(c_a), veh/h	243	243	89	1316	0	1298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	52.6	59.1	1.9	0.0	5.1
Incr Delay (d2), s/veh	10.4	1.1	21.7	0.7	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.1	1.0	1.2	0.0	6.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.4	53.8	80.8	2.7	0.0	7.3
LnGrp LOS	E	D	F	A	A	A
Approach Vol, veh/h	148			492	805	
Approach Delay, s/veh	62.3			6.9	7.3	
Approach LOS	E			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		108.0			7.0	101.0	14.1
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		104.0			7.0	93.0	18.0
Max Q Clear Time (g_c+I1), s		9.8			4.1	26.4	9.9
Green Ext Time (p_c), s		3.0			0.0	6.6	0.2

Intersection Summary		
HCM 6th Ctrl Delay	12.8	
HCM 6th LOS	B	



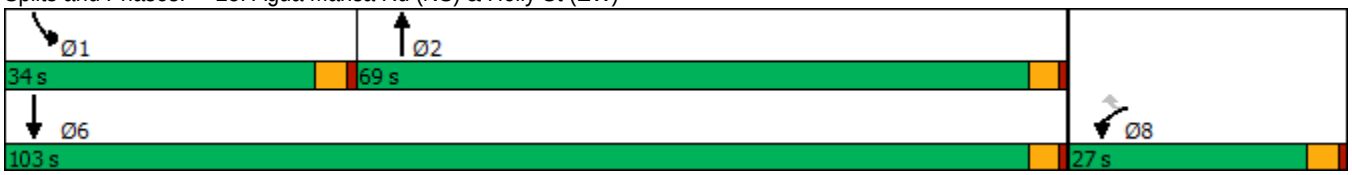
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	28	329	63	95	476
Future Volume (vph)	9	28	329	63	95	476
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.976			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1347	1045	2731	0	1504	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1347	1045	2731	0	1504	1583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		30	24			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	34%	34%	29%	29%	20%	20%
Adj. Flow (vph)	10	30	354	68	102	512
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	30	422	0	102	512
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	27.0	27.0	69.0		34.0	103.0
Total Split (%)	20.8%	20.8%	53.1%		26.2%	79.2%
Maximum Green (s)	23.0	23.0	65.0		30.0	99.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	6.2	6.2	20.9		8.6	32.4
Actuated g/C Ratio	0.17	0.17	0.56		0.23	0.86
v/c Ratio	0.04	0.15	0.28		0.29	0.37
Control Delay	16.3	9.9	8.5		16.0	3.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	16.3	9.9	8.5		16.0	3.3
LOS	B	A	A		B	A
Approach Delay	11.5		8.5			5.4
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 37.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 6.8		Intersection LOS: A	
Intersection Capacity Utilization 35.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)

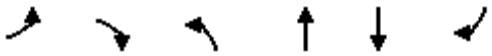




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	28	329	63	95	476
Future Volume (veh/h)	9	28	329	63	95	476
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1396	1340	1470	1470	1604	1604
Adj Flow Rate, veh/h	10	30	354	68	102	512
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	34	34	29	29	20	20
Cap, veh/h	69	66	758	146	168	957
Arrive On Green	0.05	0.05	0.32	0.32	0.10	0.60
Sat Flow, veh/h	1396	1340	2478	462	1604	1604
Grp Volume(v), veh/h	10	30	206	216	102	512
Grp Sat Flow(s),veh/h/ln	1396	1340	1397	1470	1604	1604
Q Serve(g_s), s	0.2	0.5	2.7	2.7	1.4	4.3
Cycle Q Clear(g_c), s	0.2	0.5	2.7	2.7	1.4	4.3
Prop In Lane	1.00	1.00		0.31	1.00	
Lane Grp Cap(c), veh/h	69	66	440	464	168	957
V/C Ratio(X)	0.15	0.46	0.47	0.47	0.61	0.53
Avail Cap(c_a), veh/h	1421	1364	4016	4228	2128	7023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	10.5	6.2	6.2	9.7	2.7
Incr Delay (d2), s/veh	1.0	4.8	0.8	0.7	3.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	0.3	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.3	15.3	7.0	6.9	13.2	3.2
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	40		422			614
Approach Delay, s/veh	14.3		7.0			4.8
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.4	11.1			17.5	5.1
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	30.0	65.0			99.0	23.0
Max Q Clear Time (g_c+I1), s	3.4	4.7			6.3	2.5
Green Ext Time (p_c), s	0.2	2.5			3.4	0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A



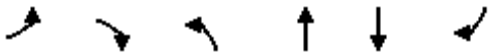
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	70	98	382	472	80
Future Volume (vph)	35	70	98	382	472	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		74				84
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	37	74	103	402	497	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	74	103	402	497	84
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	6.8	6.8	7.0	27.2	21.5	21.5
Actuated g/C Ratio	0.19	0.19	0.20	0.77	0.61	0.61
v/c Ratio	0.14	0.24	0.37	0.19	0.28	0.12
Control Delay	15.7	7.4	20.1	3.0	8.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	7.4	20.1	3.0	8.6	3.5
LOS	B	A	C	A	A	A
Approach Delay	10.2			6.5	7.9	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 35.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

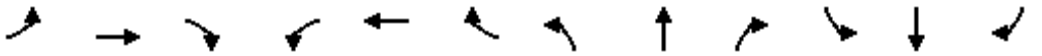




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	70	98	382	472	80
Future Volume (veh/h)	35	70	98	382	472	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	37	74	103	402	497	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	160	160	146	1587	934	472
Arrive On Green	0.11	0.11	0.10	0.58	0.32	0.32
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	37	74	103	402	497	84
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.6	1.2	1.8	1.8	3.6	1.1
Cycle Q Clear(g_c), s	0.6	1.2	1.8	1.8	3.6	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	160	160	146	1587	934	472
V/C Ratio(X)	0.23	0.46	0.70	0.25	0.53	0.18
Avail Cap(c_a), veh/h	1058	1058	395	3111	2050	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.4	10.7	11.1	2.6	7.1	6.2
Incr Delay (d2), s/veh	0.7	2.1	6.1	0.1	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.6	0.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	12.8	17.1	2.7	7.6	6.4
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	111			505	581	
Approach Delay, s/veh	12.2			5.7	7.4	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		18.8		6.7	6.6	12.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		3.8		3.2	3.8	5.6
Green Ext Time (p_c), s		2.5		0.2	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

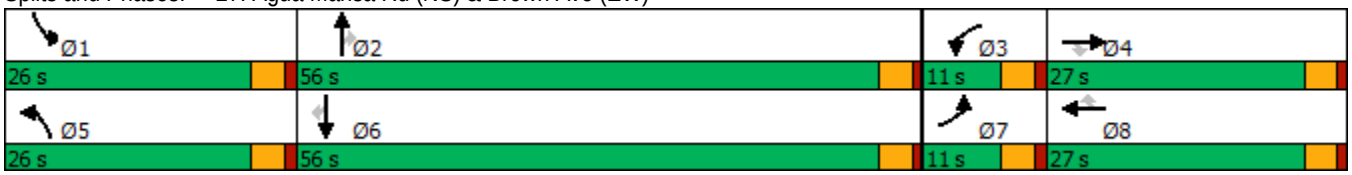


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	2	18	12	0	38	53	446	13	85	448	18
Future Volume (vph)	4	2	18	12	0	38	53	446	13	85	448	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			503			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	4	2	19	13	0	40	56	474	14	90	477	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	2	19	13	0	40	56	474	14	90	477	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	27.0	27.0	11.0	27.0	27.0	26.0	56.0	56.0	26.0	56.0	56.0
Total Split (%)	9.2%	22.5%	22.5%	9.2%	22.5%	22.5%	21.7%	46.7%	46.7%	21.7%	46.7%	46.7%
Maximum Green (s)	7.0	23.0	23.0	7.0	23.0	23.0	22.0	52.0	52.0	22.0	52.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.0	5.9	5.9	6.3		5.9	8.9	57.8	57.8	10.6	62.8	62.8
Actuated g/C Ratio	0.07	0.07	0.07	0.08		0.07	0.11	0.72	0.72	0.13	0.78	0.78
v/c Ratio	0.05	0.03	0.14	0.14		0.07	0.37	0.24	0.02	0.48	0.21	0.02
Control Delay	40.8	40.5	2.2	42.4		0.3	42.6	7.4	0.1	42.7	6.0	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	40.5	2.2	42.4		0.3	42.6	7.4	0.1	42.7	6.0	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		11.4			10.6			10.8			11.5	
Approach LOS		B			B			B			B	

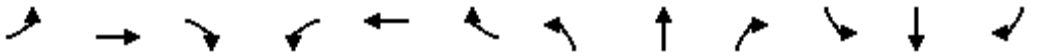
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 80.7			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	2	18	12	0	38	53	446	13	85	448	18
Future Volume (veh/h)	4	2	18	12	0	38	53	446	13	85	448	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	4	2	19	13	0	40	56	474	14	90	477	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	4	46	44	18	80	76	90	1724	871	142	1919	970
Arrive On Green	0.01	0.06	0.06	0.02	0.00	0.07	0.06	0.64	0.64	0.09	0.67	0.67
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	4	2	19	13	0	40	56	474	14	90	477	19
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.4	0.2	2.0	0.9	0.0	2.8	3.1	6.3	0.3	4.7	5.4	0.4
Cycle Q Clear(g_c), s	0.4	0.2	2.0	0.9	0.0	2.8	3.1	6.3	0.3	4.7	5.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	46	44	18	80	76	90	1724	871	142	1919	970
V/C Ratio(X)	0.96	0.04	0.43	0.72	0.00	0.52	0.62	0.27	0.02	0.63	0.25	0.02
Avail Cap(c_a), veh/h	68	222	213	99	326	313	384	1724	871	408	1919	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	36.3	37.2	40.0	0.0	36.8	37.3	6.5	5.5	35.7	5.4	4.6
Incr Delay (d2), s/veh	190.0	0.4	6.5	41.2	0.0	5.5	6.7	0.4	0.0	4.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.5	0.0	0.9	1.2	1.4	0.1	1.8	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	230.6	36.7	43.7	81.2	0.0	42.2	44.0	6.9	5.5	40.2	5.7	4.6
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		25			53			544			586	
Approach Delay, s/veh		73.0			51.8			10.7			11.0	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	56.0	5.3	8.8	9.2	58.5	4.4	9.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	52.0	7.0	23.0	22.0	52.0	7.0	23.0
Max Q Clear Time (g_c+I1), s	8.7	10.3	4.9	6.0	7.1	9.4	4.4	6.8
Green Ext Time (p_c), s	0.1	3.3	0.0	0.0	0.1	3.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B



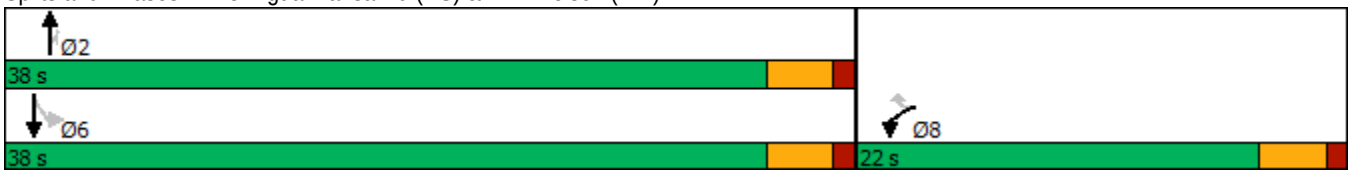
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	24	505	45	25	462
Future Volume (vph)	29	24	505	45	25	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.436	
Satd. Flow (perm)	1031	923	2654	1188	614	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		27		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	251		1750			2429
Travel Time (s)	6.8		26.5			36.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	33	27	574	51	28	525
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	27	574	51	28	525
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	7.5	7.5	48.1	48.1	48.1	48.1
Actuated g/C Ratio	0.13	0.13	0.83	0.83	0.83	0.83
v/c Ratio	0.25	0.19	0.26	0.05	0.05	0.45
Control Delay	27.0	12.6	2.7	1.2	3.0	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	12.6	2.7	1.2	3.0	4.6
LOS	C	B	A	A	A	A
Approach Delay	20.5		2.5			4.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 57.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 35.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R.A. Nelson (EW)

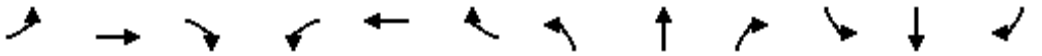




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	29	24	505	45	25	462
Future Volume (veh/h)	29	24	505	45	25	462
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	33	27	574	51	28	525
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	46	46	1978	1041	572	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	591	1381
Grp Volume(v), veh/h	33	27	574	51	28	525
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	591	1381
Q Serve(g_s), s	1.8	1.5	3.0	0.4	0.7	6.5
Cycle Q Clear(g_c), s	1.8	1.5	3.0	0.4	3.7	6.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	1978	1041	572	1052
V/C Ratio(X)	0.71	0.58	0.29	0.05	0.05	0.50
Avail Cap(c_a), veh/h	318	318	1978	1041	572	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.6	1.3	2.2	2.0
Incr Delay (d2), s/veh	18.2	11.1	0.4	0.1	0.2	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.8	31.5	2.0	1.4	2.4	3.7
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	60		625			553
Approach Delay, s/veh	35.5		1.9			3.7
Approach LOS	D		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.6
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.0			8.5	3.8
Green Ext Time (p_c), s		4.0			3.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.3
HCM 6th LOS	A

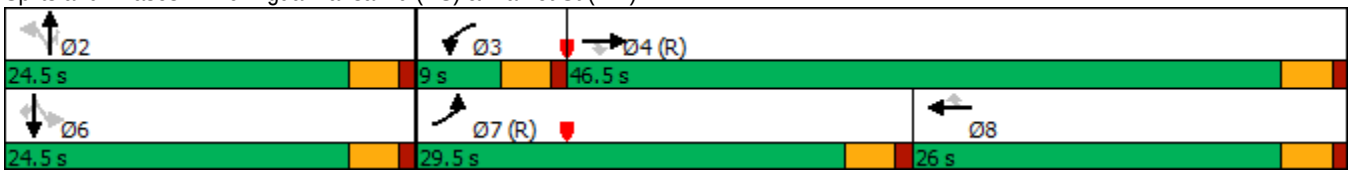


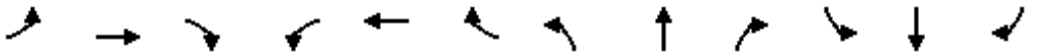
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	312	672	10	3	582	245	8	2	1	150	4	246
Future Volume (vph)	312	672	10	3	582	245	8	2	1	150	4	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	1641	3282	1272	1626	3252	1261	0	1261	965	1433	1508	1111
Flt Permitted	0.950			0.950				0.896		0.751		
Satd. Flow (perm)	1641	3282	1272	1626	3252	1261	0	1174	965	1132	1508	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			169			123			254
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			6.7			26.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	322	693	10	3	600	253	8	2	1	155	4	254
Shared Lane Traffic (%)												
Lane Group Flow (vph)	322	693	10	3	600	253	0	10	1	155	4	254
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	29.5	46.5	46.5	9.0	26.0	26.0	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (%)	36.9%	58.1%	58.1%	11.3%	32.5%	32.5%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%
Maximum Green (s)	25.5	42.5	42.5	5.0	22.0	22.0	20.5	20.5	20.5	20.5	20.5	20.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	25.5	49.7	49.7	5.0	22.0	22.0		20.5	20.5	20.5	20.5	20.5
Actuated g/C Ratio	0.32	0.62	0.62	0.06	0.28	0.28		0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.62	0.34	0.01	0.03	0.67	0.54		0.03	0.00	0.53	0.01	0.54
Control Delay	42.4	3.0	0.0	36.0	30.2	13.7		22.9	0.0	33.6	22.5	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	3.0	0.0	36.0	30.2	13.7		22.9	0.0	33.6	22.5	8.2
LOS	D	A	A	D	C	B		C	A	C	C	A
Approach Delay		15.4			25.3			20.8			17.9	
Approach LOS		B			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

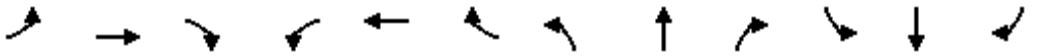




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	672	10	3	582	245	8	2	1	150	4	246
Future Volume (veh/h)	312	672	10	3	582	245	8	2	1	150	4	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	322	693	10	3	600	253	8	2	1	155	4	254
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	511	1963	992	7	996	503	228	45	303	352	388	373
Arrive On Green	0.10	0.19	0.19	0.00	0.30	0.30	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1752	3328	1682	1737	3300	1668	575	174	1184	1145	1515	1454
Grp Volume(v), veh/h	322	693	10	3	600	253	10	0	1	155	4	254
Grp Sat Flow(s),veh/h/ln	1752	1664	1682	1737	1650	1668	749	0	1184	1145	1515	1454
Q Serve(g_s), s	14.1	14.4	0.4	0.1	12.4	10.0	0.0	0.0	0.1	9.7	0.2	12.6
Cycle Q Clear(g_c), s	14.1	14.4	0.4	0.1	12.4	10.0	2.2	0.0	0.1	11.8	0.2	12.6
Prop In Lane	1.00		1.00	1.00		1.00	0.80		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	511	1963	992	7	996	503	273	0	303	352	388	373
V/C Ratio(X)	0.63	0.35	0.01	0.43	0.60	0.50	0.04	0.00	0.00	0.44	0.01	0.68
Avail Cap(c_a), veh/h	558	1963	992	109	996	503	273	0	303	352	388	373
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	1.00	1.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	32.0	19.0	13.4	39.7	23.8	23.0	22.3	0.0	22.1	27.5	22.2	26.8
Incr Delay (d2), s/veh	1.1	0.3	0.0	36.5	1.0	0.8	0.3	0.0	0.0	3.6	0.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	6.3	0.1	0.1	4.5	3.7	0.1	0.0	0.0	2.8	0.1	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	19.3	13.4	76.2	24.9	23.8	22.6	0.0	22.2	31.1	22.2	35.6
LnGrp LOS	C	B	B	E	C	C	C	A	C	C	C	D
Approach Vol, veh/h		1025			856			11			413	
Approach Delay, s/veh		23.6			24.7			22.5			33.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.5	4.3	51.2		24.5	27.4	28.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		20.5	5.0	42.5		20.5	25.5	22.0				
Max Q Clear Time (g_c+I1), s		4.2	4.1	18.4		16.6	18.1	16.4				
Green Ext Time (p_c), s		0.0	0.0	4.5		0.5	0.5	2.2				

Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

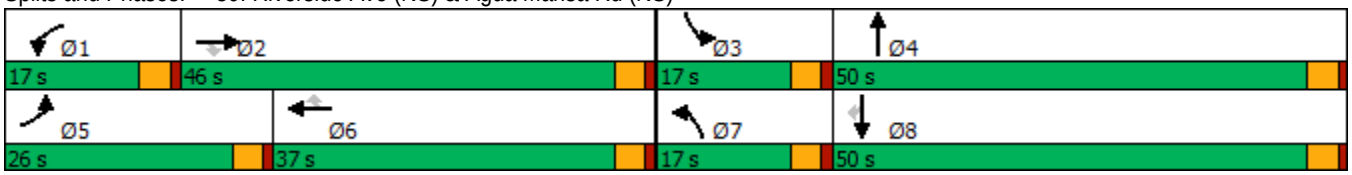


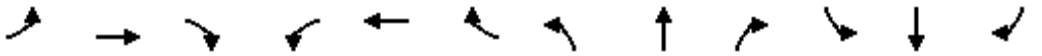
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	172	84	68	271	48	118	587	45	66	886	281
Future Volume (vph)	187	172	84	68	271	48	118	587	45	66	886	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1492	1570	1335	1570	1652	1404	1570	3105	0	1597	3195	1429
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1492	1570	1335	1570	1652	1404	1570	3105	0	1597	3195	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			109		7				109
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	21%	21%	21%	15%	15%	15%	15%	15%	15%	13%	13%	13%
Adj. Flow (vph)	217	200	98	79	315	56	137	683	52	77	1030	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	200	98	79	315	56	137	735	0	77	1030	327
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	26.0	46.0	46.0	17.0	37.0	37.0	17.0	50.0		17.0	50.0	50.0
Total Split (%)	20.0%	35.4%	35.4%	13.1%	28.5%	28.5%	13.1%	38.5%		13.1%	38.5%	38.5%
Maximum Green (s)	22.0	42.0	42.0	13.0	33.0	33.0	13.0	46.0		13.0	46.0	46.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	20.9	45.5	45.5	10.8	33.1	33.1	12.8	48.7		10.7	44.3	44.3
Actuated g/C Ratio	0.16	0.36	0.36	0.08	0.26	0.26	0.10	0.38		0.08	0.35	0.35
v/c Ratio	0.89	0.36	0.18	0.59	0.73	0.13	0.87	0.62		0.57	0.92	0.57
Control Delay	87.3	34.5	9.5	74.8	55.2	0.6	101.0	35.3		73.4	54.1	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	87.3	34.5	9.5	74.8	55.2	0.6	101.0	35.3		73.4	54.1	26.5
LOS	F	C	A	E	E	A	F	D		E	D	C
Approach Delay		52.0			51.8			45.6			48.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 127.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 48.9		Intersection LOS: D	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (NS)

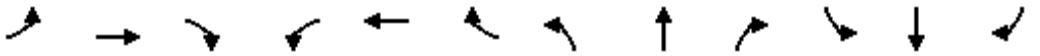




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	172	84	68	271	48	118	587	45	66	886	281
Future Volume (veh/h)	187	172	84	68	271	48	118	587	45	66	886	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1678	1678	1707	1707	1707
Adj Flow Rate, veh/h	217	200	98	79	315	56	137	683	52	77	1030	327
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	21	21	21	15	15	15	15	15	15	13	13	13
Cap, veh/h	261	555	555	122	433	433	171	1161	88	120	1137	599
Arrive On Green	0.16	0.35	0.35	0.07	0.26	0.26	0.10	0.38	0.38	0.07	0.35	0.35
Sat Flow, veh/h	1589	1589	1589	1678	1678	1678	1678	3040	231	1707	3244	1707
Grp Volume(v), veh/h	217	200	98	79	315	56	137	358	377	77	1030	327
Grp Sat Flow(s),veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1594	1678	1707	1622	1707
Q Serve(g_s), s	16.9	12.0	5.5	5.9	21.9	3.3	10.2	22.9	22.9	5.6	38.6	19.7
Cycle Q Clear(g_c), s	16.9	12.0	5.5	5.9	21.9	3.3	10.2	22.9	22.9	5.6	38.6	19.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	261	555	555	122	433	433	171	609	641	120	1137	599
V/C Ratio(X)	0.83	0.36	0.18	0.65	0.73	0.13	0.80	0.59	0.59	0.64	0.91	0.55
Avail Cap(c_a), veh/h	274	555	555	171	433	433	171	609	641	174	1168	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	30.9	28.8	57.6	43.2	36.3	56.1	31.5	31.5	57.8	39.5	33.3
Incr Delay (d2), s/veh	18.6	1.8	0.7	5.7	10.2	0.6	23.4	1.5	1.4	5.5	10.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	4.7	2.1	2.6	10.0	1.4	5.3	8.5	9.0	2.5	15.9	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	32.7	29.5	63.3	53.4	37.0	79.5	33.0	32.9	63.3	49.5	34.3
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	C
Approach Vol, veh/h		515			450			872			1434	
Approach Delay, s/veh		47.9			53.1			40.2			46.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	48.7	13.0	52.8	24.9	37.0	17.0	48.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	42.0	13.0	46.0	22.0	33.0	13.0	46.0
Max Q Clear Time (g_c+I1), s	9.9	16.0	9.6	26.9	20.9	25.9	14.2	42.6
Green Ext Time (p_c), s	0.0	1.3	0.0	3.7	0.1	1.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D



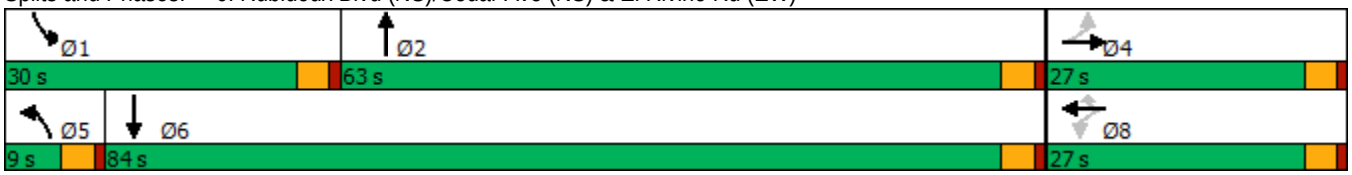
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	16	158	13	295	14	1227	121	302	1068	16
Future Volume (vph)	19	8	16	158	13	295	14	1227	121	302	1068	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.951				0.850		0.987			0.998	
Flt Protected		0.978			0.956		0.950			0.950		
Satd. Flow (prot)	0	1564	0	0	1514	1346	1597	3153	0	1612	3217	0
Flt Permitted		0.839			0.750		0.950			0.950		
Satd. Flow (perm)	0	1342	0	0	1188	1346	1597	3153	0	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				304		12			3	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	20	8	16	163	13	304	14	1265	125	311	1101	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	176	304	14	1390	0	311	1117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	27.0	27.0		27.0	27.0	27.0	9.0	63.0		30.0	84.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%	22.5%	7.5%	52.5%		25.0%	70.0%	
Maximum Green (s)	23.0	23.0		23.0	23.0	23.0	5.0	59.0		26.0	80.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		20.4			20.4	20.4	5.0	59.2		24.7	84.3	
Actuated g/C Ratio		0.18			0.18	0.18	0.04	0.51		0.21	0.73	
v/c Ratio		0.18			0.85	0.63	0.21	0.86		0.91	0.48	
Control Delay		30.7			80.2	10.9	62.7	32.6		76.1	8.4	
Queue Delay		0.0			0.0	0.0	0.0	0.8		0.0	0.0	
Total Delay		30.7			80.2	10.9	62.7	33.4		76.1	8.4	
LOS		C			F	B	E	C		E	A	
Approach Delay		30.7			36.3			33.7			23.1	
Approach LOS		C			D			C			C	

Intersection Summary

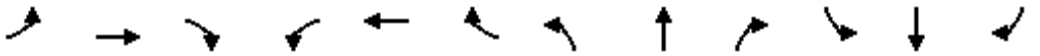
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 116.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	8	16	158	13	295	14	1227	121	302	1068	16
Future Volume (veh/h)	19	8	16	158	13	295	14	1227	121	302	1068	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	20	8	16	163	13	304	14	1265	125	311	1101	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	44	22	13	197	11	310	27	1504	149	360	2284	33
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.02	0.50	0.50	0.21	0.69	0.69
Sat Flow, veh/h	0	113	65	718	57	1604	1707	3030	299	1722	3310	48
Grp Volume(v), veh/h	44	0	0	176	0	304	14	677	713	311	544	573
Grp Sat Flow(s),veh/h/ln	178	0	0	775	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	22.4	1.0	42.9	42.9	20.7	18.4	18.4
Cycle Q Clear(g_c), s	23.0	0.0	0.0	23.0	0.0	22.4	1.0	42.9	42.9	20.7	18.4	18.4
Prop In Lane	0.45		0.36	0.93		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	79	0	0	208	0	310	27	805	848	360	1129	1188
V/C Ratio(X)	0.56	0.00	0.00	0.84	0.00	0.98	0.53	0.84	0.84	0.86	0.48	0.48
Avail Cap(c_a), veh/h	79	0	0	208	0	310	72	805	848	377	1129	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	0.0	0.0	49.6	0.0	47.7	58.1	25.9	25.9	45.4	8.6	8.6
Incr Delay (d2), s/veh	8.7	0.0	0.0	25.9	0.0	45.4	15.2	10.3	9.9	17.9	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	6.8	0.0	12.8	0.5	17.2	18.0	10.3	5.7	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	0.0	0.0	75.6	0.0	93.0	73.3	36.2	35.7	63.2	10.0	10.0
LnGrp LOS	D	A	A	E	A	F	E	D	D	E	B	A
Approach Vol, veh/h		44			480			1404			1428	
Approach Delay, s/veh		51.1			86.6			36.3			21.6	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.8	63.0		27.0	5.9	86.0		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	26.0	59.0		23.0	5.0	80.0		23.0				
Max Q Clear Time (g_c+I1), s	24.7	46.9		25.0	5.0	22.4		26.4				
Green Ext Time (p_c), s	0.1	6.6		0.0	0.0	8.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		37.4	
HCM 6th LOS		D	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	16	1347	3	0	1242
Future Volume (vph)	0	16	1347	3	0	1242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	3195	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3195	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	17	1418	3	0	1307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	17	1421	0	0	1307
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	1347	3	0	1242
Future Vol, veh/h	0	16	1347	3	0	1242
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	17	1418	3	0	1307

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	711	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	380	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	380	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	380	-
HCM Lane V/C Ratio	-	-	0.044	-
HCM Control Delay (s)	-	-	14.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-



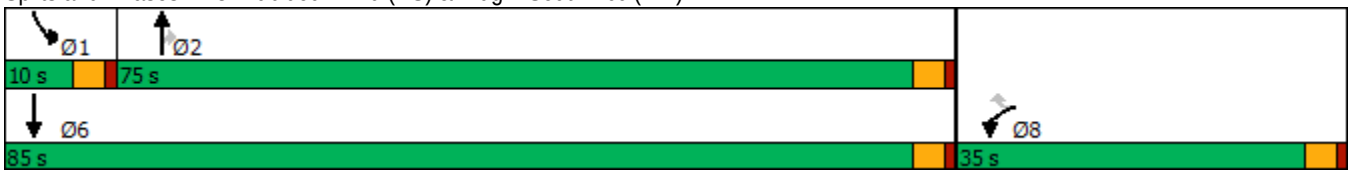
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	75	1274	95	24	1218
Future Volume (vph)	262	75	1274	95	24	1218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		79		100		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	276	79	1341	100	25	1282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	276	79	1341	100	25	1282
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	35.0	35.0	75.0	75.0	10.0	85.0
Total Split (%)	29.2%	29.2%	62.5%	62.5%	8.3%	70.8%
Maximum Green (s)	31.0	31.0	71.0	71.0	6.0	81.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	22.1	22.1	75.8	75.8	5.9	81.7
Actuated g/C Ratio	0.20	0.20	0.68	0.68	0.05	0.73
v/c Ratio	0.78	0.21	0.62	0.10	0.29	0.53
Control Delay	57.3	9.0	13.4	2.2	61.6	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	57.3	9.0	13.4	2.2	61.6	8.6
LOS	E	A	B	A	E	A
Approach Delay	46.6		12.7			9.6
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

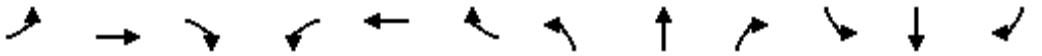




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	262	75	1274	95	24	1218
Future Volume (veh/h)	262	75	1274	95	24	1218
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	276	79	1341	100	25	1282
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	320	320	2255	1187	43	2541
Arrive On Green	0.17	0.17	0.70	0.70	0.02	0.76
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	276	79	1341	100	25	1282
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	15.1	3.9	23.0	2.0	1.5	16.1
Cycle Q Clear(g_c), s	15.1	3.9	23.0	2.0	1.5	16.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	320	320	2255	1187	43	2541
V/C Ratio(X)	0.86	0.25	0.59	0.08	0.58	0.50
Avail Cap(c_a), veh/h	550	550	2255	1187	99	2541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	38.6	8.5	5.3	51.6	5.1
Incr Delay (d2), s/veh	7.0	0.4	1.2	0.1	11.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	1.9	6.4	0.6	0.8	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.3	39.0	9.6	5.4	63.2	5.8
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	355		1441			1307
Approach Delay, s/veh	47.8		9.3			6.9
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.6	78.4			85.0	22.0
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	6.0	71.0			81.0	31.0
Max Q Clear Time (g_c+I1), s	3.5	25.0			18.1	17.1
Green Ext Time (p_c), s	0.0	12.7			11.7	0.9

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

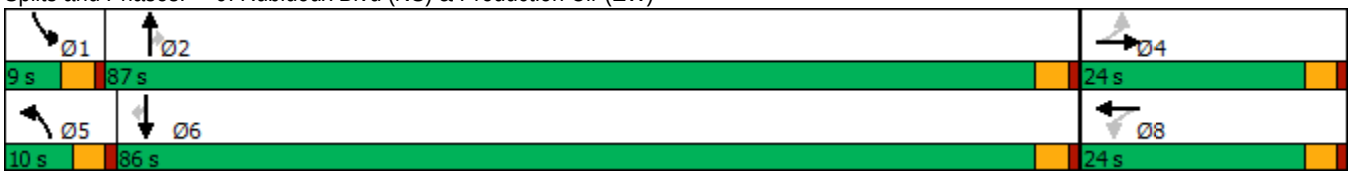


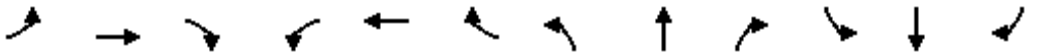
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	33	1	0	3	16	1308	0	0	1478	15
Future Volume (vph)	21	0	33	1	0	3	16	1308	0	0	1478	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.735			0.950					
Satd. Flow (perm)	1355	1524	0	1396	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		116			142							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	21	0	34	1	0	3	16	1335	0	0	1508	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	1	3	0	16	1335	0	0	1508	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		10.0	87.0	87.0	9.0	86.0	86.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		8.3%	72.5%	72.5%	7.5%	71.7%	71.7%
Maximum Green (s)	20.0	20.0		20.0	20.0		6.0	83.0	83.0	5.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.3	7.3		7.3	7.3		5.8	96.6			92.6	92.6
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.05	0.89			0.85	0.85
v/c Ratio	0.23	0.16		0.01	0.01		0.19	0.48			0.54	0.01
Control Delay	54.1	1.7		47.0	0.0		55.2	2.4			4.6	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.1	1.7		47.0	0.0		55.2	2.4			4.6	0.0
LOS	D	A		D	A		E	A			A	A
Approach Delay		21.7			11.8			3.0			4.5	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 4.2		Intersection LOS: A	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

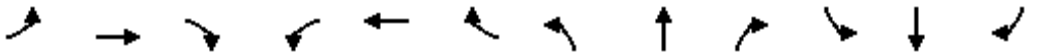




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	0	33	1	0	3	16	1308	0	0	1478	15
Future Volume (veh/h)	21	0	33	1	0	3	16	1308	0	0	1478	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	21	0	34	1	0	3	16	1335	0	0	1508	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	125	0	73	103	0	77	30	2804	1417	2	2734	1382
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1396	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	21	0	34	1	0	3	16	1335	0	0	1508	15
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1396	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.5	0.0	1.8	0.1	0.0	0.2	0.9	8.7	0.0	0.0	14.8	0.2
Cycle Q Clear(g_c), s	1.6	0.0	1.8	1.9	0.0	0.2	0.9	8.7	0.0	0.0	14.8	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	0	73	103	0	77	30	2804	1417	2	2734	1382
V/C Ratio(X)	0.17	0.00	0.47	0.01	0.00	0.04	0.53	0.48	0.00	0.00	0.55	0.01
Avail Cap(c_a), veh/h	344	0	363	326	0	381	101	2804	1417	88	2734	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	0.0	46.8	47.8	0.0	46.0	48.6	1.2	0.0	0.0	2.9	1.6
Incr Delay (d2), s/veh	0.6	0.0	4.5	0.0	0.0	0.2	13.7	0.6	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.9	0.0	0.0	0.1	0.5	0.2	0.0	0.0	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	51.4	47.8	0.0	46.2	62.3	1.8	0.0	0.0	3.7	1.6
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		55			4			1351			1523	
Approach Delay, s/veh		49.9			46.6			2.5			3.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.8		8.0	5.8	86.0		8.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	6.0	82.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	10.7		3.8	2.9	16.8		3.9				
Green Ext Time (p_c), s	0.0	12.8		0.1	0.0	16.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			4.1									
HCM 6th LOS			A									



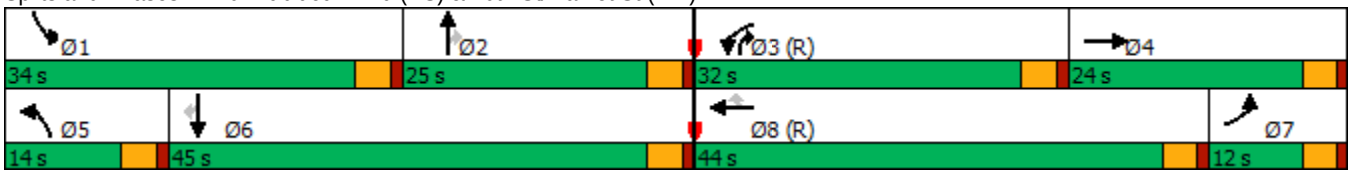
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	80	26	355	77	584	54	450	446	695	680	74
Future Volume (vph)	55	80	26	355	77	584	54	450	446	695	680	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.963				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				584			243			123
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	57	82	27	366	79	602	56	464	460	716	701	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	109	0	366	79	602	56	464	460	716	701	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	12.0	24.0		32.0	44.0	44.0	14.0	25.0	32.0	34.0	45.0	45.0
Total Split (%)	10.4%	20.9%		27.8%	38.3%	38.3%	12.2%	21.7%	27.8%	29.6%	39.1%	39.1%
Maximum Green (s)	8.0	20.0		28.0	40.0	40.0	10.0	21.0	28.0	30.0	41.0	41.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	7.5	17.6		28.0	40.0	40.0	8.6	25.3	57.3	28.1	46.8	46.8
Actuated g/C Ratio	0.07	0.15		0.24	0.35	0.35	0.07	0.22	0.50	0.24	0.41	0.41
v/c Ratio	0.56	0.44		0.46	0.13	0.67	0.47	0.63	0.55	0.88	0.48	0.11
Control Delay	73.6	43.9		49.8	42.5	27.8	63.9	46.5	12.5	54.7	28.2	1.3
Queue Delay	0.0	0.0		0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	73.6	44.0		49.8	42.5	28.0	63.9	46.5	12.7	54.7	28.2	1.3
LOS	E	D		D	D	C	E	D	B	D	C	A
Approach Delay		54.1			36.7			31.7			39.5	
Approach LOS		D			D			C			D	

Intersection Summary

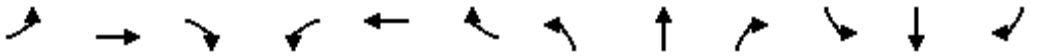
Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 37.3 Intersection LOS: D
Intersection Capacity Utilization 63.2% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

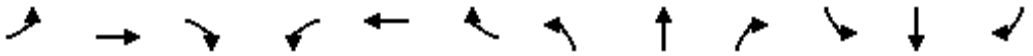
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	80	26	355	77	584	54	450	446	695	680	74
Future Volume (veh/h)	55	80	26	355	77	584	54	450	446	695	680	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	57	82	27	366	79	602	56	464	460	716	701	76
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	154	347	114	564	625	625	95	624	588	840	1329	664
Arrive On Green	0.09	0.28	0.28	0.16	0.35	0.35	0.06	0.18	0.18	0.24	0.36	0.36
Sat Flow, veh/h	1648	1240	408	3485	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	57	0	109	366	79	602	56	464	460	716	701	76
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1742	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.7	0.0	5.9	11.3	3.5	20.0	3.7	14.8	21.0	22.2	17.4	2.4
Cycle Q Clear(g_c), s	3.7	0.0	5.9	11.3	3.5	20.0	3.7	14.8	21.0	22.2	17.4	2.4
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	0	461	564	625	625	95	624	588	840	1329	664
V/C Ratio(X)	0.37	0.00	0.24	0.65	0.13	0.96	0.59	0.74	0.78	0.85	0.53	0.11
Avail Cap(c_a), veh/h	154	0	461	848	625	625	148	624	588	924	1329	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.57	0.57	0.57	0.84	0.84	0.84	0.82	0.82	0.82
Uniform Delay (d), s/veh	49.0	0.0	32.0	45.1	25.6	10.3	53.0	44.5	33.8	42.0	28.8	13.4
Incr Delay (d2), s/veh	1.5	0.0	0.3	0.7	0.2	19.7	4.8	6.7	8.5	6.0	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.3	4.8	1.5	10.2	1.7	6.6	12.3	9.9	7.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	32.2	45.9	25.8	30.0	57.8	51.1	42.3	48.0	30.0	13.7
LnGrp LOS	D	A	C	D	C	C	E	D	D	D	C	B
Approach Vol, veh/h		166			1047			980			1493	
Approach Delay, s/veh		38.5			35.3			47.4			37.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.3	25.0	22.6	36.1	10.4	45.8	14.7	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	30.0	21.0	28.0	20.0	10.0	41.0	8.0	40.0
Max Q Clear Time (g_c+I1), s	26.2	25.0	13.3	7.9	7.7	21.4	7.7	24.0
Green Ext Time (p_c), s	1.0	0.0	1.0	0.3	0.0	4.3	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

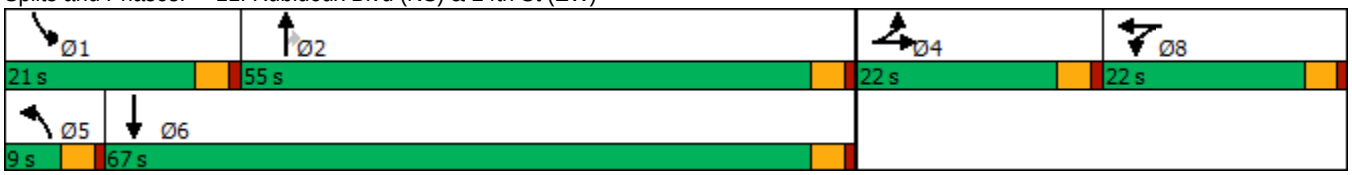


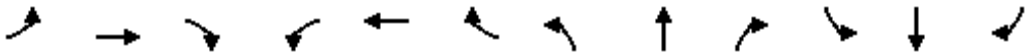
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	13	14	25	16	39	9	907	60	116	963	5
Future Volume (vph)	4	13	14	25	16	39	9	907	60	116	963	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.939			0.934				0.850		0.999	
Flt Protected		0.994			0.984		0.950			0.950		
Satd. Flow (prot)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Flt Permitted		0.994			0.984		0.950			0.950		
Satd. Flow (perm)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			34				118		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	4	13	14	26	16	40	9	935	62	120	993	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	82	0	9	935	62	120	998	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	55.0	55.0	21.0	67.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		7.5%	45.8%	45.8%	17.5%	55.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	51.0	51.0	17.0	63.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)		6.7			8.4		5.1	55.1	55.1	12.0	70.5	
Actuated g/C Ratio		0.07			0.09		0.06	0.60	0.60	0.13	0.77	
v/c Ratio		0.23			0.45		0.11	0.52	0.08	0.57	0.41	
Control Delay		34.0			35.2		49.3	15.2	0.3	50.1	6.9	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		34.0			35.2		49.3	15.2	0.3	50.1	6.9	
LOS		C			D		D	B	A	D	A	
Approach Delay		34.0			35.2			14.6			11.5	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 91.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)

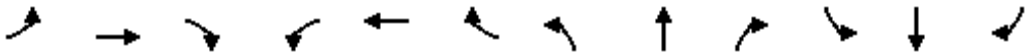




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	13	14	25	16	39	9	907	60	116	963	5
Future Volume (veh/h)	4	13	14	25	16	39	9	907	60	116	963	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	4	13	14	26	16	40	9	935	62	120	993	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	7	23	25	35	21	53	18	1947	984	151	2372	12
Arrive On Green	0.03	0.03	0.03	0.06	0.06	0.06	0.01	0.64	0.64	0.09	0.72	0.72
Sat Flow, veh/h	234	759	818	574	353	883	1604	3047	1539	1707	3313	17
Grp Volume(v), veh/h	31	0	0	82	0	0	9	935	62	120	486	512
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1539	1707	1622	1707
Q Serve(g_s), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.1	1.3	6.1	10.7	10.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.1	1.3	6.1	10.7	10.7
Prop In Lane	0.13		0.45	0.32		0.49	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	55	0	0	110	0	0	18	1947	984	151	1162	1223
V/C Ratio(X)	0.57	0.00	0.00	0.75	0.00	0.00	0.50	0.48	0.06	0.79	0.42	0.42
Avail Cap(c_a), veh/h	371	0	0	371	0	0	91	1947	984	330	1162	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	40.7	0.0	0.0	43.2	8.3	6.0	39.3	5.1	5.1
Incr Delay (d2), s/veh	8.9	0.0	0.0	9.7	0.0	0.0	19.9	0.9	0.1	9.1	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.0	0.0	0.0	0.3	3.6	0.4	2.8	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	50.4	0.0	0.0	63.1	9.1	6.1	48.4	6.2	6.1
LnGrp LOS	D	A	A	D	A	A	E	A	A	D	A	A
Approach Vol, veh/h		31			82			1006			1118	
Approach Delay, s/veh		51.0			50.4			9.4			10.7	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	60.2		6.7	5.0	67.0		9.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	17.0	51.0		18.0	5.0	63.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	16.1		3.5	2.5	12.7		5.9				
Green Ext Time (p_c), s	0.2	7.1		0.1	0.0	6.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	

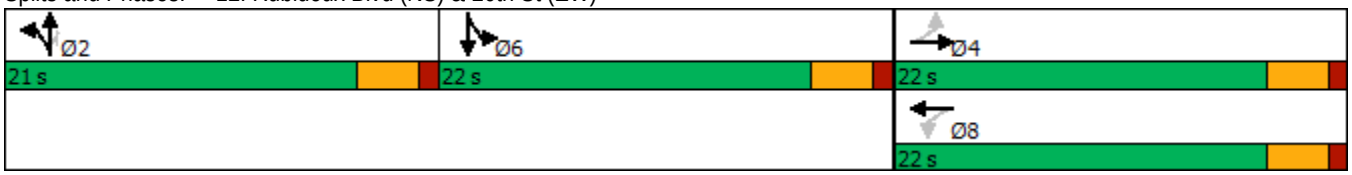


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	11	0	19	7	980	24	16	1009	3
Future Volume (vph)	0	0	10	11	0	19	7	980	24	16	1009	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Frt		0.865			0.916				0.850			
Flt Protected					0.982						0.999	
Satd. Flow (prot)	0	1644	0	0	1378	0	0	3034	1176	0	3220	0
Flt Permitted											0.999	
Satd. Flow (perm)	0	1644	0	0	1404	0	0	3034	1176	0	3220	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		533			84				84			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	11	12	0	20	7	1032	25	17	1062	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	32	0	0	1039	25	0	1082	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Split	NA	Perm	Split	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		21.0	21.0	21.0	22.0	22.0	
Total Split (%)	33.8%	33.8%		33.8%	33.8%		32.3%	32.3%	32.3%	33.8%	33.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		17.0	17.0	17.0	18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		5.6			5.6			18.2	18.2		18.2	
Actuated g/C Ratio		0.12			0.12			0.38	0.38		0.38	
v/c Ratio		0.02			0.14			0.90	0.05		0.88	
Control Delay		0.0			2.0			29.9	0.2		27.6	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		0.0			2.0			29.9	0.2		27.6	
LOS		A			A			C	A		C	
Approach Delay					2.0			29.2			27.6	
Approach LOS					A			C			C	

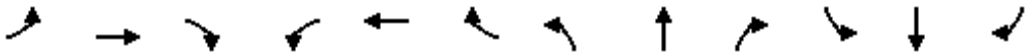
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 47.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	11	0	19	7	980	24	16	1009	3
Future Volume (veh/h)	0	0	10	11	0	19	7	980	24	16	1009	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	11	12	0	20	7	1032	25	17	1062	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	86	121	0	34	7	1083	537	19	1237	4
Arrive On Green	0.00	0.00	0.05	0.05	0.00	0.05	0.35	0.35	0.35	0.37	0.37	0.37
Sat Flow, veh/h	0	0	1900	451	0	752	20	3136	1554	52	3383	10
Grp Volume(v), veh/h	0	0	11	32	0	0	557	482	25	566	0	516
Grp Sat Flow(s),veh/h/ln	0	0	1900	1204	0	0	1618	1537	1554	1722	0	1722
Q Serve(g_s), s	0.0	0.0	0.3	1.1	0.0	0.0	16.9	14.7	0.5	15.3	0.0	13.3
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.4	0.0	0.0	16.9	14.7	0.5	15.3	0.0	13.3
Prop In Lane	0.00		1.00	0.37		0.62	0.01		1.00	0.03		0.01
Lane Grp Cap(c), veh/h	0	0	86	155	0	0	559	531	537	630	0	630
V/C Ratio(X)	0.00	0.00	0.13	0.21	0.00	0.00	1.00	0.91	0.05	0.90	0.00	0.82
Avail Cap(c_a), veh/h	0	0	695	595	0	0	559	531	537	630	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	23.2	0.0	0.0	16.1	15.4	10.7	14.8	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.7	0.0	0.0	37.3	21.8	0.2	18.2	0.0	11.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.4	0.0	0.0	10.2	6.8	0.2	7.3	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	23.2	23.9	0.0	0.0	53.4	37.1	10.9	33.0	0.0	25.5
LnGrp LOS	A	A	C	C	A	A	D	D	B	C	A	C
Approach Vol, veh/h		11			32			1064			1082	
Approach Delay, s/veh		23.2			23.9			45.0			29.4	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		6.2		22.0		6.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		17.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		18.9		2.3		17.3		3.4				
Green Ext Time (p_c), s		0.0		0.0		0.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		36.9
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	35	49	81	44	12	83	879	57	16	953	62
Future Volume (vph)	68	35	49	81	44	12	83	879	57	16	953	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.991			0.991	
Flt Protected		0.968			0.969		0.950			0.950		
Satd. Flow (prot)	0	1803	1372	0	1770	1346	1583	3138	0	1703	3375	0
Flt Permitted		0.720			0.738		0.950			0.950		
Satd. Flow (perm)	0	1341	1372	0	1348	1346	1583	3138	0	1703	3375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		13			13	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	74	38	53	88	48	13	90	955	62	17	1036	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	53	0	136	13	90	1017	0	17	1103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	10.0	28.4		9.0	27.4	
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	37.7%	16.7%	47.3%		15.0%	45.7%	
Maximum Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	6.0	24.4		5.0	23.4	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		10.0	10.0		10.1	10.1	6.0	34.4		5.0	28.3	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.12	0.68		0.10	0.56	
v/c Ratio		0.42	0.15		0.51	0.04	0.49	0.48		0.10	0.59	
Control Delay		23.1	3.0		25.3	0.2	33.5	7.9		24.4	12.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.1	3.0		25.3	0.2	33.5	7.9		24.4	12.9	
LOS		C	A		C	A	C	A		C	B	
Approach Delay		16.6			23.1			10.0			13.1	
Approach LOS		B			C			A			B	

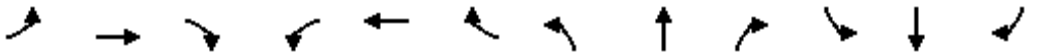
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 50.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)

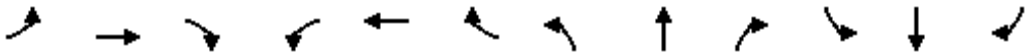
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	35	49	81	44	12	83	879	57	16	953	62
Future Volume (veh/h)	68	35	49	81	44	12	83	879	57	16	953	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	74	38	53	88	48	13	90	955	62	17	1036	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	101	32	562	100	34	553	155	1440	93	37	1306	84
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.46	0.46	0.02	0.39	0.39
Sat Flow, veh/h	0	103	1796	0	108	1767	1693	3099	201	1811	3317	215
Grp Volume(v), veh/h	112	0	53	136	0	13	90	495	522	17	537	566
Grp Sat Flow(s),veh/h/ln	103	0	1796	108	0	1767	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	0.0	0.0	1.2	0.0	0.0	0.3	3.0	14.2	14.2	0.6	16.4	16.4
Cycle Q Clear(g_c), s	18.6	0.0	1.2	18.6	0.0	0.3	3.0	14.2	14.2	0.6	16.4	16.4
Prop In Lane	0.66		1.00	0.65		1.00	1.00		0.12	1.00		0.12
Lane Grp Cap(c), veh/h	133	0	562	134	0	553	155	747	786	37	677	713
V/C Ratio(X)	0.84	0.00	0.09	1.02	0.00	0.02	0.58	0.66	0.66	0.46	0.79	0.79
Avail Cap(c_a), veh/h	133	0	562	134	0	553	171	747	786	152	677	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	14.5	25.2	0.0	14.1	25.9	12.3	12.3	28.8	15.9	15.9
Incr Delay (d2), s/veh	36.2	0.0	0.1	82.9	0.0	0.0	4.1	4.6	4.4	8.5	9.3	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.5	4.9	0.0	0.1	1.2	4.6	4.8	0.3	6.6	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	0.0	14.5	108.0	0.0	14.2	30.0	16.9	16.7	37.2	25.2	24.7
LnGrp LOS	E	A	B	F	A	B	C	B	B	D	C	C
Approach Vol, veh/h		165			149			1107			1120	
Approach Delay, s/veh		45.9			99.8			17.9			25.1	
Approach LOS		D			F			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	31.6		22.6	9.4	27.4		22.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.4		18.6	6.0	23.4		18.6				
Max Q Clear Time (g_c+I1), s	4.6	18.2		20.6	7.0	20.4		20.6				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	1.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.7	
HCM 6th LOS		C	

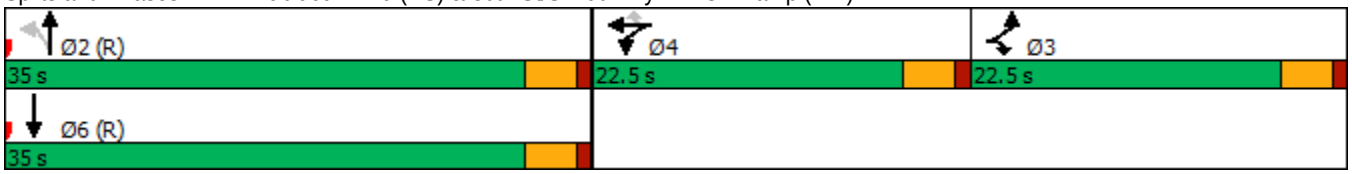


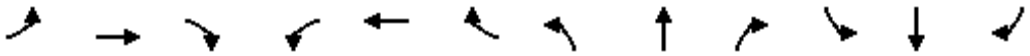
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	164	502	136	94	86	921	0	0	1106	26
Future Volume (vph)	34	0	164	502	136	94	86	921	0	0	1106	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	77		0	0		0
Storage Lanes	1		1	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850					0.997	
Flt Protected	0.950			0.950	0.972		0.950					
Satd. Flow (prot)	1736	0	1346	1681	1720	1372	1597	3195	0	0	3272	0
Flt Permitted	0.950			0.950	0.972		0.119					
Satd. Flow (perm)	1736	0	1346	1681	1720	1372	200	3195	0	0	3272	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			68					3	
Link Speed (mph)		30			30			40			50	
Link Distance (ft)		785			262			178			1593	
Travel Time (s)		17.8			6.0			3.0			21.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	13%	13%	13%	10%	10%	10%
Adj. Flow (vph)	36	0	174	534	145	100	91	980	0	0	1177	28
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	36	0	174	336	343	100	91	980	0	0	1205	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2			2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)	20		20	20	100	20	20	100			100	
Trailing Detector (ft)	0		0	0	0	0	0	0			0	
Detector 1 Position(ft)	0		0	0	0	0	0	0			0	
Detector 1 Size(ft)	20		20	20	6	20	20	6			6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		Prot	Split	NA	Perm	Perm	NA			NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3		3	4	4			2			6	
Permitted Phases						4	2					
Detector Phase	3		3	4	4	4	2	2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0	5.0			5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5	22.5	22.5			22.5	
Total Split (s)	22.5		22.5	22.5	22.5	22.5	35.0	35.0			35.0	
Total Split (%)	28.1%		28.1%	28.1%	28.1%	28.1%	43.8%	43.8%			43.8%	
Maximum Green (s)	18.5		18.5	18.5	18.5	18.5	31.0	31.0			31.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	4.0	4.0			4.0	
Lead/Lag	Lag		Lag	Lead	Lead	Lead						
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
Recall Mode	None		None	None	None	None	C-Max	C-Max			C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0		0	0	0	0	0	0			0	
Act Effct Green (s)	11.9		11.9	17.9	17.9	17.9	38.2	38.2			38.2	
Actuated g/C Ratio	0.15		0.15	0.22	0.22	0.22	0.48	0.48			0.48	
v/c Ratio	0.14		0.67	0.90	0.89	0.28	0.96	0.64			0.77	
Control Delay	28.1		31.8	58.2	57.4	12.9	111.3	19.4			23.5	
Queue Delay	0.0		0.0	1.1	1.0	0.0	0.0	3.6			0.9	
Total Delay	28.1		31.8	59.3	58.4	12.9	111.3	23.1			24.4	
LOS	C		C	E	E	B	F	C			C	
Approach Delay		31.2			53.0			30.5			24.4	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)





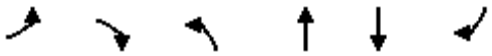
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	164	502	136	94	86	921	0	0	1106	26
Future Volume (veh/h)	34	0	164	502	136	94	86	921	0	0	1106	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	0	1767	1870	1870	1796	1707	1707	0	0	1752	1752
Adj Flow Rate, veh/h	36	0	174	340	417	100	91	980	0	0	1177	28
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	0	4	2	2	2	13	13	0	0	10	10
Cap, veh/h	0	0	0	433	433	415	297	2169	0	0	2231	53
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	1.00	1.00	0.00	0.00	0.67	0.67
Sat Flow, veh/h		0		1870	1870	1796	424	3329	0	0	3424	79
Grp Volume(v), veh/h		0.0		340	417	100	91	980	0	0	587	618
Grp Sat Flow(s),veh/h/ln				1870	1870	1796	424	1622	0	0	1664	1752
Q Serve(g_s), s				13.7	17.6	3.6	6.8	0.0	0.0	0.0	14.4	14.4
Cycle Q Clear(g_c), s				13.7	17.6	3.6	21.3	0.0	0.0	0.0	14.4	14.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h				433	433	415	297	2169	0	0	1113	1172
V/C Ratio(X)				0.79	0.96	0.24	0.31	0.45	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h				433	433	415	297	2169	0	0	1113	1172
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.95	0.95	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				28.9	30.4	25.0	2.9	0.0	0.0	0.0	6.8	6.8
Incr Delay (d2), s/veh				9.3	34.0	0.3	2.5	0.6	0.0	0.0	1.4	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.0	11.7	1.5	0.3	0.2	0.0	0.0	3.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.2	64.4	25.3	5.4	0.6	0.0	0.0	8.2	8.1
LnGrp LOS				D	E	C	A	A	A	A	A	A
Approach Vol, veh/h					857			1071			1205	
Approach Delay, s/veh					49.4			1.1			8.2	
Approach LOS					D			A			A	

Timer - Assigned Phs	2		4		6			
Phs Duration (G+Y+Rc), s	57.5		22.5		57.5			
Change Period (Y+Rc), s	4.0		4.0		4.0			
Max Green Setting (Gmax), s	31.0		18.5		31.0			
Max Q Clear Time (g_c+I1), s	23.3		19.6		16.4			
Green Ext Time (p_c), s	4.4		0.0		6.2			

Intersection Summary		
HCM 6th Ctrl Delay	17.0	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

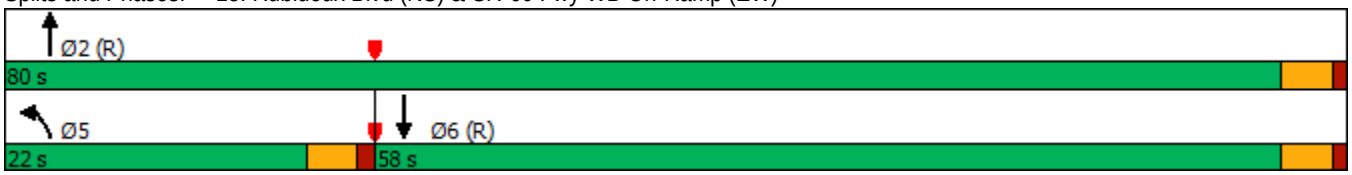


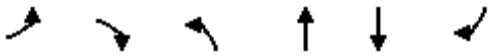
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	252	1025	1140	614
Future Volume (vph)	0	0	252	1025	1140	614
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	105			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.948	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1612	3223	3229	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1612	3223	3229	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					234	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1099			374	178	
Travel Time (s)	25.0			6.4	3.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	12%	12%	6%	6%
Adj. Flow (vph)	0	0	265	1079	1200	646
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	265	1079	1846	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors			1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)			20	100	100	
Trailing Detector (ft)			0	0	0	
Detector 1 Position(ft)			0	0	0	
Detector 1 Size(ft)			20	6	6	
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)			0.0	0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases						
Detector Phase			5	2	6	
Switch Phase						
Minimum Initial (s)			5.0	5.0	5.0	
Minimum Split (s)			9.0	22.0	22.0	
Total Split (s)			22.0	80.0	58.0	
Total Split (%)			27.5%	100.0%	72.5%	
Maximum Green (s)			18.0	76.0	54.0	
Yellow Time (s)			3.0	3.0	3.0	
All-Red Time (s)			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)			3.0	3.0	3.0	
Recall Mode			None	C-Max	C-Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)			16.4	80.0	55.6	
Actuated g/C Ratio			0.20	1.00	0.70	
v/c Ratio			0.80	0.33	0.80	
Control Delay			43.5	0.2	5.5	
Queue Delay			0.0	0.2	2.6	
Total Delay			43.5	0.4	8.2	
LOS			D	A	A	
Approach Delay				8.9	8.2	
Approach LOS				A	A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

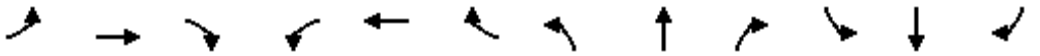




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	252	1025	1140	614
Future Volume (veh/h)	0	0	252	1025	1140	614
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Work Zone On Approach				No	No	
Adj Sat Flow, veh/h/ln			1722	1722	1811	1811
Adj Flow Rate, veh/h			265	1079	1200	646
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			12	12	6	6
Cap, veh/h			299	3108	1668	898
Arrive On Green			0.35	1.00	1.00	1.00
Sat Flow, veh/h			1722	3358	2386	1236
Grp Volume(v), veh/h			265	1079	899	947
Grp Sat Flow(s),veh/h/ln			1722	1636	1721	1811
Q Serve(g_s), s			11.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s			11.6	0.0	0.0	0.0
Prop In Lane			1.00			0.68
Lane Grp Cap(c), veh/h			299	3108	1250	1316
V/C Ratio(X)			0.89	0.35	0.72	0.72
Avail Cap(c_a), veh/h			387	3108	1250	1316
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.76	0.76	0.52	0.52
Uniform Delay (d), s/veh			25.4	0.0	0.0	0.0
Incr Delay (d2), s/veh			14.2	0.2	1.9	1.8
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			4.8	0.1	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			39.6	0.2	1.9	1.8
LnGrp LOS			D	A	A	A
Approach Vol, veh/h				1344	1846	
Approach Delay, s/veh				8.0	1.8	
Approach LOS				A	A	

Timer - Assigned Phs	2			5	6
Phs Duration (G+Y+Rc), s	80.0			17.9	62.1
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	76.0			18.0	54.0
Max Q Clear Time (g_c+I1), s	2.0			13.6	2.0
Green Ext Time (p_c), s	9.8			0.3	22.8

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

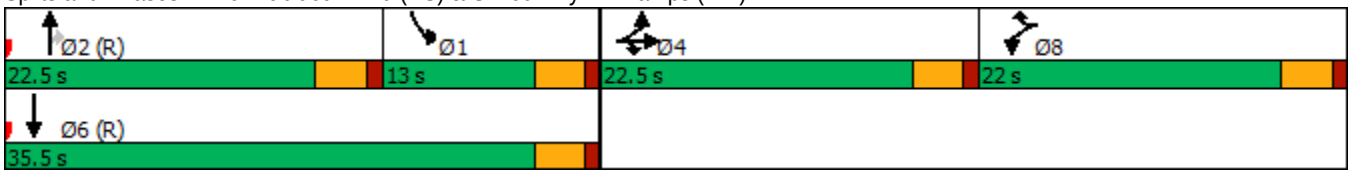


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	584	36	405	15	0	4	0	677	337	172	963	0
Future Volume (vph)	584	36	405	15	0	4	0	677	337	172	963	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.958		0.950						0.950		
Satd. Flow (prot)	1504	1517	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.958		0.950						0.950		
Satd. Flow (perm)	1504	1517	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			260			123			359			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	621	38	431	16	0	4	0	720	359	183	1024	0
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	329	330	431	16	0	4	0	720	359	183	1024	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	13.0	35.5	
Total Split (%)	28.1%	28.1%	28.1%	27.5%		27.5%		28.1%	28.1%	16.3%	44.4%	
Maximum Green (s)	18.5	18.5	18.5	18.0		18.0		18.5	18.5	9.0	31.5	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	18.5	18.5	18.5	6.3		6.3		36.0	36.0	9.0	49.0	
Actuated g/C Ratio	0.23	0.23	0.23	0.08		0.08		0.45	0.45	0.11	0.61	
v/c Ratio	0.95	0.94	0.89	0.11		0.02		0.45	0.39	0.92	0.47	
Control Delay	69.9	68.6	35.4	35.5		0.2		17.5	3.6	68.2	10.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.6	
Total Delay	69.9	68.6	35.4	35.5		0.2		17.5	3.6	68.2	11.2	
LOS	E	E	D	D		A		B	A	E	B	
Approach Delay		55.9			28.5			12.9			19.8	
Approach LOS		E			C			B			B	

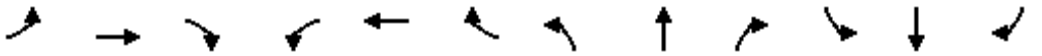
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	584	36	405	15	0	4	0	677	337	172	963	0
Future Volume (veh/h)	584	36	405	15	0	4	0	677	337	172	963	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	648	0	431	16	0	4	0	720	359	183	1024	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	783	0	376	0	0	0	0	822	433	725	2377	0
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.23	0.13	0.22	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	648	0	431		0.0		0	720	359	183	1024	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	14.6	0.0	18.5				0.0	15.6	14.6	7.1	19.9	0.0
Cycle Q Clear(g_c), s	14.6	0.0	18.5				0.0	15.6	14.6	7.1	19.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	783	0	376				0	822	433	725	2377	0
V/C Ratio(X)	0.83	0.00	1.15				0.00	0.88	0.83	0.25	0.43	0.00
Avail Cap(c_a), veh/h	783	0	376				0	822	433	725	2377	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.50	0.50	0.00
Uniform Delay (d), s/veh	29.2	0.0	30.7				0.0	29.6	29.3	24.4	18.1	0.0
Incr Delay (d2), s/veh	7.4	0.0	92.8				0.0	12.0	15.8	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	16.6				0.0	7.6	8.0	3.1	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	123.6				0.0	41.6	45.1	24.5	18.3	0.0
LnGrp LOS	D	A	F				A	D	D	C	B	A
Approach Vol, veh/h		1079						1079			1207	
Approach Delay, s/veh		71.3						42.8			19.3	
Approach LOS		E						D			B	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	35.0	22.5		22.5		57.5						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	9.0	18.5		18.5		31.5						
Max Q Clear Time (g_c+I1), s	11.1	19.6		22.5		23.9						
Green Ext Time (p_c), s	0.0	0.0		0.0		3.9						

Intersection Summary			
HCM 6th Ctrl Delay			43.5
HCM 6th LOS			D

Notes

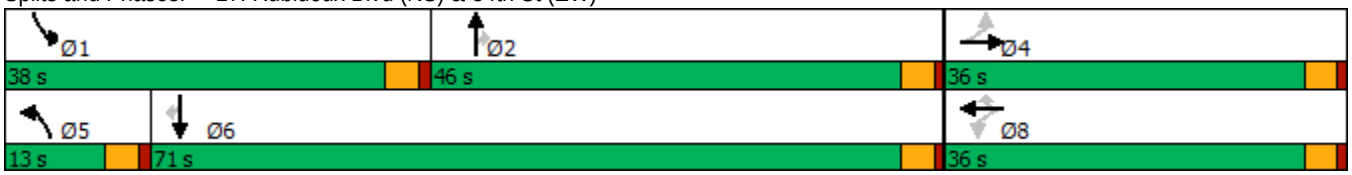
User approved volume balancing among the lanes for turning movement.

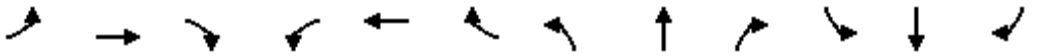
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	58	13	15	38	119	32	627	67	227	1023	159
Future Volume (vph)	105	58	13	15	38	119	32	627	67	227	1023	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.990				0.850			0.850			0.850
Flt Protected		0.971			0.986		0.950			0.950		
Satd. Flow (prot)	0	1773	0	0	1873	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.785			0.913		0.950			0.950		
Satd. Flow (perm)	0	1434	0	0	1735	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				124			82			68
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	109	60	14	16	40	124	33	653	70	236	1066	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	56	124	33	653	70	236	1066	166
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0		36.0	36.0	36.0	13.0	46.0	46.0	38.0	71.0	71.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	10.8%	38.3%	38.3%	31.7%	59.2%	59.2%
Maximum Green (s)	32.0	32.0		32.0	32.0	32.0	9.0	42.0	42.0	34.0	67.0	67.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		17.8			17.8	17.8	7.3	51.9	51.9	18.7	67.9	67.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.52	0.52	0.19	0.67	0.67
v/c Ratio		0.72			0.18	0.36	0.26	0.36	0.10	0.72	0.45	0.18
Control Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
LOS		E			D	A	D	B	A	D	B	A
Approach Delay		55.1			18.2			17.5			16.5	
Approach LOS		E			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 100.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	58	13	15	38	119	32	627	67	227	1023	159
Future Volume (veh/h)	105	58	13	15	38	119	32	627	67	227	1023	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	109	60	14	16	40	124	33	653	70	236	1066	166
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	178	83	17	104	234	306	64	1902	961	310	2384	1205
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.54	0.54	0.17	0.68	0.68
Sat Flow, veh/h	713	495	100	343	1393	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	183	0	0	56	0	124	33	653	70	236	1066	166
Grp Sat Flow(s),veh/h/ln	1308	0	0	1736	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	11.2	0.0	0.0	0.0	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Cycle Q Clear(g_c), s	13.7	0.0	0.0	2.5	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Prop In Lane	0.60		0.08	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	0	0	338	0	306	64	1902	961	310	2384	1205
V/C Ratio(X)	0.66	0.00	0.00	0.17	0.00	0.40	0.52	0.34	0.07	0.76	0.45	0.14
Avail Cap(c_a), veh/h	496	0	0	602	0	589	167	1902	961	637	2384	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	0.0	35.3	0.0	36.8	47.0	12.7	10.7	39.4	7.4	5.7
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.0	0.9	6.3	0.5	0.1	3.9	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	1.2	0.0	2.8	0.9	3.8	0.7	5.6	4.5	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	0.0	35.6	0.0	37.7	53.3	13.2	10.9	43.2	8.0	6.0
LnGrp LOS	D	A	A	D	A	D	D	B	B	D	A	A
Approach Vol, veh/h		183			180			756			1468	
Approach Delay, s/veh		43.1			37.0			14.7			13.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	57.9		20.6	7.4	71.0		20.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	34.0	42.0		32.0	9.0	67.0		32.0				
Max Q Clear Time (g_c+I1), s	16.0	14.4		15.7	5.7	17.9		10.0				
Green Ext Time (p_c), s	0.6	4.7		1.0	0.0	9.9		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		17.6	
HCM 6th LOS		B	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	482	1	4	586	0	34
Future Volume (vph)	482	1	4	586	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	507	1	4	617	0	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	507	1	4	617	0	36
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	482	1	4	586	0	34
Future Vol, veh/h	482	1	4	586	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	507	1	4	617	0	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	508	0	-	254
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	937	-	0	752
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	937	-	-	752
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	752	-	-	937	-
HCM Lane V/C Ratio	0.048	-	-	0.004	-
HCM Control Delay (s)	10	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	507	9	8	567	23	27
Future Volume (vph)	507	9	8	567	23	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2983	1335	1504	3008	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	534	9	8	597	24	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	534	9	8	597	24	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.7%		ICU Level of Service A	
Analysis Period (min) 15			

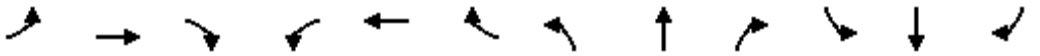
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	507	9	8	567	23	27
Future Vol, veh/h	507	9	8	567	23	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	534	9	8	597	24	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	543	0	849	267
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	315	-
Critical Hdwy	-	-	4.5	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.4	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	907	-	304	737
Stage 1	-	-	-	-	558	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	907	-	301	737
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	719	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	301	737	-	-	907	-
HCM Lane V/C Ratio	0.08	0.039	-	-	0.009	-
HCM Control Delay (s)	18	10.1	-	-	9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-

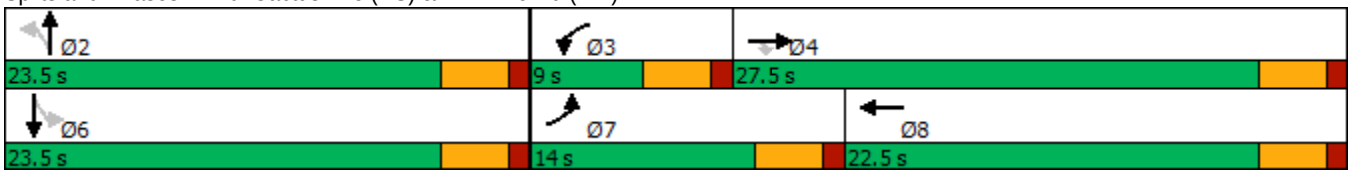


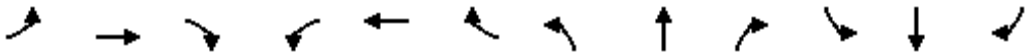
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	372	12	23	239	122	26	6	53	178	3	303
Future Volume (vph)	150	372	12	23	239	122	26	6	53	178	3	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.949			0.865			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2979	0	1805	1644	0	1556	1394	0
Flt Permitted	0.950			0.950			0.477			0.717		
Satd. Flow (perm)	1399	2798	1252	1570	2979	0	906	1644	0	1174	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91		130			56			322	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	160	396	13	24	254	130	28	6	56	189	3	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	396	13	24	384	0	28	62	0	189	325	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	14.0	27.5	27.5	9.0	22.5		23.5	23.5		23.5	23.5	
Total Split (%)	23.3%	45.8%	45.8%	15.0%	37.5%		39.2%	39.2%		39.2%	39.2%	
Maximum Green (s)	10.0	23.5	23.5	5.0	18.5		19.5	19.5		19.5	19.5	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	9.4	19.2	19.2	5.1	10.3		20.0	20.0		20.0	20.0	
Actuated g/C Ratio	0.19	0.39	0.39	0.10	0.21		0.41	0.41		0.41	0.41	
v/c Ratio	0.60	0.36	0.02	0.15	0.53		0.08	0.09		0.39	0.43	
Control Delay	32.2	11.8	0.1	25.0	14.6		12.3	5.1		15.9	4.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.2	11.8	0.1	25.0	14.6		12.3	5.1		15.9	4.1	
LOS	C	B	A	C	B		B	A		B	A	
Approach Delay		17.2			15.2			7.3			8.4	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 49			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	372	12	23	239	122	26	6	53	178	3	303
Future Volume (veh/h)	150	372	12	23	239	122	26	6	53	178	3	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	160	396	13	24	254	130	28	6	56	189	3	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	194	815	429	48	407	208	455	77	722	633	6	693
Arrive On Green	0.13	0.29	0.29	0.03	0.19	0.19	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1470	2793	1470	1678	2164	1108	1072	184	1716	1192	15	1648
Grp Volume(v), veh/h	160	396	13	24	187	197	28	0	62	189	0	325
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1072	0	1900	1192	0	1663
Q Serve(g_s), s	4.9	5.4	0.3	0.7	5.0	5.0	0.9	0.0	0.9	5.2	0.0	6.5
Cycle Q Clear(g_c), s	4.9	5.4	0.3	0.7	5.0	5.0	7.4	0.0	0.9	6.1	0.0	6.5
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.90	1.00		0.99
Lane Grp Cap(c), veh/h	194	815	429	48	300	315	455	0	799	633	0	700
V/C Ratio(X)	0.82	0.49	0.03	0.50	0.62	0.62	0.06	0.00	0.08	0.30	0.00	0.46
Avail Cap(c_a), veh/h	317	1417	746	181	636	670	455	0	799	633	0	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	13.5	11.7	22.2	17.3	17.3	12.3	0.0	8.0	9.9	0.0	9.7
Incr Delay (d2), s/veh	8.6	0.5	0.0	7.8	2.1	2.0	0.3	0.0	0.2	1.2	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.5	0.1	0.3	1.8	1.9	0.2	0.0	0.3	1.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	14.0	11.8	30.0	19.4	19.3	12.6	0.0	8.2	11.1	0.0	11.9
LnGrp LOS	C	B	B	C	B	B	B	A	A	B	A	B
Approach Vol, veh/h		569			408			90			514	
Approach Delay, s/veh		17.9			20.0			9.6			11.6	
Approach LOS		B			C			A			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	5.3	17.5		23.5	10.1	12.7				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		19.5	5.0	23.5		19.5	10.0	18.5				
Max Q Clear Time (g_c+I1), s		9.4	2.7	7.4		8.5	6.9	7.0				
Green Ext Time (p_c), s		0.2	0.0	2.4		2.1	0.1	1.7				

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	600	2	2	384	0	10
Future Volume (vph)	600	2	2	384	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	632	2	2	404	0	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	632	2	2	404	0	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.6%		ICU Level of Service A	
Analysis Period (min) 15			

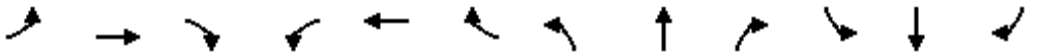
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	600	2	2	384	0	10
Future Vol, veh/h	600	2	2	384	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	632	2	2	404	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	634	0	-	316
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	862	-	0	686
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	862	-	-	686
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	686	-	-	862	-
HCM Lane V/C Ratio	0.015	-	-	0.002	-
HCM Control Delay (s)	10.3	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

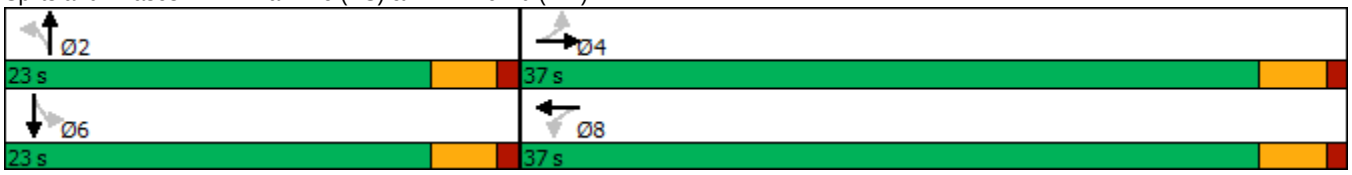


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	354	159	4	197	9	161	1	12	3	4	5
Future Volume (vph)	8	354	159	4	197	9	161	1	12	3	4	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.993			0.861			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1460	0	1583	1655	0	1517	1375	0	1805	1729	0
Flt Permitted	0.616			0.276			0.751			0.748		
Satd. Flow (perm)	944	1460	0	460	1655	0	1199	1375	0	1421	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60			6			13			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	393	177	4	219	10	179	1	13	3	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	570	0	4	229	0	179	14	0	3	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	37.0	37.0		37.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	61.7%	61.7%		61.7%	61.7%		38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	22.6	22.6		22.6	22.6		19.4	19.4		19.4	19.4	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.39	0.39		0.39	0.39	
v/c Ratio	0.02	0.83		0.02	0.31		0.39	0.03		0.01	0.01	
Control Delay	6.6	21.5		6.8	9.0		17.1	8.2		13.3	10.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.6	21.5		6.8	9.0		17.1	8.2		13.3	10.1	
LOS	A	C		A	A		B	A		B	B	
Approach Delay		21.3			9.0			16.4			10.9	
Approach LOS		C			A			B			B	

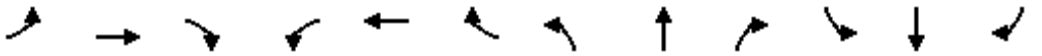
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 50.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 17.4		Intersection LOS: B	
Intersection Capacity Utilization 50.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)

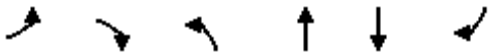
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	354	159	4	197	9	161	1	12	3	4	5
Future Volume (veh/h)	8	354	159	4	197	9	161	1	12	3	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	393	177	4	219	10	179	1	13	3	4	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	481	464	209	231	706	32	629	46	596	707	302	452
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	951	1065	480	762	1619	74	1216	116	1503	1422	760	1140
Grp Volume(v), veh/h	9	0	570	4	0	229	179	0	14	3	0	10
Grp Sat Flow(s),veh/h/ln	951	0	1544	762	0	1693	1216	0	1618	1422	0	1900
Q Serve(g_s), s	0.3	0.0	15.8	0.2	0.0	4.2	5.0	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	4.5	0.0	15.8	16.0	0.0	4.2	5.2	0.0	0.3	0.3	0.0	0.2
Prop In Lane	1.00		0.31	1.00		0.04	1.00		0.93	1.00		0.60
Lane Grp Cap(c), veh/h	481	0	673	231	0	738	629	0	642	707	0	754
V/C Ratio(X)	0.02	0.00	0.85	0.02	0.00	0.31	0.28	0.00	0.02	0.00	0.00	0.01
Avail Cap(c_a), veh/h	722	0	1064	424	0	1167	629	0	642	707	0	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	12.1	19.2	0.0	8.8	10.3	0.0	8.8	8.9	0.0	8.8
Incr Delay (d2), s/veh	0.0	0.0	3.8	0.0	0.0	0.2	1.1	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.3	0.0	0.0	1.1	1.3	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	0.0	15.9	19.3	0.0	9.0	11.5	0.0	8.8	8.9	0.0	8.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		579			233			193			13	
Approach Delay, s/veh		15.8			9.2			11.3			8.8	
Approach LOS		B			A			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		24.9		23.0		24.9				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		19.0		33.0		19.0		33.0				
Max Q Clear Time (g_c+I1), s		7.2		17.8		2.3		18.0				
Green Ext Time (p_c), s		0.5		3.1		0.0		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	49	6	164	163	4
Future Volume (vph)	10	49	6	164	163	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	11	52	6	173	172	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	52	6	173	172	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

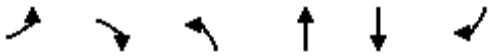
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	49	6	164	163	4
Future Vol, veh/h	10	49	6	164	163	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	11	52	6	173	172	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	357	172	176	0	-	0
Stage 1	172	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	645	877	1304	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	642	877	1304	-	-	-
Mov Cap-2 Maneuver	642	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1304	-	642	877	-	-
HCM Lane V/C Ratio	0.005	-	0.016	0.059	-	-
HCM Control Delay (s)	7.8	-	10.7	9.4	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

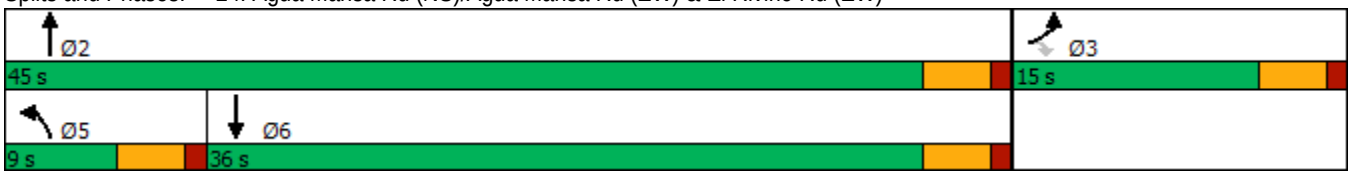


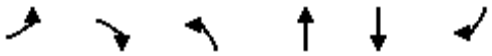
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	180	44	44	802	453	104
Future Volume (vph)	180	44	44	802	453	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.975	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1494	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1494	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45			29	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	186	45	45	827	467	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	186	45	45	827	574	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	15.0	15.0	9.0	45.0	36.0	
Total Split (%)	25.0%	25.0%	15.0%	75.0%	60.0%	
Maximum Green (s)	11.0	11.0	5.0	41.0	32.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	10.2	10.2	5.0	44.6	39.0	
Actuated g/C Ratio	0.16	0.16	0.08	0.71	0.62	
v/c Ratio	0.66	0.16	0.37	0.73	0.61	
Control Delay	35.6	9.0	35.3	11.0	12.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.6	9.0	35.3	11.0	12.2	
LOS	D	A	D	B	B	
Approach Delay	30.4			12.3	12.2	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 62.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	180	44	44	802	453	104
Future Volume (veh/h)	180	44	44	802	453	104
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	186	45	45	827	467	107
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	244	244	73	1174	767	176
Arrive On Green	0.13	0.13	0.04	0.73	0.61	0.61
Sat Flow, veh/h	1841	1841	1618	1618	1256	288
Grp Volume(v), veh/h	186	45	45	827	0	574
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	5.5	1.2	1.5	16.2	0.0	13.0
Cycle Q Clear(g_c), s	5.5	1.2	1.5	16.2	0.0	13.0
Prop In Lane	1.00	1.00	1.00			0.19
Lane Grp Cap(c), veh/h	244	244	73	1174	0	942
V/C Ratio(X)	0.76	0.18	0.62	0.70	0.00	0.61
Avail Cap(c_a), veh/h	358	358	143	1174	0	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	21.8	26.5	4.3	0.0	6.8
Incr Delay (d2), s/veh	5.5	0.4	8.4	3.6	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.5	0.7	2.4	0.0	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.1	22.1	34.9	7.9	0.0	9.8
LnGrp LOS	C	C	C	A	A	A
Approach Vol, veh/h	231			872	574	
Approach Delay, s/veh	27.8			9.3	9.8	
Approach LOS	C			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		45.0			6.5	38.5	11.5
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		41.0			5.0	32.0	11.0
Max Q Clear Time (g_c+I1), s		18.2			3.5	15.0	7.5
Green Ext Time (p_c), s		5.9			0.0	3.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

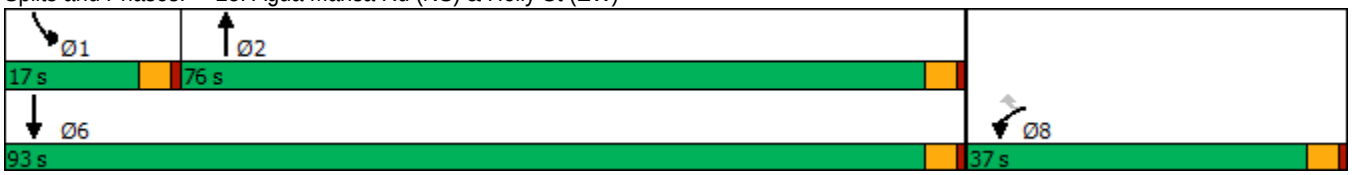


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	133	740	12	29	408
Future Volume (vph)	49	133	740	12	29	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3028	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3028	0	1421	1496
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		139	2			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	51	139	771	13	30	425
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	139	784	0	30	425
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	37.0	37.0	76.0		17.0	93.0
Total Split (%)	28.5%	28.5%	58.5%		13.1%	71.5%
Maximum Green (s)	33.0	33.0	72.0		13.0	89.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	7.6	7.6	23.1		6.9	24.8
Actuated g/C Ratio	0.19	0.19	0.57		0.17	0.61
v/c Ratio	0.18	0.41	0.46		0.12	0.47
Control Delay	17.4	8.6	7.5		18.3	6.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	17.4	8.6	7.5		18.3	6.4
LOS	B	A	A		B	A
Approach Delay	11.0		7.5			7.1
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 40.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	49	133	740	12	29	408
Future Volume (veh/h)	49	133	740	12	29	408
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1663	1596	1618	1618	1500	1500
Adj Flow Rate, veh/h	51	139	771	12	30	425
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	16	16	19	19	27	27
Cap, veh/h	221	212	1328	21	55	898
Arrive On Green	0.13	0.13	0.43	0.43	0.04	0.60
Sat Flow, veh/h	1663	1596	3188	48	1500	1500
Grp Volume(v), veh/h	51	139	381	402	30	425
Grp Sat Flow(s),veh/h/ln	1663	1596	1537	1618	1500	1500
Q Serve(g_s), s	0.8	2.5	5.6	5.6	0.6	4.7
Cycle Q Clear(g_c), s	0.8	2.5	5.6	5.6	0.6	4.7
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	221	212	657	692	55	898
V/C Ratio(X)	0.23	0.65	0.58	0.58	0.54	0.47
Avail Cap(c_a), veh/h	1842	1768	3716	3911	654	4481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	12.3	6.5	6.5	14.1	3.4
Incr Delay (d2), s/veh	0.5	3.4	0.8	0.8	8.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.8	0.8	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	15.7	7.3	7.3	22.1	3.7
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	190		783			455
Approach Delay, s/veh	14.7		7.3			5.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.1	16.7			21.8	8.0
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	13.0	72.0			89.0	33.0
Max Q Clear Time (g_c+I1), s	2.6	7.6			6.7	4.5
Green Ext Time (p_c), s	0.0	5.1			2.7	0.5

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A



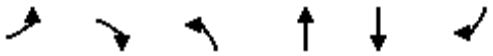
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	98	171	108	486	406	37
Future Volume (vph)	98	171	108	486	406	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		211				46
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	121	211	133	600	501	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	211	133	600	501	46
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	9.2	9.2	7.1	26.5	18.2	18.2
Actuated g/C Ratio	0.23	0.23	0.18	0.66	0.46	0.46
v/c Ratio	0.40	0.48	0.49	0.30	0.40	0.09
Control Delay	18.7	7.1	27.6	5.1	12.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	7.1	27.6	5.1	12.6	4.9
LOS	B	A	C	A	B	A
Approach Delay	11.4			9.2	11.9	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 40			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

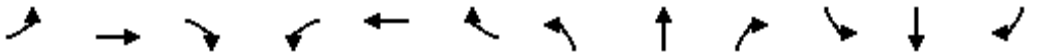




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	98	171	108	486	406	37
Future Volume (veh/h)	98	171	108	486	406	37
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	121	211	133	600	501	46
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	298	298	176	1630	816	412
Arrive On Green	0.22	0.22	0.11	0.53	0.30	0.30
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	121	211	133	600	501	46
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.4	4.5	2.5	3.6	4.9	0.8
Cycle Q Clear(g_c), s	2.4	4.5	2.5	3.6	4.9	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	298	298	176	1630	816	412
V/C Ratio(X)	0.41	0.71	0.76	0.37	0.61	0.11
Avail Cap(c_a), veh/h	775	775	357	2810	1568	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	11.5	13.7	4.4	9.6	8.2
Incr Delay (d2), s/veh	0.9	3.1	6.4	0.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	0.9	0.2	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	14.6	20.2	4.5	10.4	8.3
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	332			733	547	
Approach Delay, s/veh	13.5			7.3	10.2	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		20.8		10.9	7.5	13.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		5.6		6.5	4.5	6.9
Green Ext Time (p_c), s		3.8		0.8	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

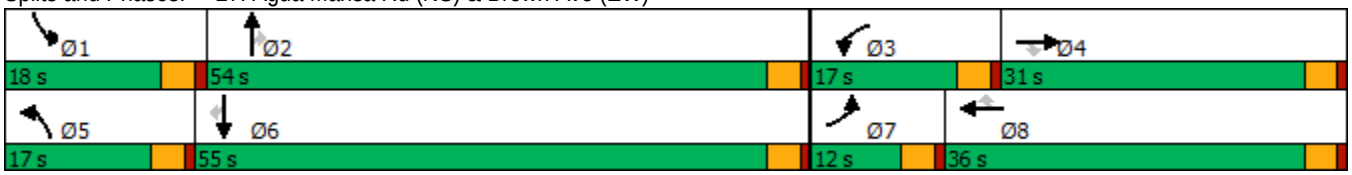


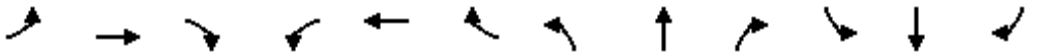
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	47	50	4	195	32	389	117	52	510	13
Future Volume (vph)	18	3	47	50	4	195	32	389	117	52	510	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			244			118			118
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	23	4	59	63	5	244	40	486	146	65	638	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	4	59	63	5	244	40	486	146	65	638	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	31.0	31.0	17.0	36.0	36.0	17.0	54.0	54.0	18.0	55.0	55.0
Total Split (%)	10.0%	25.8%	25.8%	14.2%	30.0%	30.0%	14.2%	45.0%	45.0%	15.0%	45.8%	45.8%
Maximum Green (s)	8.0	27.0	27.0	13.0	32.0	32.0	13.0	50.0	50.0	14.0	51.0	51.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.9	7.2	7.2	9.1	13.6	13.6	8.1	52.5	52.5	9.6	56.1	56.1
Actuated g/C Ratio	0.08	0.08	0.08	0.10	0.15	0.15	0.09	0.59	0.59	0.11	0.63	0.63
v/c Ratio	0.22	0.04	0.31	0.41	0.02	0.64	0.31	0.29	0.21	0.44	0.37	0.02
Control Delay	48.3	41.7	4.1	48.9	36.5	13.7	47.9	12.7	4.9	50.0	11.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	41.7	4.1	48.9	36.5	13.7	47.9	12.7	4.9	50.0	11.8	0.1
LOS	D	D	A	D	D	B	D	B	A	D	B	A
Approach Delay		17.7			21.2			13.1			15.0	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 89.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	3	47	50	4	195	32	389	117	52	510	13
Future Volume (veh/h)	18	3	47	50	4	195	32	389	117	52	510	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	22	4	59	62	5	244	40	486	146	65	638	16
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	36	226	217	104	320	308	67	1535	775	102	1532	774
Arrive On Green	0.03	0.16	0.16	0.06	0.20	0.20	0.04	0.53	0.53	0.07	0.56	0.56
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	22	4	59	62	5	244	40	486	146	65	638	16
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.4	0.2	3.6	3.5	0.2	14.1	2.4	8.9	4.9	4.1	12.5	0.5
Cycle Q Clear(g_c), s	1.4	0.2	3.6	3.5	0.2	14.1	2.4	8.9	4.9	4.1	12.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	226	217	104	320	308	67	1535	775	102	1532	774
V/C Ratio(X)	0.61	0.02	0.27	0.60	0.02	0.79	0.59	0.32	0.19	0.64	0.42	0.02
Avail Cap(c_a), veh/h	120	406	390	222	547	525	210	1535	775	215	1532	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	33.1	34.6	42.7	30.1	35.7	44.0	12.3	11.4	42.4	11.9	9.2
Incr Delay (d2), s/veh	15.9	0.0	0.7	5.4	0.0	4.6	8.0	0.5	0.5	6.4	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	1.2	1.5	0.1	5.6	1.0	2.6	1.6	1.6	3.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	33.2	35.2	48.1	30.1	40.3	52.0	12.8	11.9	48.7	12.7	9.2
LnGrp LOS	E	C	D	D	C	D	D	B	B	D	B	A
Approach Vol, veh/h		85			311			672			719	
Approach Delay, s/veh		41.8			41.7			15.0			15.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	54.0	10.1	19.0	8.2	56.5	6.4	22.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	50.0	13.0	27.0	13.0	51.0	8.0	32.0
Max Q Clear Time (g_c+I1), s	8.1	12.9	7.5	7.6	6.4	16.5	5.4	18.1
Green Ext Time (p_c), s	0.0	3.7	0.0	0.1	0.0	4.5	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	23	638	39	76	547
Future Volume (vph)	37	23	638	39	76	547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.391	
Satd. Flow (perm)	1107	991	2983	1335	590	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		25		42		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	40	25	686	42	82	588
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	25	686	42	82	588
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	9.0	25.0	73.0	73.0	95.0	95.0
Total Split (%)	7.5%	20.8%	60.8%	60.8%	79.2%	79.2%
Maximum Green (s)	5.0	21.0	69.0	69.0	91.0	91.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	6.5	6.7	104.8	104.8	104.8	104.8
Actuated g/C Ratio	0.06	0.06	0.90	0.90	0.90	0.90
v/c Ratio	0.65	0.31	0.26	0.03	0.15	0.43
Control Delay	96.9	28.7	1.4	0.4	1.9	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.9	28.7	1.4	0.4	1.9	2.6
LOS	F	C	A	A	A	A
Approach Delay	70.7		1.3			2.5
Approach LOS	E		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

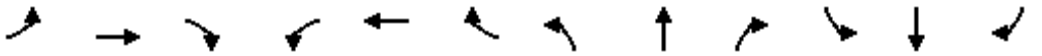




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	23	638	39	76	547
Future Volume (veh/h)	37	23	638	39	76	547
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	40	25	686	42	82	588
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	46	46	2641	1390	563	1325
Arrive On Green	0.05	0.05	0.88	0.88	0.88	0.88
Sat Flow, veh/h	966	966	3098	1589	589	1515
Grp Volume(v), veh/h	40	25	686	42	82	588
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	589	1515
Q Serve(g_s), s	4.3	2.6	3.8	0.4	2.7	8.2
Cycle Q Clear(g_c), s	4.3	2.6	3.8	0.4	6.5	8.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	2641	1390	563	1325
V/C Ratio(X)	0.86	0.54	0.26	0.03	0.15	0.44
Avail Cap(c_a), veh/h	46	46	2641	1390	563	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	48.4	1.1	0.8	1.6	1.3
Incr Delay (d2), s/veh	81.5	11.8	0.2	0.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.8	0.1	0.1	0.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	130.6	60.2	1.3	0.9	2.1	2.4
LnGrp LOS	F	E	A	A	A	A
Approach Vol, veh/h	65		728			670
Approach Delay, s/veh	103.5		1.3			2.4
Approach LOS	F		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		95.0			95.0	9.0
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		69.0			91.0	5.0
Max Q Clear Time (g_c+I1), s		5.8			10.2	6.3
Green Ext Time (p_c), s		5.1			5.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

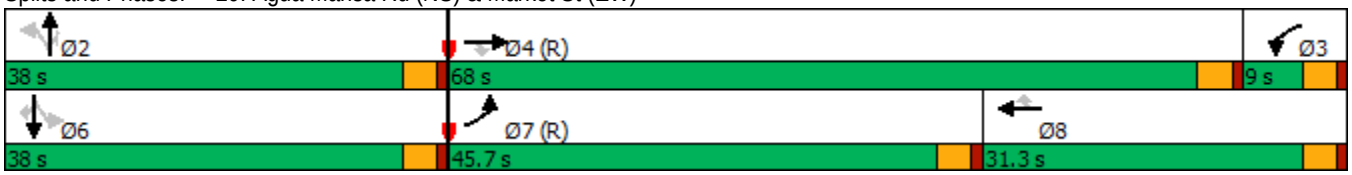


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	468	727	3	2	629	203	2	1	1	294	2	367
Future Volume (vph)	468	727	3	2	629	203	2	1	1	294	2	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.968		0.950		
Satd. Flow (prot)	1641	3282	1468	1656	3312	1482	0	1471	1292	1626	1712	1455
Flt Permitted	0.950			0.950				0.948		0.756		
Satd. Flow (perm)	1641	3282	1468	1656	3312	1482	0	1441	1292	1294	1712	1455
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			47			86			85			390
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	498	773	3	2	669	216	2	1	1	313	2	390
Shared Lane Traffic (%)												
Lane Group Flow (vph)	498	773	3	2	669	216	0	3	1	313	2	390
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	45.7	68.0	68.0	9.0	31.3	31.3	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	39.7%	59.1%	59.1%	7.8%	27.2%	27.2%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Maximum Green (s)	41.7	64.0	64.0	5.0	27.3	27.3	34.0	34.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	41.7	70.4	70.4	5.0	26.5	26.5		34.8	34.8	34.8	34.8	34.8
Actuated g/C Ratio	0.36	0.61	0.61	0.04	0.23	0.23		0.30	0.30	0.30	0.30	0.30
v/c Ratio	0.84	0.38	0.00	0.03	0.88	0.53		0.01	0.00	0.80	0.00	0.55
Control Delay	56.2	21.9	0.0	53.5	56.4	27.9		28.7	0.0	54.2	28.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	21.9	0.0	53.5	56.4	27.9		28.7	0.0	54.2	28.5	6.3
LOS	E	C	A	D	E	C		C	A	D	C	A
Approach Delay		35.3			49.4			21.5			27.6	
Approach LOS		D			D			C			C	

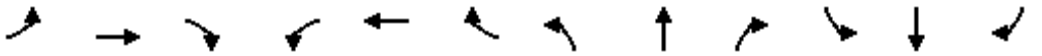
Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 115			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 37.8		Intersection LOS: D	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)



HCM 6th Signalized Intersection Summary
29: Agua Mansa Rd (NS) & Market St (EW)

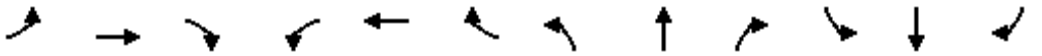
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	468	727	3	2	629	203	2	1	1	294	2	367
Future Volume (veh/h)	468	727	3	2	629	203	2	1	1	294	2	367
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	498	773	3	2	669	216	2	1	1	313	2	390
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	563	1852	975	77	936	492	230	102	452	427	514	514
Arrive On Green	0.64	1.00	1.00	0.04	0.28	0.28	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1752	3328	1752	1767	3357	1767	602	346	1530	1314	1737	1737
Grp Volume(v), veh/h	498	773	3	2	669	216	3	0	1	313	2	390
Grp Sat Flow(s),veh/h/ln	1752	1664	1752	1767	1678	1767	948	0	1530	1314	1737	1737
Q Serve(g_s), s	27.1	0.0	0.0	0.1	20.6	11.6	0.0	0.0	0.1	26.0	0.1	23.5
Cycle Q Clear(g_c), s	27.1	0.0	0.0	0.1	20.6	11.6	2.1	0.0	0.1	28.1	0.1	23.5
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	563	1852	975	77	936	492	332	0	452	427	514	514
V/C Ratio(X)	0.88	0.42	0.00	0.03	0.72	0.44	0.01	0.00	0.00	0.73	0.00	0.76
Avail Cap(c_a), veh/h	635	1852	975	77	936	492	332	0	452	427	514	514
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	18.8	0.0	0.0	52.7	37.4	34.1	28.6	0.0	28.5	39.4	28.6	36.8
Incr Delay (d2), s/veh	8.6	0.4	0.0	0.1	2.6	0.6	0.0	0.0	0.0	9.5	0.0	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.1	0.0	0.1	8.5	4.9	0.1	0.0	0.0	9.1	0.0	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.4	0.0	52.8	40.0	34.7	28.6	0.0	28.6	48.9	28.6	45.9
LnGrp LOS	C	A	A	D	D	C	C	A	C	D	C	D
Approach Vol, veh/h		1274			887			4			705	
Approach Delay, s/veh		11.0			38.7			28.6			47.2	
Approach LOS		B			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.0	9.0	68.0		38.0	40.9	36.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		34.0	5.0	64.0		34.0	41.7	27.3				
Max Q Clear Time (g_c+I1), s		4.1	4.1	4.0		30.1	31.1	24.6				
Green Ext Time (p_c), s		0.0	0.0	5.8		1.0	1.2	1.3				

Intersection Summary		
HCM 6th Ctrl Delay		28.5
HCM 6th LOS		C

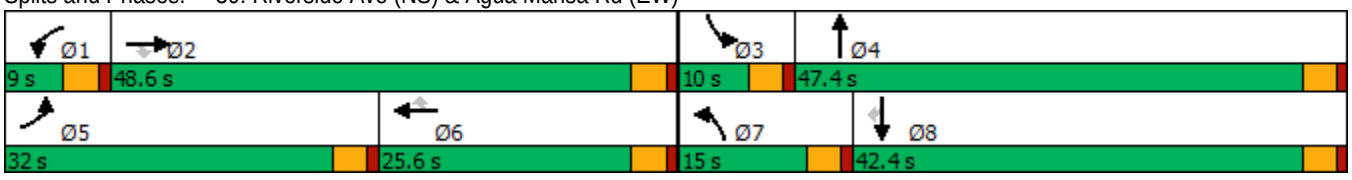


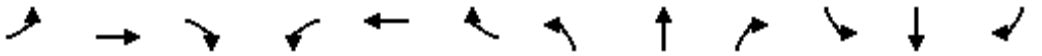
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	508	136	35	211	64	116	880	91	56	944	215
Future Volume (vph)	335	508	136	35	211	64	116	880	91	56	944	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			161		11				161
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	345	524	140	36	218	66	120	907	94	58	973	222
Shared Lane Traffic (%)												
Lane Group Flow (vph)	345	524	140	36	218	66	120	1001	0	58	973	222
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	32.0	48.6	48.6	9.0	25.6	25.6	15.0	47.4		10.0	42.4	42.4
Total Split (%)	27.8%	42.3%	42.3%	7.8%	22.3%	22.3%	13.0%	41.2%		8.7%	36.9%	36.9%
Maximum Green (s)	28.0	44.6	44.6	5.0	21.6	21.6	11.0	43.4		6.0	38.4	38.4
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	25.8	46.3	46.3	5.0	21.7	21.7	10.5	43.1		6.0	36.3	36.3
Actuated g/C Ratio	0.23	0.42	0.42	0.05	0.20	0.20	0.10	0.39		0.05	0.33	0.33
v/c Ratio	0.89	0.72	0.20	0.54	0.71	0.17	0.77	0.80		0.64	0.90	0.37
Control Delay	67.5	35.0	6.3	82.1	56.7	0.9	81.8	36.1		84.6	47.4	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	67.5	35.0	6.3	82.1	56.7	0.9	81.8	36.1		84.6	47.4	10.8
LOS	E	C	A	F	E	A	F	D		F	D	B
Approach Delay		42.1			48.0			41.0			42.6	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 110.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 42.5		Intersection LOS: D	
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



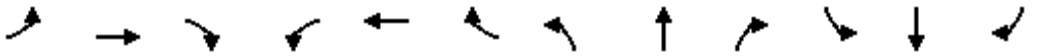


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	508	136	35	211	64	116	880	91	56	944	215
Future Volume (veh/h)	335	508	136	35	211	64	116	880	91	56	944	215
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	345	524	140	36	218	66	120	907	94	58	973	222
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	399	697	697	62	330	330	169	1141	118	94	1100	579
Arrive On Green	0.23	0.39	0.39	0.04	0.21	0.21	0.10	0.37	0.37	0.05	0.33	0.33
Sat Flow, veh/h	1767	1767	1767	1589	1589	1589	1737	3069	318	1767	3357	1767
Grp Volume(v), veh/h	345	524	140	36	218	66	120	488	513	58	973	222
Grp Sat Flow(s),veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	21.2	28.9	5.9	2.5	14.2	3.9	7.6	29.8	29.8	3.6	31.0	10.9
Cycle Q Clear(g_c), s	21.2	28.9	5.9	2.5	14.2	3.9	7.6	29.8	29.8	3.6	31.0	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	399	697	697	62	330	330	169	614	646	94	1100	579
V/C Ratio(X)	0.86	0.75	0.20	0.58	0.66	0.20	0.71	0.79	0.79	0.62	0.88	0.38
Avail Cap(c_a), veh/h	438	697	697	70	330	330	169	634	667	94	1140	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	29.5	22.5	53.4	41.1	37.0	49.5	31.7	31.7	52.4	36.0	29.2
Incr Delay (d2), s/veh	15.4	7.3	0.6	9.0	10.0	1.4	12.9	6.8	6.4	11.7	8.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	12.9	2.4	1.1	6.3	1.6	3.7	12.0	12.6	1.8	13.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	36.8	23.2	62.4	51.1	38.4	62.4	38.4	38.1	64.1	44.3	29.6
LnGrp LOS	E	D	C	E	D	D	E	D	D	E	D	C
Approach Vol, veh/h		1009			320			1121			1253	
Approach Delay, s/veh		42.0			49.7			40.9			42.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	48.6	10.0	46.0	29.5	27.5	15.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	44.6	6.0	43.4	28.0	21.6	11.0	38.4
Max Q Clear Time (g_c+I1), s	6.5	32.9	7.6	33.8	25.2	18.2	11.6	35.0
Green Ext Time (p_c), s	0.0	2.7	0.0	3.8	0.3	0.4	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	42.5
HCM 6th LOS	D

OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 2



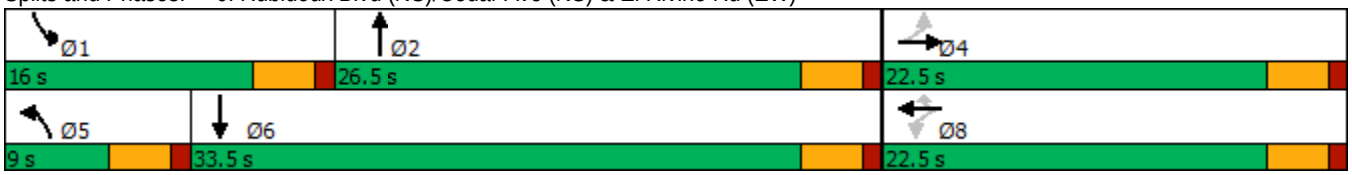
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	10	24	83	4	95	15	652	131	214	975	7
Future Volume (vph)	19	10	24	83	4	95	15	652	131	214	975	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.939				0.850		0.975			0.999	
Flt Protected		0.983			0.955		0.950			0.950		
Satd. Flow (prot)	0	1609	0	0	1463	1302	1597	3115	0	1671	3339	0
Flt Permitted		0.872			0.817		0.950			0.950		
Satd. Flow (perm)	0	1427	0	0	1252	1302	1597	3115	0	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28				151		39			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	22	12	28	98	5	112	18	767	154	252	1147	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	103	112	18	921	0	252	1155	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

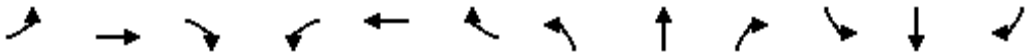
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	26.5		16.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%	34.6%	13.8%	40.8%		24.6%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	5.0	22.5		12.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		10.5			10.5	10.5	5.0	24.6		11.5	39.5	
Actuated g/C Ratio		0.19			0.19	0.19	0.09	0.44		0.20	0.70	
v/c Ratio		0.22			0.44	0.31	0.13	0.67		0.74	0.49	
Control Delay		14.1			26.5	4.4	28.2	17.6		38.4	7.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		14.1			26.5	4.4	28.2	17.6		38.4	7.8	
LOS		B			C	A	C	B		D	A	
Approach Delay		14.1			15.0			17.8			13.3	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 56.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 55.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	10	24	83	4	95	15	652	131	214	975	7
Future Volume (veh/h)	19	10	24	83	4	95	15	652	131	214	975	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	22	12	28	98	5	112	18	767	154	252	1147	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	140	81	106	316	12	232	37	1169	235	361	2079	14
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.02	0.42	0.42	0.20	0.60	0.60
Sat Flow, veh/h	321	538	708	1224	82	1544	1707	2773	557	1781	3450	24
Grp Volume(v), veh/h	62	0	0	103	0	112	18	449	472	252	563	592
Grp Sat Flow(s),veh/h/ln	1567	0	0	1306	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	3.5	0.6	11.8	11.8	7.0	10.6	10.6
Cycle Q Clear(g_c), s	3.2	0.0	0.0	3.2	0.0	3.5	0.6	11.8	11.8	7.0	10.6	10.6
Prop In Lane	0.35		0.45	0.95		1.00	1.00		0.33	1.00		0.01
Lane Grp Cap(c), veh/h	327	0	0	328	0	232	37	684	720	361	1020	1073
V/C Ratio(X)	0.19	0.00	0.00	0.31	0.00	0.48	0.48	0.66	0.66	0.70	0.55	0.55
Avail Cap(c_a), veh/h	625	0	0	553	0	536	160	684	720	401	1020	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	0.0	20.6	0.0	20.8	25.8	12.3	12.3	19.7	6.3	6.3
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.5	0.0	1.5	9.2	4.9	4.6	4.6	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	1.1	0.0	1.3	0.3	3.9	4.0	2.8	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	0.0	21.2	0.0	22.3	35.0	17.2	17.0	24.4	8.5	8.4
LnGrp LOS	C	A	A	C	A	C	D	B	B	C	A	A
Approach Vol, veh/h		62			215			939			1407	
Approach Delay, s/veh		20.2			21.8			17.4			11.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	26.5		12.0	5.2	36.1		12.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	22.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	11.0	15.8		5.2	4.6	14.6		7.5				
Green Ext Time (p_c), s	0.1	2.8		0.2	0.0	6.0		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		14.5	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	787	15	0	1082
Future Volume (vph)	0	10	787	15	0	1082
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	11	828	16	0	1139
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	11	844	0	0	1139
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	787	15	0	1082
Future Vol, veh/h	0	10	787	15	0	1082
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	11	828	16	0	1139

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	422	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	586	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	586	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	586	-
HCM Lane V/C Ratio	-	-	0.018	-
HCM Control Delay (s)	-	-	11.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

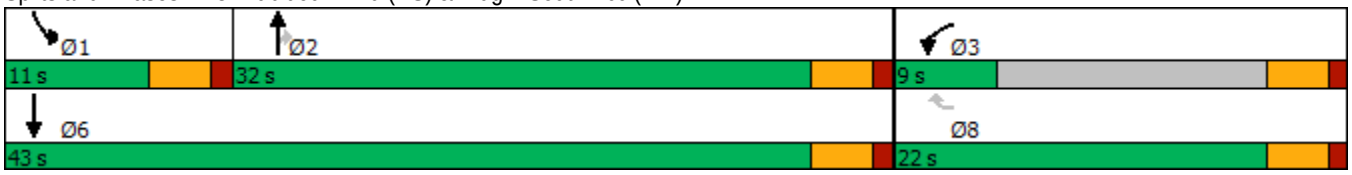


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	16	787	189	57	1025
Future Volume (vph)	67	16	787	189	57	1025
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		17		199		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	71	17	828	199	60	1079
Shared Lane Traffic (%)						
Lane Group Flow (vph)	71	17	828	199	60	1079
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	9.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	13.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	5.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)		7.0	7.0	7.0		7.0
Flash Dont Walk (s)		11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)		0	0	0		0
Act Effct Green (s)	5.7	5.9	39.4	39.4	6.6	46.3
Actuated g/C Ratio	0.10	0.11	0.72	0.72	0.12	0.84
v/c Ratio	0.38	0.09	0.36	0.18	0.30	0.39
Control Delay	28.4	12.4	6.5	1.8	25.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	12.4	6.5	1.8	25.5	2.5
LOS	C	B	A	A	C	A
Approach Delay	25.3		5.6			3.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 55			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 5.4		Intersection LOS: A	
Intersection Capacity Utilization 40.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

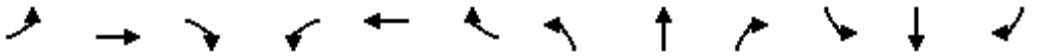




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	16	787	189	57	1025
Future Volume (veh/h)	67	16	787	189	57	1025
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	71	17	828	199	60	1079
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	133	133	2064	1086	99	2590
Arrive On Green	0.07	0.07	0.64	0.64	0.06	0.77
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	71	17	828	199	60	1079
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	1.8	0.4	6.3	2.4	1.7	5.5
Cycle Q Clear(g_c), s	1.8	0.4	6.3	2.4	1.7	5.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	133	133	2064	1086	99	2590
V/C Ratio(X)	0.53	0.13	0.40	0.18	0.60	0.42
Avail Cap(c_a), veh/h	188	188	2064	1086	245	2590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	22.0	4.5	3.8	23.3	1.9
Incr Delay (d2), s/veh	3.3	0.4	0.6	0.4	5.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	0.9	0.7	0.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.0	22.5	5.1	4.2	29.1	2.4
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	88		1027			1139
Approach Delay, s/veh	25.3		4.9			3.8
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.8	36.2			43.0	7.5
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	5.0
Max Q Clear Time (g_c+I1), s	3.7	8.3			7.5	3.8
Green Ext Time (p_c), s	0.0	5.6			8.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A

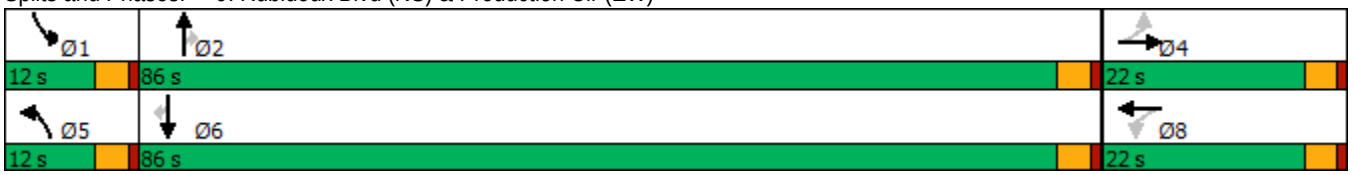


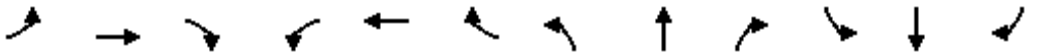
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1030	1	1	1129	11
Future Volume (vph)	5	0	15	1	0	0	19	1030	1	1	1129	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		174							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	6	0	17	1	0	0	22	1198	1	1	1313	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	17	0	1	0	0	22	1198	1	1	1313	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	22.0	22.0		22.0	22.0		12.0	86.0	86.0	12.0	86.0	86.0
Total Split (%)	18.3%	18.3%		18.3%	18.3%		10.0%	71.7%	71.7%	10.0%	71.7%	71.7%
Maximum Green (s)	18.0	18.0		18.0	18.0		8.0	82.0	82.0	8.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.3	6.3		6.2			6.8	98.7	98.7	5.7	96.2	96.2
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.07	0.07		0.01			0.21	0.40	0.00	0.01	0.44	0.01
Control Delay	51.0	0.6		49.0			53.7	2.1	0.0	51.0	3.2	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	0.6		49.0			53.7	2.1	0.0	51.0	3.2	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.7			49.0			3.0			3.2	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 106.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 3.2		Intersection LOS: A	
Intersection Capacity Utilization 42.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

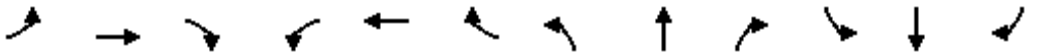




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1030	1	1	1129	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1030	1	1	1129	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	6	0	17	1	0	0	22	1198	1	1	1313	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1418	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	6	0	17	1	0	0	22	1198	1	1	1313	13
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1418	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.6	0.0	1.2	0.1	0.0	0.0	1.2	8.4	0.0	0.1	10.7	0.1
Cycle Q Clear(g_c), s	0.6	0.0	1.2	1.3	0.0	0.0	1.2	8.4	0.0	0.1	10.7	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
V/C Ratio(X)	0.06	0.00	0.52	0.01	0.00	0.00	0.56	0.43	0.00	0.41	0.47	0.01
Avail Cap(c_a), veh/h	258	0	244	314	347	0	140	2790	1410	143	2789	1409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	47.6	48.2	0.0	0.0	47.7	1.7	1.1	49.2	2.3	1.4
Incr Delay (d2), s/veh	0.3	0.0	12.2	0.0	0.0	0.0	11.7	0.5	0.0	85.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.0	0.0	0.0	0.6	0.4	0.0	0.1	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	59.8	48.3	0.0	0.0	59.4	2.2	1.1	134.7	2.9	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		23			1			1221			1327	
Approach Delay, s/veh		56.6			48.3			3.2			3.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	88.1		6.4	6.3	86.0		6.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	82.0		18.0	8.0	82.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	10.4		3.2	3.2	12.7		3.3				
Green Ext Time (p_c), s	0.0	10.6		0.0	0.0	12.4		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			3.6									
HCM 6th LOS			A									

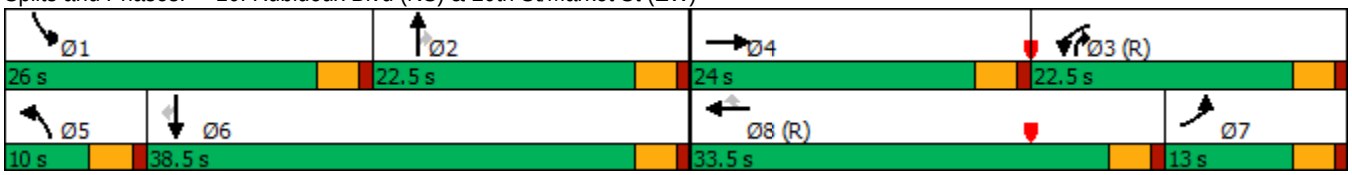


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	59	47	247	39	519	23	388	299	611	589	30
Future Volume (vph)	54	59	47	247	39	519	23	388	299	611	589	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.933				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				555			322			149
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	58	63	51	266	42	558	25	417	322	657	633	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	114	0	266	42	558	25	417	322	657	633	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	13.0	24.0		22.5	33.5	33.5	10.0	22.5	22.5	26.0	38.5	38.5
Total Split (%)	13.7%	25.3%		23.7%	35.3%	35.3%	10.5%	23.7%	23.7%	27.4%	40.5%	40.5%
Maximum Green (s)	9.0	20.0		18.5	29.5	29.5	6.0	18.5	18.5	22.0	34.5	34.5
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	8.4	12.5		26.0	32.1	32.1	5.9	19.3	45.3	21.2	40.5	40.5
Actuated g/C Ratio	0.09	0.13		0.27	0.34	0.34	0.06	0.20	0.48	0.22	0.43	0.43
v/c Ratio	0.62	0.67		0.32	0.07	0.66	0.26	0.66	0.39	0.87	0.43	0.04
Control Delay	69.9	43.8		42.0	24.7	20.7	49.4	41.0	2.5	49.4	21.2	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	43.8		42.0	24.7	21.1	49.4	41.0	2.5	49.4	21.2	0.1
LOS	E	D		D	C	C	D	D	A	D	C	A
Approach Delay		52.6			27.7			25.0			34.7	
Approach LOS		D			C			C			C	

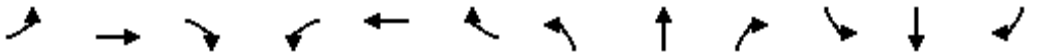
Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 31.4		Intersection LOS: C	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	59	47	247	39	519	23	388	299	611	589	30
Future Volume (veh/h)	54	59	47	247	39	519	23	388	299	611	589	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	58	63	51	266	42	558	25	417	322	657	633	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	92	82	66	807	526	526	46	615	733	791	1360	716
Arrive On Green	0.10	0.17	0.17	0.25	0.31	0.31	0.03	0.19	0.19	0.22	0.39	0.39
Sat Flow, veh/h	877	485	393	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	58	0	114	266	42	558	25	417	322	657	633	32
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	6.0	0.0	11.8	6.3	1.7	16.4	1.4	11.6	6.0	16.7	12.8	0.7
Cycle Q Clear(g_c), s	6.0	0.0	11.8	6.3	1.7	16.4	1.4	11.6	6.0	16.7	12.8	0.7
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	0	149	807	526	526	46	615	733	791	1360	716
V/C Ratio(X)	0.63	0.00	0.77	0.33	0.08	1.06	0.55	0.68	0.44	0.83	0.47	0.04
Avail Cap(c_a), veh/h	92	0	185	807	526	526	105	615	733	827	1360	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.76	0.76	0.76	0.94	0.94	0.94	0.90	0.90	0.90
Uniform Delay (d), s/veh	40.8	0.0	37.7	29.4	23.2	10.1	45.6	35.5	6.7	35.3	21.7	8.6
Incr Delay (d2), s/veh	13.1	0.0	14.0	0.2	0.2	51.8	9.2	5.6	1.8	6.3	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	3.0	2.4	0.7	12.6	0.7	4.7	2.4	7.4	5.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	51.7	29.6	23.4	61.9	54.8	41.1	8.5	41.5	22.7	8.7
LnGrp LOS	D	A	D	C	C	F	D	D	A	D	C	A
Approach Vol, veh/h		172			866			764			1322	
Approach Delay, s/veh		52.5			50.1			27.8			31.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.1	22.5	27.4	20.1	6.6	40.9	13.9	33.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	18.5	18.5	20.0	6.0	34.5	9.0	29.5
Max Q Clear Time (g_c+I1), s	20.7	15.6	8.3	13.8	5.4	16.8	10.0	20.4
Green Ext Time (p_c), s	0.4	1.0	0.6	0.2	0.0	3.6	0.0	1.4

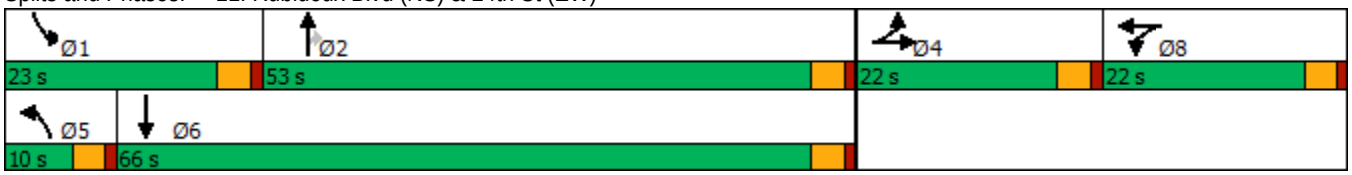
Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	5	14	6	2	12	17	699	33	113	783	1
Future Volume (vph)	2	5	14	6	2	12	17	699	33	113	783	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.908			0.916				0.850			
Flt Protected		0.995			0.986		0.950			0.950		
Satd. Flow (prot)	0	1047	0	0	1430	0	1530	3059	1186	1570	3139	0
Flt Permitted		0.995			0.986		0.950			0.950		
Satd. Flow (perm)	0	1047	0	0	1430	0	1530	3059	1186	1570	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			13				118			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	64%	64%	64%	20%	20%	20%	18%	18%	18%	15%	15%	15%
Adj. Flow (vph)	2	5	15	6	2	13	18	744	35	120	833	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	21	0	18	744	35	120	834	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		10.0	53.0	53.0	23.0	66.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		8.3%	44.2%	44.2%	19.2%	55.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		6.0	49.0	49.0	19.0	62.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)		6.7			6.4		6.0	56.6	56.6	11.8	71.8	
Actuated g/C Ratio		0.08			0.08		0.07	0.67	0.67	0.14	0.85	
v/c Ratio		0.23			0.17		0.17	0.36	0.04	0.55	0.31	
Control Delay		30.2			29.9		45.5	9.9	0.1	45.0	5.4	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		30.2			29.9		45.5	9.9	0.1	45.0	5.4	
LOS		C			C		D	A	A	D	A	
Approach Delay		30.2			29.9			10.2			10.4	
Approach LOS		C			C			B			B	

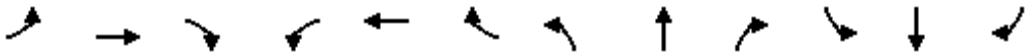
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 84.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 40.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)

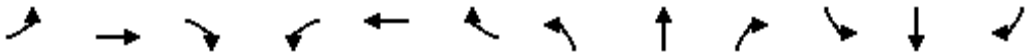
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	5	14	6	2	12	17	699	33	113	783	1
Future Volume (veh/h)	2	5	14	6	2	12	17	699	33	113	783	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	952	952	913	1604	1604	1539	1633	1633	1568	1678	1678	1611
Adj Flow Rate, veh/h	2	5	15	6	2	13	18	744	35	120	833	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	64	64	64	20	20	20	18	18	18	15	15	15
Cap, veh/h	2	5	16	11	4	23	33	2084	1053	151	2422	3
Arrive On Green	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.67	0.67	0.09	0.74	0.74
Sat Flow, veh/h	87	216	649	458	153	993	1633	3103	1568	1678	3268	4
Grp Volume(v), veh/h	22	0	0	21	0	0	18	744	35	120	406	428
Grp Sat Flow(s),veh/h/ln	952	0	0	1604	0	0	1633	1552	1568	1678	1594	1678
Q Serve(g_s), s	1.9	0.0	0.0	1.1	0.0	0.0	0.9	8.7	0.6	5.9	7.4	7.4
Cycle Q Clear(g_c), s	1.9	0.0	0.0	1.1	0.0	0.0	0.9	8.7	0.6	5.9	7.4	7.4
Prop In Lane	0.09		0.68	0.29		0.62	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	23	0	0	37	0	0	33	2084	1053	151	1181	1244
V/C Ratio(X)	0.97	0.00	0.00	0.57	0.00	0.00	0.54	0.36	0.03	0.79	0.34	0.34
Avail Cap(c_a), veh/h	205	0	0	345	0	0	117	2084	1053	381	1181	1244
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	0.0	40.4	0.0	0.0	40.6	5.9	4.6	37.3	3.8	3.8
Incr Delay (d2), s/veh	79.0	0.0	0.0	12.9	0.0	0.0	12.9	0.5	0.1	9.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.6	0.0	0.0	0.5	2.0	0.2	2.6	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.8	0.0	0.0	53.4	0.0	0.0	53.4	6.4	4.7	46.2	4.6	4.5
LnGrp LOS	F	A	A	D	A	A	D	A	A	D	A	A
Approach Vol, veh/h		22			21			797			954	
Approach Delay, s/veh		119.8			53.4			7.4			9.8	
Approach LOS		F			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	60.2		6.0	5.7	66.0		5.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	49.0		18.0	6.0	62.0		18.0				
Max Q Clear Time (g_c+I1), s	7.9	10.7		3.9	2.9	9.4		3.1				
Green Ext Time (p_c), s	0.2	5.3		0.0	0.0	5.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		10.6	
HCM 6th LOS		B	

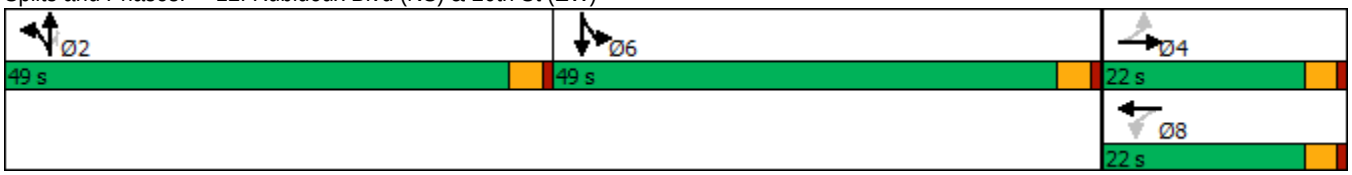


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	11	2	7	8	745	17	13	802	0
Future Volume (vph)	0	0	3	11	2	7	8	745	17	13	802	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Frt		0.865			0.955				0.850			
Flt Protected					0.972			0.999			0.999	
Satd. Flow (prot)	0	1644	0	0	1225	0	0	3056	1186	0	3031	0
Flt Permitted					0.952			0.999			0.999	
Satd. Flow (perm)	0	1644	0	0	1200	0	0	3056	1186	0	3031	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		571			7				45			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	44%	44%	44%	18%	18%	18%	19%	19%	19%
Adj. Flow (vph)	0	0	3	12	2	7	9	793	18	14	853	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	21	0	0	802	18	0	867	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Split	NA	Perm	Split	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		40.8%	40.8%	40.8%	40.8%	40.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		45.0	45.0	45.0	45.0	45.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		6.8			7.0			45.2	45.2		45.2	
Actuated g/C Ratio		0.07			0.07			0.44	0.44		0.44	
v/c Ratio		0.00			0.24			0.60	0.03		0.65	
Control Delay		0.0			42.9			25.3	0.9		26.7	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		0.0			42.9			25.3	0.9		26.7	
LOS		A			D			C	A		C	
Approach Delay					42.9			24.8			26.7	
Approach LOS					D			C			C	

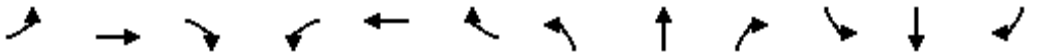
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 25.9		Intersection LOS: C	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)

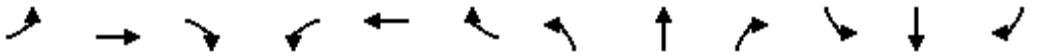
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	11	2	7	8	745	17	13	802	0
Future Volume (veh/h)	0	0	3	11	2	7	8	745	17	13	802	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1248	1248	1248	1633	1633	1568	1618	1618	1554
Adj Flow Rate, veh/h	0	0	3	12	2	7	9	793	18	14	853	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	44	44	44	18	18	18	19	19	19
Cap, veh/h	0	0	46	68	2	8	15	1357	675	21	1338	0
Arrive On Green	0.00	0.00	0.02	0.02	0.02	0.02	0.43	0.43	0.43	0.43	0.43	0.00
Sat Flow, veh/h	0	0	1900	563	94	329	34	3151	1568	49	3188	0
Grp Volume(v), veh/h	0	0	3	21	0	0	430	372	18	465	402	0
Grp Sat Flow(s),veh/h/ln	0	0	1900	986	0	0	1633	1552	1568	1618	1537	0
Q Serve(g_s), s	0.0	0.0	0.2	2.1	0.0	0.0	21.3	18.8	0.7	24.0	21.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.2	2.2	0.0	0.0	21.3	18.8	0.7	24.0	21.1	0.0
Prop In Lane	0.00		1.00	0.57		0.33	0.02		1.00	0.03		0.00
Lane Grp Cap(c), veh/h	0	0	46	78	0	0	703	668	675	697	662	0
V/C Ratio(X)	0.00	0.00	0.07	0.27	0.00	0.00	0.61	0.56	0.03	0.67	0.61	0.00
Avail Cap(c_a), veh/h	0	0	327	234	0	0	703	668	675	697	662	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	49.9	50.9	0.0	0.0	23.0	22.3	17.1	23.8	22.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	1.8	0.0	0.0	3.9	3.3	0.1	5.0	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.6	0.0	0.0	8.2	6.8	0.2	9.3	7.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	50.5	52.8	0.0	0.0	26.9	25.6	17.2	28.8	27.0	0.0
LnGrp LOS	A	A	D	D	A	A	C	C	B	C	C	A
Approach Vol, veh/h		3			21			820			867	
Approach Delay, s/veh		50.5			52.8			26.1			28.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.0		6.5		49.0		6.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		45.0		18.0		45.0		18.0				
Max Q Clear Time (g_c+I1), s		23.3		2.2		26.0		4.2				
Green Ext Time (p_c), s		4.5		0.0		4.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			27.4									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	42	61	62	33	6	40	729	23	6	772	50
Future Volume (vph)	61	42	61	62	33	6	40	729	23	6	772	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.995			0.991	
Flt Protected		0.971			0.969		0.950			0.950		
Satd. Flow (prot)	0	1662	1261	0	1615	1228	1543	3070	0	1543	3058	0
Flt Permitted		0.760			0.737		0.950			0.950		
Satd. Flow (perm)	0	1301	1261	0	1228	1228	1543	3070	0	1543	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		6			13	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	11%	11%	14%	14%	14%	17%	17%	17%	17%	17%	17%
Adj. Flow (vph)	66	46	66	67	36	7	43	792	25	7	839	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	66	0	103	7	43	817	0	7	893	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	9.0	28.4		9.0	28.4	
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	37.7%	15.0%	47.3%		15.0%	47.3%	
Maximum Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	5.0	24.4		5.0	24.4	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		9.1	9.1		9.1	9.1	5.1	30.8		5.1	29.2	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.11	0.66		0.11	0.63	
v/c Ratio		0.44	0.21		0.43	0.02	0.26	0.40		0.04	0.47	
Control Delay		22.8	4.8		22.9	0.2	25.6	6.9		22.3	8.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		22.8	4.8		22.9	0.2	25.6	6.9		22.3	8.7	
LOS		C	A		C	A	C	A		C	A	
Approach Delay		16.1			21.4			7.9			8.8	
Approach LOS		B			C			A			A	

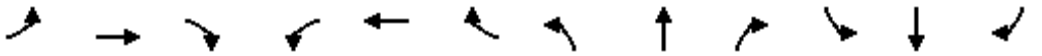
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)

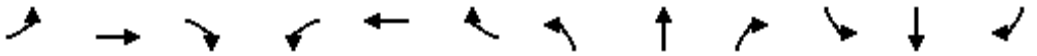
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	42	61	62	33	6	40	729	23	6	772	50
Future Volume (veh/h)	61	42	61	62	33	6	40	729	23	6	772	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1668	1693	1693	1625	1648	1648	1648	1648	1648	1648
Adj Flow Rate, veh/h	66	46	66	67	36	7	43	792	25	7	839	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	11	11	11	14	14	14	17	17	17	17	17	17
Cap, veh/h	99	42	537	103	32	524	78	1435	45	15	1276	82
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.05	0.46	0.46	0.01	0.42	0.42
Sat Flow, veh/h	0	130	1668	0	98	1625	1648	3115	98	1648	3019	194
Grp Volume(v), veh/h	112	0	66	103	0	7	43	398	419	7	435	458
Grp Sat Flow(s),veh/h/ln	130	0	1668	98	0	1625	1648	1566	1648	1648	1566	1648
Q Serve(g_s), s	0.0	0.0	1.6	0.0	0.0	0.2	1.5	10.6	10.6	0.2	12.8	12.8
Cycle Q Clear(g_c), s	18.6	0.0	1.6	18.6	0.0	0.2	1.5	10.6	10.6	0.2	12.8	12.8
Prop In Lane	0.59		1.00	0.65		1.00	1.00		0.06	1.00		0.12
Lane Grp Cap(c), veh/h	141	0	537	134	0	524	78	721	759	15	662	697
V/C Ratio(X)	0.79	0.00	0.12	0.77	0.00	0.01	0.55	0.55	0.55	0.46	0.66	0.66
Avail Cap(c_a), veh/h	141	0	537	134	0	524	143	721	759	143	662	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	13.8	23.3	0.0	13.3	26.9	11.3	11.3	28.5	13.3	13.3
Incr Delay (d2), s/veh	26.0	0.0	0.1	22.8	0.0	0.0	6.0	3.0	2.9	20.3	5.1	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.6	2.2	0.0	0.1	0.6	3.2	3.3	0.2	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	0.0	13.9	46.2	0.0	13.3	32.9	14.3	14.1	48.8	18.4	18.1
LnGrp LOS	D	A	B	D	A	B	C	B	B	D	B	B
Approach Vol, veh/h		178			110			860			900	
Approach Delay, s/veh		35.5			44.1			15.1			18.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	30.6		22.6	6.7	28.4		22.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.4		18.6	5.0	24.4		18.6				
Max Q Clear Time (g_c+I1), s	4.2	14.6		20.6	5.5	16.8		20.6				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	3.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

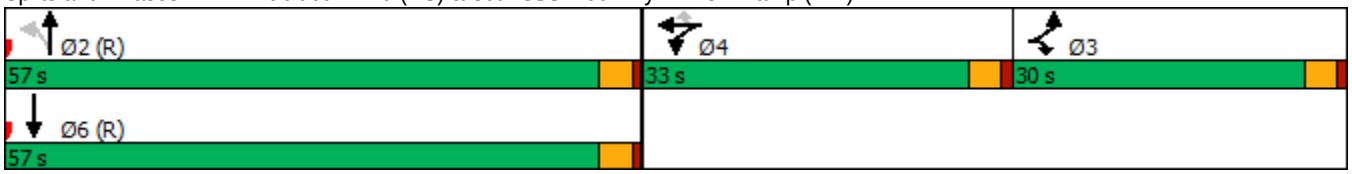


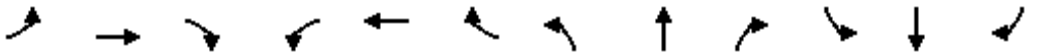
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	195	367	97	123	37	697	0	0	844	24
Future Volume (vph)	19	0	195	367	97	123	37	697	0	0	844	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	77		0	0		0
Storage Lanes	1		1	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850					0.996	
Flt Protected	0.950			0.950	0.972		0.950					
Satd. Flow (prot)	1703	0	1320	1649	1687	1346	1556	3112	0	0	3127	0
Flt Permitted	0.950			0.950	0.972		0.214					
Satd. Flow (perm)	1703	0	1320	1649	1687	1346	351	3112	0	0	3127	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			71					3	
Link Speed (mph)		30			30			40			50	
Link Distance (ft)		785			262			178			1593	
Travel Time (s)		17.8			6.0			3.0			21.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	16%	16%	16%	15%	15%	15%
Adj. Flow (vph)	21	0	219	412	109	138	42	783	0	0	948	27
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	21	0	219	260	261	138	42	783	0	0	975	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2			2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)	20		20	20	100	20	20	100			100	
Trailing Detector (ft)	0		0	0	0	0	0	0			0	
Detector 1 Position(ft)	0		0	0	0	0	0	0			0	
Detector 1 Size(ft)	20		20	20	6	20	20	6			6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		Prot	Split	NA	Perm	Perm	NA			NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3		3	4	4			2			6	
Permitted Phases						4	2					
Detector Phase	3		3	4	4	4	2	2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0	5.0			5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5	22.5	22.5			22.5	
Total Split (s)	30.0		30.0	33.0	33.0	33.0	57.0	57.0			57.0	
Total Split (%)	25.0%		25.0%	27.5%	27.5%	27.5%	47.5%	47.5%			47.5%	
Maximum Green (s)	26.0		26.0	29.0	29.0	29.0	53.0	53.0			53.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	4.0	4.0			4.0	
Lead/Lag	Lag		Lag	Lead	Lead	Lead						
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
Recall Mode	None		None	None	None	None	C-Max	C-Max			C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0		0	0	0	0	0	0			0	
Act Effct Green (s)	18.2		18.2	24.3	24.3	24.3	65.6	65.6			65.6	
Actuated g/C Ratio	0.15		0.15	0.20	0.20	0.20	0.55	0.55			0.55	
v/c Ratio	0.08		0.82	0.78	0.77	0.42	0.22	0.46			0.57	
Control Delay	40.8		53.8	61.2	59.7	23.6	9.6	7.9			21.8	
Queue Delay	0.0		2.8	0.0	0.0	0.0	1.2	1.5			0.1	
Total Delay	40.8		56.6	61.2	59.7	23.6	10.7	9.4			21.8	
LOS	D		E	E	E	C	B	A			C	
Approach Delay		55.2			52.7			9.5			21.8	
Approach LOS		E			D			A			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 28.6		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)





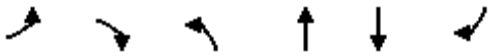
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	0	195	367	97	123	37	697	0	0	844	24
Future Volume (veh/h)	19	0	195	367	97	123	37	697	0	0	844	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1739	1841	1841	1767	1663	1663	0	0	1678	1678
Adj Flow Rate, veh/h	21	0	219	260	321	138	42	783	0	0	948	27
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	0	6	4	4	4	16	16	0	0	15	15
Cap, veh/h	0	0	0	370	370	355	377	2314	0	0	2330	66
Arrive On Green	0.00	0.00	0.00	0.20	0.20	0.20	1.00	1.00	0.00	0.00	0.73	0.73
Sat Flow, veh/h		0		1841	1841	1767	513	3243	0	0	3265	91
Grp Volume(v), veh/h		0.0		260	321	138	42	783	0	0	475	500
Grp Sat Flow(s),veh/h/ln				1841	1841	1767	513	1580	0	0	1594	1678
Q Serve(g_s), s				15.8	20.3	8.1	1.7	0.0	0.0	0.0	13.6	13.6
Cycle Q Clear(g_c), s				15.8	20.3	8.1	15.3	0.0	0.0	0.0	13.6	13.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h				370	370	355	377	2314	0	0	1168	1229
V/C Ratio(X)				0.70	0.87	0.39	0.11	0.34	0.00	0.00	0.41	0.41
Avail Cap(c_a), veh/h				445	445	427	377	2314	0	0	1168	1229
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.98	0.98	0.00	0.00	0.89	0.89
Uniform Delay (d), s/veh				44.6	46.4	41.6	1.2	0.0	0.0	0.0	6.1	6.1
Incr Delay (d2), s/veh				3.9	14.5	0.7	0.6	0.4	0.0	0.0	0.9	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.6	10.7	3.6	0.1	0.1	0.0	0.0	3.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.5	61.0	42.3	1.8	0.4	0.0	0.0	7.1	7.0
LnGrp LOS				D	E	D	A	A	A	A	A	A
Approach Vol, veh/h					719			825			975	
Approach Delay, s/veh					52.9			0.5			7.0	
Approach LOS					D			A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	91.9	28.1	91.9
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	53.0	29.0	53.0
Max Q Clear Time (g_c+I1), s	17.3	22.3	15.6
Green Ext Time (p_c), s	6.6	1.8	6.4

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

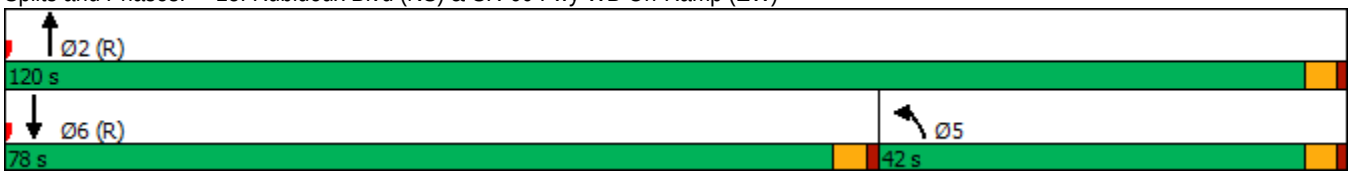


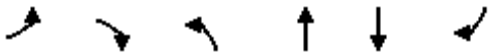
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	334	732	888	538
Future Volume (vph)	0	0	334	732	888	538
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	105			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.943	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1612	3223	3039	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1612	3223	3039	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					197	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1099			374	178	
Travel Time (s)	25.0			6.4	3.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	12%	12%	12%	12%
Adj. Flow (vph)	0	0	384	841	1021	618
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	384	841	1639	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors			1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)			20	100	100	
Trailing Detector (ft)			0	0	0	
Detector 1 Position(ft)			0	0	0	
Detector 1 Size(ft)			20	6	6	
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)			0.0	0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases						
Detector Phase			5	2	6	
Switch Phase						
Minimum Initial (s)			5.0	5.0	5.0	
Minimum Split (s)			9.0	22.0	22.0	
Total Split (s)			42.0	120.0	78.0	
Total Split (%)			35.0%	100.0%	65.0%	
Maximum Green (s)			38.0	116.0	74.0	
Yellow Time (s)			3.0	3.0	3.0	
All-Red Time (s)			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)			3.0	3.0	3.0	
Recall Mode			None	C-Max	C-Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)			38.0	120.0	74.0	
Actuated g/C Ratio			0.32	1.00	0.62	
v/c Ratio			0.75	0.26	0.84	
Control Delay			45.0	0.2	16.8	
Queue Delay			10.1	0.0	1.7	
Total Delay			55.2	0.2	18.5	
LOS			E	A	B	
Approach Delay				17.4	18.5	
Approach LOS				B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

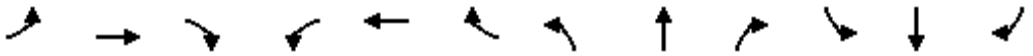




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	334	732	888	538
Future Volume (veh/h)	0	0	334	732	888	538
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Work Zone On Approach				No	No	
Adj Sat Flow, veh/h/ln			1722	1722	1722	1722
Adj Flow Rate, veh/h			384	841	1021	618
Peak Hour Factor			0.87	0.87	0.87	0.87
Percent Heavy Veh, %			12	12	12	12
Cap, veh/h			545	3163	1290	781
Arrive On Green			0.63	1.00	0.62	0.62
Sat Flow, veh/h			1722	3358	2178	1266
Grp Volume(v), veh/h			384	841	798	841
Grp Sat Flow(s),veh/h/ln			1722	1636	1636	1722
Q Serve(g_s), s			17.7	0.0	43.9	43.9
Cycle Q Clear(g_c), s			17.7	0.0	43.9	43.9
Prop In Lane			1.00			0.74
Lane Grp Cap(c), veh/h			545	3163	1009	1062
V/C Ratio(X)			0.70	0.27	0.79	0.79
Avail Cap(c_a), veh/h			545	3163	1009	1062
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.83	0.83	0.72	0.72
Uniform Delay (d), s/veh			18.3	0.0	17.2	17.2
Incr Delay (d2), s/veh			3.4	0.2	4.6	4.4
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			5.1	0.1	16.0	16.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			21.7	0.2	21.9	21.6
LnGrp LOS			C	A	C	C
Approach Vol, veh/h				1225	1639	
Approach Delay, s/veh				6.9	21.8	
Approach LOS				A	C	

Timer - Assigned Phs	2			5	6
Phs Duration (G+Y+Rc), s	120.0			42.0	78.0
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	116.0			38.0	74.0
Max Q Clear Time (g_c+I1), s	2.0			19.7	45.9
Green Ext Time (p_c), s	6.8			1.0	14.1

Intersection Summary	
HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

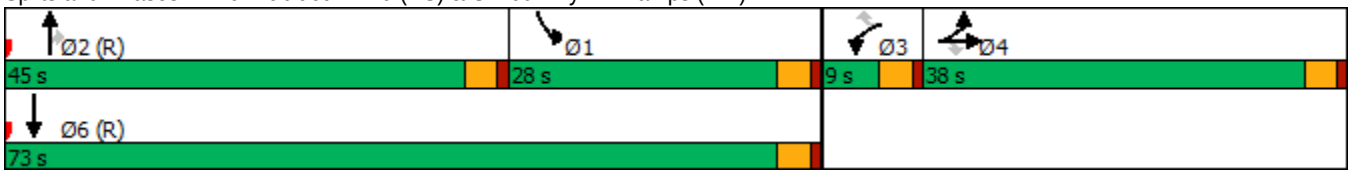


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	434	26	257	11	0	3	0	596	576	196	685	0
Future Volume (vph)	434	26	257	11	0	3	0	596	576	196	685	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.958		0.950						0.950		
Satd. Flow (prot)	1478	1491	1207	1805	0	1615	0	3471	1553	1703	3406	0
Flt Permitted	0.950	0.958		0.950						0.950		
Satd. Flow (perm)	1478	1491	1207	1805	0	1615	0	3471	1553	1703	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159			82			655			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	16%	16%	16%	0%	0%	0%	4%	4%	4%	6%	6%	6%
Adj. Flow (vph)	493	30	292	13	0	3	0	677	655	223	778	0
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	261	262	292	13	0	3	0	677	655	223	778	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		3				2		1	6	
Permitted Phases			4			3			2			
Detector Phase	4	4	4	3		3		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	9.0		9.0		22.5	22.5	9.5	22.5	
Total Split (s)	38.0	38.0	38.0	9.0		9.0		45.0	45.0	28.0	73.0	
Total Split (%)	31.7%	31.7%	31.7%	7.5%		7.5%		37.5%	37.5%	23.3%	60.8%	
Maximum Green (s)	34.0	34.0	34.0	5.0		5.0		41.0	41.0	24.0	69.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0					11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0					0	0		0	
Act Effct Green (s)	27.5	27.5	27.5	5.0		5.0		52.9	52.9	24.0	80.9	
Actuated g/C Ratio	0.23	0.23	0.23	0.04		0.04		0.44	0.44	0.20	0.67	
v/c Ratio	0.77	0.77	0.73	0.17		0.02		0.44	0.62	0.66	0.34	
Control Delay	58.0	57.5	29.5	60.9		0.3		26.5	5.2	38.2	6.2	
Queue Delay	1.2	1.1	0.0	0.0		0.0		0.0	0.0	0.2	0.4	
Total Delay	59.2	58.6	29.5	60.9		0.3		26.5	5.2	38.4	6.5	
LOS	E	E	C	E		A		C	A	D	A	
Approach Delay		48.3			49.6			16.1			13.6	
Approach LOS		D			D			B			B	

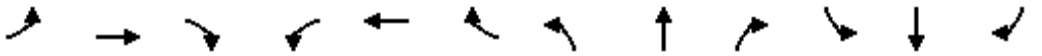
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 23.8		Intersection LOS: C	
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



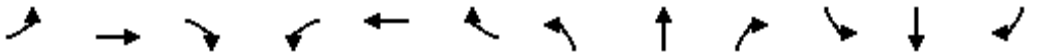
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	434	26	257	11	0	3	0	596	576	196	685	0
Future Volume (veh/h)	434	26	257	11	0	3	0	596	576	196	685	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1596	1900	0	1900	0	1841	1841	1811	1811	0
Adj Flow Rate, veh/h	514	0	292	12	0	3	0	677	655	223	778	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	16	16	16	0	0	0	0	4	4	6	6	0
Cap, veh/h	746	0	358	0	0	0	0	1195	629	605	2440	0
Arrive On Green	0.22	0.00	0.22	0.00	0.00	0.00	0.00	0.34	0.34	0.67	1.00	0.00
Sat Flow, veh/h	3326	0	1596		0		0	3589	1841	1811	3532	0
Grp Volume(v), veh/h	514	0	292		0.0		0	677	655	223	778	0
Grp Sat Flow(s),veh/h/ln	1663	0	1596				0	1749	1841	1811	1721	0
Q Serve(g_s), s	17.0	0.0	20.8				0.0	19.0	38.9	6.5	0.0	0.0
Cycle Q Clear(g_c), s	17.0	0.0	20.8				0.0	19.0	38.9	6.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	746	0	358				0	1195	629	605	2440	0
V/C Ratio(X)	0.69	0.00	0.82				0.00	0.57	1.04	0.37	0.32	0.00
Avail Cap(c_a), veh/h	942	0	452				0	1195	629	605	2440	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.43	0.43	0.00
Uniform Delay (d), s/veh	42.7	0.0	44.2				0.0	32.2	35.6	14.3	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	8.9				0.0	1.7	44.9	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	9.1				0.0	8.1	25.0	2.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	53.1				0.0	34.0	80.5	14.5	0.1	0.0
LnGrp LOS	D	A	D				A	C	F	B	A	A
Approach Vol, veh/h		806						1332			1001	
Approach Delay, s/veh		47.4						56.9			3.3	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	44.1	45.0		30.9		89.1
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	24.0	41.0		34.0		69.0
Max Q Clear Time (g_c+I1), s	10.5	40.9		24.8		4.0
Green Ext Time (p_c), s	0.5	0.1		2.1		6.1

Intersection Summary		
HCM 6th Ctrl Delay		37.4
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

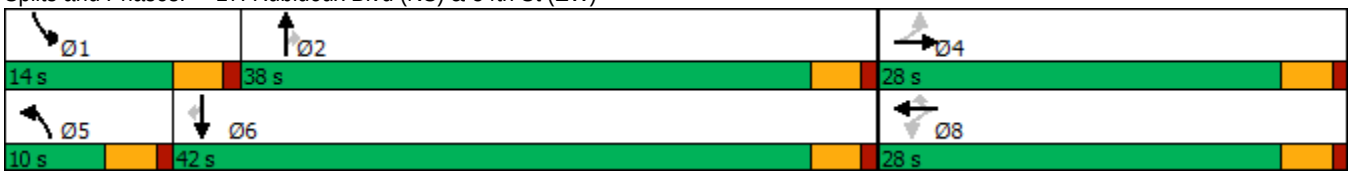


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	33	20	12	18	126	25	822	53	74	684	73
Future Volume (vph)	155	33	20	12	18	126	25	822	53	74	684	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.987				0.850			0.850			0.850
Flt Protected		0.964			0.980		0.950			0.950		
Satd. Flow (prot)	0	1722	0	0	1862	1400	1719	3438	1333	1703	3406	1320
Flt Permitted		0.760			0.894		0.950			0.950		
Satd. Flow (perm)	0	1357	0	0	1699	1400	1719	3438	1333	1703	3406	1320
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				135			68			68
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	5%	5%	5%	6%	6%	6%
Adj. Flow (vph)	167	35	22	13	19	135	27	884	57	80	735	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	224	0	0	32	135	27	884	57	80	735	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	28.0	28.0		28.0	28.0	28.0	10.0	38.0	38.0	14.0	42.0	42.0
Total Split (%)	35.0%	35.0%		35.0%	35.0%	35.0%	12.5%	47.5%	47.5%	17.5%	52.5%	52.5%
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	6.0	34.0	34.0	10.0	38.0	38.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		16.2			16.2	16.2	5.9	36.6	36.6	8.2	43.0	43.0
Actuated g/C Ratio		0.23			0.23	0.23	0.08	0.52	0.52	0.12	0.61	0.61
v/c Ratio		0.71			0.08	0.32	0.19	0.50	0.08	0.41	0.36	0.09
Control Delay		37.3			21.4	6.6	36.6	14.7	3.4	37.2	9.6	4.0
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		37.3			21.4	6.6	36.6	14.7	3.4	37.2	9.6	4.0
LOS		D			C	A	D	B	A	D	A	A
Approach Delay		37.3			9.4			14.6			11.6	
Approach LOS		D			A			B			B	

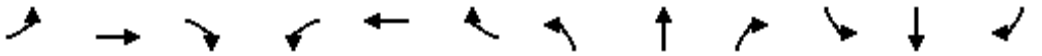
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 70.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)



HCM 6th Signalized Intersection Summary
17: Rubidoux Blvd (NS) & 34th St (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	33	20	12	18	126	25	822	53	74	684	73
Future Volume (veh/h)	155	33	20	12	18	126	25	822	53	74	684	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1824	1826	1826	1753	1811	1811	1739
Adj Flow Rate, veh/h	167	35	22	13	19	135	27	884	57	80	735	78
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	0	0	0	5	5	5	6	6	6
Cap, veh/h	285	55	27	199	262	408	54	1795	907	144	1953	987
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.52	0.52	0.08	0.57	0.57
Sat Flow, veh/h	852	244	119	552	1170	1824	1826	3469	1753	1811	3441	1739
Grp Volume(v), veh/h	224	0	0	32	0	135	27	884	57	80	735	78
Grp Sat Flow(s),veh/h/ln	1215	0	0	1722	0	1824	1826	1735	1753	1811	1721	1739
Q Serve(g_s), s	10.1	0.0	0.0	0.0	0.0	4.2	1.0	11.1	1.1	2.8	7.9	1.4
Cycle Q Clear(g_c), s	12.1	0.0	0.0	0.9	0.0	4.2	1.0	11.1	1.1	2.8	7.9	1.4
Prop In Lane	0.75		0.10	0.41		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	0	0	461	0	408	54	1795	907	144	1953	987
V/C Ratio(X)	0.61	0.00	0.00	0.07	0.00	0.33	0.50	0.49	0.06	0.55	0.38	0.08
Avail Cap(c_a), veh/h	543	0	0	682	0	654	164	1795	907	270	1953	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	0.0	20.5	0.0	21.8	32.0	10.5	8.1	29.7	8.0	6.6
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.1	0.0	0.5	7.1	1.0	0.1	3.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	0.4	0.0	1.8	0.5	3.6	0.4	1.3	2.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	0.0	0.0	20.6	0.0	22.2	39.1	11.4	8.2	33.0	8.5	6.7
LnGrp LOS	C	A	A	C	A	C	D	B	A	C	A	A
Approach Vol, veh/h		224			167			968			893	
Approach Delay, s/veh		27.0			21.9			12.0			10.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	38.6		19.0	6.0	42.0		19.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	34.0		24.0	6.0	38.0		24.0				
Max Q Clear Time (g_c+I1), s	6.8	15.1		14.1	5.0	11.9		8.2				
Green Ext Time (p_c), s	0.0	5.9		0.9	0.0	5.3		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		13.7	
HCM 6th LOS		B	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	349	6	12	183	0	12
Future Volume (vph)	349	6	12	183	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	367	6	13	193	0	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	367	6	13	193	0	13
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	349	6	12	183	0	12
Future Vol, veh/h	349	6	12	183	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	367	6	13	193	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	373	0	-	184
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	1039	-	0	833
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1039	-	-	833
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	833	-	-	1039	-
HCM Lane V/C Ratio	0.015	-	-	0.012	-
HCM Control Delay (s)	9.4	-	-	8.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	344	17	14	188	7	10
Future Volume (vph)	344	17	14	188	7	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3282	1468	1456	2911	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	362	18	15	198	7	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	362	18	15	198	7	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

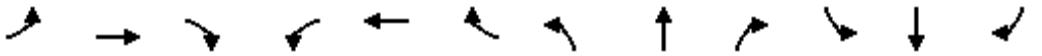
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	344	17	14	188	7	10
Future Vol, veh/h	344	17	14	188	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	362	18	15	198	7	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	380	0	491	181
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	-	-	4.58	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.44	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1032	-	512	837
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1032	-	504	837
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	889	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	504	837	-	-	1032	-
HCM Lane V/C Ratio	0.015	0.013	-	-	0.014	-
HCM Control Delay (s)	12.2	9.4	-	-	8.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

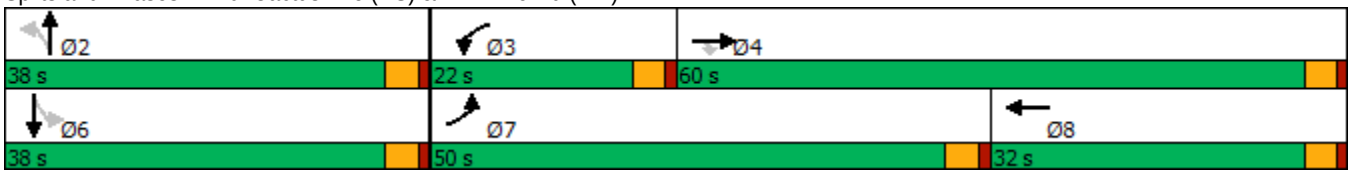


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	133	20	47	100	100	6	3	15	84	6	84
Future Volume (vph)	205	133	20	47	100	100	6	3	15	84	6	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.925			0.872			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2783	0	1805	1657	0	1626	1472	0
Flt Permitted	0.950			0.950			0.692			0.744		
Satd. Flow (perm)	1583	3167	1417	1504	2783	0	1315	1657	0	1274	1472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		112			17			94	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	230	149	22	53	112	112	7	3	17	94	7	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	230	149	22	53	224	0	7	20	0	94	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.0	60.0	60.0	22.0	32.0		38.0	38.0		38.0	38.0	
Total Split (%)	41.7%	50.0%	50.0%	18.3%	26.7%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	46.0	56.0	56.0	18.0	28.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	15.5	20.4	20.4	8.0	8.5		34.3	34.3		34.3	34.3	
Actuated g/C Ratio	0.22	0.29	0.29	0.11	0.12		0.49	0.49		0.49	0.49	
v/c Ratio	0.66	0.16	0.05	0.31	0.52		0.01	0.02		0.15	0.13	
Control Delay	35.0	20.9	3.0	35.1	20.0		12.2	6.8		12.9	4.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.0	20.9	3.0	35.1	20.0		12.2	6.8		12.9	4.2	
LOS	C	C	A	D	C		B	A		B	A	
Approach Delay		28.0			22.9			8.2			8.4	
Approach LOS		C			C			A			A	

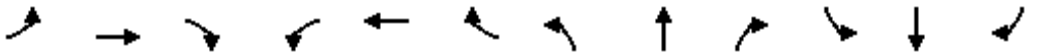
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 70.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	133	20	47	100	100	6	3	15	84	6	84
Future Volume (veh/h)	205	133	20	47	100	100	6	3	15	84	6	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	230	149	22	53	112	112	7	3	17	94	7	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	286	770	405	76	184	184	766	150	851	787	63	852
Arrive On Green	0.17	0.24	0.24	0.05	0.12	0.12	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1693	3216	1693	1604	1564	1564	1314	285	1615	1293	120	1617
Grp Volume(v), veh/h	230	149	22	53	109	115	7	0	20	94	0	101
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1314	0	1900	1293	0	1737
Q Serve(g_s), s	8.4	2.4	0.6	2.1	4.4	4.4	0.2	0.0	0.3	2.4	0.0	1.9
Cycle Q Clear(g_c), s	8.4	2.4	0.6	2.1	4.4	4.4	2.1	0.0	0.3	2.7	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.97	1.00		0.85	1.00		0.93
Lane Grp Cap(c), veh/h	286	770	405	76	179	189	766	0	1001	787	0	916
V/C Ratio(X)	0.80	0.19	0.05	0.70	0.61	0.61	0.01	0.00	0.02	0.12	0.00	0.11
Avail Cap(c_a), veh/h	1207	2792	1469	447	661	696	766	0	1001	787	0	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	19.6	18.9	30.3	27.0	27.0	8.2	0.0	7.3	7.9	0.0	7.7
Incr Delay (d2), s/veh	5.2	0.1	0.1	10.8	3.3	3.1	0.0	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.9	0.2	1.0	1.7	1.8	0.0	0.0	0.1	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	19.7	19.0	41.1	30.4	30.2	8.2	0.0	7.3	8.3	0.0	7.9
LnGrp LOS	C	B	B	D	C	C	A	A	A	A	A	A
Approach Vol, veh/h		401			277			27			195	
Approach Delay, s/veh		26.1			32.3			7.6			8.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.0	7.1	19.4		38.0	14.9	11.6				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		34.0	18.0	56.0		34.0	46.0	28.0				
Max Q Clear Time (g_c+I1), s		4.1	4.1	4.4		4.7	10.4	6.4				
Green Ext Time (p_c), s		0.1	0.1	1.1		0.9	0.7	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			23.6									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	228	4	5	246	0	3
Future Volume (vph)	228	4	5	246	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	240	4	5	259	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	4	5	259	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.3%		ICU Level of Service A	
Analysis Period (min) 15			

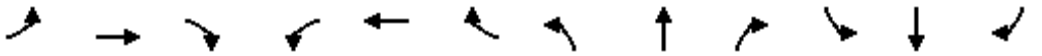
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	228	4	5	246	0	3
Future Vol, veh/h	228	4	5	246	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	240	4	5	259	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	244	0	-	120
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1198	-	0	915
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1198	-	-	915
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	915	-	-	1198	-
HCM Lane V/C Ratio	0.003	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

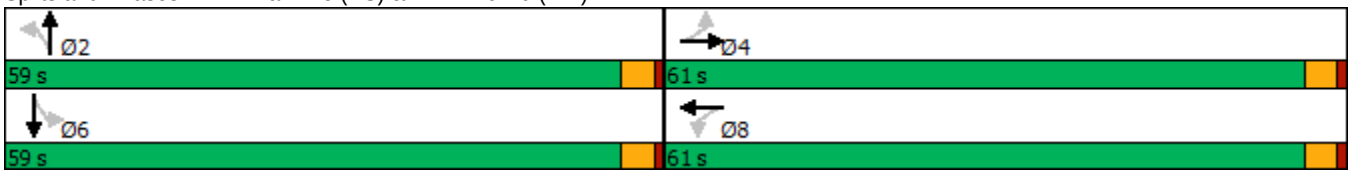


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	135	84	15	146	5	101	3	4	9	8	11
Future Volume (vph)	2	135	84	15	146	5	101	3	4	9	8	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.942			0.995			0.917			0.912	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1642	0	1583	1658	0	1410	1361	0	1736	1666	0
Flt Permitted	0.514			0.337			0.742			0.752		
Satd. Flow (perm)	896	1642	0	562	1658	0	1101	1361	0	1374	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			2			5			14	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	2	167	104	19	180	6	125	4	5	11	10	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	271	0	19	186	0	125	9	0	11	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	16.7	16.7		16.7	16.7		55.1	55.1		55.1	55.1	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.69	0.69		0.69	0.69	
v/c Ratio	0.01	0.73		0.16	0.53		0.16	0.01		0.01	0.02	
Control Delay	24.0	37.2		28.5	33.4		5.9	4.0		5.2	3.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.0	37.2		28.5	33.4		5.9	4.0		5.2	3.5	
LOS	C	D		C	C		A	A		A	A	
Approach Delay		37.1			32.9			5.8			4.0	
Approach LOS		D			C			A			A	

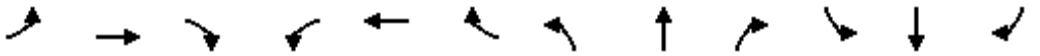
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 79.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 27.5		Intersection LOS: C	
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)

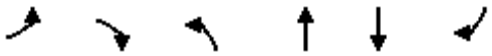
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	135	84	15	146	5	101	3	4	9	8	11
Future Volume (veh/h)	2	135	84	15	146	5	101	3	4	9	8	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	2	167	104	19	180	6	125	4	5	11	10	14
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	208	220	137	149	331	11	854	460	575	1053	534	748
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1131	1089	678	1003	1638	55	1101	660	825	1384	767	1074
Grp Volume(v), veh/h	2	0	271	19	0	186	125	0	9	11	0	24
Grp Sat Flow(s),veh/h/ln	1131	0	1767	1003	0	1693	1101	0	1485	1384	0	1841
Q Serve(g_s), s	0.1	0.0	11.4	1.4	0.0	7.8	3.1	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	7.9	0.0	11.4	12.9	0.0	7.8	3.4	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.38	1.00		0.03	1.00		0.56	1.00		0.58
Lane Grp Cap(c), veh/h	208	0	357	149	0	342	854	0	1035	1053	0	1282
V/C Ratio(X)	0.01	0.00	0.76	0.13	0.00	0.54	0.15	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	796	0	1276	670	0	1222	854	0	1035	1053	0	1282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	29.7	35.7	0.0	28.2	4.2	0.0	3.7	3.7	0.0	3.7
Incr Delay (d2), s/veh	0.0	0.0	3.3	0.4	0.0	1.3	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.8	0.3	0.0	3.0	0.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	33.0	36.1	0.0	29.6	4.6	0.0	3.7	3.7	0.0	3.7
LnGrp LOS	C	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		273			205			134			35	
Approach Delay, s/veh		33.0			30.2			4.5			3.7	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		19.9		59.0		19.9				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		55.0		57.0		55.0		57.0				
Max Q Clear Time (g_c+I1), s		5.4		13.4		2.3		14.9				
Green Ext Time (p_c), s		0.6		1.5		0.1		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			24.6									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	13	14	104	98	9
Future Volume (vph)	4	13	14	104	98	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1410	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1410	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	28%	28%	11%	11%
Adj. Flow (vph)	4	14	15	109	103	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	14	15	109	103	9
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.4%		ICU Level of Service A	
Analysis Period (min) 15			

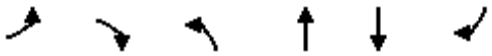
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	13	14	104	98	9
Future Vol, veh/h	4	13	14	104	98	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	28	28	11	11
Mvmt Flow	4	14	15	109	103	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	242	103	112	0	-	0
Stage 1	103	-	-	-	-	-
Stage 2	139	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.452	-	-	-
Pot Cap-1 Maneuver	751	957	1331	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	743	957	1331	-	-	-
Mov Cap-2 Maneuver	743	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1331	-	743	957	-	-
HCM Lane V/C Ratio	0.011	-	0.006	0.014	-	-
HCM Control Delay (s)	7.7	-	9.9	8.8	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

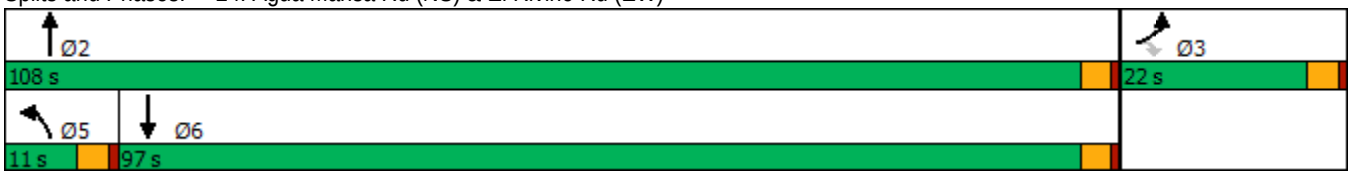


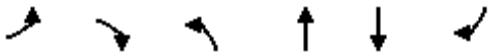
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	89	31	21	366	475	135
Future Volume (vph)	89	31	21	366	475	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.970	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	1380	1456	1532	1562	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	1380	1456	1532	1562	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		39			28	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	17%	17%	24%	24%	18%	18%
Adj. Flow (vph)	113	39	27	463	601	171
Shared Lane Traffic (%)						
Lane Group Flow (vph)	113	39	27	463	772	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	22.0	22.0	11.0	108.0	97.0	
Total Split (%)	16.9%	16.9%	8.5%	83.1%	74.6%	
Maximum Green (s)	18.0	18.0	7.0	104.0	93.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	14.0	14.0	6.6	104.0	97.6	
Actuated g/C Ratio	0.11	0.11	0.05	0.83	0.77	
v/c Ratio	0.66	0.21	0.36	0.37	0.64	
Control Delay	72.4	17.4	72.0	3.9	10.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.4	17.4	72.0	3.9	10.5	
LOS	E	B	E	A	B	
Approach Delay	58.3			7.7	10.5	
Approach LOS	E			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 126			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	89	31	21	366	475	135
Future Volume (veh/h)	89	31	21	366	475	135
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1648	1648	1544	1544	1633	1633
Adj Flow Rate, veh/h	113	39	27	463	601	171
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	17	17	24	24	18	18
Cap, veh/h	140	140	38	1312	1008	287
Arrive On Green	0.08	0.08	0.02	0.85	0.79	0.79
Sat Flow, veh/h	1648	1648	1544	1544	1271	362
Grp Volume(v), veh/h	113	39	27	463	0	772
Grp Sat Flow(s),veh/h/ln	1648	1648	1544	1544	0	1633
Q Serve(g_s), s	8.2	2.7	2.1	7.9	0.0	22.8
Cycle Q Clear(g_c), s	8.2	2.7	2.1	7.9	0.0	22.8
Prop In Lane	1.00	1.00	1.00			0.22
Lane Grp Cap(c), veh/h	140	140	38	1312	0	1294
V/C Ratio(X)	0.81	0.28	0.71	0.35	0.00	0.60
Avail Cap(c_a), veh/h	242	242	88	1312	0	1294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	52.5	59.3	2.0	0.0	5.0
Incr Delay (d2), s/veh	10.4	1.1	21.8	0.7	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.1	1.0	1.3	0.0	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.5	53.6	81.0	2.7	0.0	7.0
LnGrp LOS	E	D	F	A	A	A
Approach Vol, veh/h	152			490	772	
Approach Delay, s/veh	62.4			7.0	7.0	
Approach LOS	E			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		108.0			7.0	101.0	14.4
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		104.0			7.0	93.0	18.0
Max Q Clear Time (g_c+I1), s		9.9			4.1	24.8	10.2
Green Ext Time (p_c), s		3.0			0.0	6.1	0.2

Intersection Summary		
HCM 6th Ctrl Delay	13.0	
HCM 6th LOS	B	



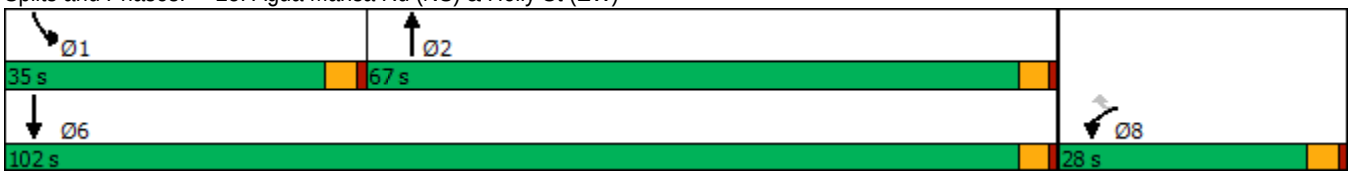
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	28	328	63	95	465
Future Volume (vph)	9	28	328	63	95	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.976			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1347	1045	2731	0	1504	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1347	1045	2731	0	1504	1583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		30	24			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	34%	34%	29%	29%	20%	20%
Adj. Flow (vph)	10	30	353	68	102	500
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	30	421	0	102	500
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

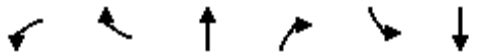


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	28.0	28.0	67.0		35.0	102.0
Total Split (%)	21.5%	21.5%	51.5%		26.9%	78.5%
Maximum Green (s)	24.0	24.0	63.0		31.0	98.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	6.2	6.2	20.8		8.7	32.4
Actuated g/C Ratio	0.17	0.17	0.55		0.23	0.86
v/c Ratio	0.04	0.15	0.28		0.29	0.37
Control Delay	16.2	9.9	8.5		15.9	3.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	16.2	9.9	8.5		15.9	3.2
LOS	B	A	A		B	A
Approach Delay	11.5		8.5			5.4
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 37.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 6.8		Intersection LOS: A	
Intersection Capacity Utilization 35.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)

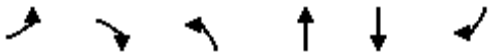




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	28	328	63	95	465
Future Volume (veh/h)	9	28	328	63	95	465
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1396	1340	1470	1470	1604	1604
Adj Flow Rate, veh/h	10	30	353	68	102	500
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	34	34	29	29	20	20
Cap, veh/h	69	66	757	146	168	957
Arrive On Green	0.05	0.05	0.31	0.31	0.10	0.60
Sat Flow, veh/h	1396	1340	2477	463	1604	1604
Grp Volume(v), veh/h	10	30	205	216	102	500
Grp Sat Flow(s),veh/h/ln	1396	1340	1397	1470	1604	1604
Q Serve(g_s), s	0.2	0.5	2.7	2.7	1.4	4.1
Cycle Q Clear(g_c), s	0.2	0.5	2.7	2.7	1.4	4.1
Prop In Lane	1.00	1.00		0.31	1.00	
Lane Grp Cap(c), veh/h	69	66	440	463	168	957
V/C Ratio(X)	0.15	0.46	0.47	0.47	0.61	0.52
Avail Cap(c_a), veh/h	1483	1424	3896	4101	2201	6958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	10.4	6.2	6.2	9.7	2.7
Incr Delay (d2), s/veh	1.0	4.8	0.8	0.7	3.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	0.3	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	15.3	7.0	6.9	13.2	3.1
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	40		421			602
Approach Delay, s/veh	14.3		7.0			4.8
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.4	11.1			17.5	5.1
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	31.0	63.0			98.0	24.0
Max Q Clear Time (g_c+I1), s	3.4	4.7			6.1	2.5
Green Ext Time (p_c), s	0.2	2.5			3.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A



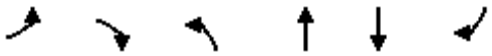
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	74	98	382	472	69
Future Volume (vph)	34	74	98	382	472	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		78				73
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	36	78	103	402	497	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	78	103	402	497	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	6.8	6.8	7.0	27.2	21.5	21.5
Actuated g/C Ratio	0.19	0.19	0.20	0.77	0.61	0.61
v/c Ratio	0.13	0.25	0.37	0.19	0.28	0.10
Control Delay	15.7	7.4	20.2	3.0	8.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	7.4	20.2	3.0	8.6	3.6
LOS	B	A	C	A	A	A
Approach Delay	10.0			6.5	8.0	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 35.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

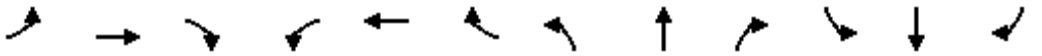




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	74	98	382	472	69
Future Volume (veh/h)	34	74	98	382	472	69
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	36	78	103	402	497	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	163	163	146	1583	931	470
Arrive On Green	0.11	0.11	0.10	0.58	0.32	0.32
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	36	78	103	402	497	73
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.6	1.2	1.8	1.9	3.6	0.9
Cycle Q Clear(g_c), s	0.6	1.2	1.8	1.9	3.6	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	163	163	146	1583	931	470
V/C Ratio(X)	0.22	0.48	0.70	0.25	0.53	0.16
Avail Cap(c_a), veh/h	1057	1057	395	3107	2047	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.4	10.7	11.1	2.7	7.1	6.2
Incr Delay (d2), s/veh	0.7	2.2	6.1	0.1	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.1	0.6	0.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	12.9	17.2	2.7	7.6	6.4
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	114			505	570	
Approach Delay, s/veh	12.3			5.7	7.4	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		18.8		6.8	6.6	12.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		3.9		3.2	3.8	5.6
Green Ext Time (p_c), s		2.5		0.2	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

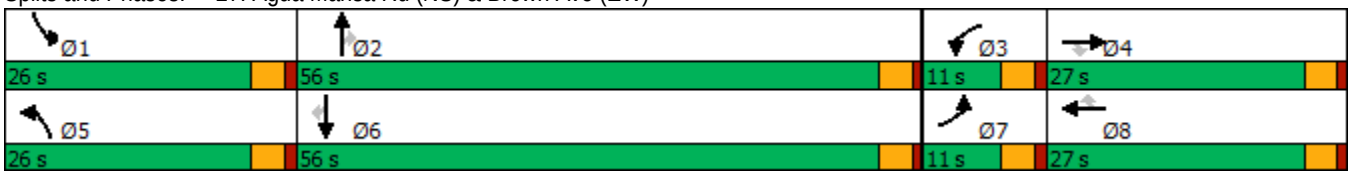


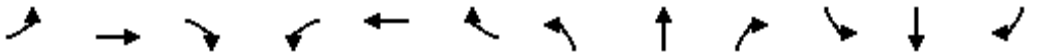
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	2	18	12	0	38	53	446	13	85	452	18
Future Volume (vph)	4	2	18	12	0	38	53	446	13	85	452	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			503			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	4	2	19	13	0	40	56	474	14	90	481	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	2	19	13	0	40	56	474	14	90	481	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	27.0	27.0	11.0	27.0	27.0	26.0	56.0	56.0	26.0	56.0	56.0
Total Split (%)	9.2%	22.5%	22.5%	9.2%	22.5%	22.5%	21.7%	46.7%	46.7%	21.7%	46.7%	46.7%
Maximum Green (s)	7.0	23.0	23.0	7.0	23.0	23.0	22.0	52.0	52.0	22.0	52.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.0	5.9	5.9	6.3		5.9	8.9	57.8	57.8	10.6	62.8	62.8
Actuated g/C Ratio	0.07	0.07	0.07	0.08		0.07	0.11	0.72	0.72	0.13	0.78	0.78
v/c Ratio	0.05	0.03	0.14	0.14		0.07	0.37	0.24	0.02	0.48	0.22	0.02
Control Delay	40.8	40.5	2.2	42.4		0.3	42.6	7.4	0.1	42.7	6.0	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	40.5	2.2	42.4		0.3	42.6	7.4	0.1	42.7	6.0	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		11.4			10.6			10.8			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 80.7			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	2	18	12	0	38	53	446	13	85	452	18
Future Volume (veh/h)	4	2	18	12	0	38	53	446	13	85	452	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	4	2	19	13	0	40	56	474	14	90	481	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	4	46	44	18	80	76	90	1724	871	142	1919	970
Arrive On Green	0.01	0.06	0.06	0.02	0.00	0.07	0.06	0.64	0.64	0.09	0.67	0.67
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	4	2	19	13	0	40	56	474	14	90	481	19
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.4	0.2	2.0	0.9	0.0	2.8	3.1	6.3	0.3	4.7	5.5	0.4
Cycle Q Clear(g_c), s	0.4	0.2	2.0	0.9	0.0	2.8	3.1	6.3	0.3	4.7	5.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	46	44	18	80	76	90	1724	871	142	1919	970
V/C Ratio(X)	0.96	0.04	0.43	0.72	0.00	0.52	0.62	0.27	0.02	0.63	0.25	0.02
Avail Cap(c_a), veh/h	68	222	213	99	326	313	384	1724	871	408	1919	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	36.3	37.2	40.0	0.0	36.8	37.3	6.5	5.5	35.7	5.4	4.6
Incr Delay (d2), s/veh	190.0	0.4	6.5	41.2	0.0	5.5	6.7	0.4	0.0	4.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.5	0.0	0.9	1.2	1.4	0.1	1.8	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	230.6	36.7	43.7	81.2	0.0	42.2	44.0	6.9	5.5	40.2	5.8	4.6
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		25			53			544			590	
Approach Delay, s/veh		73.0			51.8			10.7			11.0	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	56.0	5.3	8.8	9.2	58.5	4.4	9.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	52.0	7.0	23.0	22.0	52.0	7.0	23.0
Max Q Clear Time (g_c+I1), s	8.7	10.3	4.9	6.0	7.1	9.5	4.4	6.8
Green Ext Time (p_c), s	0.1	3.3	0.0	0.0	0.1	3.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

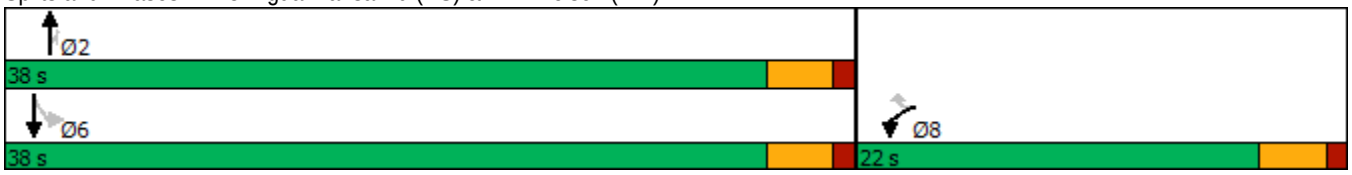


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	24	505	45	25	466
Future Volume (vph)	29	24	505	45	25	466
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.436	
Satd. Flow (perm)	1031	923	2654	1188	614	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		27		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	251		1750			2429
Travel Time (s)	6.8		26.5			36.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	33	27	574	51	28	530
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	27	574	51	28	530
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	7.5	7.5	48.1	48.1	48.1	48.1
Actuated g/C Ratio	0.13	0.13	0.83	0.83	0.83	0.83
v/c Ratio	0.25	0.19	0.26	0.05	0.05	0.45
Control Delay	27.0	12.6	2.7	1.2	3.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	12.6	2.7	1.2	3.0	4.7
LOS	C	B	A	A	A	A
Approach Delay	20.5		2.5			4.6
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 57.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 35.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R.A. Nelson (EW)

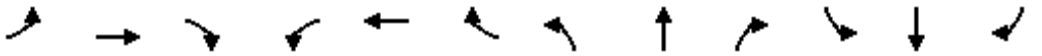




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	29	24	505	45	25	466
Future Volume (veh/h)	29	24	505	45	25	466
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	33	27	574	51	28	530
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	46	46	1978	1041	572	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	591	1381
Grp Volume(v), veh/h	33	27	574	51	28	530
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	591	1381
Q Serve(g_s), s	1.8	1.5	3.0	0.4	0.7	6.6
Cycle Q Clear(g_c), s	1.8	1.5	3.0	0.4	3.7	6.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	1978	1041	572	1052
V/C Ratio(X)	0.71	0.58	0.29	0.05	0.05	0.50
Avail Cap(c_a), veh/h	318	318	1978	1041	572	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.6	1.3	2.2	2.1
Incr Delay (d2), s/veh	18.2	11.1	0.4	0.1	0.2	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.8	31.5	2.0	1.4	2.4	3.8
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	60		625			558
Approach Delay, s/veh	35.5		1.9			3.7
Approach LOS	D		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.6
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.0			8.6	3.8
Green Ext Time (p_c), s		4.0			3.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

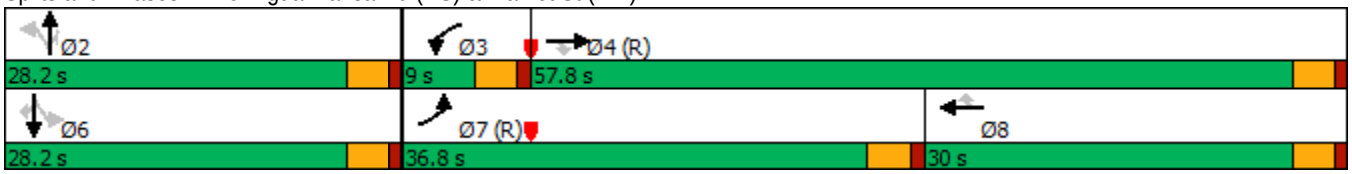


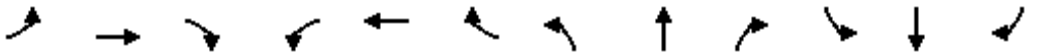
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	312	670	10	3	548	245	8	2	1	152	4	248
Future Volume (vph)	312	670	10	3	548	245	8	2	1	152	4	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	1641	3282	1272	1626	3252	1261	0	1261	965	1433	1508	1111
Flt Permitted	0.950			0.950				0.897		0.751		
Satd. Flow (perm)	1641	3282	1272	1626	3252	1261	0	1175	965	1132	1508	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			57			151			103			256
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			6.7			26.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	322	691	10	3	565	253	8	2	1	157	4	256
Shared Lane Traffic (%)												
Lane Group Flow (vph)	322	691	10	3	565	253	0	10	1	157	4	256
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	36.8	57.8	57.8	9.0	30.0	30.0	28.2	28.2	28.2	28.2	28.2	28.2
Total Split (%)	38.7%	60.8%	60.8%	9.5%	31.6%	31.6%	29.7%	29.7%	29.7%	29.7%	29.7%	29.7%
Maximum Green (s)	32.8	53.8	53.8	5.0	26.0	26.0	24.2	24.2	24.2	24.2	24.2	24.2
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	32.8	61.0	61.0	5.0	26.0	26.0		24.2	24.2	24.2	24.2	24.2
Actuated g/C Ratio	0.35	0.64	0.64	0.05	0.27	0.27		0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.57	0.33	0.01	0.04	0.63	0.56		0.03	0.00	0.55	0.01	0.54
Control Delay	46.7	3.1	0.0	43.7	34.1	17.3		27.2	0.0	38.9	26.8	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	3.1	0.0	43.7	34.1	17.3		27.2	0.0	38.9	26.8	8.6
LOS	D	A	A	D	C	B		C	A	D	C	A
Approach Delay		16.8			29.0			24.7			20.2	
Approach LOS		B			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 21.9		Intersection LOS: C	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

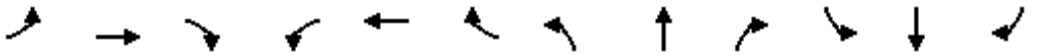




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	670	10	3	548	245	8	2	1	152	4	248
Future Volume (veh/h)	312	670	10	3	548	245	8	2	1	152	4	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	322	691	10	3	565	253	8	2	1	157	4	256
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	483	2047	1034	7	1132	572	217	44	302	339	386	370
Arrive On Green	0.09	0.20	0.20	0.00	0.34	0.34	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1752	3328	1682	1737	3300	1668	584	171	1184	1145	1515	1454
Grp Volume(v), veh/h	322	691	10	3	565	253	10	0	1	157	4	256
Grp Sat Flow(s),veh/h/ln	1752	1664	1682	1737	1650	1668	755	0	1184	1145	1515	1454
Q Serve(g_s), s	16.9	16.9	0.5	0.2	12.9	11.2	0.1	0.0	0.1	11.6	0.2	15.1
Cycle Q Clear(g_c), s	16.9	16.9	0.5	0.2	12.9	11.2	2.3	0.0	0.1	14.0	0.2	15.1
Prop In Lane	1.00		1.00	1.00		1.00	0.80		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	2047	1034	7	1132	572	261	0	302	339	386	370
V/C Ratio(X)	0.67	0.34	0.01	0.43	0.50	0.44	0.04	0.00	0.00	0.46	0.01	0.69
Avail Cap(c_a), veh/h	605	2047	1034	91	1132	572	261	0	302	339	386	370
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	38.9	21.3	14.8	47.2	24.7	24.2	26.8	0.0	26.4	32.6	26.5	32.0
Incr Delay (d2), s/veh	1.3	0.3	0.0	37.0	0.3	0.5	0.3	0.0	0.0	4.0	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	7.5	0.1	0.1	4.8	4.2	0.2	0.0	0.0	3.4	0.1	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	21.6	14.8	84.2	25.1	24.7	27.1	0.0	26.4	36.7	26.5	41.2
LnGrp LOS	D	C	B	F	C	C	C	A	C	D	C	D
Approach Vol, veh/h		1023			821			11			417	
Approach Delay, s/veh		27.4			25.2			27.0			39.4	
Approach LOS		C			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.2	4.4	62.4		28.2	30.2	36.6				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		24.2	5.0	53.8		24.2	32.8	26.0				
Max Q Clear Time (g_c+I1), s		4.3	4.2	20.9		19.1	20.9	16.9				
Green Ext Time (p_c), s		0.0	0.0	4.8		0.7	0.7	2.9				

Intersection Summary												
HCM 6th Ctrl Delay			28.8									
HCM 6th LOS			C									

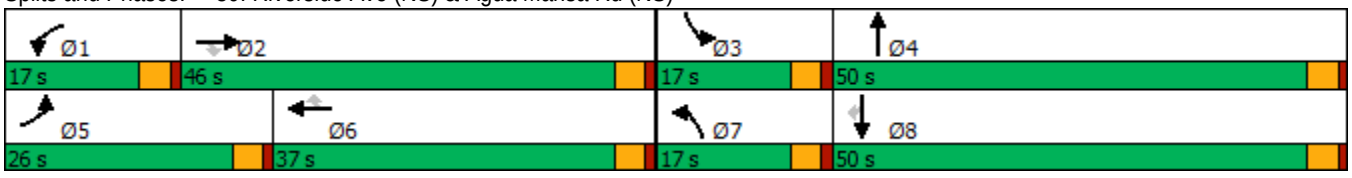


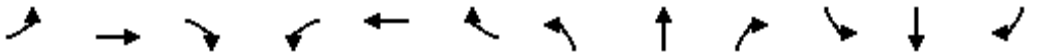
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	173	84	68	264	48	118	587	45	66	886	262
Future Volume (vph)	188	173	84	68	264	48	118	587	45	66	886	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1492	1570	1335	1570	1652	1404	1570	3105	0	1597	3195	1429
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1492	1570	1335	1570	1652	1404	1570	3105	0	1597	3195	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			109		7				109
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	21%	21%	21%	15%	15%	15%	15%	15%	15%	13%	13%	13%
Adj. Flow (vph)	219	201	98	79	307	56	137	683	52	77	1030	305
Shared Lane Traffic (%)												
Lane Group Flow (vph)	219	201	98	79	307	56	137	735	0	77	1030	305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	26.0	46.0	46.0	17.0	37.0	37.0	17.0	50.0		17.0	50.0	50.0
Total Split (%)	20.0%	35.4%	35.4%	13.1%	28.5%	28.5%	13.1%	38.5%		13.1%	38.5%	38.5%
Maximum Green (s)	22.0	42.0	42.0	13.0	33.0	33.0	13.0	46.0		13.0	46.0	46.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	20.9	45.5	45.5	10.8	33.1	33.1	12.8	48.7		10.7	44.3	44.3
Actuated g/C Ratio	0.16	0.36	0.36	0.08	0.26	0.26	0.10	0.38		0.08	0.35	0.35
v/c Ratio	0.89	0.36	0.18	0.59	0.72	0.13	0.87	0.62		0.57	0.92	0.54
Control Delay	88.4	34.5	9.5	74.8	54.2	0.6	101.0	35.3		73.3	54.1	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	88.4	34.5	9.5	74.8	54.2	0.6	101.0	35.3		73.3	54.1	24.7
LOS	F	C	A	E	D	A	F	D		E	D	C
Approach Delay		52.6			51.1			45.6			48.8	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 127.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 48.9		Intersection LOS: D	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (NS)

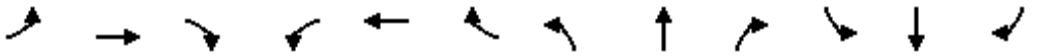




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	173	84	68	264	48	118	587	45	66	886	262
Future Volume (veh/h)	188	173	84	68	264	48	118	587	45	66	886	262
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1678	1678	1707	1707	1707
Adj Flow Rate, veh/h	219	201	98	79	307	56	137	683	52	77	1030	305
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	21	21	21	15	15	15	15	15	15	13	13	13
Cap, veh/h	262	557	557	122	433	433	170	1159	88	120	1136	598
Arrive On Green	0.17	0.35	0.35	0.07	0.26	0.26	0.10	0.38	0.38	0.07	0.35	0.35
Sat Flow, veh/h	1589	1589	1589	1678	1678	1678	1678	3040	231	1707	3244	1707
Grp Volume(v), veh/h	219	201	98	79	307	56	137	358	377	77	1030	305
Grp Sat Flow(s),veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1594	1678	1707	1622	1707
Q Serve(g_s), s	17.1	12.0	5.5	5.9	21.3	3.3	10.2	22.9	22.9	5.6	38.7	18.1
Cycle Q Clear(g_c), s	17.1	12.0	5.5	5.9	21.3	3.3	10.2	22.9	22.9	5.6	38.7	18.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	262	557	557	122	433	433	170	608	640	120	1136	598
V/C Ratio(X)	0.83	0.36	0.18	0.65	0.71	0.13	0.80	0.59	0.59	0.64	0.91	0.51
Avail Cap(c_a), veh/h	273	557	557	170	433	433	170	608	640	174	1166	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	30.9	28.8	57.7	43.1	36.4	56.2	31.6	31.6	57.9	39.6	32.9
Incr Delay (d2), s/veh	19.0	1.8	0.7	5.7	9.5	0.6	23.6	1.5	1.4	5.5	10.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	4.8	2.1	2.6	9.7	1.4	5.3	8.5	9.0	2.5	16.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.7	32.7	29.5	63.4	52.6	37.1	79.8	33.1	33.0	63.4	49.7	33.6
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	C
Approach Vol, veh/h		518			442			872			1412	
Approach Delay, s/veh		48.2			52.5			40.4			47.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	48.8	13.0	52.8	25.1	37.0	17.0	48.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	42.0	13.0	46.0	22.0	33.0	13.0	46.0
Max Q Clear Time (g_c+I1), s	9.9	16.0	9.6	26.9	21.1	25.3	14.2	42.7
Green Ext Time (p_c), s	0.0	1.3	0.0	3.7	0.1	1.1	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D



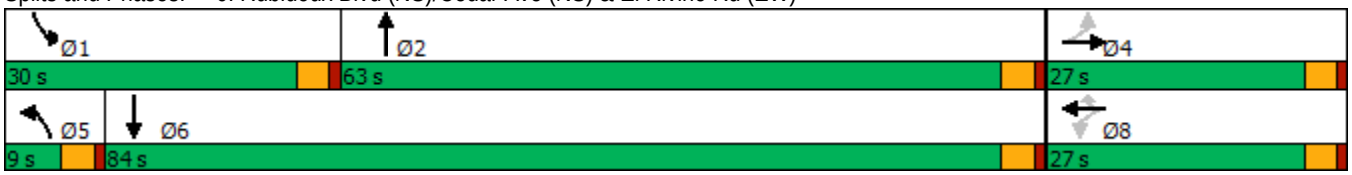
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	16	158	13	295	15	1223	121	321	1071	16
Future Volume (vph)	19	8	16	158	13	295	15	1223	121	321	1071	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.951				0.850		0.986			0.998	
Flt Protected		0.978			0.956		0.950			0.950		
Satd. Flow (prot)	0	1564	0	0	1514	1346	1597	3150	0	1612	3217	0
Flt Permitted		0.836			0.749		0.950			0.950		
Satd. Flow (perm)	0	1337	0	0	1186	1346	1597	3150	0	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				304		12			3	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	20	8	16	163	13	304	15	1261	125	331	1104	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	176	304	15	1386	0	331	1120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	27.0	27.0		27.0	27.0	27.0	9.0	63.0		30.0	84.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%	22.5%	7.5%	52.5%		25.0%	70.0%	
Maximum Green (s)	23.0	23.0		23.0	23.0	23.0	5.0	59.0		26.0	80.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		20.4			20.4	20.4	5.0	59.1		25.5	85.0	
Actuated g/C Ratio		0.17			0.17	0.17	0.04	0.51		0.22	0.73	
v/c Ratio		0.18			0.85	0.63	0.22	0.87		0.95	0.48	
Control Delay		30.8			80.6	10.9	63.5	33.2		82.1	8.4	
Queue Delay		0.0			0.0	0.0	0.0	0.8		0.0	0.0	
Total Delay		30.8			80.6	10.9	63.5	34.0		82.1	8.4	
LOS		C			F	B	E	C		F	A	
Approach Delay		30.8			36.5			34.3			25.2	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 30.7 Intersection LOS: C
Intersection Capacity Utilization 81.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	8	16	158	13	295	15	1223	121	321	1071	16
Future Volume (veh/h)	19	8	16	158	13	295	15	1223	121	321	1071	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	20	8	16	163	13	304	15	1261	125	331	1104	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	44	22	12	195	11	307	28	1489	148	373	2290	33
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.02	0.49	0.49	0.22	0.69	0.69
Sat Flow, veh/h	0	113	65	718	57	1604	1707	3029	300	1722	3310	48
Grp Volume(v), veh/h	44	0	0	176	0	304	15	675	711	331	546	574
Grp Sat Flow(s),veh/h/ln	178	0	0	775	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	22.7	1.0	43.5	43.5	22.4	18.5	18.5
Cycle Q Clear(g_c), s	23.0	0.0	0.0	23.0	0.0	22.7	1.0	43.5	43.5	22.4	18.5	18.5
Prop In Lane	0.45		0.36	0.93		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	78	0	0	206	0	307	28	797	839	373	1132	1191
V/C Ratio(X)	0.57	0.00	0.00	0.85	0.00	0.99	0.53	0.85	0.85	0.89	0.48	0.48
Avail Cap(c_a), veh/h	78	0	0	206	0	307	71	797	839	373	1132	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	0.0	50.3	0.0	48.4	58.5	26.6	26.6	45.6	8.6	8.6
Incr Delay (d2), s/veh	9.2	0.0	0.0	27.5	0.0	48.2	14.6	10.8	10.3	21.8	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	6.9	0.0	13.1	0.6	17.6	18.4	11.4	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	0.0	0.0	77.8	0.0	96.6	73.1	37.3	36.9	67.4	10.0	9.9
LnGrp LOS	D	A	A	E	A	F	E	D	D	E	B	A
Approach Vol, veh/h		44			480			1401			1451	
Approach Delay, s/veh		52.3			89.7			37.5			23.1	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	63.0		27.0	6.0	87.0		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	26.0	59.0		23.0	5.0	80.0		23.0				
Max Q Clear Time (g_c+I1), s	26.4	47.5		25.0	5.0	22.5		26.7				
Green Ext Time (p_c), s	0.0	6.3		0.0	0.0	8.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		38.9	
HCM 6th LOS		D	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	28	1332	26	0	1245
Future Volume (vph)	0	28	1332	26	0	1245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	29	1402	27	0	1311
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	1429	0	0	1311
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	1332	26	0	1245
Future Vol, veh/h	0	28	1332	26	0	1245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	29	1402	27	0	1311

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	715	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	378	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	378	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	378	-
HCM Lane V/C Ratio	-	-	0.078	-
HCM Control Delay (s)	-	-	15.3	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.3	-



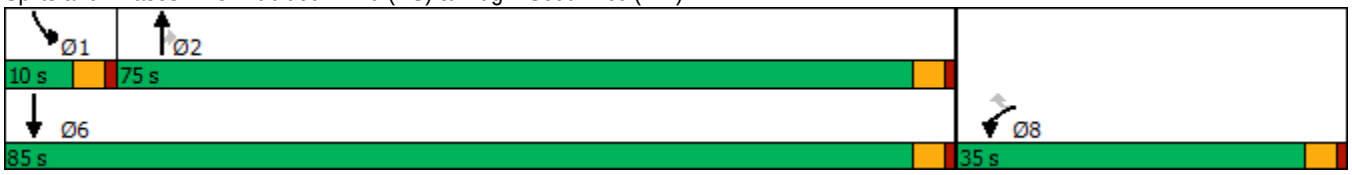
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	210	60	1297	96	27	1218
Future Volume (vph)	210	60	1297	96	27	1218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		63		101		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	221	63	1365	101	28	1282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	221	63	1365	101	28	1282
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	35.0	35.0	75.0	75.0	10.0	85.0
Total Split (%)	29.2%	29.2%	62.5%	62.5%	8.3%	70.8%
Maximum Green (s)	31.0	31.0	71.0	71.0	6.0	81.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	18.5	18.5	76.8	76.8	5.9	82.7
Actuated g/C Ratio	0.17	0.17	0.70	0.70	0.05	0.76
v/c Ratio	0.73	0.19	0.61	0.10	0.31	0.51
Control Delay	56.6	10.6	11.5	1.9	60.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	56.6	10.6	11.5	1.9	60.2	6.9
LOS	E	B	B	A	E	A
Approach Delay	46.4		10.8			8.0
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 54.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

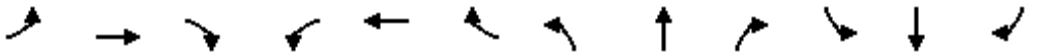




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	210	60	1297	96	27	1218
Future Volume (veh/h)	210	60	1297	96	27	1218
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	221	63	1365	101	28	1282
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	265	265	2328	1225	47	2629
Arrive On Green	0.14	0.14	0.72	0.72	0.03	0.78
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	221	63	1365	101	28	1282
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	11.7	3.1	21.2	1.8	1.6	13.9
Cycle Q Clear(g_c), s	11.7	3.1	21.2	1.8	1.6	13.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	265	265	2328	1225	47	2629
V/C Ratio(X)	0.83	0.24	0.59	0.08	0.59	0.49
Avail Cap(c_a), veh/h	569	569	2328	1225	102	2629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	39.6	7.1	4.4	49.8	3.9
Incr Delay (d2), s/veh	6.7	0.5	1.1	0.1	11.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	1.5	5.4	0.5	0.8	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.1	40.1	8.2	4.5	61.1	4.6
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	284		1466			1310
Approach Delay, s/veh	47.9		7.9			5.8
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.8	78.2			85.0	18.4
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	6.0	71.0			81.0	31.0
Max Q Clear Time (g_c+I1), s	3.6	23.2			15.9	13.7
Green Ext Time (p_c), s	0.0	13.2			11.8	0.7

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

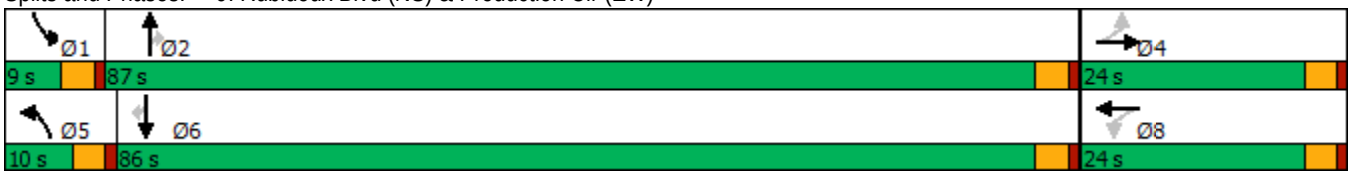


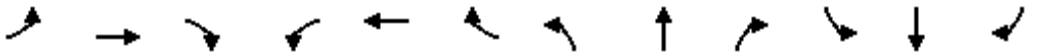
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	33	1	0	3	16	1332	0	0	1426	15
Future Volume (vph)	21	0	33	1	0	3	16	1332	0	0	1426	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.735			0.950					
Satd. Flow (perm)	1355	1524	0	1396	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122			138							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	21	0	34	1	0	3	16	1359	0	0	1455	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	1	3	0	16	1359	0	0	1455	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		10.0	87.0	87.0	9.0	86.0	86.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		8.3%	72.5%	72.5%	7.5%	71.7%	71.7%
Maximum Green (s)	20.0	20.0		20.0	20.0		6.0	83.0	83.0	5.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.3	7.3		7.3	7.3		5.8	96.6			92.6	92.6
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.05	0.89			0.85	0.85
v/c Ratio	0.23	0.16		0.01	0.01		0.19	0.49			0.52	0.01
Control Delay	54.1	1.5		47.0	0.0		55.2	2.4			4.4	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.1	1.5		47.0	0.0		55.2	2.4			4.4	0.0
LOS	D	A		D	A		E	A			A	A
Approach Delay		21.6			11.8			3.1			4.4	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 4.1		Intersection LOS: A	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

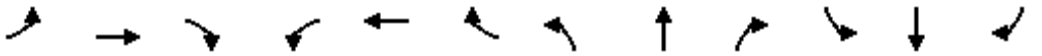




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	0	33	1	0	3	16	1332	0	0	1426	15
Future Volume (veh/h)	21	0	33	1	0	3	16	1332	0	0	1426	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	21	0	34	1	0	3	16	1359	0	0	1455	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	125	0	73	103	0	77	30	2804	1417	2	2734	1382
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1396	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	21	0	34	1	0	3	16	1359	0	0	1455	15
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1396	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.5	0.0	1.8	0.1	0.0	0.2	0.9	8.9	0.0	0.0	13.8	0.2
Cycle Q Clear(g_c), s	1.6	0.0	1.8	1.9	0.0	0.2	0.9	8.9	0.0	0.0	13.8	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	0	73	103	0	77	30	2804	1417	2	2734	1382
V/C Ratio(X)	0.17	0.00	0.47	0.01	0.00	0.04	0.53	0.48	0.00	0.00	0.53	0.01
Avail Cap(c_a), veh/h	344	0	363	326	0	381	101	2804	1417	88	2734	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	0.0	46.8	47.8	0.0	46.0	48.6	1.3	0.0	0.0	2.8	1.6
Incr Delay (d2), s/veh	0.6	0.0	4.5	0.0	0.0	0.2	13.7	0.6	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.9	0.0	0.0	0.1	0.5	0.2	0.0	0.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	51.4	47.8	0.0	46.2	62.3	1.9	0.0	0.0	3.6	1.6
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		55			4			1375			1470	
Approach Delay, s/veh		49.9			46.6			2.6			3.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.8		8.0	5.8	86.0		8.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	6.0	82.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	10.9		3.8	2.9	15.8		3.9				
Green Ext Time (p_c), s	0.0	13.3		0.1	0.0	14.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		4.0	
HCM 6th LOS		A	



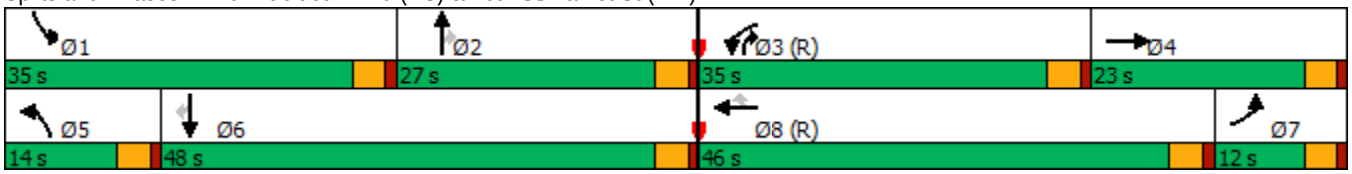
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	80	26	365	77	598	54	460	446	664	659	74
Future Volume (vph)	55	80	26	365	77	598	54	460	446	664	659	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.963				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				573			220			118
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	57	82	27	376	79	616	56	474	460	685	679	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	109	0	376	79	616	56	474	460	685	679	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

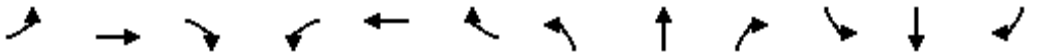
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	12.0	23.0		35.0	46.0	46.0	14.0	27.0	35.0	35.0	48.0	48.0
Total Split (%)	10.0%	19.2%		29.2%	38.3%	38.3%	11.7%	22.5%	29.2%	29.2%	40.0%	40.0%
Maximum Green (s)	8.0	19.0		31.0	42.0	42.0	10.0	23.0	31.0	31.0	44.0	44.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	7.6	16.7		31.0	42.1	42.1	8.6	27.9	62.9	28.4	49.6	49.6
Actuated g/C Ratio	0.06	0.14		0.26	0.35	0.35	0.07	0.23	0.52	0.24	0.41	0.41
v/c Ratio	0.59	0.48		0.44	0.13	0.68	0.49	0.61	0.54	0.87	0.45	0.11
Control Delay	78.9	48.7		51.9	44.8	30.3	67.6	46.6	12.9	56.2	28.3	1.5
Queue Delay	0.0	0.0		0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	78.9	48.7		51.9	44.8	30.5	67.6	46.6	13.1	56.2	28.3	1.5
LOS	E	D		D	D	C	E	D	B	E	C	A
Approach Delay		59.1			39.1			32.2			40.1	
Approach LOS		E			D			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 38.6 Intersection LOS: D
Intersection Capacity Utilization 63.9% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

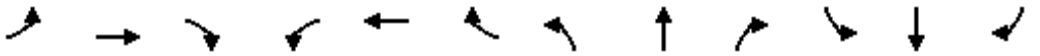




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	80	26	365	77	598	54	460	446	664	659	74
Future Volume (veh/h)	55	80	26	365	77	598	54	460	446	664	659	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	57	82	27	376	79	616	56	474	460	685	679	76
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	156	346	114	577	629	629	95	662	614	808	1339	669
Arrive On Green	0.09	0.28	0.28	0.17	0.35	0.35	0.06	0.19	0.19	0.23	0.37	0.37
Sat Flow, veh/h	1648	1240	408	3485	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	57	0	109	376	79	616	56	474	460	685	679	76
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1742	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.9	0.0	6.1	12.1	3.6	22.2	3.8	15.6	23.3	22.2	17.4	2.5
Cycle Q Clear(g_c), s	3.9	0.0	6.1	12.1	3.6	22.2	3.8	15.6	23.3	22.2	17.4	2.5
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	0	460	577	629	629	95	662	614	808	1339	669
V/C Ratio(X)	0.37	0.00	0.24	0.65	0.13	0.98	0.59	0.72	0.75	0.85	0.51	0.11
Avail Cap(c_a), veh/h	156	0	460	900	629	629	142	662	614	915	1339	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.56	0.56	0.56	0.84	0.84	0.84	0.84	0.84	0.84
Uniform Delay (d), s/veh	50.9	0.0	33.4	46.8	26.5	11.5	55.4	45.3	33.7	44.3	29.6	13.9
Incr Delay (d2), s/veh	1.4	0.0	0.3	0.7	0.2	22.4	4.9	5.5	6.9	5.8	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.4	5.2	1.5	11.7	1.7	6.9	12.4	10.0	7.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	0.0	33.7	47.5	26.7	34.0	60.3	50.8	40.6	50.1	30.7	14.2
LnGrp LOS	D	A	C	D	C	C	E	D	D	D	C	B
Approach Vol, veh/h		166			1071			990			1440	
Approach Delay, s/veh		40.1			38.2			46.6			39.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.4	27.3	23.9	37.5	10.6	48.0	15.4	46.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	23.0	31.0	19.0	10.0	44.0	8.0	42.0
Max Q Clear Time (g_c+I1), s	26.2	27.3	14.1	8.1	7.8	21.4	7.9	26.2
Green Ext Time (p_c), s	1.2	0.0	1.1	0.3	0.0	4.3	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

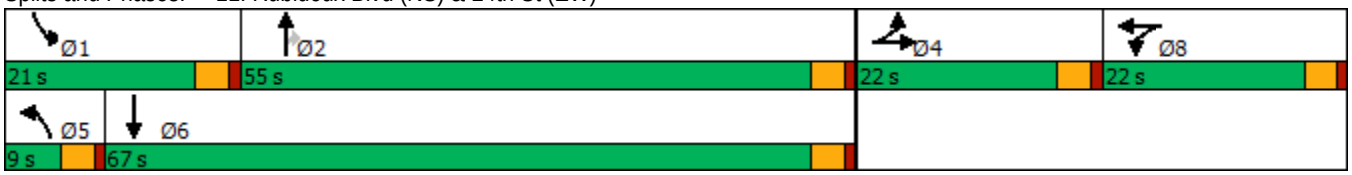


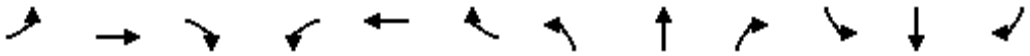
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	13	14	25	16	39	9	917	60	116	952	5
Future Volume (vph)	4	13	14	25	16	39	9	917	60	116	952	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.939			0.934				0.850		0.999	
Flt Protected		0.994			0.984		0.950			0.950		
Satd. Flow (prot)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Flt Permitted		0.994			0.984		0.950			0.950		
Satd. Flow (perm)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			34				118		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	4	13	14	26	16	40	9	945	62	120	981	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	82	0	9	945	62	120	986	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	55.0	55.0	21.0	67.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		7.5%	45.8%	45.8%	17.5%	55.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	51.0	51.0	17.0	63.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)		6.7			8.4		5.1	55.1	55.1	12.0	70.5	
Actuated g/C Ratio		0.07			0.09		0.06	0.60	0.60	0.13	0.77	
v/c Ratio		0.23			0.45		0.11	0.52	0.08	0.57	0.40	
Control Delay		34.0			35.2		49.3	15.3	0.3	50.1	6.8	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		34.0			35.2		49.3	15.3	0.3	50.1	6.8	
LOS		C			D		D	B	A	D	A	
Approach Delay		34.0			35.2			14.6			11.5	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 91.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)

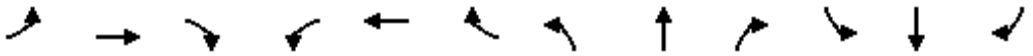




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	13	14	25	16	39	9	917	60	116	952	5
Future Volume (veh/h)	4	13	14	25	16	39	9	917	60	116	952	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	4	13	14	26	16	40	9	945	62	120	981	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	7	23	25	35	21	53	18	1947	984	151	2372	12
Arrive On Green	0.03	0.03	0.03	0.06	0.06	0.06	0.01	0.64	0.64	0.09	0.72	0.72
Sat Flow, veh/h	234	759	818	574	353	883	1604	3047	1539	1707	3312	17
Grp Volume(v), veh/h	31	0	0	82	0	0	9	945	62	120	480	506
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1539	1707	1622	1707
Q Serve(g_s), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.3	1.3	6.1	10.5	10.5
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.3	1.3	6.1	10.5	10.5
Prop In Lane	0.13		0.45	0.32		0.49	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	55	0	0	110	0	0	18	1947	984	151	1162	1223
V/C Ratio(X)	0.57	0.00	0.00	0.75	0.00	0.00	0.50	0.49	0.06	0.79	0.41	0.41
Avail Cap(c_a), veh/h	371	0	0	371	0	0	91	1947	984	330	1162	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	40.7	0.0	0.0	43.2	8.3	6.0	39.3	5.0	5.0
Incr Delay (d2), s/veh	8.9	0.0	0.0	9.7	0.0	0.0	19.9	0.9	0.1	9.1	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.0	0.0	0.0	0.3	3.7	0.4	2.8	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	50.4	0.0	0.0	63.1	9.2	6.1	48.4	6.1	6.1
LnGrp LOS	D	A	A	D	A	A	E	A	A	D	A	A
Approach Vol, veh/h		31			82			1016			1106	
Approach Delay, s/veh		51.0			50.4			9.5			10.7	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	60.2		6.7	5.0	67.0		9.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	17.0	51.0		18.0	5.0	63.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	16.3		3.5	2.5	12.5		5.9				
Green Ext Time (p_c), s	0.2	7.2		0.1	0.0	6.6		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	

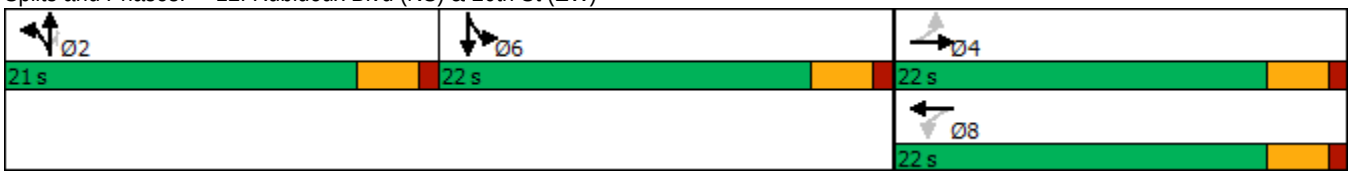


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	11	0	19	7	990	24	16	998	3
Future Volume (vph)	0	0	10	11	0	19	7	990	24	16	998	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Frt		0.865			0.916				0.850			
Flt Protected					0.982						0.999	
Satd. Flow (prot)	0	1644	0	0	1378	0	0	3034	1176	0	3220	0
Flt Permitted											0.999	
Satd. Flow (perm)	0	1644	0	0	1404	0	0	3034	1176	0	3220	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		533			84				84			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	11	12	0	20	7	1042	25	17	1051	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	32	0	0	1049	25	0	1071	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Split	NA	Perm	Split	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		21.0	21.0	21.0	22.0	22.0	
Total Split (%)	33.8%	33.8%		33.8%	33.8%		32.3%	32.3%	32.3%	33.8%	33.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		17.0	17.0	17.0	18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		5.6			5.6			18.2	18.2		18.2	
Actuated g/C Ratio		0.12			0.12			0.38	0.38		0.38	
v/c Ratio		0.02			0.14			0.91	0.05		0.88	
Control Delay		0.0			2.0			30.8	0.2		26.8	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		0.0			2.0			30.8	0.2		26.8	
LOS		A			A			C	A		C	
Approach Delay					2.0			30.1			26.8	
Approach LOS					A			C			C	

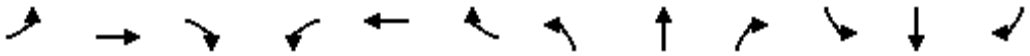
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 47.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)

10/08/2018



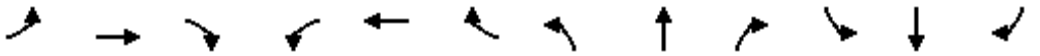
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	11	0	19	7	990	24	16	998	3
Future Volume (veh/h)	0	0	10	11	0	19	7	990	24	16	998	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	11	12	0	20	7	1042	25	17	1051	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	86	121	0	34	7	1083	537	19	1237	4
Arrive On Green	0.00	0.00	0.05	0.05	0.00	0.05	0.35	0.35	0.35	0.37	0.37	0.37
Sat Flow, veh/h	0	0	1900	451	0	752	20	3136	1554	52	3382	10
Grp Volume(v), veh/h	0	0	11	32	0	0	563	486	25	561	0	510
Grp Sat Flow(s),veh/h/ln	0	0	1900	1204	0	0	1618	1537	1554	1722	0	1722
Q Serve(g_s), s	0.0	0.0	0.3	1.1	0.0	0.0	17.0	14.9	0.5	15.1	0.0	13.1
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.4	0.0	0.0	17.0	14.9	0.5	15.1	0.0	13.1
Prop In Lane	0.00		1.00	0.37		0.62	0.01		1.00	0.03		0.01
Lane Grp Cap(c), veh/h	0	0	86	155	0	0	559	531	537	630	0	630
V/C Ratio(X)	0.00	0.00	0.13	0.21	0.00	0.00	1.01	0.92	0.05	0.89	0.00	0.81
Avail Cap(c_a), veh/h	0	0	695	595	0	0	559	531	537	630	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	23.2	0.0	0.0	16.1	15.4	10.7	14.7	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.7	0.0	0.0	39.7	23.0	0.2	17.2	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.4	0.0	0.0	10.6	7.1	0.2	7.1	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	23.2	23.9	0.0	0.0	55.8	38.4	10.9	31.9	0.0	24.9
LnGrp LOS	A	A	C	C	A	A	F	D	B	C	A	C
Approach Vol, veh/h		11			32			1074			1071	
Approach Delay, s/veh		23.2			23.9			46.9			28.6	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		6.2		22.0		6.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		17.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		19.0		2.3		17.1		3.4				
Green Ext Time (p_c), s		0.0		0.0		0.6		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		37.5
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	35	49	81	44	12	83	886	57	16	939	65
Future Volume (vph)	71	35	49	81	44	12	83	886	57	16	939	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.991			0.990	
Flt Protected		0.968			0.969		0.950			0.950		
Satd. Flow (prot)	0	1803	1372	0	1770	1346	1583	3138	0	1703	3372	0
Flt Permitted		0.717			0.736		0.950			0.950		
Satd. Flow (perm)	0	1336	1372	0	1345	1346	1583	3138	0	1703	3372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		13			14	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	77	38	53	88	48	13	90	963	62	17	1021	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	53	0	136	13	90	1025	0	17	1092	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	10.0	28.4		9.0	27.4	
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	37.7%	16.7%	47.3%		15.0%	45.7%	
Maximum Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	6.0	24.4		5.0	23.4	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		10.1	10.1		10.1	10.1	6.0	34.4		5.0	28.3	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.12	0.68		0.10	0.56	
v/c Ratio		0.44	0.15		0.51	0.04	0.49	0.48		0.10	0.58	
Control Delay		23.3	2.9		25.3	0.2	33.5	7.9		24.4	12.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.3	2.9		25.3	0.2	33.5	7.9		24.4	12.8	
LOS		C	A		C	A	C	A		C	B	
Approach Delay		16.9			23.1			10.0			12.9	
Approach LOS		B			C			A			B	

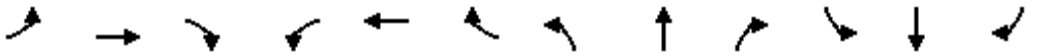
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 50.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)

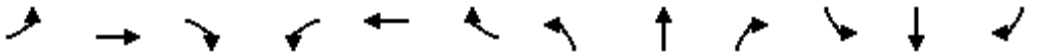
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	35	49	81	44	12	83	886	57	16	939	65
Future Volume (veh/h)	71	35	49	81	44	12	83	886	57	16	939	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	77	38	53	88	48	13	90	963	62	17	1021	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	101	31	562	100	34	553	155	1441	93	37	1300	90
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.46	0.46	0.02	0.39	0.39
Sat Flow, veh/h	0	99	1796	0	108	1767	1693	3101	200	1811	3302	230
Grp Volume(v), veh/h	115	0	53	136	0	13	90	499	526	17	532	560
Grp Sat Flow(s),veh/h/ln	99	0	1796	108	0	1767	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	0.0	0.0	1.2	0.0	0.0	0.3	3.0	14.3	14.3	0.6	16.1	16.1
Cycle Q Clear(g_c), s	18.6	0.0	1.2	18.6	0.0	0.3	3.0	14.3	14.3	0.6	16.1	16.1
Prop In Lane	0.67		1.00	0.65		1.00	1.00		0.12	1.00		0.13
Lane Grp Cap(c), veh/h	132	0	562	134	0	553	155	747	786	37	677	713
V/C Ratio(X)	0.87	0.00	0.09	1.02	0.00	0.02	0.58	0.67	0.67	0.46	0.79	0.79
Avail Cap(c_a), veh/h	132	0	562	134	0	553	171	747	786	152	677	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	14.5	25.2	0.0	14.1	25.9	12.4	12.4	28.8	15.8	15.8
Incr Delay (d2), s/veh	42.2	0.0	0.1	82.9	0.0	0.0	4.1	4.7	4.5	8.5	8.9	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.5	4.9	0.0	0.1	1.2	4.6	4.8	0.3	6.5	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.0	0.0	14.5	108.0	0.0	14.2	30.0	17.1	16.8	37.2	24.7	24.3
LnGrp LOS	E	A	B	F	A	B	C	B	B	D	C	C
Approach Vol, veh/h		168			149			1115			1109	
Approach Delay, s/veh		50.5			99.8			18.0			24.7	
Approach LOS		D			F			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	31.6		22.6	9.4	27.4		22.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.4		18.6	6.0	23.4		18.6				
Max Q Clear Time (g_c+I1), s	4.6	18.3		20.6	7.0	20.1		20.6				
Green Ext Time (p_c), s	0.0	2.9		0.0	0.0	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.9	
HCM 6th LOS		C	

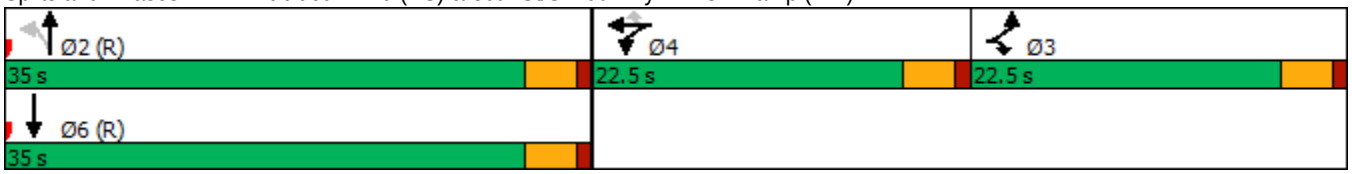


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	164	502	136	95	86	927	0	0	1092	26
Future Volume (vph)	34	0	164	502	136	95	86	927	0	0	1092	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	77		0	0		0
Storage Lanes	1		1	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850					0.996	
Flt Protected	0.950			0.950	0.972		0.950					
Satd. Flow (prot)	1736	0	1346	1681	1720	1372	1597	3195	0	0	3269	0
Flt Permitted	0.950			0.950	0.972		0.123					
Satd. Flow (perm)	1736	0	1346	1681	1720	1372	207	3195	0	0	3269	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			68					3	
Link Speed (mph)		30			30			40			50	
Link Distance (ft)		785			262			178			1593	
Travel Time (s)		17.8			6.0			3.0			21.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	13%	13%	13%	10%	10%	10%
Adj. Flow (vph)	36	0	174	534	145	101	91	986	0	0	1162	28
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	36	0	174	336	343	101	91	986	0	0	1190	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2			2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)	20		20	20	100	20	20	100			100	
Trailing Detector (ft)	0		0	0	0	0	0	0			0	
Detector 1 Position(ft)	0		0	0	0	0	0	0			0	
Detector 1 Size(ft)	20		20	20	6	20	20	6			6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		Prot	Split	NA	Perm	Perm	NA			NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3		3	4	4			2			6	
Permitted Phases						4	2					
Detector Phase	3		3	4	4	4	2	2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0	5.0			5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5	22.5	22.5			22.5	
Total Split (s)	22.5		22.5	22.5	22.5	22.5	35.0	35.0			35.0	
Total Split (%)	28.1%		28.1%	28.1%	28.1%	28.1%	43.8%	43.8%			43.8%	
Maximum Green (s)	18.5		18.5	18.5	18.5	18.5	31.0	31.0			31.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	4.0	4.0			4.0	
Lead/Lag	Lag		Lag	Lead	Lead	Lead						
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
Recall Mode	None		None	None	None	None	C-Max	C-Max			C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0		0	0	0	0	0	0			0	
Act Effct Green (s)	11.9		11.9	17.9	17.9	17.9	38.2	38.2			38.2	
Actuated g/C Ratio	0.15		0.15	0.22	0.22	0.22	0.48	0.48			0.48	
v/c Ratio	0.14		0.67	0.90	0.89	0.28	0.93	0.65			0.76	
Control Delay	28.1		31.8	58.2	57.4	13.0	101.8	19.5			23.2	
Queue Delay	0.0		0.0	0.6	0.7	0.0	0.0	3.7			0.8	
Total Delay	28.1		31.8	58.8	58.1	13.0	101.8	23.2			24.0	
LOS	C		C	E	E	B	F	C			C	
Approach Delay		31.2			52.6			29.8			24.0	
Approach LOS		C			D			C			C	

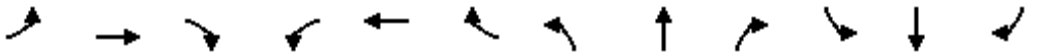
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 33.2		Intersection LOS: C	
Intersection Capacity Utilization 69.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)



HCM 6th Signalized Intersection Summary
14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)

10/08/2018



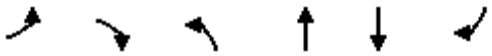
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	164	502	136	95	86	927	0	0	1092	26
Future Volume (veh/h)	34	0	164	502	136	95	86	927	0	0	1092	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	0	1767	1870	1870	1796	1707	1707	0	0	1752	1752
Adj Flow Rate, veh/h	36	0	174	340	417	101	91	986	0	0	1162	28
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	0	4	2	2	2	13	13	0	0	10	10
Cap, veh/h	0	0	0	433	433	415	301	2169	0	0	2231	54
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	1.00	1.00	0.00	0.00	0.67	0.67
Sat Flow, veh/h		0		1870	1870	1796	430	3329	0	0	3423	80
Grp Volume(v), veh/h		0.0		340	417	101	91	986	0	0	580	610
Grp Sat Flow(s),veh/h/ln				1870	1870	1796	430	1622	0	0	1664	1752
Q Serve(g_s), s				13.7	17.6	3.7	6.6	0.0	0.0	0.0	14.2	14.2
Cycle Q Clear(g_c), s				13.7	17.6	3.7	20.7	0.0	0.0	0.0	14.2	14.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h				433	433	415	301	2169	0	0	1113	1172
V/C Ratio(X)				0.79	0.96	0.24	0.30	0.45	0.00	0.00	0.52	0.52
Avail Cap(c_a), veh/h				433	433	415	301	2169	0	0	1113	1172
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.95	0.95	0.00	0.00	0.81	0.81
Uniform Delay (d), s/veh				28.9	30.4	25.0	2.7	0.0	0.0	0.0	6.7	6.7
Incr Delay (d2), s/veh				9.3	34.0	0.3	2.4	0.7	0.0	0.0	1.4	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.0	11.7	1.6	0.3	0.2	0.0	0.0	3.6	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.2	64.4	25.3	5.2	0.7	0.0	0.0	8.2	8.1
LnGrp LOS				D	E	C	A	A	A	A	A	A
Approach Vol, veh/h					858			1077			1190	
Approach Delay, s/veh					49.4			1.0			8.1	
Approach LOS					D			A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	57.5	22.5	57.5
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	18.5	31.0
Max Q Clear Time (g_c+I1), s	22.7	19.6	16.2
Green Ext Time (p_c), s	4.6	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

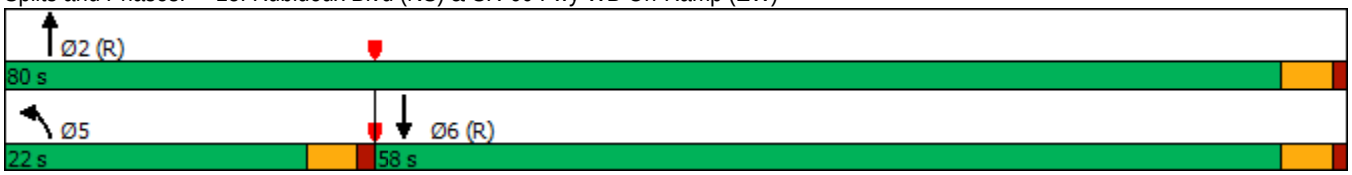


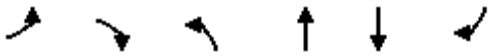
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	252	1031	1137	603
Future Volume (vph)	0	0	252	1031	1137	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	105			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.948	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1612	3223	3229	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1612	3223	3229	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					234	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1099			374	178	
Travel Time (s)	25.0			6.4	3.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	12%	12%	6%	6%
Adj. Flow (vph)	0	0	265	1085	1197	635
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	265	1085	1832	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors			1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)			20	100	100	
Trailing Detector (ft)			0	0	0	
Detector 1 Position(ft)			0	0	0	
Detector 1 Size(ft)			20	6	6	
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)			0.0	0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases						
Detector Phase			5	2	6	
Switch Phase						
Minimum Initial (s)			5.0	5.0	5.0	
Minimum Split (s)			9.0	22.0	22.0	
Total Split (s)			22.0	80.0	58.0	
Total Split (%)			27.5%	100.0%	72.5%	
Maximum Green (s)			18.0	76.0	54.0	
Yellow Time (s)			3.0	3.0	3.0	
All-Red Time (s)			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)			3.0	3.0	3.0	
Recall Mode			None	C-Max	C-Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)			16.4	80.0	55.6	
Actuated g/C Ratio			0.20	1.00	0.70	
v/c Ratio			0.80	0.34	0.79	
Control Delay			43.4	0.2	5.4	
Queue Delay			0.0	0.2	2.4	
Total Delay			43.4	0.4	7.8	
LOS			D	A	A	
Approach Delay				8.8	7.8	
Approach LOS				A	A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

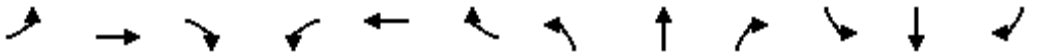




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	252	1031	1137	603
Future Volume (veh/h)	0	0	252	1031	1137	603
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Work Zone On Approach				No	No	
Adj Sat Flow, veh/h/ln			1722	1722	1811	1811
Adj Flow Rate, veh/h			265	1085	1197	635
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			12	12	6	6
Cap, veh/h			299	3108	1677	889
Arrive On Green			0.35	1.00	1.00	1.00
Sat Flow, veh/h			1722	3358	2398	1224
Grp Volume(v), veh/h			265	1085	893	939
Grp Sat Flow(s),veh/h/ln			1722	1636	1721	1811
Q Serve(g_s), s			11.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s			11.6	0.0	0.0	0.0
Prop In Lane			1.00			0.68
Lane Grp Cap(c), veh/h			299	3108	1250	1316
V/C Ratio(X)			0.89	0.35	0.71	0.71
Avail Cap(c_a), veh/h			387	3108	1250	1316
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.76	0.76	0.53	0.53
Uniform Delay (d), s/veh			25.4	0.0	0.0	0.0
Incr Delay (d2), s/veh			14.2	0.2	1.9	1.8
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			4.8	0.1	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			39.6	0.2	1.9	1.8
LnGrp LOS			D	A	A	A
Approach Vol, veh/h				1350	1832	
Approach Delay, s/veh				8.0	1.8	
Approach LOS				A	A	

Timer - Assigned Phs	2			5	6
Phs Duration (G+Y+Rc), s	80.0			17.9	62.1
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	76.0			18.0	54.0
Max Q Clear Time (g_c+I1), s	2.0			13.6	2.0
Green Ext Time (p_c), s	9.9			0.3	22.4

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

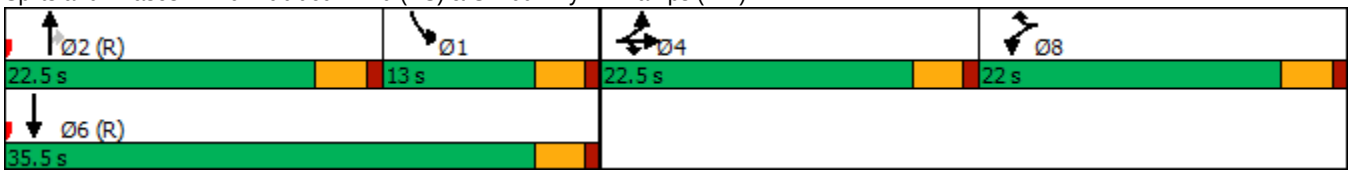


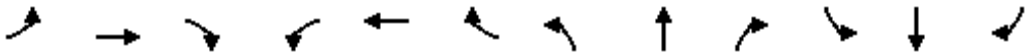
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	587	36	405	15	0	4	0	680	337	171	961	0
Future Volume (vph)	587	36	405	15	0	4	0	680	337	171	961	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.958		0.950						0.950		
Satd. Flow (prot)	1504	1517	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.958		0.950						0.950		
Satd. Flow (perm)	1504	1517	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			259			123			359			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	624	38	431	16	0	4	0	723	359	182	1022	0
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	331	331	431	16	0	4	0	723	359	182	1022	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	13.0	35.5	
Total Split (%)	28.1%	28.1%	28.1%	27.5%		27.5%		28.1%	28.1%	16.3%	44.4%	
Maximum Green (s)	18.5	18.5	18.5	18.0		18.0		18.5	18.5	9.0	31.5	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	18.5	18.5	18.5	6.3		6.3		36.0	36.0	9.0	49.0	
Actuated g/C Ratio	0.23	0.23	0.23	0.08		0.08		0.45	0.45	0.11	0.61	
v/c Ratio	0.95	0.95	0.89	0.11		0.02		0.45	0.39	0.91	0.47	
Control Delay	71.1	69.2	35.4	35.5		0.2		17.5	3.6	67.5	10.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.5	
Total Delay	71.1	69.2	35.4	35.5		0.2		17.5	3.6	67.5	11.1	
LOS	E	E	D	D		A		B	A	E	B	
Approach Delay		56.5			28.5			12.9			19.6	
Approach LOS		E			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)





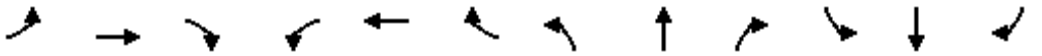
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	36	405	15	0	4	0	680	337	171	961	0
Future Volume (veh/h)	587	36	405	15	0	4	0	680	337	171	961	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	651	0	431	16	0	4	0	723	359	182	1022	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	783	0	376	0	0	0	0	822	433	725	2377	0
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.23	0.13	0.22	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	651	0	431		0.0		0	723	359	182	1022	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	14.6	0.0	18.5				0.0	15.7	14.6	7.0	19.8	0.0
Cycle Q Clear(g_c), s	14.6	0.0	18.5				0.0	15.7	14.6	7.0	19.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	783	0	376				0	822	433	725	2377	0
V/C Ratio(X)	0.83	0.00	1.15				0.00	0.88	0.83	0.25	0.43	0.00
Avail Cap(c_a), veh/h	783	0	376				0	822	433	725	2377	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.51	0.51	0.00
Uniform Delay (d), s/veh	29.3	0.0	30.7				0.0	29.7	29.3	24.4	18.0	0.0
Incr Delay (d2), s/veh	7.6	0.0	92.8				0.0	12.3	15.8	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	16.6				0.0	7.6	8.0	3.1	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.0	123.6				0.0	42.0	45.1	24.5	18.3	0.0
LnGrp LOS	D	A	F				A	D	D	C	B	A
Approach Vol, veh/h		1082						1082			1204	
Approach Delay, s/veh		71.4						43.0			19.3	
Approach LOS		E						D			B	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	35.0	22.5		22.5		57.5						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	9.0	18.5		18.5		31.5						
Max Q Clear Time (g_c+I1), s	11.0	19.7		22.5		23.8						
Green Ext Time (p_c), s	0.0	0.0		0.0		3.9						

Intersection Summary												
HCM 6th Ctrl Delay			43.6									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

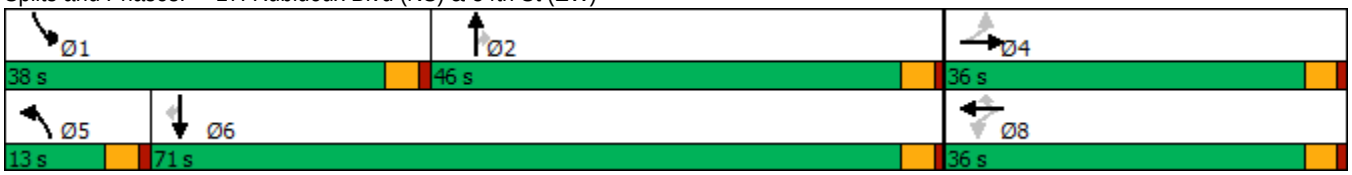


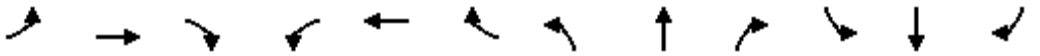
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	58	13	15	38	119	32	630	67	227	1021	159
Future Volume (vph)	105	58	13	15	38	119	32	630	67	227	1021	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.990				0.850			0.850			0.850
Flt Protected		0.971			0.986		0.950			0.950		
Satd. Flow (prot)	0	1773	0	0	1873	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.785			0.913		0.950			0.950		
Satd. Flow (perm)	0	1434	0	0	1735	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				124			82			68
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	109	60	14	16	40	124	33	656	70	236	1064	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	56	124	33	656	70	236	1064	166
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0		36.0	36.0	36.0	13.0	46.0	46.0	38.0	71.0	71.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	10.8%	38.3%	38.3%	31.7%	59.2%	59.2%
Maximum Green (s)	32.0	32.0		32.0	32.0	32.0	9.0	42.0	42.0	34.0	67.0	67.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		17.8			17.8	17.8	7.3	51.9	51.9	18.7	67.9	67.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.52	0.52	0.19	0.67	0.67
v/c Ratio		0.72			0.18	0.36	0.26	0.37	0.10	0.72	0.45	0.18
Control Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
LOS		E			D	A	D	B	A	D	B	A
Approach Delay		55.1			18.2			17.5			16.5	
Approach LOS		E			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 100.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	58	13	15	38	119	32	630	67	227	1021	159
Future Volume (veh/h)	105	58	13	15	38	119	32	630	67	227	1021	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	109	60	14	16	40	124	33	656	70	236	1064	166
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	178	83	17	104	234	306	64	1902	961	310	2384	1205
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.54	0.54	0.17	0.68	0.68
Sat Flow, veh/h	713	495	100	343	1393	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	183	0	0	56	0	124	33	656	70	236	1064	166
Grp Sat Flow(s),veh/h/ln	1308	0	0	1736	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	11.2	0.0	0.0	0.0	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Cycle Q Clear(g_c), s	13.7	0.0	0.0	2.5	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Prop In Lane	0.60		0.08	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	0	0	338	0	306	64	1902	961	310	2384	1205
V/C Ratio(X)	0.66	0.00	0.00	0.17	0.00	0.40	0.52	0.34	0.07	0.76	0.45	0.14
Avail Cap(c_a), veh/h	496	0	0	602	0	589	167	1902	961	637	2384	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	0.0	35.3	0.0	36.8	47.0	12.7	10.7	39.4	7.4	5.7
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.0	0.9	6.3	0.5	0.1	3.9	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	1.2	0.0	2.8	0.9	3.8	0.7	5.6	4.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	0.0	35.6	0.0	37.7	53.3	13.2	10.9	43.2	8.0	6.0
LnGrp LOS	D	A	A	D	A	D	D	B	B	D	A	A
Approach Vol, veh/h		183			180			759			1466	
Approach Delay, s/veh		43.1			37.0			14.7			13.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	57.9		20.6	7.4	71.0		20.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	34.0	42.0		32.0	9.0	67.0		32.0				
Max Q Clear Time (g_c+I1), s	16.0	14.4		15.7	5.7	17.9		10.0				
Green Ext Time (p_c), s	0.6	4.7		1.0	0.0	9.9		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	482	20	16	586	0	40
Future Volume (vph)	482	20	16	586	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	507	21	17	617	0	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	507	21	17	617	0	42
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	482	20	16	586	0	40
Future Vol, veh/h	482	20	16	586	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	507	21	17	617	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	528	0	-	254
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	920	-	0	752
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	920	-	-	752
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	752	-	-	920	-
HCM Lane V/C Ratio	0.056	-	-	0.018	-
HCM Control Delay (s)	10.1	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	513	9	8	579	23	27
Future Volume (vph)	513	9	8	579	23	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2983	1335	1504	3008	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	540	9	8	609	24	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	540	9	8	609	24	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.0%		ICU Level of Service A	
Analysis Period (min) 15			

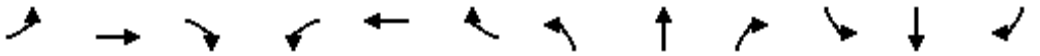
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	513	9	8	579	23	27
Future Vol, veh/h	513	9	8	579	23	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	540	9	8	609	24	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	549	0	861	270
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	321	-
Critical Hdwy	-	-	4.5	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.4	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	902	-	299	734
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	902	-	296	734
Mov Cap-2 Maneuver	-	-	-	-	296	-
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	714	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	296	734	-	-	902	-
HCM Lane V/C Ratio	0.082	0.039	-	-	0.009	-
HCM Control Delay (s)	18.2	10.1	-	-	9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-

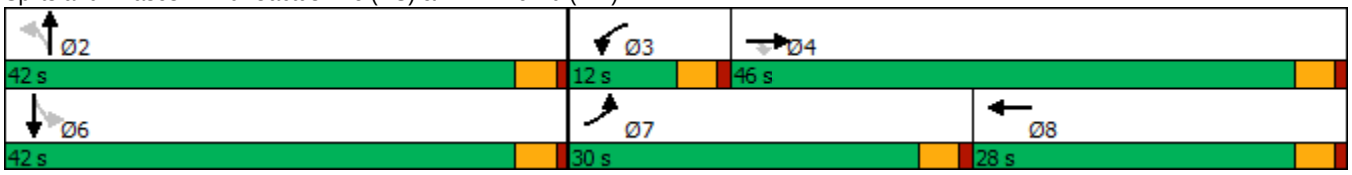


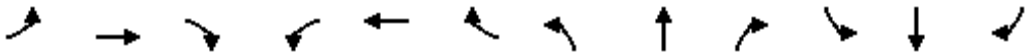
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	375	12	23	246	122	26	6	53	178	3	308
Future Volume (vph)	153	375	12	23	246	122	26	6	53	178	3	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.950			0.865			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2982	0	1805	1644	0	1556	1394	0
Flt Permitted	0.950			0.950			0.478			0.717		
Satd. Flow (perm)	1399	2798	1252	1570	2982	0	908	1644	0	1174	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55		81			56			328	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	163	399	13	24	262	130	28	6	56	189	3	328
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	399	13	24	392	0	28	62	0	189	331	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	30.0	46.0	46.0	12.0	28.0		42.0	42.0		42.0	42.0	
Total Split (%)	30.0%	46.0%	46.0%	12.0%	28.0%		42.0%	42.0%		42.0%	42.0%	
Maximum Green (s)	26.0	42.0	42.0	8.0	24.0		38.0	38.0		38.0	38.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	14.5	28.2	28.2	6.7	13.9		38.5	38.5		38.5	38.5	
Actuated g/C Ratio	0.18	0.36	0.36	0.08	0.18		0.49	0.49		0.49	0.49	
v/c Ratio	0.64	0.40	0.03	0.18	0.66		0.06	0.07		0.33	0.39	
Control Delay	42.2	21.0	0.1	40.2	30.1		14.7	5.5		17.0	3.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	42.2	21.0	0.1	40.2	30.1		14.7	5.5		17.0	3.6	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		26.6			30.6			8.4			8.5	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 79			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 50.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	375	12	23	246	122	26	6	53	178	3	308
Future Volume (veh/h)	153	375	12	23	246	122	26	6	53	178	3	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	163	399	13	24	262	130	28	6	56	189	3	328
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	199	774	407	44	367	182	540	97	909	712	8	872
Arrive On Green	0.14	0.28	0.28	0.03	0.17	0.17	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1470	2793	1470	1678	2187	1085	1066	184	1716	1192	15	1648
Grp Volume(v), veh/h	163	399	13	24	191	201	28	0	62	189	0	331
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1066	0	1900	1192	0	1663
Q Serve(g_s), s	7.7	8.6	0.5	1.0	8.1	8.1	1.1	0.0	1.1	6.6	0.0	8.4
Cycle Q Clear(g_c), s	7.7	8.6	0.5	1.0	8.1	8.1	9.5	0.0	1.1	7.7	0.0	8.4
Prop In Lane	1.00		1.00	1.00		0.65	1.00		0.90	1.00		0.99
Lane Grp Cap(c), veh/h	199	774	407	44	268	282	540	0	1006	712	0	880
V/C Ratio(X)	0.82	0.52	0.03	0.54	0.71	0.71	0.05	0.00	0.06	0.27	0.00	0.38
Avail Cap(c_a), veh/h	533	1635	860	187	533	561	540	0	1006	712	0	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	21.9	18.9	34.5	28.2	28.2	12.7	0.0	8.2	10.1	0.0	9.9
Incr Delay (d2), s/veh	8.0	0.5	0.0	9.8	3.5	3.3	0.2	0.0	0.1	0.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.7	0.2	0.5	3.2	3.4	0.3	0.0	0.4	1.7	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	22.4	19.0	44.3	31.7	31.6	12.9	0.0	8.3	11.0	0.0	11.1
LnGrp LOS	D	C	B	D	C	C	B	A	A	B	A	B
Approach Vol, veh/h		575			416			90			520	
Approach Delay, s/veh		26.8			32.4			9.8			11.1	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		42.0	5.9	23.9		42.0	13.7	16.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		38.0	8.0	42.0		38.0	26.0	24.0				
Max Q Clear Time (g_c+I1), s		11.5	3.0	10.6		10.4	9.7	10.1				
Green Ext Time (p_c), s		0.4	0.0	3.0		2.9	0.4	1.9				

Intersection Summary												
HCM 6th Ctrl Delay			22.2									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	603	2	2	391	0	10
Future Volume (vph)	603	2	2	391	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	635	2	2	412	0	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	635	2	2	412	0	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.7%		ICU Level of Service A	
Analysis Period (min) 15			

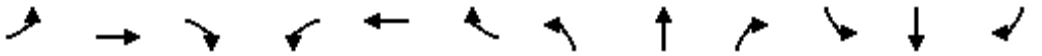
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	603	2	2	391	0	10
Future Vol, veh/h	603	2	2	391	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	635	2	2	412	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	637	0	-	318
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	860	-	0	684
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	860	-	-	684
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	684	-	-	860	-
HCM Lane V/C Ratio	0.015	-	-	0.002	-
HCM Control Delay (s)	10.3	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

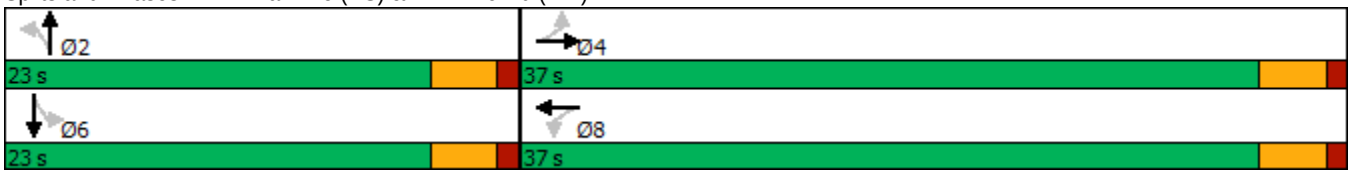


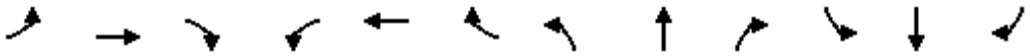
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	348	168	4	205	9	160	1	12	3	4	5
Future Volume (vph)	8	348	168	4	205	9	160	1	12	3	4	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.994			0.861			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1457	0	1583	1657	0	1517	1375	0	1805	1729	0
Flt Permitted	0.606			0.273			0.751			0.748		
Satd. Flow (perm)	929	1457	0	455	1657	0	1199	1375	0	1421	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			6			13			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	387	187	4	228	10	178	1	13	3	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	574	0	4	238	0	178	14	0	3	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	37.0	37.0		37.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	61.7%	61.7%		61.7%	61.7%		38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	22.6	22.6		22.6	22.6		19.4	19.4		19.4	19.4	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.39	0.39		0.39	0.39	
v/c Ratio	0.02	0.83		0.02	0.32		0.38	0.03		0.01	0.01	
Control Delay	6.6	21.7		6.8	9.1		17.1	8.2		13.3	10.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.6	21.7		6.8	9.1		17.1	8.2		13.3	10.2	
LOS	A	C		A	A		B	A		B	B	
Approach Delay		21.4			9.1			16.4			10.9	
Approach LOS		C			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 50.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

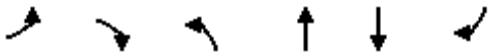




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	348	168	4	205	9	160	1	12	3	4	5
Future Volume (veh/h)	8	348	168	4	205	9	160	1	12	3	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	387	187	4	228	10	178	1	13	3	4	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	476	456	221	230	711	31	626	46	594	704	300	451
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	943	1041	503	759	1621	71	1216	116	1503	1422	760	1140
Grp Volume(v), veh/h	9	0	574	4	0	238	178	0	14	3	0	10
Grp Sat Flow(s),veh/h/ln	943	0	1544	759	0	1693	1216	0	1618	1422	0	1900
Q Serve(g_s), s	0.3	0.0	16.0	0.2	0.0	4.4	5.0	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	4.7	0.0	16.0	16.2	0.0	4.4	5.2	0.0	0.3	0.3	0.0	0.2
Prop In Lane	1.00		0.33	1.00		0.04	1.00		0.93	1.00		0.60
Lane Grp Cap(c), veh/h	476	0	677	230	0	742	626	0	640	704	0	751
V/C Ratio(X)	0.02	0.00	0.85	0.02	0.00	0.32	0.28	0.00	0.02	0.00	0.00	0.01
Avail Cap(c_a), veh/h	711	0	1060	419	0	1162	626	0	640	704	0	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	0.0	12.1	19.3	0.0	8.8	10.4	0.0	8.9	9.0	0.0	8.8
Incr Delay (d2), s/veh	0.0	0.0	3.9	0.0	0.0	0.2	1.1	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.3	0.0	0.0	1.1	1.3	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	0.0	16.0	19.3	0.0	9.1	11.5	0.0	8.9	9.0	0.0	8.9
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		583			242			192			13	
Approach Delay, s/veh		15.9			9.2			11.4			8.9	
Approach LOS		B			A			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		25.1		23.0		25.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		19.0		33.0		19.0		33.0				
Max Q Clear Time (g_c+I1), s		7.2		18.0		2.3		18.2				
Green Ext Time (p_c), s		0.5		3.1		0.0		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	49	6	163	172	4
Future Volume (vph)	10	49	6	163	172	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	11	52	6	172	181	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	52	6	172	181	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

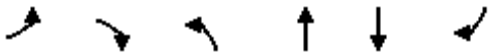
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	49	6	163	172	4
Future Vol, veh/h	10	49	6	163	172	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	11	52	6	172	181	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	365	181	185	0	-	0
Stage 1	181	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	639	867	1294	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	636	867	1294	-	-	-
Mov Cap-2 Maneuver	636	-	-	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1294	-	636	867	-	-
HCM Lane V/C Ratio	0.005	-	0.017	0.059	-	-
HCM Control Delay (s)	7.8	-	10.8	9.4	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

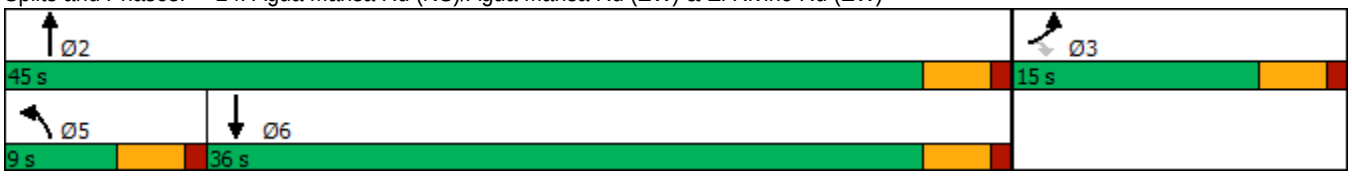


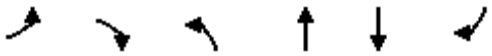
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	44	44	792	452	112
Future Volume (vph)	174	44	44	792	452	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.973	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1491	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1491	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45			32	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	179	45	45	816	466	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	45	45	816	581	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	15.0	15.0	9.0	45.0	36.0	
Total Split (%)	25.0%	25.0%	15.0%	75.0%	60.0%	
Maximum Green (s)	11.0	11.0	5.0	41.0	32.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	10.0	10.0	5.0	45.8	40.3	
Actuated g/C Ratio	0.16	0.16	0.08	0.75	0.66	
v/c Ratio	0.63	0.15	0.36	0.68	0.58	
Control Delay	33.7	9.0	34.7	9.4	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.7	9.0	34.7	9.4	11.6	
LOS	C	A	C	A	B	
Approach Delay	28.7			10.7	11.6	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	174	44	44	792	452	112
Future Volume (veh/h)	174	44	44	792	452	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	179	45	45	816	466	115
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	237	237	73	1180	759	187
Arrive On Green	0.13	0.13	0.04	0.73	0.61	0.61
Sat Flow, veh/h	1841	1841	1618	1618	1239	306
Grp Volume(v), veh/h	179	45	45	816	0	581
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	5.3	1.2	1.5	15.5	0.0	13.1
Cycle Q Clear(g_c), s	5.3	1.2	1.5	15.5	0.0	13.1
Prop In Lane	1.00	1.00	1.00			0.20
Lane Grp Cap(c), veh/h	237	237	73	1180	0	947
V/C Ratio(X)	0.75	0.19	0.62	0.69	0.00	0.61
Avail Cap(c_a), veh/h	360	360	144	1180	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	21.9	26.4	4.2	0.0	6.8
Incr Delay (d2), s/veh	4.8	0.4	8.3	3.3	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.5	0.7	2.2	0.0	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.5	22.3	34.7	7.5	0.0	9.7
LnGrp LOS	C	C	C	A	A	A
Approach Vol, veh/h	224			861	581	
Approach Delay, s/veh	27.2			8.9	9.7	
Approach LOS	C			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		45.0			6.5	38.5	11.2
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		41.0			5.0	32.0	11.0
Max Q Clear Time (g_c+I1), s		17.5			3.5	15.1	7.3
Green Ext Time (p_c), s		5.8			0.0	3.3	0.2

Intersection Summary		
HCM 6th Ctrl Delay		11.7
HCM 6th LOS		B

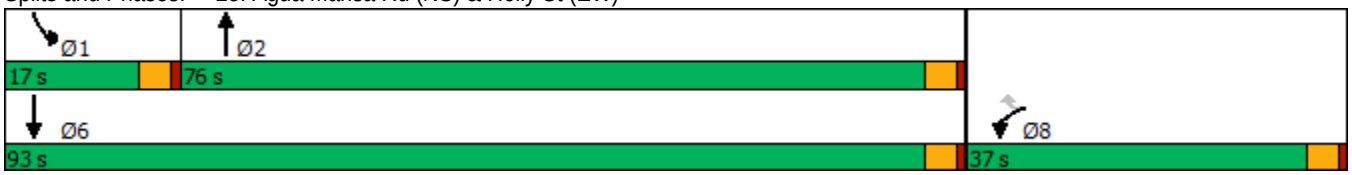


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	133	730	12	29	407
Future Volume (vph)	49	133	730	12	29	407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.997			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3025	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3025	0	1421	1496
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		139	2			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	51	139	760	13	30	424
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	139	773	0	30	424
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	37.0	37.0	76.0		17.0	93.0
Total Split (%)	28.5%	28.5%	58.5%		13.1%	71.5%
Maximum Green (s)	33.0	33.0	72.0		13.0	89.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	7.6	7.6	22.9		6.9	24.6
Actuated g/C Ratio	0.19	0.19	0.57		0.17	0.61
v/c Ratio	0.18	0.41	0.45		0.12	0.47
Control Delay	17.2	8.5	7.4		18.2	6.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	17.2	8.5	7.4		18.2	6.4
LOS	B	A	A		B	A
Approach Delay	10.9		7.4			7.2
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 40.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 35.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	49	133	730	12	29	407
Future Volume (veh/h)	49	133	730	12	29	407
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1663	1596	1618	1618	1500	1500
Adj Flow Rate, veh/h	51	139	760	12	30	424
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	16	16	19	19	27	27
Cap, veh/h	222	213	1316	21	55	894
Arrive On Green	0.13	0.13	0.42	0.42	0.04	0.60
Sat Flow, veh/h	1663	1596	3188	49	1500	1500
Grp Volume(v), veh/h	51	139	376	396	30	424
Grp Sat Flow(s),veh/h/ln	1663	1596	1537	1618	1500	1500
Q Serve(g_s), s	0.8	2.4	5.5	5.5	0.6	4.7
Cycle Q Clear(g_c), s	0.8	2.4	5.5	5.5	0.6	4.7
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	222	213	651	686	55	894
V/C Ratio(X)	0.23	0.65	0.58	0.58	0.54	0.47
Avail Cap(c_a), veh/h	1856	1782	3744	3941	659	4515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	12.2	6.5	6.5	14.0	3.4
Incr Delay (d2), s/veh	0.5	3.3	0.8	0.8	8.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.7	0.8	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.0	15.5	7.3	7.3	22.0	3.8
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	190		772			454
Approach Delay, s/veh	14.6		7.3			5.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.1	16.5			21.6	7.9
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	13.0	72.0			89.0	33.0
Max Q Clear Time (g_c+I1), s	2.6	7.5			6.7	4.4
Green Ext Time (p_c), s	0.0	5.0			2.7	0.5

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A



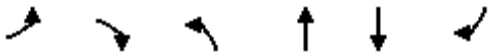
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	88	190	108	486	406	36
Future Volume (vph)	88	190	108	486	406	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		235				44
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	109	235	133	600	501	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	235	133	600	501	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	8.9	8.9	7.0	24.5	15.9	15.9
Actuated g/C Ratio	0.21	0.21	0.17	0.59	0.38	0.38
v/c Ratio	0.39	0.54	0.52	0.33	0.47	0.10
Control Delay	18.8	7.9	28.6	5.3	13.2	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	7.9	28.6	5.3	13.2	5.0
LOS	B	A	C	A	B	A
Approach Delay	11.4			9.5	12.5	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 41.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 32.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

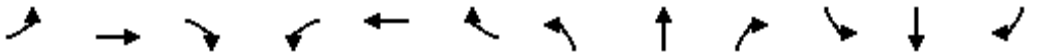




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	190	108	486	406	36
Future Volume (veh/h)	88	190	108	486	406	36
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	109	235	133	600	501	44
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	319	319	174	1603	806	407
Arrive On Green	0.23	0.23	0.11	0.52	0.29	0.29
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	109	235	133	600	501	44
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.2	5.2	2.6	3.8	5.1	0.8
Cycle Q Clear(g_c), s	2.2	5.2	2.6	3.8	5.1	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	319	319	174	1603	806	407
V/C Ratio(X)	0.34	0.74	0.77	0.37	0.62	0.11
Avail Cap(c_a), veh/h	753	753	347	2731	1525	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.4	11.6	14.2	4.6	10.0	8.5
Incr Delay (d2), s/veh	0.6	3.3	6.9	0.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	1.0	0.3	1.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	14.9	21.0	4.8	10.8	8.6
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	344			733	545	
Approach Delay, s/veh	13.7			7.7	10.6	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		21.0		11.6	7.5	13.5
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		5.8		7.2	4.6	7.1
Green Ext Time (p_c), s		3.8		0.8	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

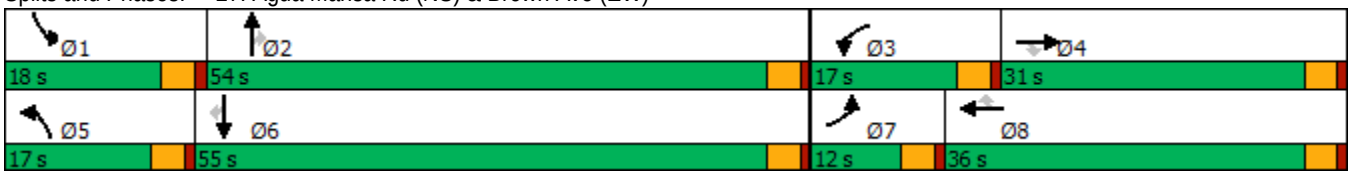


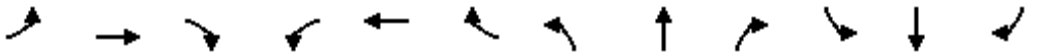
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	47	50	4	195	32	389	117	52	529	13
Future Volume (vph)	18	3	47	50	4	195	32	389	117	52	529	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			244			118			118
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	23	4	59	63	5	244	40	486	146	65	661	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	4	59	63	5	244	40	486	146	65	661	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	31.0	31.0	17.0	36.0	36.0	17.0	54.0	54.0	18.0	55.0	55.0
Total Split (%)	10.0%	25.8%	25.8%	14.2%	30.0%	30.0%	14.2%	45.0%	45.0%	15.0%	45.8%	45.8%
Maximum Green (s)	8.0	27.0	27.0	13.0	32.0	32.0	13.0	50.0	50.0	14.0	51.0	51.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.9	7.2	7.2	9.1	13.6	13.6	8.1	52.5	52.5	9.6	56.1	56.1
Actuated g/C Ratio	0.08	0.08	0.08	0.10	0.15	0.15	0.09	0.59	0.59	0.11	0.63	0.63
v/c Ratio	0.22	0.04	0.31	0.41	0.02	0.64	0.31	0.29	0.21	0.44	0.38	0.02
Control Delay	48.3	41.7	4.1	48.9	36.5	13.7	47.9	12.7	4.9	50.0	12.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	41.7	4.1	48.9	36.5	13.7	47.9	12.7	4.9	50.0	12.0	0.1
LOS	D	D	A	D	D	B	D	B	A	D	B	A
Approach Delay		17.7			21.2			13.1			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 89.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	3	47	50	4	195	32	389	117	52	529	13
Future Volume (veh/h)	18	3	47	50	4	195	32	389	117	52	529	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	22	4	59	62	5	244	40	486	146	65	661	16
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	36	226	217	104	320	308	67	1535	775	102	1532	774
Arrive On Green	0.03	0.16	0.16	0.06	0.20	0.20	0.04	0.53	0.53	0.07	0.56	0.56
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	22	4	59	62	5	244	40	486	146	65	661	16
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.4	0.2	3.6	3.5	0.2	14.1	2.4	8.9	4.9	4.1	13.1	0.5
Cycle Q Clear(g_c), s	1.4	0.2	3.6	3.5	0.2	14.1	2.4	8.9	4.9	4.1	13.1	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	226	217	104	320	308	67	1535	775	102	1532	774
V/C Ratio(X)	0.61	0.02	0.27	0.60	0.02	0.79	0.59	0.32	0.19	0.64	0.43	0.02
Avail Cap(c_a), veh/h	120	406	390	222	547	525	210	1535	775	215	1532	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	33.1	34.6	42.7	30.1	35.7	44.0	12.3	11.4	42.4	12.0	9.2
Incr Delay (d2), s/veh	15.9	0.0	0.7	5.4	0.0	4.6	8.0	0.5	0.5	6.4	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	1.2	1.5	0.1	5.6	1.0	2.6	1.6	1.6	3.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	33.2	35.2	48.1	30.1	40.3	52.0	12.8	11.9	48.7	12.9	9.2
LnGrp LOS	E	C	D	D	C	D	D	B	B	D	B	A
Approach Vol, veh/h		85			311			672			742	
Approach Delay, s/veh		41.8			41.7			15.0			15.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	54.0	10.1	19.0	8.2	56.5	6.4	22.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	50.0	13.0	27.0	13.0	51.0	8.0	32.0
Max Q Clear Time (g_c+I1), s	8.1	12.9	7.5	7.6	6.4	17.1	5.4	18.1
Green Ext Time (p_c), s	0.0	3.7	0.0	0.1	0.0	4.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C



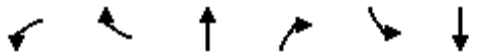
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	23	638	39	76	566
Future Volume (vph)	37	23	638	39	76	566
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.391	
Satd. Flow (perm)	1107	991	2983	1335	590	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		25		42		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	40	25	686	42	82	609
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	25	686	42	82	609
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	9.0	25.0	73.0	73.0	95.0	95.0
Total Split (%)	7.5%	20.8%	60.8%	60.8%	79.2%	79.2%
Maximum Green (s)	5.0	21.0	69.0	69.0	91.0	91.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	6.5	6.7	104.8	104.8	104.8	104.8
Actuated g/C Ratio	0.06	0.06	0.90	0.90	0.90	0.90
v/c Ratio	0.65	0.31	0.26	0.03	0.15	0.45
Control Delay	96.9	28.7	1.4	0.4	1.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.9	28.7	1.4	0.4	1.9	2.7
LOS	F	C	A	A	A	A
Approach Delay	70.7		1.3			2.6
Approach LOS	E		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

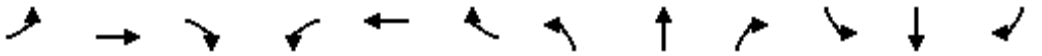




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	23	638	39	76	566
Future Volume (veh/h)	37	23	638	39	76	566
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	40	25	686	42	82	609
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	46	46	2641	1390	563	1325
Arrive On Green	0.05	0.05	0.88	0.88	0.88	0.88
Sat Flow, veh/h	966	966	3098	1589	589	1515
Grp Volume(v), veh/h	40	25	686	42	82	609
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	589	1515
Q Serve(g_s), s	4.3	2.6	3.8	0.4	2.7	8.7
Cycle Q Clear(g_c), s	4.3	2.6	3.8	0.4	6.5	8.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	2641	1390	563	1325
V/C Ratio(X)	0.86	0.54	0.26	0.03	0.15	0.46
Avail Cap(c_a), veh/h	46	46	2641	1390	563	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	48.4	1.1	0.8	1.6	1.4
Incr Delay (d2), s/veh	81.5	11.8	0.2	0.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.8	0.1	0.1	0.2	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	130.6	60.2	1.3	0.9	2.1	2.5
LnGrp LOS	F	E	A	A	A	A
Approach Vol, veh/h	65		728			691
Approach Delay, s/veh	103.5		1.3			2.5
Approach LOS	F		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		95.0			95.0	9.0
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		69.0			91.0	5.0
Max Q Clear Time (g_c+I1), s		5.8			10.7	6.3
Green Ext Time (p_c), s		5.1			5.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A



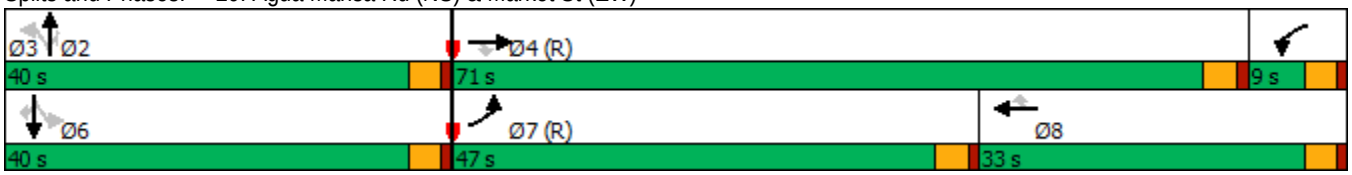
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	468	696	3	2	643	203	2	1	1	303	2	377
Future Volume (vph)	468	696	3	2	643	203	2	1	1	303	2	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.968		0.950		
Satd. Flow (prot)	1641	3282	1468	1656	3312	1482	0	1471	1292	1626	1712	1455
Flt Permitted	0.950			0.950				0.949		0.756		
Satd. Flow (perm)	1641	3282	1468	1656	3312	1482	0	1442	1292	1294	1712	1455
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45			81			82			401
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	498	740	3	2	684	216	2	1	1	322	2	401
Shared Lane Traffic (%)												
Lane Group Flow (vph)	498	740	3	2	684	216	0	3	1	322	2	401
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	

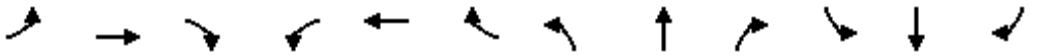
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	47.0	71.0	71.0	9.0	33.0	33.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	39.2%	59.2%	59.2%	7.5%	27.5%	27.5%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	43.0	67.0	67.0	5.0	29.0	29.0	36.0	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	43.0	73.3	73.3	5.0	28.1	28.1		36.9	36.9	36.9	36.9	36.9
Actuated g/C Ratio	0.36	0.61	0.61	0.04	0.23	0.23		0.31	0.31	0.31	0.31	0.31
v/c Ratio	0.85	0.37	0.00	0.03	0.88	0.53		0.01	0.00	0.81	0.00	0.55
Control Delay	60.5	22.0	0.0	56.0	58.2	29.5		29.7	0.0	56.1	29.5	6.3
Queue Delay	1.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	22.0	0.0	56.0	58.2	29.5		29.7	0.0	56.1	29.5	6.3
LOS	E	C	A	E	E	C		C	A	E	C	A
Approach Delay		37.8			51.3			22.3			28.5	
Approach LOS		D			D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 39.7 Intersection LOS: D
Intersection Capacity Utilization 77.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

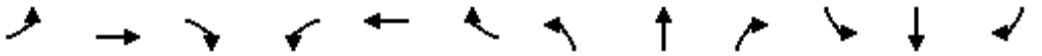




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	468	696	3	2	643	203	2	1	1	303	2	377
Future Volume (veh/h)	468	696	3	2	643	203	2	1	1	303	2	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	498	740	3	2	684	216	2	1	1	322	2	401
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	560	1858	978	74	941	495	230	103	459	431	521	521
Arrive On Green	0.64	1.00	1.00	0.04	0.28	0.28	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1752	3328	1752	1767	3357	1767	599	342	1530	1314	1737	1737
Grp Volume(v), veh/h	498	740	3	2	684	216	3	0	1	322	2	401
Grp Sat Flow(s),veh/h/ln	1752	1664	1752	1767	1678	1767	941	0	1530	1314	1737	1737
Q Serve(g_s), s	28.5	0.0	0.0	0.1	22.1	12.0	0.0	0.0	0.1	27.9	0.1	25.2
Cycle Q Clear(g_c), s	28.5	0.0	0.0	0.1	22.1	12.0	2.1	0.0	0.1	30.0	0.1	25.2
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	560	1858	978	74	941	495	332	0	459	431	521	521
V/C Ratio(X)	0.89	0.40	0.00	0.03	0.73	0.44	0.01	0.00	0.00	0.75	0.00	0.77
Avail Cap(c_a), veh/h	628	1858	978	74	941	495	332	0	459	431	521	521
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	19.9	0.0	0.0	55.2	39.0	35.4	29.5	0.0	29.4	40.9	29.4	38.2
Incr Delay (d2), s/veh	9.3	0.4	0.0	0.1	2.8	0.6	0.0	0.0	0.0	10.1	0.0	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.1	0.0	0.1	9.1	5.1	0.1	0.0	0.0	9.9	0.0	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	0.4	0.0	55.3	41.9	36.0	29.5	0.0	29.4	51.0	29.4	47.6
LnGrp LOS	C	A	A	E	D	D	C	A	C	D	C	D
Approach Vol, veh/h		1241			902			4			725	
Approach Delay, s/veh		11.9			40.5			29.5			49.1	
Approach LOS		B			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		40.0	9.0	71.0		40.0	42.4	37.6				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		36.0	5.0	67.0		36.0	43.0	29.0				
Max Q Clear Time (g_c+I1), s		4.1	4.1	4.0		32.0	32.5	26.1				
Green Ext Time (p_c), s		0.0	0.0	5.4		1.0	1.2	1.4				

Intersection Summary												
HCM 6th Ctrl Delay			30.3									
HCM 6th LOS			C									

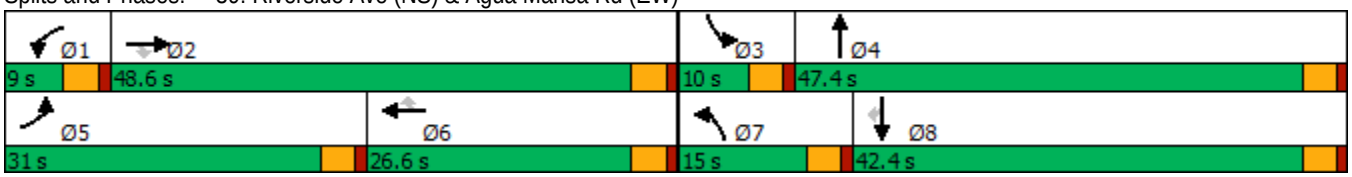


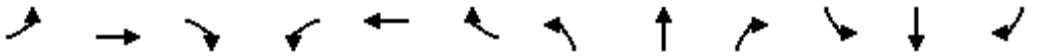
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	505	136	35	214	64	116	880	91	56	944	219
Future Volume (vph)	322	505	136	35	214	64	116	880	91	56	944	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			161		11				161
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	332	521	140	36	221	66	120	907	94	58	973	226
Shared Lane Traffic (%)												
Lane Group Flow (vph)	332	521	140	36	221	66	120	1001	0	58	973	226
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	31.0	48.6	48.6	9.0	26.6	26.6	15.0	47.4		10.0	42.4	42.4
Total Split (%)	27.0%	42.3%	42.3%	7.8%	23.1%	23.1%	13.0%	41.2%		8.7%	36.9%	36.9%
Maximum Green (s)	27.0	44.6	44.6	5.0	22.6	22.6	11.0	43.4		6.0	38.4	38.4
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	25.0	46.5	46.5	5.0	22.7	22.7	10.5	43.1		6.0	36.3	36.3
Actuated g/C Ratio	0.23	0.42	0.42	0.05	0.21	0.21	0.09	0.39		0.05	0.33	0.33
v/c Ratio	0.89	0.71	0.20	0.54	0.69	0.16	0.77	0.80		0.64	0.90	0.38
Control Delay	68.4	34.8	6.3	82.1	54.3	0.9	82.0	36.2		85.1	47.5	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	68.4	34.8	6.3	82.1	54.3	0.9	82.0	36.2		85.1	47.5	11.1
LOS	E	C	A	F	D	A	F	D		F	D	B
Approach Delay		42.0			46.5			41.1			42.7	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 110.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 42.3		Intersection LOS: D	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



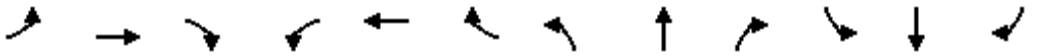


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	505	136	35	214	64	116	880	91	56	944	219
Future Volume (veh/h)	322	505	136	35	214	64	116	880	91	56	944	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	332	521	140	36	221	66	120	907	94	58	973	226
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	386	697	697	62	342	342	169	1141	118	94	1100	579
Arrive On Green	0.22	0.39	0.39	0.04	0.22	0.22	0.10	0.37	0.37	0.05	0.33	0.33
Sat Flow, veh/h	1767	1767	1767	1589	1589	1589	1737	3069	318	1767	3357	1767
Grp Volume(v), veh/h	332	521	140	36	221	66	120	488	513	58	973	226
Grp Sat Flow(s),veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	20.4	28.6	5.9	2.5	14.3	3.8	7.6	29.8	29.8	3.6	31.0	11.2
Cycle Q Clear(g_c), s	20.4	28.6	5.9	2.5	14.3	3.8	7.6	29.8	29.8	3.6	31.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	386	697	697	62	342	342	169	614	646	94	1100	579
V/C Ratio(X)	0.86	0.75	0.20	0.58	0.65	0.19	0.71	0.79	0.79	0.62	0.88	0.39
Avail Cap(c_a), veh/h	422	697	697	70	342	342	169	633	667	94	1140	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	29.4	22.5	53.4	40.5	36.3	49.5	31.7	31.7	52.4	36.0	29.3
Incr Delay (d2), s/veh	15.3	7.2	0.6	9.0	9.1	1.3	12.9	6.8	6.4	11.7	8.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	12.8	2.4	1.1	6.3	1.5	3.7	12.0	12.6	1.8	13.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	36.6	23.2	62.4	49.6	37.6	62.4	38.4	38.1	64.1	44.3	29.7
LnGrp LOS	E	D	C	E	D	D	E	D	D	E	D	C
Approach Vol, veh/h		993			323			1121			1257	
Approach Delay, s/veh		41.8			48.6			40.8			42.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	48.6	10.0	46.0	28.7	28.3	15.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	44.6	6.0	43.4	27.0	22.6	11.0	38.4
Max Q Clear Time (g_c+I1), s	6.5	32.6	7.6	33.8	24.4	18.3	11.6	35.0
Green Ext Time (p_c), s	0.0	2.7	0.0	3.8	0.3	0.5	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

YEAR 2035 WITH PROJECT – ALTERNATIVE 1

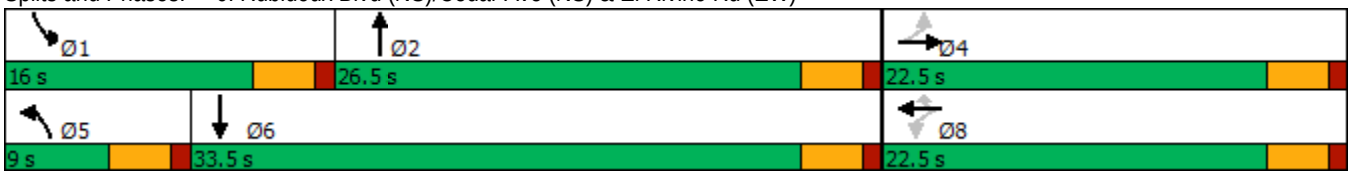


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	10	24	83	4	95	15	645	131	220	1136	8
Future Volume (vph)	21	10	24	83	4	95	15	645	131	220	1136	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941				0.850		0.975			0.999	
Flt Protected		0.981			0.954		0.950			0.950		
Satd. Flow (prot)	0	1609	0	0	1462	1302	1597	3115	0	1671	3339	0
Flt Permitted		0.865			0.696		0.950			0.950		
Satd. Flow (perm)	0	1419	0	0	1066	1302	1597	3115	0	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				151		40			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	21	10	24	83	4	95	15	645	131	220	1136	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	87	95	15	776	0	220	1144	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	26.5		16.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%	34.6%	13.8%	40.8%		24.6%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	5.0	22.5		12.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		9.7			9.7	9.7	5.0	25.7		11.0	39.9	
Actuated g/C Ratio		0.17			0.17	0.17	0.09	0.46		0.20	0.71	
v/c Ratio		0.21			0.48	0.27	0.11	0.54		0.67	0.48	
Control Delay		14.8			29.7	3.5	27.1	14.1		33.7	7.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		14.8			29.7	3.5	27.1	14.1		33.7	7.1	
LOS		B			C	A	C	B		C	A	
Approach Delay		14.8			16.0			14.4			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	10	24	83	4	95	15	645	131	220	1136	8
Future Volume (veh/h)	21	10	24	83	4	95	15	645	131	220	1136	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	21	10	24	83	4	95	15	645	131	220	1136	8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	147	76	97	307	11	216	32	1216	247	332	2095	15
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.02	0.44	0.44	0.19	0.61	0.61
Sat Flow, veh/h	360	542	698	1217	79	1544	1707	2767	562	1781	3450	24
Grp Volume(v), veh/h	55	0	0	87	0	95	15	378	398	220	557	587
Grp Sat Flow(s),veh/h/ln	1600	0	0	1296	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	2.9	0.4	8.7	8.7	5.9	9.9	9.9
Cycle Q Clear(g_c), s	2.7	0.0	0.0	2.6	0.0	2.9	0.4	8.7	8.7	5.9	9.9	9.9
Prop In Lane	0.38		0.44	0.95		1.00	1.00		0.33	1.00		0.01
Lane Grp Cap(c), veh/h	321	0	0	318	0	216	32	713	750	332	1028	1082
V/C Ratio(X)	0.17	0.00	0.00	0.27	0.00	0.44	0.47	0.53	0.53	0.66	0.54	0.54
Avail Cap(c_a), veh/h	656	0	0	573	0	558	167	713	750	418	1028	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	0.0	20.1	0.0	20.2	24.9	10.5	10.5	19.3	5.9	5.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.5	0.0	1.4	10.3	2.8	2.7	2.7	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.9	0.0	1.0	0.2	2.6	2.7	2.2	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	0.0	0.0	20.5	0.0	21.6	35.1	13.3	13.2	22.0	7.9	7.8
LnGrp LOS	B	A	A	C	A	C	D	B	B	C	A	A
Approach Vol, veh/h		55			182			791			1364	
Approach Delay, s/veh		19.8			21.1			13.6			10.2	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	26.5		11.1	5.0	35.1		11.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	22.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	9.9	12.7		4.7	4.4	13.9		6.9				
Green Ext Time (p_c), s	0.1	3.0		0.2	0.0	6.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.4	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	789	20	0	1243
Future Volume (vph)	0	2	789	20	0	1243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.996			
Flt Protected						
Satd. Flow (prot)	0	1644	3182	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3182	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	2	789	20	0	1243
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	809	0	0	1243
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	789	20	0	1243
Future Vol, veh/h	0	2	789	20	0	1243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	2	789	20	0	1243

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	405	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	601	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	601	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	601	-
HCM Lane V/C Ratio	-	-	0.003	-
HCM Control Delay (s)	-	-	11	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



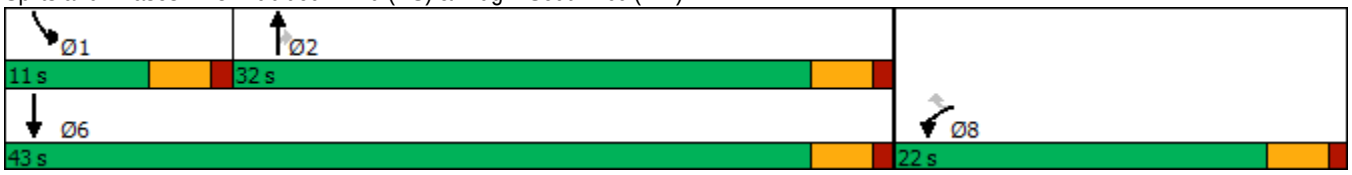
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	68	17	792	241	74	1169
Future Volume (vph)	68	17	792	241	74	1169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		17		241		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	68	17	792	241	74	1169
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	17	792	241	74	1169
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	33.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	18.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	7.5	7.5	39.7	39.7	6.7	46.4
Actuated g/C Ratio	0.13	0.13	0.70	0.70	0.12	0.82
v/c Ratio	0.28	0.07	0.35	0.22	0.38	0.43
Control Delay	24.3	11.4	7.3	2.0	28.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	11.4	7.3	2.0	28.6	3.4
LOS	C	B	A	A	C	A
Approach Delay	21.7		6.1			4.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 43.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



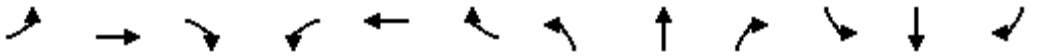
HCM 6th Signalized Intersection Summary
8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	68	17	792	241	74	1169
Future Volume (veh/h)	68	17	792	241	74	1169
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	68	17	792	241	74	1169
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	131	131	2042	1075	113	2593
Arrive On Green	0.07	0.07	0.63	0.63	0.06	0.77
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	68	17	792	241	74	1169
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	1.7	0.4	6.0	3.1	2.1	6.1
Cycle Q Clear(g_c), s	1.7	0.4	6.0	3.1	2.1	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	131	131	2042	1075	113	2593
V/C Ratio(X)	0.52	0.13	0.39	0.22	0.65	0.45
Avail Cap(c_a), veh/h	677	677	2042	1075	245	2593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	22.1	4.6	4.0	23.1	2.0
Incr Delay (d2), s/veh	3.2	0.4	0.6	0.5	6.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.9	0.5	0.9	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.8	22.5	5.1	4.5	29.4	2.6
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	85		1033			1243
Approach Delay, s/veh	25.2		5.0			4.2
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	35.8			43.0	7.5
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	18.0
Max Q Clear Time (g_c+I1), s	4.1	8.0			8.1	3.7
Green Ext Time (p_c), s	0.0	5.5			9.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.3
HCM 6th LOS	A

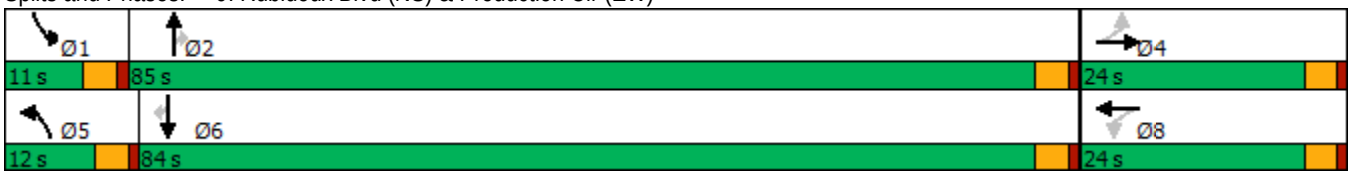


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1087	1	1	1213	11
Future Volume (vph)	5	0	15	1	0	0	19	1087	1	1	1213	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		178							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	5	0	15	1	0	0	19	1087	1	1	1213	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	15	0	1	0	0	19	1087	1	1	1213	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

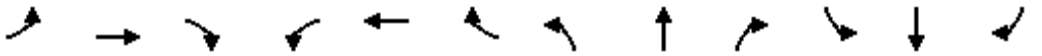
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		12.0	85.0	85.0	11.0	84.0	84.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		10.0%	70.8%	70.8%	9.2%	70.0%	70.0%
Maximum Green (s)	20.0	20.0		20.0	20.0		8.0	81.0	81.0	7.0	80.0	80.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.2	6.2		6.2			6.7	98.0	98.0	5.7	95.5	95.5
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.06	0.06		0.01			0.19	0.36	0.00	0.01	0.40	0.01
Control Delay	50.4	0.5		49.0			52.7	1.9	0.0	50.0	3.0	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	0.5		49.0			52.7	1.9	0.0	50.0	3.0	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.0			49.0			2.8			3.0	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 3.0		Intersection LOS: A	
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)



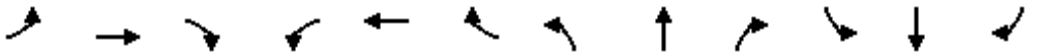
HCM 6th Signalized Intersection Summary
9: Rubidoux Blvd (NS) & Production Cir (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1087	1	1	1213	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1087	1	1	1213	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	5	0	15	1	0	0	19	1087	1	1	1213	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1421	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	5	0	15	1	0	0	19	1087	1	1	1213	11
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1421	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.5	0.0	1.1	0.1	0.0	0.0	1.1	7.1	0.0	0.1	9.1	0.1
Cycle Q Clear(g_c), s	0.5	0.0	1.1	1.1	0.0	0.0	1.1	7.1	0.0	0.1	9.1	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
V/C Ratio(X)	0.05	0.00	0.50	0.01	0.00	0.00	0.53	0.39	0.00	0.41	0.43	0.01
Avail Cap(c_a), veh/h	286	0	278	355	395	0	143	2786	1408	129	2793	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	0.0	46.5	47.0	0.0	0.0	46.6	1.6	1.1	48.0	2.1	1.4
Incr Delay (d2), s/veh	0.2	0.0	12.5	0.0	0.0	0.0	11.8	0.4	0.0	85.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.0	0.0	0.0	0.5	0.3	0.0	0.1	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	58.9	47.1	0.0	0.0	58.4	2.0	1.1	133.4	2.6	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		20			1			1107			1225	
Approach Delay, s/veh		55.8			47.1			3.0			2.7	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	85.9		6.1	6.0	84.0		6.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	81.0		20.0	8.0	80.0		20.0				
Max Q Clear Time (g_c+I1), s	2.1	9.1		3.1	3.1	11.1		3.1				
Green Ext Time (p_c), s	0.0	9.0		0.0	0.0	10.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		3.3	
HCM 6th LOS		A	

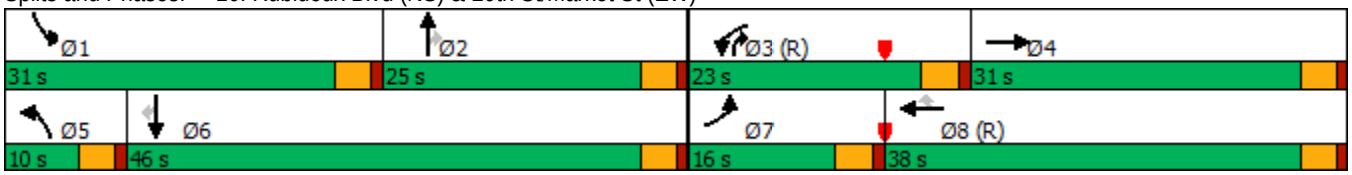


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	112	47	339	78	553	23	411	346	630	656	30
Future Volume (vph)	54	112	47	339	78	553	23	411	346	630	656	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.956				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				553			343			129
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	54	112	47	339	78	553	23	411	346	630	656	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	159	0	339	78	553	23	411	346	630	656	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

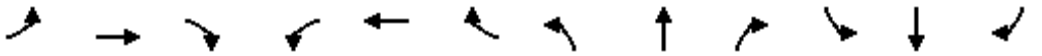
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	16.0	31.0		23.0	38.0	38.0	10.0	25.0	23.0	31.0	46.0	46.0
Total Split (%)	14.5%	28.2%		20.9%	34.5%	34.5%	9.1%	22.7%	20.9%	28.2%	41.8%	41.8%
Maximum Green (s)	12.0	27.0		19.0	34.0	34.0	6.0	21.0	19.0	27.0	42.0	42.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.8	27.0		19.0	38.1	38.1	5.9	23.5	46.5	24.5	48.0	48.0
Actuated g/C Ratio	0.09	0.25		0.17	0.35	0.35	0.05	0.21	0.42	0.22	0.44	0.44
v/c Ratio	0.57	0.57		0.64	0.14	0.65	0.28	0.62	0.44	0.84	0.43	0.04
Control Delay	70.3	41.6		52.8	49.8	27.1	58.7	44.6	4.4	51.6	23.5	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	41.6		52.8	49.8	27.7	58.7	44.6	4.4	51.6	23.5	0.1
LOS	E	D		D	D	C	E	D	A	D	C	A
Approach Delay		48.8			38.3			27.2			36.4	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 35.6		Intersection LOS: D	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



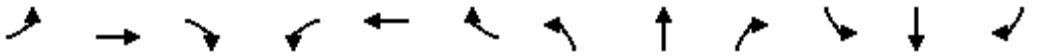
HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	112	47	339	78	553	23	411	346	630	656	30
Future Volume (veh/h)	54	112	47	339	78	553	23	411	346	630	656	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	54	112	47	339	78	553	23	411	346	630	656	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	69	166	70	586	625	625	42	610	618	764	1335	703
Arrive On Green	0.08	0.27	0.27	0.18	0.37	0.37	0.03	0.19	0.19	0.21	0.38	0.38
Sat Flow, veh/h	877	618	259	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	54	0	159	339	78	553	23	411	346	630	656	30
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	6.6	0.0	17.8	10.4	3.4	33.7	1.5	13.3	18.2	18.5	15.7	1.1
Cycle Q Clear(g_c), s	6.6	0.0	17.8	10.4	3.4	33.7	1.5	13.3	18.2	18.5	15.7	1.1
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	0	236	586	625	625	42	610	618	764	1335	703
V/C Ratio(X)	0.79	0.00	0.67	0.58	0.12	0.89	0.55	0.67	0.56	0.82	0.49	0.04
Avail Cap(c_a), veh/h	96	0	236	586	625	625	91	610	618	877	1335	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.66	0.66	0.66	0.84	0.84	0.84	0.92	0.92	0.92
Uniform Delay (d), s/veh	49.8	0.0	35.9	41.4	22.9	32.5	53.0	41.2	27.4	41.3	25.9	21.4
Incr Delay (d2), s/veh	24.3	0.0	7.3	0.9	0.3	11.9	9.0	4.9	3.1	5.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	4.1	4.1	1.3	15.0	0.7	5.3	7.4	8.3	6.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	0.0	43.2	42.3	23.2	44.4	62.0	46.1	30.5	46.6	27.1	21.5
LnGrp LOS	E	A	D	D	C	D	E	D	C	D	C	C
Approach Vol, veh/h		213			970			780			1316	
Approach Delay, s/veh		51.1			42.0			39.6			36.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.5	25.2	23.6	33.6	6.8	46.0	12.6	44.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	27.0	21.0	19.0	27.0	6.0	42.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	22.5	22.2	12.4	19.8	5.5	19.7	10.6	37.7
Green Ext Time (p_c), s	1.0	0.0	0.6	0.4	0.0	4.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

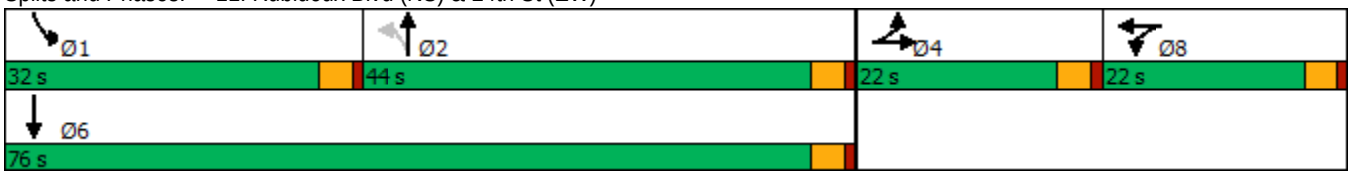


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	32	46	7	2	13	17	722	96	282	792	1
Future Volume (vph)	5	32	46	7	2	13	17	722	96	282	792	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.920			0.982				
Flt Protected		0.997			0.984		0.950			0.950		
Satd. Flow (prot)	0	1068	0	0	1433	0	1530	3004	0	1570	3139	0
Flt Permitted		0.997			0.984		0.352			0.950		
Satd. Flow (perm)	0	1068	0	0	1433	0	567	3004	0	1570	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			13			13				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	64%	64%	64%	20%	20%	20%	18%	18%	18%	15%	15%	15%
Adj. Flow (vph)	5	32	46	7	2	13	17	722	96	282	792	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	22	0	17	818	0	282	793	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	

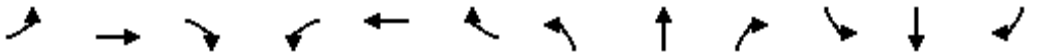
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		44.0	44.0		32.0	76.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		36.7%	36.7%		26.7%	63.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		40.0	40.0		28.0	72.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		9.4			6.5		48.2	48.2		21.0	74.3	
Actuated g/C Ratio		0.10			0.07		0.52	0.52		0.23	0.80	
v/c Ratio		0.56			0.20		0.06	0.52		0.79	0.32	
Control Delay		38.0			32.8		19.9	20.2		51.5	4.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		38.0			32.8		19.9	20.2		51.5	4.8	
LOS		D			C		B	C		D	A	
Approach Delay		38.0			32.8			20.2			17.0	
Approach LOS		D			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 53.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	32	46	7	2	13	17	722	96	282	792	1
Future Volume (veh/h)	5	32	46	7	2	13	17	722	96	282	792	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	952	952	913	1604	1604	1539	1633	1633	1568	1678	1678	1611
Adj Flow Rate, veh/h	5	32	46	7	2	13	17	722	96	282	792	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	64	64	64	20	20	20	18	18	18	15	15	15
Cap, veh/h	6	36	51	12	3	22	387	1467	195	319	2464	3
Arrive On Green	0.10	0.10	0.10	0.02	0.02	0.02	0.52	0.52	0.52	0.19	0.75	0.75
Sat Flow, veh/h	57	367	527	510	146	948	597	2811	374	1678	3267	4
Grp Volume(v), veh/h	83	0	0	22	0	0	17	399	419	282	386	407
Grp Sat Flow(s),veh/h/ln	952	0	0	1604	0	0	597	1552	1633	1678	1594	1678
Q Serve(g_s), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.8	15.8	15.6	7.5	7.5
Cycle Q Clear(g_c), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.8	15.8	15.6	7.5	7.5
Prop In Lane	0.06		0.55	0.32		0.59	1.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h	92	0	0	37	0	0	387	810	853	319	1202	1265
V/C Ratio(X)	0.90	0.00	0.00	0.59	0.00	0.00	0.04	0.49	0.49	0.88	0.32	0.32
Avail Cap(c_a), veh/h	179	0	0	302	0	0	387	810	853	492	1202	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	0.0	46.2	0.0	0.0	11.2	14.7	14.7	37.6	3.8	3.8
Incr Delay (d2), s/veh	24.3	0.0	0.0	14.1	0.0	0.0	0.2	2.1	2.0	11.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.7	0.0	0.0	0.2	5.2	5.5	7.0	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	0.0	0.0	60.3	0.0	0.0	11.4	16.8	16.7	49.2	4.5	4.5
LnGrp LOS	E	A	A	E	A	A	B	B	B	D	A	A
Approach Vol, veh/h		83			22			835			1075	
Approach Delay, s/veh		66.9			60.3			16.7			16.2	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	22.2	53.8		13.3		76.0		6.2				
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s	28.0	40.0		18.0		72.0		18.0				
Max Q Clear Time (g_c+I1), s	17.6	17.8		10.2		9.5		3.3				
Green Ext Time (p_c), s	0.5	4.8		0.2		4.9		0.0				

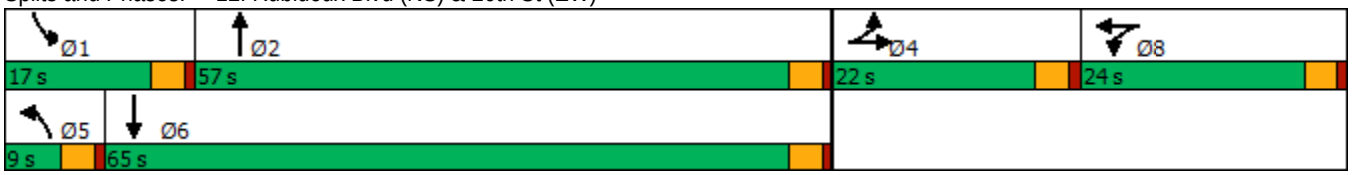
Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	29	3	17	9	768	97	63	799	0
Future Volume (vph)	0	0	3	29	3	17	9	768	97	63	799	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.953			0.983				
Flt Protected					0.971		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Flt Permitted					0.971		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		375			17			15				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	44%	44%	44%	18%	18%	18%	19%	19%	19%
Adj. Flow (vph)	0	0	3	29	3	17	9	768	97	63	799	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	49	0	9	865	0	63	799	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

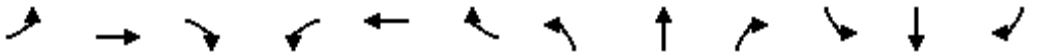
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	57.0		17.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	47.5%		14.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	53.0		13.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.5			8.0		5.0	62.5		9.1	71.8	
Actuated g/C Ratio		0.06			0.09		0.06	0.71		0.10	0.81	
v/c Ratio		0.01			0.39		0.10	0.41		0.41	0.32	
Control Delay		0.0			36.8		44.2	8.9		45.5	4.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			36.8		44.2	8.9		45.5	4.4	
LOS		A			D		D	A		D	A	
Approach Delay					36.8			9.2			7.4	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 88.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



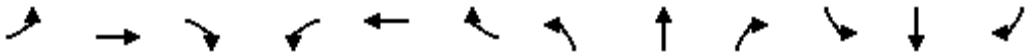
HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	29	3	17	9	768	97	63	799	0
Future Volume (veh/h)	0	0	3	29	3	17	9	768	97	63	799	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1248	1248	1248	1633	1633	1568	1618	1618	1554
Adj Flow Rate, veh/h	0	0	3	29	3	17	9	768	97	63	799	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	44	44	44	18	18	18	19	19	19
Cap, veh/h	0	0	8	32	3	19	18	2003	253	78	2292	0
Arrive On Green	0.00	0.00	0.00	0.04	0.04	0.04	0.01	0.71	0.71	0.05	0.75	0.00
Sat Flow, veh/h	0	0	1900	739	76	433	1633	2828	357	1618	3156	0
Grp Volume(v), veh/h	0	0	3	49	0	0	9	421	444	63	799	0
Grp Sat Flow(s),veh/h/ln	0	0	1900	1248	0	0	1633	1552	1633	1618	1537	0
Q Serve(g_s), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.9	8.9	3.2	7.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.9	8.9	3.2	7.3	0.0
Prop In Lane	0.00		1.00	0.59		0.35	1.00		0.22	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	8	55	0	0	18	1099	1157	78	2292	0
V/C Ratio(X)	0.00	0.00	0.39	0.90	0.00	0.00	0.49	0.38	0.38	0.80	0.35	0.00
Avail Cap(c_a), veh/h	0	0	418	305	0	0	100	1099	1157	257	2292	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	40.7	38.9	0.0	0.0	40.2	4.8	4.8	38.6	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	29.6	35.2	0.0	0.0	18.5	1.0	1.0	17.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.5	0.0	0.0	0.3	1.9	2.0	1.5	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	70.2	74.1	0.0	0.0	58.8	5.8	5.7	55.6	4.0	0.0
LnGrp LOS	A	A	E	E	A	A	E	A	A	E	A	A
Approach Vol, veh/h		3			49			874			862	
Approach Delay, s/veh		70.2			74.1			6.3			7.8	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	62.0		4.3	4.9	65.0		7.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	53.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	5.2	10.9		2.1	2.4	9.3		5.2				
Green Ext Time (p_c), s	0.1	5.5		0.0	0.0	5.8		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		9.0	
HCM 6th LOS		A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	118	111	81	58	7	168	837	65	7	802	49
Future Volume (vph)	60	118	111	81	58	7	168	837	65	7	802	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.927			0.984			0.989			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1587	0	1583	1640	0	1543	3052	0	1543	3058	0
Flt Permitted	0.715			0.467			0.950			0.950		
Satd. Flow (perm)	1224	1587	0	778	1640	0	1543	3052	0	1543	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			7			16			11	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	11%	11%	14%	14%	14%	17%	17%	17%	17%	17%	17%
Adj. Flow (vph)	60	118	111	81	58	7	168	837	65	7	802	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	229	0	81	65	0	168	902	0	7	851	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

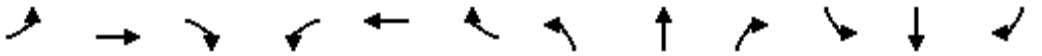
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		13.0	28.5		9.0	24.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		21.7%	47.5%		15.0%	40.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		9.0	24.5		5.0	20.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	10.5	10.5		10.5	10.5		8.7	31.9		5.0	20.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.17	0.61		0.10	0.40	
v/c Ratio	0.24	0.60		0.52	0.19		0.65	0.48		0.05	0.69	
Control Delay	19.4	18.7		30.5	16.5		36.8	8.3		24.4	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.4	18.7		30.5	16.5		36.8	8.3		24.4	18.0	
LOS	B	B		C	B		D	A		C	B	
Approach Delay		18.9			24.3			12.8			18.0	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 52			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



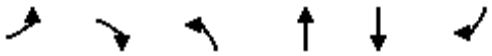
HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	118	111	81	58	7	168	837	65	7	802	49
Future Volume (veh/h)	60	118	111	81	58	7	168	837	65	7	802	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1668	1693	1693	1625	1648	1648	1648	1648	1648	1648
Adj Flow Rate, veh/h	60	118	111	81	58	7	168	837	65	7	802	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	11	11	11	14	14	14	17	17	17	17	17	17
Cap, veh/h	373	234	220	248	396	48	256	1532	119	15	1114	68
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.51	0.51	0.01	0.37	0.37
Sat Flow, veh/h	1241	895	842	1042	1510	182	1648	2982	232	1648	3029	185
Grp Volume(v), veh/h	60	0	229	81	0	65	168	439	463	7	415	436
Grp Sat Flow(s),veh/h/ln	1241	0	1737	1042	0	1693	1648	1566	1648	1648	1566	1648
Q Serve(g_s), s	2.3	0.0	6.2	4.2	0.0	1.6	5.3	10.6	10.6	0.2	12.7	12.7
Cycle Q Clear(g_c), s	5.9	0.0	6.2	12.4	0.0	1.6	5.3	10.6	10.6	0.2	12.7	12.7
Prop In Lane	1.00		0.48	1.00		0.11	1.00		0.14	1.00		0.11
Lane Grp Cap(c), veh/h	373	0	455	248	0	443	256	804	847	15	576	606
V/C Ratio(X)	0.16	0.00	0.50	0.33	0.00	0.15	0.66	0.55	0.55	0.46	0.72	0.72
Avail Cap(c_a), veh/h	460	0	576	321	0	562	266	804	847	148	576	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	17.5	23.7	0.0	15.8	22.2	9.2	9.2	27.5	15.2	15.2
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.8	0.0	0.2	5.5	2.7	2.5	20.2	7.6	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.4	1.0	0.0	0.6	2.1	2.9	3.0	0.2	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	18.4	24.5	0.0	15.9	27.6	11.8	11.7	47.7	22.8	22.4
LnGrp LOS	B	A	B	C	A	B	C	B	B	D	C	C
Approach Vol, veh/h		289			146			1070			858	
Approach Delay, s/veh		18.5			20.7			14.3			22.8	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	32.6		18.6	12.7	24.5		18.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	9.0	20.5		18.5				
Max Q Clear Time (g_c+I1), s	4.2	14.6		10.2	9.3	16.7		14.4				
Green Ext Time (p_c), s	0.0	3.6		0.9	0.0	1.7		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	195	134	1076	952	35
Future Volume (vph)	0	195	134	1076	952	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1344	1556	3112	3139	1404
Flt Permitted			0.950			
Satd. Flow (perm)	0	1344	1556	3112	3139	1404
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	16%	16%	15%	15%
Adj. Flow (vph)	0	195	134	1076	952	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	195	134	1076	952	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

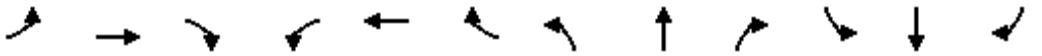
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	195	134	1076	952	35
Future Vol, veh/h	0	195	134	1076	952	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	16	16	15	15
Mvmt Flow	0	195	134	1076	952	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	476	987	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	4.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	2.36	-	-	-
Pot Cap-1 Maneuver	0	525	617	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	525	617	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	617	-	525	-	-
HCM Lane V/C Ratio	0.217	-	0.371	-	-
HCM Control Delay (s)	12.4	-	15.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	1.7	-	-

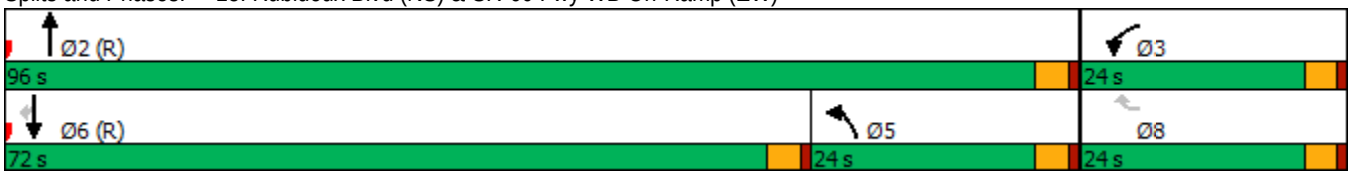


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Future Volume (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						240						578
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	12%	12%	12%
Adj. Flow (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

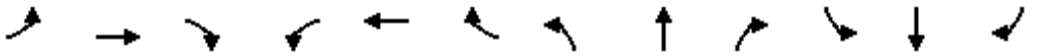
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				24.0		24.0	24.0	96.0			72.0	72.0
Total Split (%)				20.0%		20.0%	20.0%	80.0%			60.0%	60.0%
Maximum Green (s)				20.0		20.0	20.0	92.0			68.0	68.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				17.5		17.5	20.0	94.5			70.5	70.5
Actuated g/C Ratio				0.15		0.15	0.17	0.79			0.59	0.59
v/c Ratio				0.74		0.57	0.68	0.35			0.27	0.68
Control Delay				58.0		12.1	43.9	3.1			12.9	7.0
Queue Delay				0.0		0.0	0.0	0.3			0.0	0.0
Total Delay				58.0		12.1	43.9	3.4			12.9	7.0
LOS				E		B	D	A			B	A
Approach Delay					39.6			14.9			9.4	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



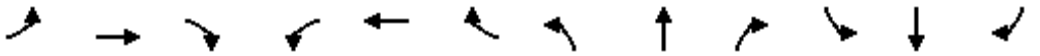
HCM 6th Signalized Intersection Summary
15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	377	0	251	352	889	0	0	509	738
Future Volume (veh/h)	0	0	0	377	0	251	352	889	0	0	509	738
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1722	1722
Adj Flow Rate, veh/h				377	0	251	352	889	0	0	509	738
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	12	12
Cap, veh/h				557	0	287	609	2560	0	0	1854	976
Arrive On Green				0.15	0.00	0.15	0.06	0.26	0.00	0.00	0.57	0.57
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3358	1722
Grp Volume(v), veh/h				377	0	251	352	889	0	0	509	738
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1636	1722
Q Serve(g_s), s				11.6	0.0	15.5	12.3	26.6	0.0	0.0	9.6	39.0
Cycle Q Clear(g_c), s				11.6	0.0	15.5	12.3	26.6	0.0	0.0	9.6	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				557	0	287	609	2560	0	0	1854	976
V/C Ratio(X)				0.68	0.00	0.87	0.58	0.35	0.00	0.00	0.27	0.76
Avail Cap(c_a), veh/h				614	0	317	609	2560	0	0	1854	976
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.2	0.0	49.8	51.9	19.5	0.0	0.0	13.3	19.7
Incr Delay (d2), s/veh				2.6	0.0	21.4	1.2	0.3	0.0	0.0	0.4	5.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	9.1	5.6	11.7	0.0	0.0	3.4	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.8	0.0	71.2	53.1	19.9	0.0	0.0	13.7	25.2
LnGrp LOS				D	A	E	D	B	A	A	B	C
Approach Vol, veh/h					628			1241			1247	
Approach Delay, s/veh					59.0			29.3			20.5	
Approach LOS					E			C			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		97.9			25.9	72.0		22.1				
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0				
Max Green Setting (Gmax), s		92.0			20.0	68.0		20.0				
Max Q Clear Time (g_c+I1), s		28.6			14.3	41.0		17.5				
Green Ext Time (p_c), s		7.3			0.6	6.4		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			31.8									
HCM 6th LOS			C									

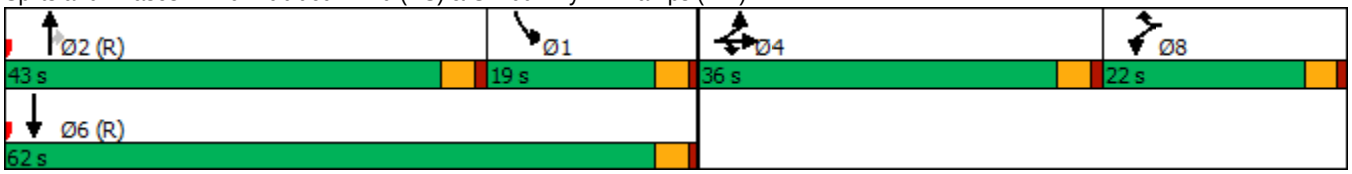


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	452	37	357	12	0	3	0	601	665	195	684	0
Future Volume (vph)	452	37	357	12	0	3	0	601	665	195	684	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1478	1492	1207	1805	0	1615	0	3471	1553	1703	3406	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1478	1492	1207	1805	0	1615	0	3471	1553	1703	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203			82			665			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	16%	0%	0%	0%	4%	4%	4%	6%	6%	6%
Adj. Flow (vph)	452	37	357	12	0	3	0	601	665	195	684	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	244	245	357	12	0	3	0	601	665	195	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

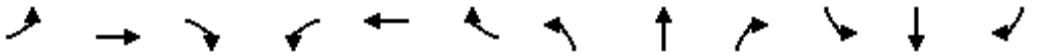
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	36.0	36.0	36.0	22.0		22.0		43.0	43.0	19.0	62.0	
Total Split (%)	30.0%	30.0%	30.0%	18.3%		18.3%		35.8%	35.8%	15.8%	51.7%	
Maximum Green (s)	32.0	32.0	32.0	18.0		18.0		39.0	39.0	15.0	58.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	26.4	26.4	26.4	6.4		6.4		62.1	62.1	15.0	81.1	
Actuated g/C Ratio	0.22	0.22	0.22	0.05		0.05		0.52	0.52	0.12	0.68	
v/c Ratio	0.75	0.75	0.84	0.12		0.02		0.33	0.59	0.92	0.30	
Control Delay	57.9	57.5	36.8	56.4		0.3		19.5	4.2	76.7	5.7	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.4	
Total Delay	57.9	57.5	36.8	56.4		0.3		19.5	4.2	76.7	6.1	
LOS	E	E	D	E		A		B	A	E	A	
Approach Delay		48.9			45.2			11.5			21.8	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 56 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



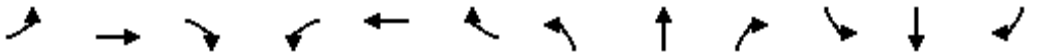
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	37	357	12	0	3	0	601	665	195	684	0
Future Volume (veh/h)	452	37	357	12	0	3	0	601	665	195	684	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1596	1900	0	1900	0	1841	1841	1811	1811	0
Adj Flow Rate, veh/h	478	0	357	12	0	3	0	601	665	195	684	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	16	0	0	0	0	4	4	6	6	0
Cap, veh/h	847	0	406	0	0	0	0	1137	598	580	2335	0
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.32	0.32	0.64	1.00	0.00
Sat Flow, veh/h	3326	0	1596		0		0	3589	1841	1811	3532	0
Grp Volume(v), veh/h	478	0	357		0.0		0	601	665	195	684	0
Grp Sat Flow(s),veh/h/ln	1663	0	1596				0	1749	1841	1811	1721	0
Q Serve(g_s), s	15.0	0.0	25.8				0.0	16.8	39.0	5.9	0.0	0.0
Cycle Q Clear(g_c), s	15.0	0.0	25.8				0.0	16.8	39.0	5.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	847	0	406				0	1137	598	580	2335	0
V/C Ratio(X)	0.56	0.00	0.88				0.00	0.53	1.11	0.34	0.29	0.00
Avail Cap(c_a), veh/h	887	0	426				0	1137	598	580	2335	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.88	0.88	0.00
Uniform Delay (d), s/veh	38.9	0.0	42.9				0.0	33.0	40.5	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	18.0				0.0	1.6	69.3	0.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	12.1				0.0	7.2	28.5	2.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.0	60.9				0.0	34.6	109.8	16.0	0.3	0.0
LnGrp LOS	D	A	E				A	C	F	B	A	A
Approach Vol, veh/h		835						1266			879	
Approach Delay, s/veh		48.8						74.1			3.8	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	42.4	43.0		34.6		85.4						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	15.0	39.0		32.0		58.0						
Max Q Clear Time (g_c+I1), s	9.9	41.0		29.8		4.0						
Green Ext Time (p_c), s	0.2	0.0		0.8		5.1						

Intersection Summary			
HCM 6th Ctrl Delay			46.3
HCM 6th LOS			D

Notes

User approved volume balancing among the lanes for turning movement.

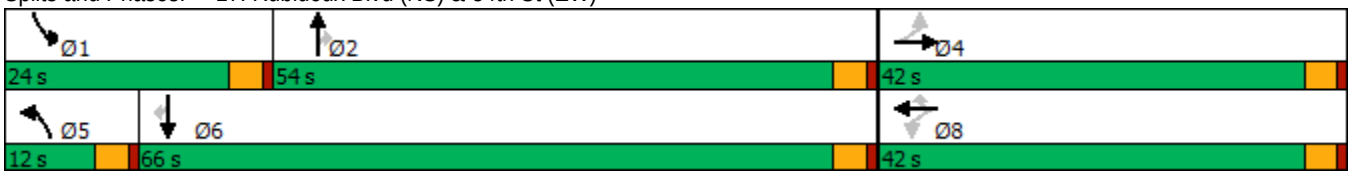


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	46	21	12	22	190	28	881	80	124	683	79
Future Volume (vph)	164	46	21	12	22	190	28	881	80	124	683	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.988				0.850			0.850			0.850
Flt Protected		0.966			0.983		0.950			0.950		
Satd. Flow (prot)	0	1727	0	0	1868	1400	1719	3438	1333	1703	3406	1320
Flt Permitted		0.768			0.906		0.950			0.950		
Satd. Flow (perm)	0	1373	0	0	1721	1400	1719	3438	1333	1703	3406	1320
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				190			82			46
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	5%	5%	5%	6%	6%	6%
Adj. Flow (vph)	164	46	21	12	22	190	28	881	80	124	683	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	34	190	28	881	80	124	683	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

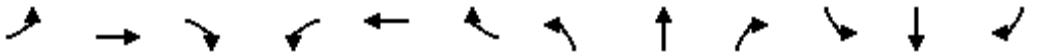
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	42.0	42.0		42.0	42.0	42.0	12.0	54.0	54.0	24.0	66.0	66.0
Total Split (%)	35.0%	35.0%		35.0%	35.0%	35.0%	10.0%	45.0%	45.0%	20.0%	55.0%	55.0%
Maximum Green (s)	38.0	38.0		38.0	38.0	38.0	8.0	50.0	50.0	20.0	62.0	62.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		21.6			21.6	21.6	6.9	53.3	53.3	12.6	63.4	63.4
Actuated g/C Ratio		0.22			0.22	0.22	0.07	0.54	0.54	0.13	0.64	0.64
v/c Ratio		0.77			0.09	0.42	0.24	0.48	0.11	0.58	0.31	0.09
Control Delay		53.6			31.8	7.7	53.0	17.4	4.1	53.8	10.7	5.9
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		53.6			31.8	7.7	53.0	17.4	4.1	53.8	10.7	5.9
LOS		D			C	A	D	B	A	D	B	A
Approach Delay		53.6			11.4			17.3			16.3	
Approach LOS		D			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 99.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 20.0		Intersection LOS: B	
Intersection Capacity Utilization 60.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)



HCM 6th Signalized Intersection Summary
17: Rubidoux Blvd (NS) & 34th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	46	21	12	22	190	28	881	80	124	683	79
Future Volume (veh/h)	164	46	21	12	22	190	28	881	80	124	683	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1824	1826	1826	1753	1811	1811	1739
Adj Flow Rate, veh/h	164	46	21	12	22	190	28	881	80	124	683	79
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	5	5	5	0	0	0	5	5	5	6	6	6
Cap, veh/h	246	58	24	159	270	406	54	1914	967	189	2155	1089
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.55	0.55	0.10	0.63	0.63
Sat Flow, veh/h	827	262	109	491	1213	1824	1826	3469	1753	1811	3441	1739
Grp Volume(v), veh/h	231	0	0	34	0	190	28	881	80	124	683	79
Grp Sat Flow(s),veh/h/ln	1198	0	0	1703	0	1824	1826	1735	1753	1811	1721	1739
Q Serve(g_s), s	16.7	0.0	0.0	0.0	0.0	8.9	1.5	15.1	2.1	6.5	9.2	1.8
Cycle Q Clear(g_c), s	18.7	0.0	0.0	1.4	0.0	8.9	1.5	15.1	2.1	6.5	9.2	1.8
Prop In Lane	0.71		0.09	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	0	0	429	0	406	54	1914	967	189	2155	1089
V/C Ratio(X)	0.70	0.00	0.00	0.08	0.00	0.47	0.51	0.46	0.08	0.66	0.32	0.07
Avail Cap(c_a), veh/h	535	0	0	697	0	700	148	1914	967	366	2155	1089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	0.0	0.0	30.4	0.0	33.4	47.3	13.3	10.4	42.6	8.6	7.2
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.0	0.8	7.3	0.8	0.2	3.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	0.0	0.7	0.0	4.1	0.8	5.5	0.8	3.0	3.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	0.0	0.0	30.5	0.0	34.2	54.6	14.1	10.6	46.5	9.0	7.4
LnGrp LOS	D	A	A	C	A	C	D	B	B	D	A	A
Approach Vol, veh/h		231			224			989			886	
Approach Delay, s/veh		40.5			33.7			15.0			14.1	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	58.6		26.1	7.0	66.0		26.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	50.0		38.0	8.0	62.0		38.0				
Max Q Clear Time (g_c+I1), s	10.5	19.1		20.7	5.5	13.2		12.9				
Green Ext Time (p_c), s	0.2	6.9		1.4	0.0	5.3		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		19.0	
HCM 6th LOS		B	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	349	12	35	183	0	5
Future Volume (vph)	349	12	35	183	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	349	12	35	183	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	349	12	35	183	0	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	349	12	35	183	0	5
Future Vol, veh/h	349	12	35	183	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	349	12	35	183	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	361	0	-	175
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	1051	-	0	844
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1051	-	-	844
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	1051	-
HCM Lane V/C Ratio	0.006	-	-	0.033	-
HCM Control Delay (s)	9.3	-	-	8.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	337	17	14	211	7	10
Future Volume (vph)	337	17	14	211	7	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3282	1468	1456	2911	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	337	17	14	211	7	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	337	17	14	211	7	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

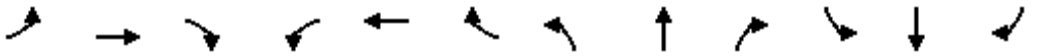
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	337	17	14	211	7	10
Future Vol, veh/h	337	17	14	211	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	337	17	14	211	7	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	354	0	471	169
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	134	-
Critical Hdwy	-	-	4.58	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.44	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1058	-	527	852
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1058	-	520	852
Mov Cap-2 Maneuver	-	-	-	-	520	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	884	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	520	852	-	-	1058	-
HCM Lane V/C Ratio	0.013	0.012	-	-	0.013	-
HCM Control Delay (s)	12	9.3	-	-	8.4	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

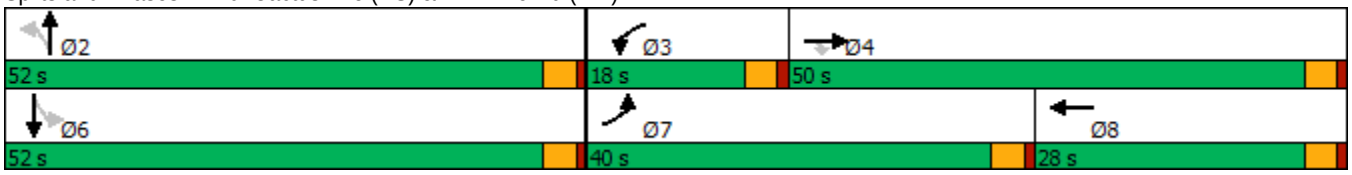


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	127	20	47	126	114	6	3	15	207	6	81
Future Volume (vph)	204	127	20	47	126	114	6	3	15	207	6	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.929			0.875			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2795	0	1805	1662	0	1626	1472	0
Flt Permitted	0.950			0.950			0.701			0.746		
Satd. Flow (perm)	1583	3167	1417	1504	2795	0	1332	1662	0	1277	1472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		114			15			81	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	204	127	20	47	126	114	6	3	15	207	6	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	204	127	20	47	240	0	6	18	0	207	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

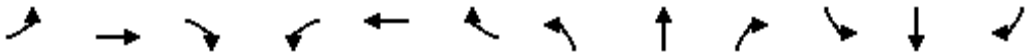
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	40.0	50.0	50.0	18.0	28.0		52.0	52.0		52.0	52.0	
Total Split (%)	33.3%	41.7%	41.7%	15.0%	23.3%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	36.0	46.0	46.0	14.0	24.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.3	22.1	22.1	8.2	9.5		48.4	48.4		48.4	48.4	
Actuated g/C Ratio	0.19	0.26	0.26	0.10	0.11		0.56	0.56		0.56	0.56	
v/c Ratio	0.68	0.16	0.05	0.33	0.59		0.01	0.02		0.29	0.10	
Control Delay	45.0	27.0	2.5	44.6	25.7		11.5	6.4		13.1	3.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	45.0	27.0	2.5	44.6	25.7		11.5	6.4		13.1	3.7	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		36.1			28.8			7.7			10.3	
Approach LOS		D			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 86.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 25.3		Intersection LOS: C	
Intersection Capacity Utilization 46.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	127	20	47	126	114	6	3	15	207	6	81
Future Volume (veh/h)	204	127	20	47	126	114	6	3	15	207	6	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	204	127	20	47	126	114	6	3	15	207	6	81
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	249	705	371	65	185	167	849	188	938	851	71	958
Arrive On Green	0.15	0.22	0.22	0.04	0.11	0.11	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1693	3216	1693	1604	1642	1485	1331	317	1583	1295	120	1617
Grp Volume(v), veh/h	204	127	20	47	117	123	6	0	18	207	0	87
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1331	0	1900	1295	0	1737
Q Serve(g_s), s	9.5	2.6	0.8	2.3	6.0	6.0	0.2	0.0	0.3	6.3	0.0	1.7
Cycle Q Clear(g_c), s	9.5	2.6	0.8	2.3	6.0	6.0	1.9	0.0	0.3	6.7	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.93	1.00		0.83	1.00		0.93
Lane Grp Cap(c), veh/h	249	705	371	65	172	181	849	0	1125	851	0	1029
V/C Ratio(X)	0.82	0.18	0.05	0.73	0.68	0.68	0.01	0.00	0.02	0.24	0.00	0.08
Avail Cap(c_a), veh/h	752	1825	961	277	451	475	849	0	1125	851	0	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	25.7	25.0	38.4	34.6	34.6	7.5	0.0	6.8	8.2	0.0	7.1
Incr Delay (d2), s/veh	6.6	0.1	0.1	14.4	4.7	4.5	0.0	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.0	0.3	1.2	2.4	2.5	0.0	0.0	0.1	1.7	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	25.8	25.1	52.8	39.2	39.0	7.5	0.0	6.8	8.8	0.0	7.3
LnGrp LOS	D	C	C	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		351			287			24			294	
Approach Delay, s/veh		34.1			41.4			7.0			8.4	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		52.0	7.3	21.8		52.0	15.9	13.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		48.0	14.0	46.0		48.0	36.0	24.0				
Max Q Clear Time (g_c+I1), s		3.9	4.3	4.6		8.7	11.5	8.0				
Green Ext Time (p_c), s		0.1	0.0	0.9		1.2	0.5	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			27.7									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	345	4	5	286	0	3
Future Volume (vph)	345	4	5	286	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	345	4	5	286	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	345	4	5	286	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

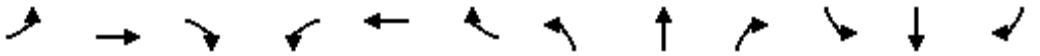
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	345	4	5	286	0	3
Future Vol, veh/h	345	4	5	286	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	345	4	5	286	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	349	0	-	173
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1087	-	0	847
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1087	-	-	847
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	847	-	-	1087	-
HCM Lane V/C Ratio	0.004	-	-	0.005	-
HCM Control Delay (s)	9.3	-	-	8.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

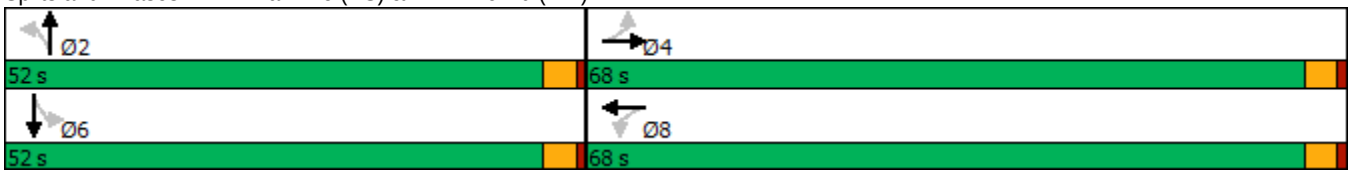


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	156	158	15	161	6	115	3	4	10	12	11
Future Volume (vph)	3	156	158	15	161	6	115	3	4	10	12	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925			0.995			0.914			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1612	0	1583	1658	0	1410	1357	0	1736	1695	0
Flt Permitted	0.583			0.301			0.742			0.753		
Satd. Flow (perm)	1016	1612	0	502	1658	0	1101	1357	0	1376	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65			2			4			11	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	3	156	158	15	161	6	115	3	4	10	12	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	314	0	15	167	0	115	7	0	10	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

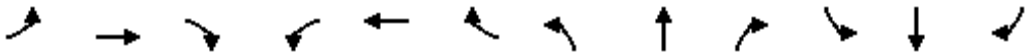
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	68.0	68.0		68.0	68.0		52.0	52.0		52.0	52.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	64.0	64.0		64.0	64.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	16.7	16.7		16.7	16.7		48.2	48.2		48.2	48.2	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.66	0.66		0.66	0.66	
v/c Ratio	0.01	0.75		0.13	0.44		0.16	0.01		0.01	0.02	
Control Delay	20.7	32.1		24.2	27.1		6.4	4.6		5.8	4.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.7	32.1		24.2	27.1		6.4	4.6		5.8	4.2	
LOS	C	C		C	C		A	A		A	A	
Approach Delay		32.0			26.9			6.3			4.7	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 73			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 24.4		Intersection LOS: C	
Intersection Capacity Utilization 37.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



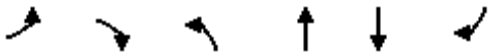
HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	156	158	15	161	6	115	3	4	10	12	11
Future Volume (veh/h)	3	156	158	15	161	6	115	3	4	10	12	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	3	156	158	15	161	6	115	3	4	10	12	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	260	197	199	154	365	14	828	423	564	1020	639	586
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1151	878	889	964	1632	61	1102	636	849	1386	960	880
Grp Volume(v), veh/h	3	0	314	15	0	167	115	0	7	10	0	23
Grp Sat Flow(s),veh/h/ln	1151	0	1767	964	0	1693	1102	0	1485	1386	0	1841
Q Serve(g_s), s	0.2	0.0	12.1	1.1	0.0	6.1	2.8	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	6.3	0.0	12.1	13.2	0.0	6.1	3.2	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.50	1.00		0.04	1.00		0.57	1.00		0.48
Lane Grp Cap(c), veh/h	260	0	396	154	0	379	828	0	988	1020	0	1224
V/C Ratio(X)	0.01	0.00	0.79	0.10	0.00	0.44	0.14	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	1023	0	1567	793	0	1501	828	0	988	1020	0	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	26.4	32.6	0.0	24.1	4.6	0.0	4.1	4.1	0.0	4.1
Incr Delay (d2), s/veh	0.0	0.0	3.6	0.3	0.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.0	0.2	0.0	2.3	0.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	30.1	32.9	0.0	24.9	5.0	0.0	4.1	4.1	0.0	4.1
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		317			182			122			33	
Approach Delay, s/veh		30.0			25.6			4.9			4.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		20.2		52.0		20.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		48.0		64.0		48.0		64.0				
Max Q Clear Time (g_c+I1), s		5.2		14.1		2.3		15.2				
Green Ext Time (p_c), s		0.5		1.8		0.1		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			22.8									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	13	14	118	176	9
Future Volume (vph)	4	13	14	118	176	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	902	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	902	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	100%	28%	11%	11%
Adj. Flow (vph)	4	13	14	118	176	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	13	14	118	176	9
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

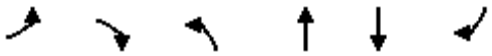
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	13	14	118	176	9
Future Vol, veh/h	4	13	14	118	176	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	100	28	11	11
Mvmt Flow	4	13	14	118	176	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	322	176	185	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.4	6.2	5.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	3.1	-	-	-
Pot Cap-1 Maneuver	676	872	967	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	667	872	967	-	-	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	886	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	967	-	667	872	-	-
HCM Lane V/C Ratio	0.014	-	0.006	0.015	-	-
HCM Control Delay (s)	8.8	-	10.4	9.2	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

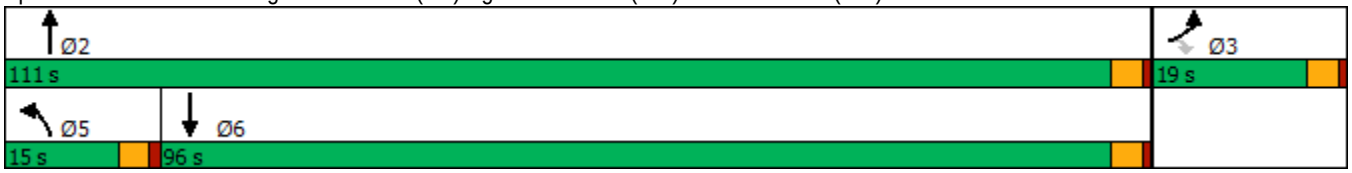


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	87	76	48	468	620	150
Future Volume (vph)	87	76	48	468	620	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.974	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	1380	1456	1532	1568	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	1380	1456	1532	1568	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		76			23	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	24%	24%	18%	18%
Adj. Flow (vph)	87	76	48	468	620	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	76	48	468	770	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

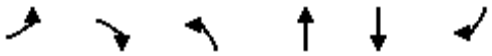
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	19.0	19.0	15.0	111.0	96.0	
Total Split (%)	14.6%	14.6%	11.5%	85.4%	73.8%	
Maximum Green (s)	15.0	15.0	11.0	107.0	92.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	11.9	11.9	9.0	107.1	96.1	
Actuated g/C Ratio	0.09	0.09	0.07	0.84	0.76	
v/c Ratio	0.60	0.38	0.47	0.36	0.65	
Control Delay	72.7	17.2	71.9	3.3	11.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.7	17.2	71.9	3.3	11.7	
LOS	E	B	E	A	B	
Approach Delay	46.8			9.7	11.7	
Approach LOS	D			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 127			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	87	76	48	468	620	150
Future Volume (veh/h)	87	76	48	468	620	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1648	1648	1544	1544	1633	1633
Adj Flow Rate, veh/h	87	76	48	468	620	150
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	24	24	18	18
Cap, veh/h	114	114	59	1337	1046	253
Arrive On Green	0.07	0.07	0.04	0.87	0.80	0.80
Sat Flow, veh/h	1648	1648	1544	1544	1315	318
Grp Volume(v), veh/h	87	76	48	468	0	770
Grp Sat Flow(s),veh/h/ln	1648	1648	1544	1544	0	1633
Q Serve(g_s), s	6.4	5.6	3.8	7.2	0.0	22.6
Cycle Q Clear(g_c), s	6.4	5.6	3.8	7.2	0.0	22.6
Prop In Lane	1.00	1.00	1.00			0.19
Lane Grp Cap(c), veh/h	114	114	59	1337	0	1299
V/C Ratio(X)	0.76	0.66	0.81	0.35	0.00	0.59
Avail Cap(c_a), veh/h	200	200	137	1337	0	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	56.1	59.0	1.6	0.0	4.9
Incr Delay (d2), s/veh	9.9	6.5	22.8	0.7	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.5	1.8	1.0	0.0	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.4	62.6	81.8	2.3	0.0	6.9
LnGrp LOS	E	E	F	A	A	A
Approach Vol, veh/h	163			516	770	
Approach Delay, s/veh	64.6			9.7	6.9	
Approach LOS	E			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		111.0			8.7	102.3	12.6
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		107.0			11.0	92.0	15.0
Max Q Clear Time (g_c+I1), s		9.2			5.8	24.6	8.4
Green Ext Time (p_c), s		3.0			0.0	6.1	0.2

Intersection Summary		
HCM 6th Ctrl Delay	14.4	
HCM 6th LOS	B	

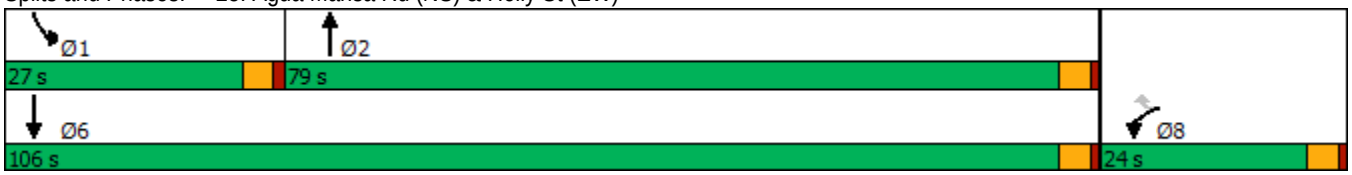


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	30	494	70	103	656
Future Volume (vph)	10	30	494	70	103	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.981			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1347	1045	2745	0	1504	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1347	1045	2745	0	1504	1583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		30	20			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	34%	34%	29%	29%	20%	20%
Adj. Flow (vph)	10	30	494	70	103	656
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	30	564	0	103	656
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

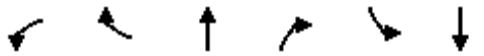
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	24.0	24.0	79.0		27.0	106.0
Total Split (%)	18.5%	18.5%	60.8%		20.8%	81.5%
Maximum Green (s)	20.0	20.0	75.0		23.0	102.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	6.8	6.8	90.4		13.4	109.3
Actuated g/C Ratio	0.06	0.06	0.76		0.11	0.92
v/c Ratio	0.13	0.34	0.27		0.61	0.45
Control Delay	55.7	28.4	5.6		64.8	2.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.7	28.4	5.6		64.8	2.4
LOS	E	C	A		E	A
Approach Delay	35.3		5.6			10.9
Approach LOS	D		A			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 45.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)



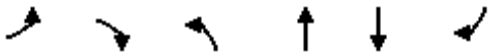
HCM 6th Signalized Intersection Summary
25: Agua Mansa Rd (NS) & Holly St (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	30	494	70	103	656
Future Volume (veh/h)	10	30	494	70	103	656
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1396	1340	1470	1470	1604	1604
Adj Flow Rate, veh/h	10	30	494	70	103	656
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	34	34	29	29	20	20
Cap, veh/h	44	42	1968	279	127	1440
Arrive On Green	0.03	0.03	0.78	0.78	0.08	0.90
Sat Flow, veh/h	1396	1340	2585	356	1604	1604
Grp Volume(v), veh/h	10	30	275	289	103	656
Grp Sat Flow(s),veh/h/ln	1396	1340	1397	1470	1604	1604
Q Serve(g_s), s	0.8	2.5	6.0	6.0	7.2	8.0
Cycle Q Clear(g_c), s	0.8	2.5	6.0	6.0	7.2	8.0
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	44	42	1095	1152	127	1440
V/C Ratio(X)	0.23	0.71	0.25	0.25	0.81	0.46
Avail Cap(c_a), veh/h	246	236	1095	1152	325	1440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	54.5	3.3	3.3	51.5	1.0
Incr Delay (d2), s/veh	2.6	19.5	0.6	0.5	11.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	1.3	1.3	3.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.2	74.0	3.9	3.8	63.1	2.0
LnGrp LOS	E	E	A	A	E	A
Approach Vol, veh/h	40		564			759
Approach Delay, s/veh	69.6		3.8			10.3
Approach LOS	E		A			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.0	93.0			106.0	7.6
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	23.0	75.0			102.0	20.0
Max Q Clear Time (g_c+I1), s	9.2	8.0			10.0	4.5
Green Ext Time (p_c), s	0.2	3.4			4.8	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	144	97	537	660	80
Future Volume (vph)	47	144	97	537	660	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		144				72
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	47	144	97	537	660	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	144	97	537	660	80
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

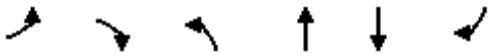
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	13.0	38.0	25.0	25.0
Total Split (%)	36.7%	36.7%	21.7%	63.3%	41.7%	41.7%
Maximum Green (s)	18.0	18.0	9.0	34.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	7.5	7.5	7.9	28.7	22.2	22.2
Actuated g/C Ratio	0.19	0.19	0.20	0.71	0.55	0.55
v/c Ratio	0.18	0.41	0.36	0.27	0.42	0.12
Control Delay	18.7	8.3	21.5	3.8	10.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	8.3	21.5	3.8	10.6	4.3
LOS	B	A	C	A	B	A
Approach Delay	10.9			6.5	9.9	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 40.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave



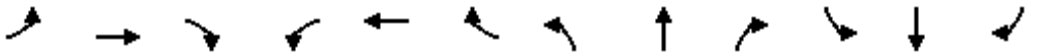
HCM 6th Signalized Intersection Summary
26: Agua Mansa Rd (NS) & Hall Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	144	97	537	660	80
Future Volume (veh/h)	47	144	97	537	660	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	47	144	97	537	660	80
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	205	205	133	1636	1083	547
Arrive On Green	0.14	0.14	0.09	0.60	0.37	0.37
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	47	144	97	537	660	80
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.8	2.8	2.0	3.0	5.6	1.1
Cycle Q Clear(g_c), s	0.8	2.8	2.0	3.0	5.6	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	205	205	133	1636	1083	547
V/C Ratio(X)	0.23	0.70	0.73	0.33	0.61	0.15
Avail Cap(c_a), veh/h	896	896	430	3089	2025	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	12.4	13.3	3.0	7.7	6.3
Incr Delay (d2), s/veh	0.6	4.3	7.4	0.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.7	0.0	0.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	16.7	20.8	3.2	8.2	6.4
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	191			634	740	
Approach Delay, s/veh	15.6			5.8	8.0	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.0		8.1	6.8	15.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	9.0	21.0
Max Q Clear Time (g_c+I1), s		5.0		4.8	4.0	7.6
Green Ext Time (p_c), s		3.6		0.4	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A



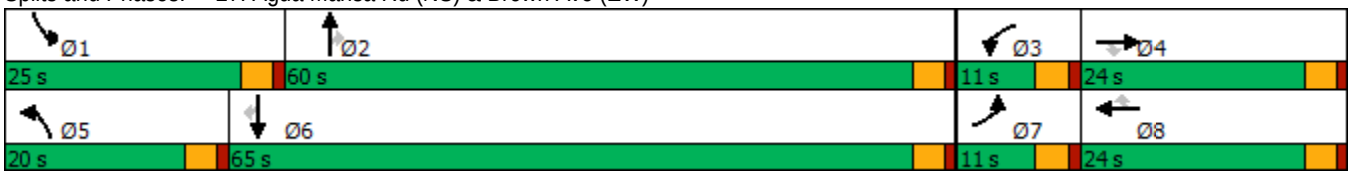
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	2	18	13	0	40	53	600	16	92	709	18
Future Volume (vph)	4	2	18	13	0	40	53	600	16	92	709	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			422			118			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	4	2	18	13	0	40	53	600	16	92	709	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	2	18	13	0	40	53	600	16	92	709	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lanes, Volumes, Timings
27: Agua Mansa Rd (NS) & Brown Ave (EW)

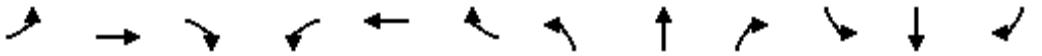
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	20.0	60.0	60.0	25.0	65.0	65.0
Total Split (%)	9.2%	20.0%	20.0%	9.2%	20.0%	20.0%	16.7%	50.0%	50.0%	20.8%	54.2%	54.2%
Maximum Green (s)	7.0	20.0	20.0	7.0	20.0	20.0	16.0	56.0	56.0	21.0	61.0	61.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.1	5.9	5.9	6.3		5.9	8.9	64.0	64.0	11.1	69.4	69.4
Actuated g/C Ratio	0.07	0.07	0.07	0.07		0.07	0.10	0.73	0.73	0.13	0.79	0.79
v/c Ratio	0.06	0.03	0.11	0.15		0.09	0.38	0.30	0.02	0.51	0.31	0.02
Control Delay	44.2	44.0	1.4	46.4		0.4	46.5	7.5	0.1	46.7	6.2	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	44.0	1.4	46.4		0.4	46.5	7.5	0.1	46.7	6.2	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		12.1			11.7			10.4			10.6	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 87.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 41.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	2	18	13	0	40	53	600	16	92	709	18
Future Volume (veh/h)	4	2	18	13	0	40	53	600	16	92	709	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	4	2	18	13	0	40	53	600	16	92	709	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	4	45	43	18	78	75	85	1769	894	143	1979	1000
Arrive On Green	0.01	0.06	0.06	0.02	0.00	0.07	0.06	0.65	0.65	0.09	0.69	0.69
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	4	2	18	13	0	40	53	600	16	92	709	18
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.4	0.2	2.0	1.0	0.0	3.1	3.2	8.8	0.4	5.2	9.1	0.3
Cycle Q Clear(g_c), s	0.4	0.2	2.0	1.0	0.0	3.1	3.2	8.8	0.4	5.2	9.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	45	43	18	78	75	85	1769	894	143	1979	1000
V/C Ratio(X)	0.96	0.04	0.42	0.73	0.00	0.54	0.62	0.34	0.02	0.64	0.36	0.02
Avail Cap(c_a), veh/h	62	178	171	91	261	251	257	1769	894	359	1979	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	39.6	40.4	43.5	0.0	40.0	40.7	6.9	5.4	38.7	5.7	4.4
Incr Delay (d2), s/veh	191.5	0.4	6.3	42.7	0.0	5.9	7.2	0.5	0.0	4.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.5	0.0	1.0	1.2	2.0	0.1	2.0	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	235.6	40.0	46.7	86.2	0.0	45.9	48.0	7.4	5.4	43.5	6.3	4.4
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		24			53			669			819	
Approach Delay, s/veh		77.7			55.8			10.5			10.4	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	61.9	5.4	9.1	9.3	65.0	4.5	10.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	56.0	7.0	20.0	16.0	61.0	7.0	20.0
Max Q Clear Time (g_c+I1), s	9.2	12.8	5.0	6.0	7.2	13.1	4.4	7.1
Green Ext Time (p_c), s	0.1	4.3	0.0	0.0	0.0	5.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	29	652	51	29	718
Future Volume (vph)	32	29	652	51	29	718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.404	
Satd. Flow (perm)	1031	923	2654	1188	569	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		29		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	32	29	652	51	29	718
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	29	652	51	29	718
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	7.3	6.9	48.7	48.7	48.7	48.7
Actuated g/C Ratio	0.13	0.12	0.88	0.88	0.88	0.88
v/c Ratio	0.24	0.21	0.28	0.05	0.06	0.58
Control Delay	25.8	12.9	2.2	1.1	2.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	12.9	2.2	1.1	2.6	6.3
LOS	C	B	A	A	A	A
Approach Delay	19.6		2.1			6.1
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 4.8		Intersection LOS: A	
Intersection Capacity Utilization 48.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



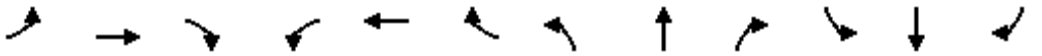
HCM 6th Signalized Intersection Summary
28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	32	29	652	51	29	718
Future Volume (veh/h)	32	29	652	51	29	718
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	32	29	652	51	29	718
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	47	47	1977	1040	536	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	549	1381
Grp Volume(v), veh/h	32	29	652	51	29	718
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	549	1381
Q Serve(g_s), s	1.8	1.6	3.6	0.4	0.8	11.5
Cycle Q Clear(g_c), s	1.8	1.6	3.6	0.4	4.4	11.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	47	47	1977	1040	536	1052
V/C Ratio(X)	0.68	0.62	0.33	0.05	0.05	0.68
Avail Cap(c_a), veh/h	318	318	1977	1040	536	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.7	1.3	2.4	2.6
Incr Delay (d2), s/veh	16.1	12.6	0.4	0.1	0.2	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.7	33.1	2.1	1.4	2.6	6.2
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	61		703			747
Approach Delay, s/veh	34.9		2.1			6.1
Approach LOS	C		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.7
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.6			13.5	3.8
Green Ext Time (p_c), s		4.6			5.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A



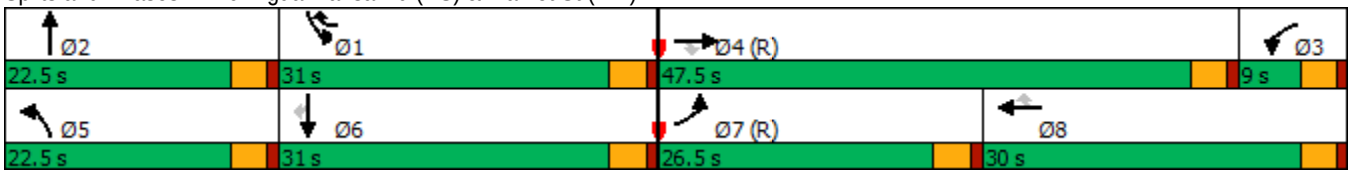
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	673	11	3	582	273	9	3	1	240	6	417
Future Volume (vph)	435	673	11	3	582	273	9	3	1	240	6	417
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	1		0	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	3282	1272	1626	3252	1261	1245	1261	0	1433	1508	1955
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	3282	1272	1626	3252	1261	1245	1261	0	1433	1508	1955
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89			192		1				417
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	435	673	11	3	582	273	9	3	1	240	6	417
Shared Lane Traffic (%)												
Lane Group Flow (vph)	435	673	11	3	582	273	9	4	0	240	6	417
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm

Lanes, Volumes, Timings
29: Agua Mansa Rd (NS) & Market St (EW)

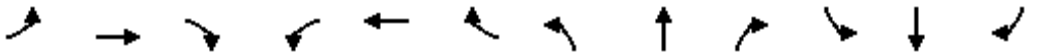
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	4	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	26.5	47.5	47.5	9.0	30.0	31.0	22.5	22.5		31.0	31.0	31.0
Total Split (%)	24.1%	43.2%	43.2%	8.2%	27.3%	28.2%	20.5%	20.5%		28.2%	28.2%	28.2%
Maximum Green (s)	22.5	43.5	43.5	5.0	26.0	27.0	18.5	18.5		27.0	27.0	27.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	0
Act Effct Green (s)	22.5	48.5	48.5	5.0	23.8	50.8	20.7	20.7		27.0	27.0	27.0
Actuated g/C Ratio	0.20	0.44	0.44	0.05	0.22	0.46	0.19	0.19		0.25	0.25	0.25
v/c Ratio	0.67	0.47	0.02	0.04	0.83	0.40	0.04	0.02		0.68	0.02	0.53
Control Delay	56.1	38.4	0.2	51.3	52.0	4.6	39.0	35.0		48.9	31.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	56.1	38.4	0.2	51.3	52.0	4.6	39.0	35.0		48.9	31.8	5.9
LOS	E	D	A	D	D	A	D	C		D	C	A
Approach Delay		44.9			36.9			37.8			21.7	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 36.5		Intersection LOS: D	
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)



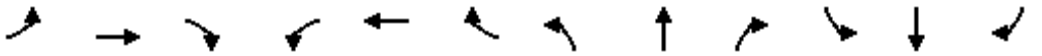
HCM 6th Signalized Intersection Summary
29: Agua Mansa Rd (NS) & Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	435	673	11	3	582	273	9	3	1	240	6	417
Future Volume (veh/h)	435	673	11	3	582	273	9	3	1	240	6	417
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	435	673	11	3	582	273	9	3	1	240	6	417
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	652	1316	665	79	822	825	207	156	52	372	372	628
Arrive On Green	0.38	0.79	0.79	0.05	0.25	0.25	0.17	0.17	0.17	0.25	0.25	0.25
Sat Flow, veh/h	3398	3328	1682	1737	3300	1668	1233	925	308	1515	1515	2559
Grp Volume(v), veh/h	435	673	11	3	582	273	9	0	4	240	6	417
Grp Sat Flow(s),veh/h/ln	1699	1664	1682	1737	1650	1668	1233	0	1233	1515	1515	1280
Q Serve(g_s), s	11.7	7.8	0.1	0.2	17.7	4.9	0.7	0.0	0.3	15.6	0.3	16.2
Cycle Q Clear(g_c), s	11.7	7.8	0.1	0.2	17.7	4.9	0.7	0.0	0.3	15.6	0.3	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	652	1316	665	79	822	825	207	0	207	372	372	628
V/C Ratio(X)	0.67	0.51	0.02	0.04	0.71	0.33	0.04	0.00	0.02	0.65	0.02	0.66
Avail Cap(c_a), veh/h	695	1316	665	79	822	825	207	0	207	372	372	628
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	31.0	7.8	2.5	50.2	37.7	6.2	38.3	0.0	38.2	37.2	31.4	37.4
Incr Delay (d2), s/veh	1.5	1.0	0.0	0.2	2.8	0.2	0.4	0.0	0.2	6.8	0.1	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.0	0.1	0.1	7.2	1.8	0.2	0.0	0.1	6.3	0.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	8.7	2.6	50.4	40.5	6.4	38.7	0.0	38.4	44.0	31.5	41.8
LnGrp LOS	C	A	A	D	D	A	D	A	D	D	C	D
Approach Vol, veh/h		1119			858			13			663	
Approach Delay, s/veh		17.9			29.7			38.6			42.5	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	22.5	9.0	47.5	22.5	31.0	25.1	31.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	27.0	18.5	5.0	43.5	18.5	27.0	22.5	26.0
Max Q Clear Time (g_c+I1), s	17.6	4.3	4.2	11.8	2.7	20.2	15.7	21.7
Green Ext Time (p_c), s	0.4	0.0	0.0	4.6	0.0	0.9	0.9	1.8

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

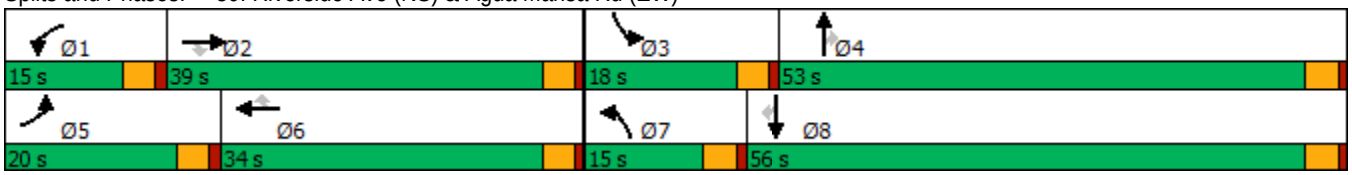


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Future Volume (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2894	1570	1335	1570	1652	1404	1570	3139	1404	1597	3195	1429
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2894	1570	1335	1570	1652	1404	1570	3139	1404	1597	3195	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			79			113			113			124
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	21%	15%	15%	15%	15%	15%	15%	13%	13%	13%
Adj. Flow (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Shared Lane Traffic (%)												
Lane Group Flow (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

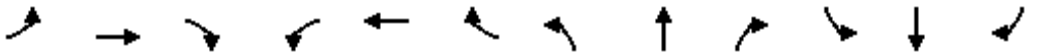
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	20.0	39.0	39.0	15.0	34.0	34.0	15.0	53.0	53.0	18.0	56.0	56.0
Total Split (%)	16.0%	31.2%	31.2%	12.0%	27.2%	27.2%	12.0%	42.4%	42.4%	14.4%	44.8%	44.8%
Maximum Green (s)	16.0	35.0	35.0	11.0	30.0	30.0	11.0	49.0	49.0	14.0	52.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	15.9	38.5	38.5	9.5	30.0	30.0	10.9	50.0	50.0	11.8	50.9	50.9
Actuated g/C Ratio	0.13	0.31	0.31	0.08	0.24	0.24	0.09	0.40	0.40	0.10	0.41	0.41
v/c Ratio	0.91	0.47	0.18	0.56	0.79	0.19	0.86	0.56	0.07	0.64	0.94	0.59
Control Delay	81.6	40.1	9.4	73.1	59.8	3.5	101.5	30.9	0.2	73.0	49.7	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.6	40.1	9.4	73.1	59.8	3.5	101.5	30.9	0.2	73.0	49.7	22.8
LOS	F	D	A	E	E	A	F	C	A	E	D	C
Approach Delay		57.6			52.2			38.8			44.9	
Approach LOS		E			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 123.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 46.6		Intersection LOS: D	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



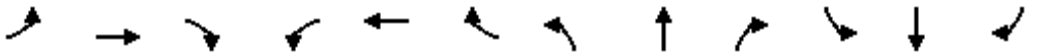
HCM 6th Signalized Intersection Summary
39: Riverside Ave (NS) & Agua Mansa Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	229	85	68	317	79	118	711	45	97	1237	389
Future Volume (veh/h)	337	229	85	68	317	79	118	711	45	97	1237	389
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1678	1678	1707	1707	1707
Adj Flow Rate, veh/h	337	229	85	68	317	79	118	711	45	97	1237	389
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	21	21	21	15	15	15	15	15	15	13	13	13
Cap, veh/h	397	485	485	109	405	405	149	1327	698	145	1338	704
Arrive On Green	0.13	0.31	0.31	0.06	0.24	0.24	0.09	0.42	0.42	0.08	0.41	0.41
Sat Flow, veh/h	3082	1589	1589	1678	1678	1678	1678	3188	1678	1707	3244	1707
Grp Volume(v), veh/h	337	229	85	68	317	79	118	711	45	97	1237	389
Grp Sat Flow(s),veh/h/ln	1541	1589	1589	1678	1678	1678	1678	1594	1678	1707	1622	1707
Q Serve(g_s), s	13.3	14.5	4.9	4.9	22.0	4.7	8.6	20.8	2.0	6.8	45.0	21.5
Cycle Q Clear(g_c), s	13.3	14.5	4.9	4.9	22.0	4.7	8.6	20.8	2.0	6.8	45.0	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	485	485	109	405	405	149	1327	698	145	1338	704
V/C Ratio(X)	0.85	0.47	0.18	0.62	0.78	0.19	0.79	0.54	0.06	0.67	0.92	0.55
Avail Cap(c_a), veh/h	397	485	485	149	405	405	149	1327	698	192	1358	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	35.0	31.7	56.6	44.1	37.5	55.5	27.2	21.7	55.2	34.7	27.8
Incr Delay (d2), s/veh	15.8	3.3	0.8	5.7	14.0	1.1	25.0	0.4	0.0	5.5	10.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	5.9	1.9	2.2	10.4	2.0	4.5	7.5	0.8	3.1	18.3	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	38.3	32.5	62.3	58.0	38.6	80.5	27.7	21.8	60.6	45.5	28.7
LnGrp LOS	E	D	C	E	E	D	F	C	C	E	D	C
Approach Vol, veh/h		651			464			874			1723	
Approach Delay, s/veh		53.3			55.3			34.5			42.5	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	41.9	14.5	55.7	20.0	34.0	15.0	55.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	35.0	14.0	49.0	16.0	30.0	11.0	52.0
Max Q Clear Time (g_c+I1), s	8.9	18.5	10.8	24.8	17.3	26.0	12.6	49.0
Green Ext Time (p_c), s	0.0	1.2	0.0	4.5	0.0	0.7	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

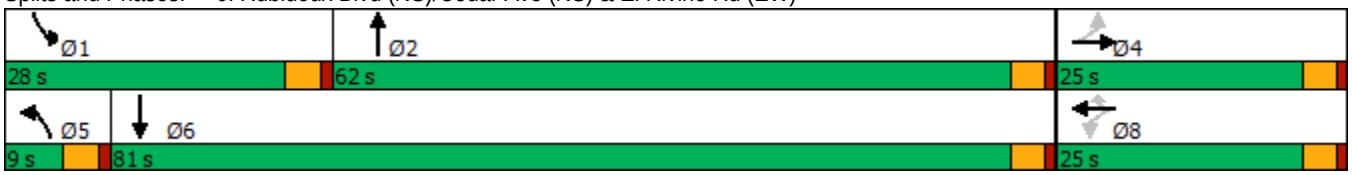


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	8	26	158	13	295	14	1295	121	302	1075	16
Future Volume (vph)	21	8	26	158	13	295	14	1295	121	302	1075	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.936				0.850		0.987			0.998	
Flt Protected		0.981			0.956		0.950			0.950		
Satd. Flow (prot)	0	1544	0	0	1514	1346	1597	3153	0	1612	3217	0
Flt Permitted		0.856			0.728		0.950			0.950		
Satd. Flow (perm)	0	1347	0	0	1153	1346	1597	3153	0	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				295		12			3	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	21	8	26	158	13	295	14	1295	121	302	1075	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	171	295	14	1416	0	302	1091	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	25.0	25.0		25.0	25.0	25.0	9.0	62.0		28.0	81.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%	21.7%	7.8%	53.9%		24.3%	70.4%	
Maximum Green (s)	21.0	21.0		21.0	21.0	21.0	5.0	58.0		24.0	77.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		19.3			19.3	19.3	5.0	58.1		23.0	81.5	
Actuated g/C Ratio		0.17			0.17	0.17	0.04	0.52		0.20	0.73	
v/c Ratio		0.22			0.86	0.62	0.20	0.87		0.92	0.47	
Control Delay		26.9			82.8	11.0	59.8	31.2		77.4	7.9	
Queue Delay		0.0			0.0	0.0	0.0	0.6		0.0	0.0	
Total Delay		26.9			82.8	11.0	59.8	31.8		77.4	7.9	
LOS		C			F	B	E	C		E	A	
Approach Delay		26.9			37.4			32.1			23.0	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 112.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.9		Intersection LOS: C	
Intersection Capacity Utilization 82.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	8	26	158	13	295	14	1295	121	302	1075	16
Future Volume (veh/h)	21	8	26	158	13	295	14	1295	121	302	1075	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	21	8	26	158	13	295	14	1295	121	302	1075	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	43	25	23	176	10	294	27	1544	144	352	2303	34
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.51	0.51	0.20	0.70	0.70
Sat Flow, veh/h	0	138	124	631	52	1604	1707	3045	284	1722	3309	49
Grp Volume(v), veh/h	55	0	0	171	0	295	14	690	726	302	532	559
Grp Sat Flow(s),veh/h/ln	262	0	0	682	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	21.0	0.9	41.8	41.8	19.4	16.7	16.7
Cycle Q Clear(g_c), s	21.0	0.0	0.0	21.0	0.0	21.0	0.9	41.8	41.8	19.4	16.7	16.7
Prop In Lane	0.38		0.47	0.92		1.00	1.00		0.17	1.00		0.03
Lane Grp Cap(c), veh/h	91	0	0	186	0	294	27	822	866	352	1138	1198
V/C Ratio(X)	0.60	0.00	0.00	0.92	0.00	1.00	0.52	0.84	0.84	0.86	0.47	0.47
Avail Cap(c_a), veh/h	91	0	0	186	0	294	75	822	866	361	1138	1198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	0.0	49.5	0.0	46.7	55.9	24.2	24.2	43.9	7.8	7.8
Incr Delay (d2), s/veh	10.5	0.0	0.0	44.0	0.0	53.0	14.9	10.0	9.6	17.8	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	7.2	0.0	12.6	0.5	16.6	17.3	9.6	5.1	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	0.0	0.0	93.5	0.0	99.7	70.7	34.2	33.8	61.7	9.2	9.1
LnGrp LOS	D	A	A	F	A	F	E	C	C	E	A	A
Approach Vol, veh/h		55			466			1430			1393	
Approach Delay, s/veh		51.3			97.4			34.4			20.6	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.4	62.0		25.0	5.8	83.6		25.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	24.0	58.0		21.0	5.0	77.0		21.0				
Max Q Clear Time (g_c+I1), s	23.4	45.8		23.0	4.9	20.7		25.0				
Green Ext Time (p_c), s	0.1	6.7		0.0	0.0	7.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		37.7	
HCM 6th LOS		D	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	16	1414	3	0	1259
Future Volume (vph)	0	16	1414	3	0	1259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	3195	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3195	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	16	1414	3	0	1259
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	1417	0	0	1259
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	1414	3	0	1259
Future Vol, veh/h	0	16	1414	3	0	1259
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	16	1414	3	0	1259

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	709	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	381	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	381	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	381	-
HCM Lane V/C Ratio	-	-	0.042	-
HCM Control Delay (s)	-	-	14.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

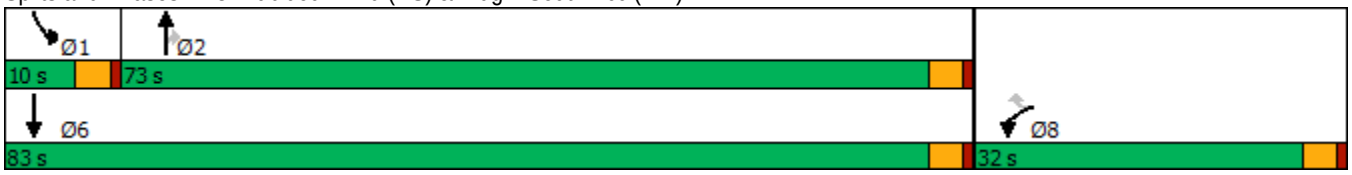


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	262	75	1342	95	24	1235
Future Volume (vph)	262	75	1342	95	24	1235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		75		95		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	262	75	1342	95	24	1235
Shared Lane Traffic (%)						
Lane Group Flow (vph)	262	75	1342	95	24	1235
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	32.0	32.0	73.0	73.0	10.0	83.0
Total Split (%)	27.8%	27.8%	63.5%	63.5%	8.7%	72.2%
Maximum Green (s)	28.0	28.0	69.0	69.0	6.0	79.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	20.6	20.6	76.1	76.1	5.9	80.0
Actuated g/C Ratio	0.19	0.19	0.70	0.70	0.05	0.74
v/c Ratio	0.77	0.20	0.60	0.09	0.27	0.51
Control Delay	56.5	9.4	11.6	2.1	58.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	56.5	9.4	11.6	2.1	58.6	7.7
LOS	E	A	B	A	E	A
Approach Delay	46.0		10.9			8.7
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



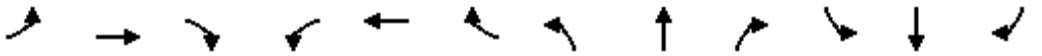
HCM 6th Signalized Intersection Summary
8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	262	75	1342	95	24	1235
Future Volume (veh/h)	262	75	1342	95	24	1235
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	262	75	1342	95	24	1235
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	306	306	2268	1194	43	2557
Arrive On Green	0.16	0.16	0.70	0.70	0.02	0.76
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	262	75	1342	95	24	1235
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	13.9	3.6	22.0	1.8	1.4	14.4
Cycle Q Clear(g_c), s	13.9	3.6	22.0	1.8	1.4	14.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	306	306	2268	1194	43	2557
V/C Ratio(X)	0.86	0.25	0.59	0.08	0.56	0.48
Avail Cap(c_a), veh/h	513	513	2268	1194	102	2557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	38.0	8.0	5.0	50.1	4.7
Incr Delay (d2), s/veh	7.4	0.4	1.1	0.1	11.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	1.7	6.0	0.5	0.7	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.7	38.4	9.1	5.1	61.3	5.3
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	337		1437			1259
Approach Delay, s/veh	47.2		8.9			6.4
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.5	76.5			83.0	20.7
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	6.0	69.0			79.0	28.0
Max Q Clear Time (g_c+I1), s	3.4	24.0			16.4	15.9
Green Ext Time (p_c), s	0.0	12.6			11.0	0.8

Intersection Summary		
HCM 6th Ctrl Delay	12.1	
HCM 6th LOS	B	

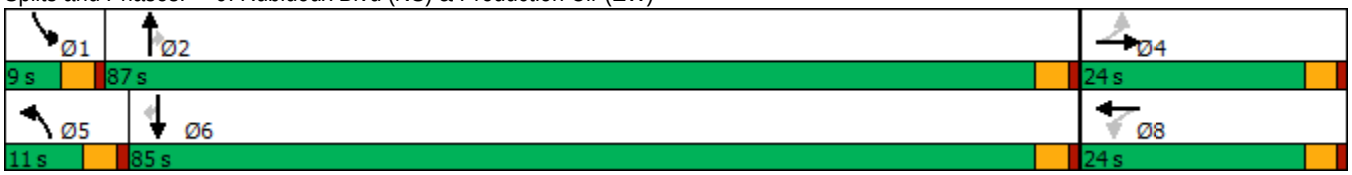


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	0	37	1	0	3	18	1336	0	0	1478	17
Future Volume (vph)	23	0	37	1	0	3	18	1336	0	0	1478	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.733			0.950					
Satd. Flow (perm)	1355	1524	0	1393	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		118			142							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	23	0	37	1	0	3	18	1336	0	0	1478	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	37	0	1	3	0	18	1336	0	0	1478	17
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

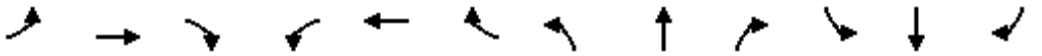
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		11.0	87.0	87.0	9.0	85.0	85.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		9.2%	72.5%	72.5%	7.5%	70.8%	70.8%
Maximum Green (s)	20.0	20.0		20.0	20.0		7.0	83.0	83.0	5.0	81.0	81.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.5	7.5		7.5	7.5		6.4	96.6			92.2	92.2
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.06	0.88			0.84	0.84
v/c Ratio	0.25	0.17		0.01	0.01		0.20	0.48			0.53	0.02
Control Delay	54.6	1.8		46.0	0.0		54.3	2.4			4.8	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.6	1.8		46.0	0.0		54.3	2.4			4.8	0.1
LOS	D	A		D	A		D	A			A	A
Approach Delay		22.0			11.5			3.1			4.8	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 4.4		Intersection LOS: A	
Intersection Capacity Utilization 55.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)



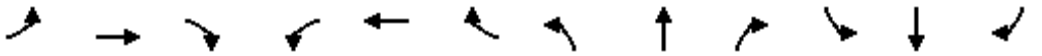
HCM 6th Signalized Intersection Summary
9: Rubidoux Blvd (NS) & Production Cir (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	37	1	0	3	18	1336	0	0	1478	17
Future Volume (veh/h)	23	0	37	1	0	3	18	1336	0	0	1478	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	23	0	37	1	0	3	18	1336	0	0	1478	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	128	0	76	103	0	79	33	2797	1413	2	2721	1375
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1393	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	23	0	37	1	0	3	18	1336	0	0	1478	17
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1393	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.6	0.0	2.0	0.1	0.0	0.2	1.1	8.8	0.0	0.0	14.5	0.2
Cycle Q Clear(g_c), s	1.8	0.0	2.0	2.0	0.0	0.2	1.1	8.8	0.0	0.0	14.5	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	0	76	103	0	79	33	2797	1413	2	2721	1375
V/C Ratio(X)	0.18	0.00	0.49	0.01	0.00	0.04	0.54	0.48	0.00	0.00	0.54	0.01
Avail Cap(c_a), veh/h	347	0	366	326	0	383	119	2797	1413	88	2721	1375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	0.0	46.4	47.4	0.0	45.6	48.1	1.3	0.0	0.0	3.0	1.7
Incr Delay (d2), s/veh	0.7	0.0	4.8	0.0	0.0	0.2	13.2	0.6	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.0	0.0	0.0	0.1	0.5	0.2	0.0	0.0	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	51.3	47.5	0.0	45.8	61.3	1.9	0.0	0.0	3.8	1.7
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		60			4			1354			1495	
Approach Delay, s/veh		49.7			46.2			2.7			3.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.0		8.1	6.0	85.0		8.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	7.0	81.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	10.8		4.0	3.1	16.5		4.0				
Green Ext Time (p_c), s	0.0	12.9		0.2	0.0	15.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		4.2	
HCM 6th LOS		A	



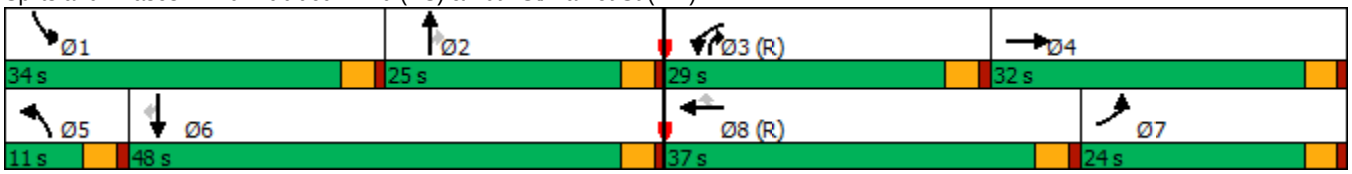
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	132	26	426	121	583	54	514	569	695	704	74
Future Volume (vph)	59	132	26	426	121	583	54	514	569	695	704	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	*1.00	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.975				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				583			266			118
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	59	132	26	426	121	583	54	514	569	695	704	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	158	0	426	121	583	54	514	569	695	704	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.0	22.0		11.0	22.0	22.0	11.0	22.0	11.0	11.0	22.0	22.0
Total Split (s)	24.0	32.0		29.0	37.0	37.0	11.0	25.0	29.0	34.0	48.0	48.0
Total Split (%)	20.0%	26.7%		24.2%	30.8%	30.8%	9.2%	20.8%	24.2%	28.3%	40.0%	40.0%
Maximum Green (s)	20.0	28.0		25.0	33.0	33.0	7.0	21.0	25.0	30.0	44.0	44.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.4	17.4		25.0	34.2	34.2	9.5	31.5	60.5	30.0	54.2	54.2
Actuated g/C Ratio	0.09	0.14		0.21	0.28	0.28	0.08	0.26	0.50	0.25	0.45	0.45
v/c Ratio	0.44	0.67		0.61	0.24	0.69	0.43	0.58	0.67	0.83	0.43	0.10
Control Delay	61.4	59.3		56.8	49.0	26.4	62.5	43.6	17.2	51.9	25.3	1.3
Queue Delay	0.0	0.0		0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	59.3		56.8	49.0	27.5	62.5	43.6	17.2	51.9	25.3	1.3
LOS	E	E		E	D	C	E	D	B	D	C	A
Approach Delay		59.9			40.9			31.3			36.6	
Approach LOS		E			D			C			D	

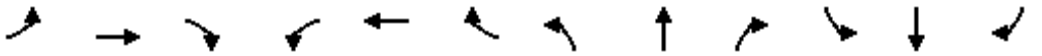
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 110 (92%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 37.6		Intersection LOS: D	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



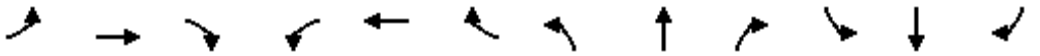
HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	132	26	426	121	583	54	514	569	695	704	74
Future Volume (veh/h)	59	132	26	426	121	583	54	514	569	695	704	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	59	132	26	426	121	583	54	514	569	695	704	74
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	282	280	55	874	494	494	92	653	742	812	1339	669
Arrive On Green	0.17	0.20	0.20	0.24	0.28	0.28	0.05	0.19	0.19	0.23	0.37	0.37
Sat Flow, veh/h	1648	1377	271	3593	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	59	0	158	426	121	583	54	514	569	695	704	74
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1796	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.7	0.0	10.1	12.2	6.3	19.5	3.7	17.2	22.9	22.6	18.2	2.0
Cycle Q Clear(g_c), s	3.7	0.0	10.1	12.2	6.3	19.5	3.7	17.2	22.9	22.6	18.2	2.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	0	335	874	494	494	92	653	742	812	1339	669
V/C Ratio(X)	0.21	0.00	0.47	0.49	0.24	1.18	0.59	0.79	0.77	0.86	0.53	0.11
Avail Cap(c_a), veh/h	282	0	385	874	494	494	100	653	742	886	1339	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.65	0.65	0.65	0.52	0.52	0.52	0.83	0.83	0.83
Uniform Delay (d), s/veh	42.7	0.0	42.1	39.0	33.8	15.2	55.5	46.2	28.8	44.4	29.8	9.8
Incr Delay (d2), s/veh	0.4	0.0	1.0	0.3	0.8	94.4	4.1	5.1	4.0	6.6	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.1	5.3	2.8	20.3	1.7	7.5	13.9	10.2	7.8	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	43.2	39.3	34.6	109.7	59.6	51.3	32.8	50.9	31.0	10.0
LnGrp LOS	D	A	D	D	C	F	E	D	C	D	C	B
Approach Vol, veh/h		217			1130			1137			1473	
Approach Delay, s/veh		43.2			75.1			42.4			39.4	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.5	26.9	33.2	28.4	10.4	48.0	24.6	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	30.0	21.0	25.0	28.0	7.0	44.0	20.0	33.0
Max Q Clear Time (g_c+I1), s	26.6	26.9	14.2	12.1	7.7	22.2	7.7	23.5
Green Ext Time (p_c), s	0.9	0.0	1.1	0.6	0.0	4.5	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	50.7
HCM 6th LOS	D



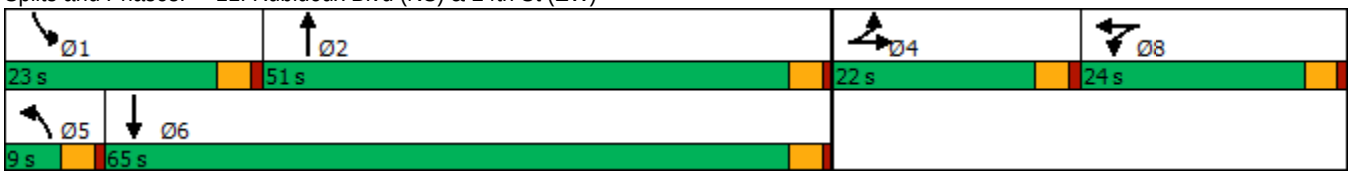
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	20	15	76	54	149	10	987	92	218	963	6
Future Volume (vph)	5	20	15	76	54	149	10	987	92	218	963	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949			0.928			0.987			0.999	
Flt Protected		0.994			0.987		0.950			0.950		
Satd. Flow (prot)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Flt Permitted		0.994			0.987		0.950			0.950		
Satd. Flow (perm)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			41			10			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	5	20	15	76	54	149	10	987	92	218	963	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	279	0	10	1079	0	218	969	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	

Lanes, Volumes, Timings
11: Rubidoux Blvd (NS) & 24th St (EW)

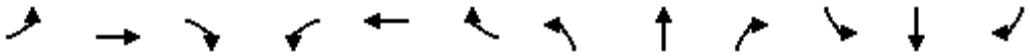
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	51.0		23.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	42.5%		19.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	47.0		19.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.2			18.9		5.0	47.4		17.6	67.4	
Actuated g/C Ratio		0.07			0.18		0.05	0.46		0.17	0.65	
v/c Ratio		0.30			0.83		0.14	0.79		0.80	0.46	
Control Delay		40.0			57.4		55.2	30.2		64.5	11.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		40.0			57.4		55.2	30.2		64.5	11.3	
LOS		D			E		E	C		E	B	
Approach Delay		40.0			57.4			30.4			21.1	
Approach LOS		D			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	20	15	76	54	149	10	987	92	218	963	6
Future Volume (veh/h)	5	20	15	76	54	149	10	987	92	218	963	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	5	20	15	76	54	149	10	987	92	218	963	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	8	31	23	86	61	169	19	1380	129	251	2042	13
Arrive On Green	0.03	0.03	0.03	0.18	0.18	0.18	0.01	0.48	0.48	0.15	0.62	0.62
Sat Flow, veh/h	226	906	679	493	351	967	1604	2860	267	1707	3309	21
Grp Volume(v), veh/h	40	0	0	279	0	0	10	526	553	218	472	497
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1604	1707	1622	1707
Q Serve(g_s), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.0	27.0	12.3	15.5	15.5
Cycle Q Clear(g_c), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.0	27.0	12.3	15.5	15.5
Prop In Lane	0.12		0.37	0.27		0.53	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	61	0	0	317	0	0	19	735	773	251	1001	1054
V/C Ratio(X)	0.65	0.00	0.00	0.88	0.00	0.00	0.51	0.72	0.72	0.87	0.47	0.47
Avail Cap(c_a), veh/h	330	0	0	367	0	0	81	735	773	328	1001	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	0.0	39.8	0.0	0.0	48.5	20.2	20.2	41.2	10.2	10.2
Incr Delay (d2), s/veh	11.3	0.0	0.0	19.2	0.0	0.0	19.4	5.9	5.6	17.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	8.2	0.0	0.0	0.3	9.6	10.0	6.1	4.9	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	0.0	59.0	0.0	0.0	67.9	26.1	25.8	58.5	11.8	11.7
LnGrp LOS	E	A	A	E	A	A	E	C	C	E	B	B
Approach Vol, veh/h		40			279			1089			1187	
Approach Delay, s/veh		58.5			59.0			26.3			20.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.5	51.7		7.3	5.2	65.0		21.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	47.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	14.3	29.0		4.2	2.6	17.5		16.8				
Green Ext Time (p_c), s	0.2	6.1		0.1	0.0	6.4		0.5				

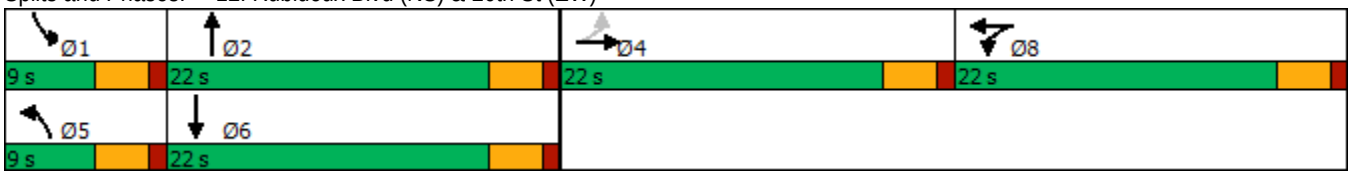
Intersection Summary			
HCM 6th Ctrl Delay		27.6	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	55	0	85	7	1026	62	38	1013	3
Future Volume (vph)	0	0	10	55	0	85	7	1026	62	38	1013	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.918			0.991				
Flt Protected					0.981		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1380	0	1517	3006	0	1612	3223	0
Flt Permitted					0.981		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1380	0	1517	3006	0	1612	3223	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		492			131			8				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	10	55	0	85	7	1026	62	38	1013	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	140	0	7	1088	0	38	1016	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

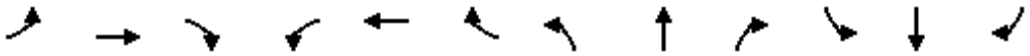
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4											
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		12.0%	29.3%		12.0%	29.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	18.0		5.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.7			6.8		5.2	24.7		5.2	24.7	
Actuated g/C Ratio		0.14			0.17		0.13	0.62		0.13	0.62	
v/c Ratio		0.02			0.41		0.04	0.58		0.18	0.51	
Control Delay		0.0			8.6		18.6	12.4		19.8	10.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			8.6		18.6	12.4		19.8	10.9	
LOS		A			A		B	B		B	B	
Approach Delay					8.6			12.4			11.2	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 39.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



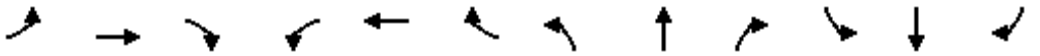
HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	55	0	85	7	1026	62	38	1013	3
Future Volume (veh/h)	0	0	10	55	0	85	7	1026	62	38	1013	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	10	55	0	85	7	1026	62	38	1013	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	25	72	0	112	15	1300	79	74	1575	5
Arrive On Green	0.00	0.00	0.01	0.12	0.00	0.12	0.01	0.44	0.44	0.04	0.47	0.47
Sat Flow, veh/h	0	0	1900	607	0	938	1618	2976	180	1722	3348	10
Grp Volume(v), veh/h	0	0	10	140	0	0	7	530	558	38	495	521
Grp Sat Flow(s),veh/h/ln	0	0	1900	1544	0	0	1618	1537	1618	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.2	12.2	0.9	9.5	9.5
Cycle Q Clear(g_c), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.2	12.2	0.9	9.5	9.5
Prop In Lane	0.00		1.00	0.39		0.61	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	25	184	0	0	15	672	707	74	769	810
V/C Ratio(X)	0.00	0.00	0.40	0.76	0.00	0.00	0.46	0.79	0.79	0.52	0.64	0.64
Avail Cap(c_a), veh/h	0	0	830	675	0	0	196	672	707	209	769	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.2	17.6	0.0	0.0	20.3	10.0	10.0	19.3	8.3	8.3
Incr Delay (d2), s/veh	0.0	0.0	10.1	6.4	0.0	0.0	20.4	9.2	8.7	5.5	4.1	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	1.4	0.0	0.0	0.1	3.9	4.0	0.4	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.2	24.0	0.0	0.0	40.7	19.1	18.7	24.8	12.4	12.2
LnGrp LOS	A	A	C	C	A	A	D	B	B	C	B	B
Approach Vol, veh/h		10			140			1095			1054	
Approach Delay, s/veh		30.2			24.0			19.0			12.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	22.0		4.5	4.4	23.4		8.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	2.9	14.2		2.2	2.2	11.5		5.6				
Green Ext Time (p_c), s	0.0	2.1		0.0	0.0	3.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		16.5	
HCM 6th LOS		B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	88	57	154	116	26	164	923	97	35	957	62
Future Volume (vph)	82	88	57	154	116	26	164	923	97	35	957	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.973			0.986			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1753	0	1736	1778	0	1583	3122	0	1703	3375	0
Flt Permitted	0.666			0.665			0.950			0.950		
Satd. Flow (perm)	1241	1753	0	1215	1778	0	1583	3122	0	1703	3375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			19			22			11	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	82	88	57	154	116	26	164	923	97	35	957	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	145	0	154	142	0	164	1020	0	35	1019	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

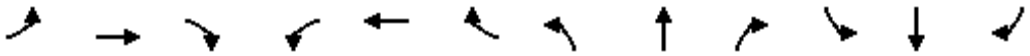
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		15.0	28.5		9.0	22.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		25.0%	47.5%		15.0%	37.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		11.0	24.5		5.0	18.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.5	11.5		11.8	11.8		9.5	32.3		5.1	24.6	
Actuated g/C Ratio	0.22	0.22		0.23	0.23		0.18	0.62		0.10	0.47	
v/c Ratio	0.30	0.33		0.56	0.34		0.57	0.52		0.21	0.63	
Control Delay	19.5	13.3		26.2	17.2		29.1	11.0		27.6	19.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.5	13.3		26.2	17.2		29.1	11.0		27.6	19.5	
LOS	B	B		C	B		C	B		C	B	
Approach Delay		15.6			21.9			13.5			19.7	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



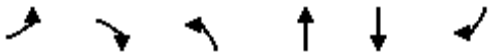
HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	88	57	154	116	26	164	923	97	35	957	62
Future Volume (veh/h)	82	88	57	154	116	26	164	923	97	35	957	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	82	88	57	154	116	26	164	923	97	35	957	62
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	347	304	197	343	403	90	259	1392	146	69	1165	75
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.15	0.47	0.47	0.04	0.35	0.35
Sat Flow, veh/h	1246	1135	735	1223	1504	337	1693	2987	314	1811	3317	215
Grp Volume(v), veh/h	82	0	145	154	0	142	164	497	523	35	496	523
Grp Sat Flow(s),veh/h/ln	1246	0	1870	1223	0	1841	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	3.1	0.0	3.2	6.3	0.0	3.2	4.8	12.6	12.6	1.0	13.9	13.9
Cycle Q Clear(g_c), s	8.3	0.0	3.2	11.5	0.0	3.2	4.8	12.6	12.6	1.0	13.9	13.9
Prop In Lane	1.00		0.39	1.00		0.18	1.00		0.19	1.00		0.12
Lane Grp Cap(c), veh/h	347	0	501	343	0	493	259	750	789	69	604	636
V/C Ratio(X)	0.24	0.00	0.29	0.45	0.00	0.29	0.63	0.66	0.66	0.51	0.82	0.82
Avail Cap(c_a), veh/h	451	0	657	445	0	646	353	750	789	172	604	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	15.3	20.8	0.0	15.3	20.9	10.9	10.9	24.9	15.6	15.6
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.9	0.0	0.3	2.6	4.6	4.4	5.7	11.9	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.3	1.7	0.0	1.2	1.7	3.9	4.0	0.5	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	0.0	15.6	21.8	0.0	15.6	23.5	15.4	15.2	30.5	27.5	27.0
LnGrp LOS	B	A	B	C	A	B	C	B	B	C	C	C
Approach Vol, veh/h		227			296			1184			1054	
Approach Delay, s/veh		17.1			18.8			16.5			27.4	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	28.6		18.1	12.1	22.5		18.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	11.0	18.5		18.5				
Max Q Clear Time (g_c+I1), s	5.0	16.6		10.3	8.8	17.9		13.5				
Green Ext Time (p_c), s	0.0	3.6		0.6	0.1	0.4		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	164	235	117	1169	40
Future Volume (vph)	0	164	235	117	1169	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1370	1597	3195	3282	1468
Flt Permitted			0.950			
Satd. Flow (perm)	0	1370	1597	3195	3282	1468
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	13%	13%	10%	10%
Adj. Flow (vph)	0	164	235	117	1169	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	235	117	1169	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

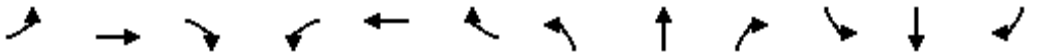
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	164	235	117	1169	40
Future Vol, veh/h	0	164	235	117	1169	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	13	13	10	10
Mvmt Flow	0	164	235	117	1169	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	585	1209	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.36	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.33	-	-	-
Pot Cap-1 Maneuver	0	449	515	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	449	515	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	11.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	515	-	449	-	-
HCM Lane V/C Ratio	0.456	-	0.365	-	-
HCM Control Delay (s)	17.7	-	17.6	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	2.4	-	1.7	-	-

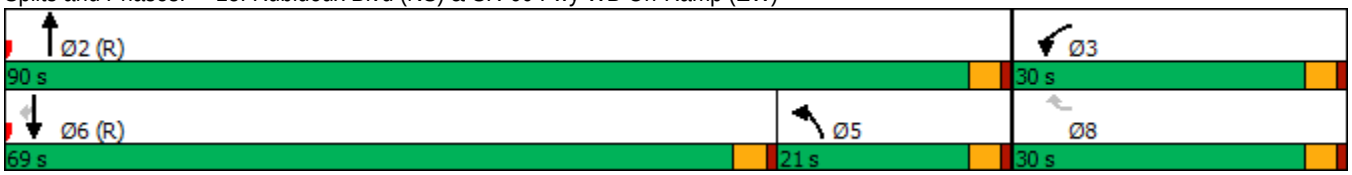


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Future Volume (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						148						700
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	6%	6%	6%
Adj. Flow (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

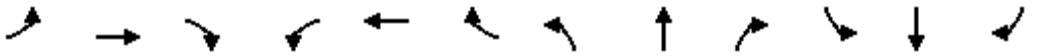
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				30.0		30.0	21.0	90.0			69.0	69.0
Total Split (%)				25.0%		25.0%	17.5%	75.0%			57.5%	57.5%
Maximum Green (s)				26.0		26.0	17.0	86.0			65.0	65.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				22.0		22.0	17.0	90.0			69.0	69.0
Actuated g/C Ratio				0.18		0.18	0.14	0.75			0.58	0.58
v/c Ratio				0.78		0.58	0.57	0.45			0.33	0.62
Control Delay				55.6		23.0	38.4	1.9			14.3	4.0
Queue Delay				0.0		0.0	0.0	0.1			0.0	0.0
Total Delay				55.6		23.0	38.4	2.0			14.3	4.0
LOS				E		C	D	A			B	A
Approach Delay					45.0			8.9			8.8	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



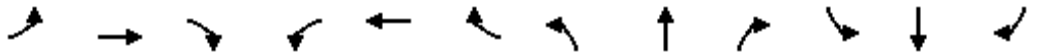
HCM 6th Signalized Intersection Summary
15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	0	243	252	1088	0	0	638	731
Future Volume (veh/h)	0	0	0	502	0	243	252	1088	0	0	638	731
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1811	1811
Adj Flow Rate, veh/h				502	0	243	252	1088	0	0	638	731
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	6	6
Cap, veh/h				602	0	310	652	2520	0	0	1864	981
Arrive On Green				0.16	0.00	0.16	0.39	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3532	1811
Grp Volume(v), veh/h				502	0	243	252	1088	0	0	638	731
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1721	1811
Q Serve(g_s), s				15.8	0.0	14.7	6.5	0.0	0.0	0.0	12.5	37.2
Cycle Q Clear(g_c), s				15.8	0.0	14.7	6.5	0.0	0.0	0.0	12.5	37.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				602	0	310	652	2520	0	0	1864	981
V/C Ratio(X)				0.83	0.00	0.78	0.39	0.43	0.00	0.00	0.34	0.75
Avail Cap(c_a), veh/h				799	0	412	652	2520	0	0	1864	981
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.6	0.0	48.2	31.4	0.0	0.0	0.0	15.5	21.1
Incr Delay (d2), s/veh				5.8	0.0	7.0	0.3	0.4	0.0	0.0	0.5	5.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	7.6	2.4	0.2	0.0	0.0	4.8	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				54.5	0.0	55.2	31.7	0.4	0.0	0.0	16.0	26.3
LnGrp LOS				D	A	E	C	A	A	A	B	C
Approach Vol, veh/h					745			1340			1369	
Approach Delay, s/veh					54.7			6.3			21.5	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	96.4		27.4	69.0		23.6						
Change Period (Y+Rc), s	4.0		4.0	4.0		4.0						
Max Green Setting (Gmax), s	86.0		17.0	65.0		26.0						
Max Q Clear Time (g_c+I1), s	2.0		8.5	39.2		17.8						
Green Ext Time (p_c), s	10.0		0.5	7.3		1.8						

Intersection Summary		
HCM 6th Ctrl Delay	22.8	
HCM 6th LOS	C	

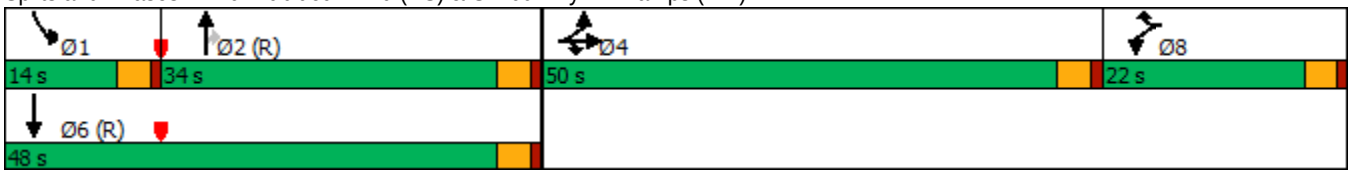


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	584	45	504	16	0	4	0	677	353	172	963	0
Future Volume (vph)	584	45	504	16	0	4	0	677	353	172	963	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			265			82			353			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	584	45	504	16	0	4	0	677	353	172	963	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	315	314	504	16	0	4	0	677	353	172	963	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

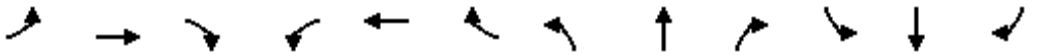
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	50.0	50.0	50.0	22.0		22.0		34.0	34.0	14.0	48.0	
Total Split (%)	41.7%	41.7%	41.7%	18.3%		18.3%		28.3%	28.3%	11.7%	40.0%	
Maximum Green (s)	46.0	46.0	46.0	18.0		18.0		30.0	30.0	10.0	44.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	37.3	37.3	37.3	6.7		6.7		44.8	44.8	21.2	70.0	
Actuated g/C Ratio	0.31	0.31	0.31	0.06		0.06		0.37	0.37	0.18	0.58	
v/c Ratio	0.67	0.67	0.89	0.16		0.02		0.51	0.44	0.55	0.47	
Control Delay	42.4	41.9	36.7	57.1		0.2		33.9	5.6	51.3	10.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.5	
Total Delay	42.4	41.9	36.7	57.1		0.2		33.9	5.6	51.3	10.7	
LOS	D	D	D	E		A		C	A	D	B	
Approach Delay		39.7			45.7			24.2			16.8	
Approach LOS		D			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	584	45	504	16	0	4	0	677	353	172	963	0
Future Volume (veh/h)	584	45	504	16	0	4	0	677	353	172	963	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	616	0	504	16	0	4	0	677	353	172	963	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	1176	0	565	0	0	0	0	1667	878	156	2082	0
Arrive On Green	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.47	0.47	0.17	1.00	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	616	0	504		0.0		0	677	353	172	963	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	17.4	0.0	35.2				0.0	15.0	14.8	10.0	0.0	0.0
Cycle Q Clear(g_c), s	17.4	0.0	35.2				0.0	15.0	14.8	10.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1176	0	565				0	1667	878	156	2082	0
V/C Ratio(X)	0.52	0.00	0.89				0.00	0.41	0.40	1.10	0.46	0.00
Avail Cap(c_a), veh/h	1298	0	623				0	1667	878	156	2082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.93	0.93	0.84	0.84	0.00
Uniform Delay (d), s/veh	31.2	0.0	37.0				0.0	20.9	20.8	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	14.3				0.0	0.7	1.3	96.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	16.0				0.0	6.2	6.6	8.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	51.4				0.0	21.6	22.1	146.5	0.6	0.0
LnGrp LOS	C	A	D				A	C	C	F	A	A
Approach Vol, veh/h		1120						1030			1135	
Approach Delay, s/veh		40.5						21.8			22.7	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.0	60.3		45.7		74.3						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	10.0	30.0		46.0		44.0						
Max Q Clear Time (g_c+I1), s	14.0	19.0		39.2		4.0						
Green Ext Time (p_c), s	0.0	4.1		2.5		7.8						

Intersection Summary												
HCM 6th Ctrl Delay			28.5									
HCM 6th LOS			C									

Notes

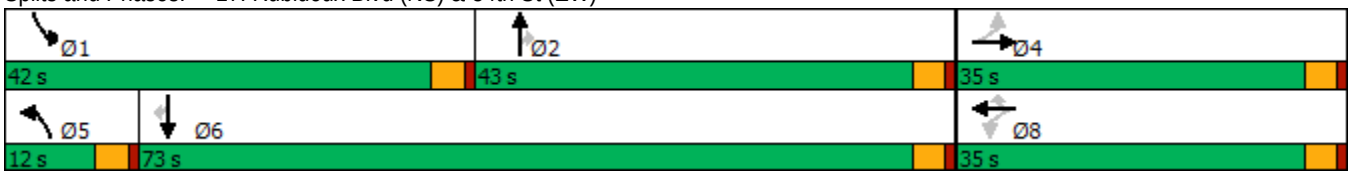
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	67	13	17	50	141	33	627	77	296	1023	167
Future Volume (vph)	110	67	13	17	50	141	33	627	77	296	1023	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.991				0.850			0.850			0.850
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1875	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.783			0.916		0.950			0.950		
Satd. Flow (perm)	0	1431	0	0	1740	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				141			82			74
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	110	67	13	17	50	141	33	627	77	296	1023	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	67	141	33	627	77	296	1023	167
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

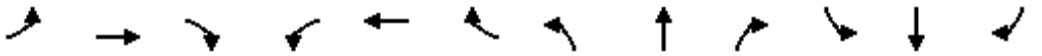
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0	35.0	12.0	43.0	43.0	42.0	73.0	73.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%	29.2%	10.0%	35.8%	35.8%	35.0%	60.8%	60.8%
Maximum Green (s)	31.0	31.0		31.0	31.0	31.0	8.0	39.0	39.0	38.0	69.0	69.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		18.6			18.6	18.6	7.0	49.8	49.8	22.5	69.9	69.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.48	0.48	0.22	0.68	0.68
v/c Ratio		0.73			0.21	0.38	0.28	0.37	0.11	0.77	0.43	0.18
Control Delay		56.5			38.1	9.3	55.7	19.9	4.9	52.5	10.0	5.5
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		56.5			38.1	9.3	55.7	19.9	4.9	52.5	10.0	5.5
LOS		E			D	A	E	B	A	D	B	A
Approach Delay		56.5			18.6			20.0			18.0	
Approach LOS		E			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)



HCM 6th Signalized Intersection Summary
17: Rubidoux Blvd (NS) & 34th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	67	13	17	50	141	33	627	77	296	1023	167
Future Volume (veh/h)	110	67	13	17	50	141	33	627	77	296	1023	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	110	67	13	17	50	141	33	627	77	296	1023	167
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	174	91	15	96	255	322	64	1778	898	368	2369	1197
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.03	0.51	0.51	0.20	0.67	0.67
Sat Flow, veh/h	670	513	87	297	1446	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	190	0	0	67	0	141	33	627	77	296	1023	167
Grp Sat Flow(s),veh/h/ln	1271	0	0	1743	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	12.1	0.0	0.0	0.0	0.0	7.1	1.8	11.0	2.3	15.6	13.8	3.5
Cycle Q Clear(g_c), s	15.2	0.0	0.0	3.1	0.0	7.1	1.8	11.0	2.3	15.6	13.8	3.5
Prop In Lane	0.58		0.07	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	0	0	352	0	322	64	1778	898	368	2369	1197
V/C Ratio(X)	0.68	0.00	0.00	0.19	0.00	0.44	0.52	0.35	0.09	0.80	0.43	0.14
Avail Cap(c_a), veh/h	455	0	0	567	0	551	143	1778	898	687	2369	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	0.0	36.1	0.0	37.7	48.7	15.1	13.0	39.3	7.8	6.1
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.3	0.0	0.9	6.4	0.6	0.2	4.2	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	1.5	0.0	3.3	0.9	4.2	0.9	7.3	4.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	36.3	0.0	38.7	55.1	15.7	13.2	43.4	8.4	6.3
LnGrp LOS	D	A	A	D	A	D	E	B	B	D	A	A
Approach Vol, veh/h		190			208			737			1486	
Approach Delay, s/veh		44.6			37.9			17.2			15.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	56.2		22.1	7.5	73.0		22.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	38.0	39.0		31.0	8.0	69.0		31.0				
Max Q Clear Time (g_c+I1), s	19.6	15.0		17.2	5.8	17.8		11.1				
Green Ext Time (p_c), s	0.7	4.3		0.9	0.0	9.4		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	497	1	4	579	0	34
Future Volume (vph)	497	1	4	579	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	497	1	4	579	0	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	497	1	4	579	0	34
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	497	1	4	579	0	34
Future Vol, veh/h	497	1	4	579	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	497	1	4	579	0	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	498	0	-	249
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	946	-	0	757
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	946	-	-	757
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	757	-	-	946	-
HCM Lane V/C Ratio	0.045	-	-	0.004	-
HCM Control Delay (s)	10	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	522	9	8	560	23	27
Future Volume (vph)	522	9	8	560	23	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2983	1335	1504	3008	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	522	9	8	560	23	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	522	9	8	560	23	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

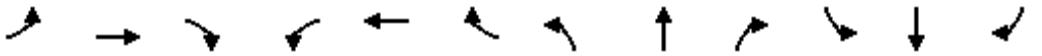
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	522	9	8	560	23	27
Future Vol, veh/h	522	9	8	560	23	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	522	9	8	560	23	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	531	0	818	261
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	296	-
Critical Hdwy	-	-	4.5	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.4	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	917	-	318	744
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	735	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	917	-	315	744
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	735	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	315	744	-	-	917	-
HCM Lane V/C Ratio	0.073	0.036	-	-	0.009	-
HCM Control Delay (s)	17.3	10	-	-	9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	387	12	23	239	201	26	6	53	448	3	303
Future Volume (vph)	150	387	12	23	239	201	26	6	53	448	3	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.931			0.865			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2923	0	1805	1644	0	1556	1394	0
Flt Permitted	0.950			0.950			0.525			0.719		
Satd. Flow (perm)	1399	2798	1252	1570	2923	0	998	1644	0	1178	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		156			53			303	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	150	387	12	23	239	201	26	6	53	448	3	303
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	387	12	23	440	0	26	59	0	448	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

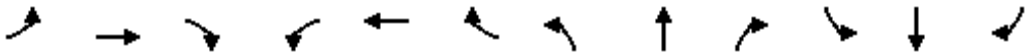
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	25.0	40.0	40.0	10.0	25.0		70.0	70.0		70.0	70.0	
Total Split (%)	20.8%	33.3%	33.3%	8.3%	20.8%		58.3%	58.3%		58.3%	58.3%	
Maximum Green (s)	21.0	36.0	36.0	6.0	21.0		66.0	66.0		66.0	66.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.3	32.9	32.9	5.9	16.3		66.4	66.4		66.4	66.4	
Actuated g/C Ratio	0.15	0.30	0.30	0.05	0.15		0.60	0.60		0.60	0.60	
v/c Ratio	0.73	0.47	0.03	0.28	0.78		0.04	0.06		0.64	0.32	
Control Delay	66.7	34.4	0.2	62.3	40.0		12.0	4.1		21.7	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	66.7	34.4	0.2	62.3	40.0		12.0	4.1		21.7	2.5	
LOS	E	C	A	E	D		B	A		C	A	
Approach Delay		42.4			41.1			6.5			13.9	
Approach LOS		D			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.1			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 28.8		Intersection LOS: C	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	387	12	23	239	201	26	6	53	448	3	303
Future Volume (veh/h)	150	387	12	23	239	201	26	6	53	448	3	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	150	387	12	23	239	201	26	6	53	448	3	303
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	175	714	376	39	283	238	636	118	1042	781	10	1005
Arrive On Green	0.12	0.26	0.26	0.02	0.16	0.16	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1470	2793	1470	1678	1777	1494	1090	193	1707	1195	16	1647
Grp Volume(v), veh/h	150	387	12	23	214	226	26	0	59	448	0	306
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1090	0	1900	1195	0	1663
Q Serve(g_s), s	10.8	12.9	0.7	1.5	14.1	14.1	1.3	0.0	1.4	26.1	0.0	9.5
Cycle Q Clear(g_c), s	10.8	12.9	0.7	1.5	14.1	14.1	10.8	0.0	1.4	27.5	0.0	9.5
Prop In Lane	1.00		1.00	1.00		0.89	1.00		0.90	1.00		0.99
Lane Grp Cap(c), veh/h	175	714	376	39	254	268	636	0	1159	781	0	1015
V/C Ratio(X)	0.86	0.54	0.03	0.59	0.84	0.84	0.04	0.00	0.05	0.57	0.00	0.30
Avail Cap(c_a), veh/h	285	930	489	93	309	326	636	0	1159	781	0	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	34.8	30.2	52.3	44.1	44.1	12.6	0.0	8.5	14.0	0.0	10.1
Incr Delay (d2), s/veh	12.9	0.6	0.0	13.7	16.1	15.4	0.1	0.0	0.1	3.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	4.4	0.2	0.8	6.7	7.0	0.3	0.0	0.6	7.3	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	35.4	30.2	66.0	60.2	59.5	12.8	0.0	8.6	17.1	0.0	10.8
LnGrp LOS	E	D	C	E	E	E	B	A	A	B	A	B
Approach Vol, veh/h		549			463			85			754	
Approach Delay, s/veh		41.9			60.2			9.8			14.5	
Approach LOS		D			E			A			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		70.0	6.5	31.7		70.0	16.9	21.3				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		66.0	6.0	36.0		66.0	21.0	21.0				
Max Q Clear Time (g_c+I1), s		12.8	3.5	14.9		29.5	12.8	16.1				
Green Ext Time (p_c), s		0.4	0.0	2.6		4.2	0.2	1.1				

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	886	2	2	463	0	10
Future Volume (vph)	886	2	2	463	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	886	2	2	463	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	886	2	2	463	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.5%		ICU Level of Service A	
Analysis Period (min) 15			

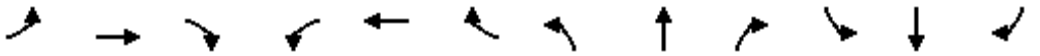
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	886	2	2	463	0	10
Future Vol, veh/h	886	2	2	463	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	886	2	2	463	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	888	0	-	443
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	682	-	0	568
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	682	-	-	568
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	568	-	-	682	-
HCM Lane V/C Ratio	0.018	-	-	0.003	-
HCM Control Delay (s)	11.5	-	-	10.3	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

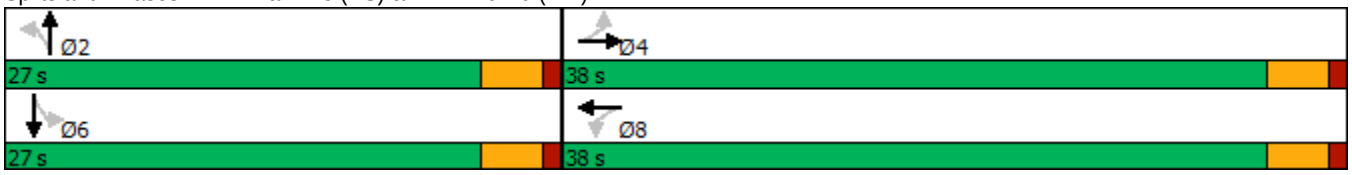


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	391	215	4	198	10	303	3	12	4	5	6
Future Volume (vph)	9	391	215	4	198	10	303	3	12	4	5	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947			0.993			0.880			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1451	0	1583	1655	0	1517	1405	0	1805	1744	0
Flt Permitted	0.625			0.239			0.750			0.748		
Satd. Flow (perm)	958	1451	0	398	1655	0	1197	1405	0	1421	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			6			12			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	391	215	4	198	10	303	3	12	4	5	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	606	0	4	208	0	303	15	0	4	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

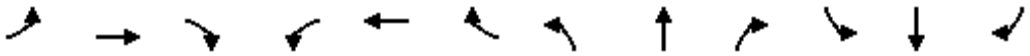
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	38.0	38.0		38.0	38.0		27.0	27.0		27.0	27.0	
Total Split (%)	58.5%	58.5%		58.5%	58.5%		41.5%	41.5%		41.5%	41.5%	
Maximum Green (s)	34.0	34.0		34.0	34.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	26.5	26.5		26.5	26.5		23.4	23.4		23.4	23.4	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.40	0.40		0.40	0.40	
v/c Ratio	0.02	0.87		0.02	0.27		0.63	0.03		0.01	0.02	
Control Delay	7.8	27.1		8.0	9.9		24.1	8.7		13.5	10.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.8	27.1		8.0	9.9		24.1	8.7		13.5	10.5	
LOS	A	C		A	A		C	A		B	B	
Approach Delay		26.8			9.8			23.4			11.3	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 22.6		Intersection LOS: C	
Intersection Capacity Utilization 63.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



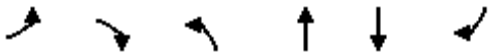
HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	391	215	4	198	10	303	3	12	4	5	6
Future Volume (veh/h)	9	391	215	4	198	10	303	3	12	4	5	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	391	215	4	198	10	303	3	12	4	5	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	486	445	245	194	719	36	623	133	532	704	355	426
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	969	996	548	737	1611	81	1214	324	1295	1421	864	1036
Grp Volume(v), veh/h	9	0	606	4	0	208	303	0	15	4	0	11
Grp Sat Flow(s),veh/h/ln	969	0	1544	737	0	1693	1214	0	1618	1421	0	1900
Q Serve(g_s), s	0.3	0.0	20.0	0.3	0.0	4.3	11.0	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	4.7	0.0	20.0	20.3	0.0	4.3	11.2	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.35	1.00		0.05	1.00		0.80	1.00		0.55
Lane Grp Cap(c), veh/h	486	0	689	194	0	755	623	0	665	704	0	780
V/C Ratio(X)	0.02	0.00	0.88	0.02	0.00	0.28	0.49	0.00	0.02	0.01	0.00	0.01
Avail Cap(c_a), veh/h	642	0	938	313	0	1028	623	0	665	704	0	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	0.0	14.1	23.4	0.0	9.8	13.1	0.0	9.8	9.9	0.0	9.8
Incr Delay (d2), s/veh	0.0	0.0	7.4	0.0	0.0	0.2	2.7	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	6.5	0.0	0.0	1.2	3.0	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.3	0.0	21.6	23.4	0.0	10.0	15.8	0.0	9.9	9.9	0.0	9.8
LnGrp LOS	B	A	C	C	A	A	B	A	A	A	A	A
Approach Vol, veh/h		615			212			318			15	
Approach Delay, s/veh		21.4			10.2			15.5			9.8	
Approach LOS		C			B			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		29.0		27.0		29.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		34.0		23.0		34.0				
Max Q Clear Time (g_c+I1), s		13.2		22.0		2.4		22.3				
Green Ext Time (p_c), s		0.9		3.0		0.0		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	49	6	308	220	4
Future Volume (vph)	10	49	6	308	220	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	10	49	6	308	220	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	49	6	308	220	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.2%		ICU Level of Service A	
Analysis Period (min) 15			

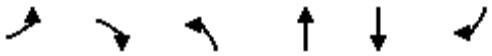
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	49	6	308	220	4
Future Vol, veh/h	10	49	6	308	220	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	10	49	6	308	220	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	540	220	224	0	-	0
Stage 1	220	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	506	825	1251	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	503	825	1251	-	-	-
Mov Cap-2 Maneuver	503	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1251	-	503	825	-	-
HCM Lane V/C Ratio	0.005	-	0.02	0.059	-	-
HCM Control Delay (s)	7.9	-	12.3	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

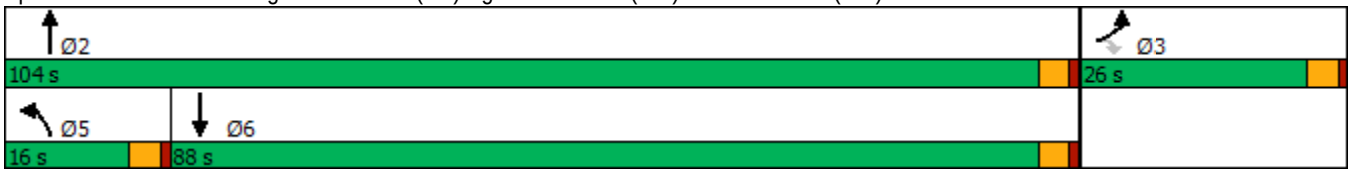


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	181	106	80	924	591	104
Future Volume (vph)	181	106	80	924	591	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.980	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1502	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1502	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		106			14	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	181	106	80	924	591	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	181	106	80	924	695	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

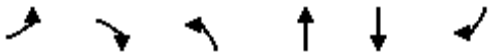
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	26.0	26.0	16.0	104.0	88.0	
Total Split (%)	20.0%	20.0%	12.3%	80.0%	67.7%	
Maximum Green (s)	22.0	22.0	12.0	100.0	84.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	17.6	17.6	10.5	100.2	88.0	
Actuated g/C Ratio	0.14	0.14	0.08	0.80	0.70	
v/c Ratio	0.75	0.34	0.63	0.73	0.66	
Control Delay	70.9	11.7	78.4	11.1	16.1	
Queue Delay	0.0	0.0	0.0	0.3	0.0	
Total Delay	70.9	11.7	78.4	11.4	16.1	
LOS	E	B	E	B	B	
Approach Delay	49.0			16.8	16.1	
Approach LOS	D			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 125.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	181	106	80	924	591	104
Future Volume (veh/h)	181	106	80	924	591	104
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	181	106	80	924	591	104
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	215	215	99	1324	951	167
Arrive On Green	0.12	0.12	0.06	0.82	0.72	0.72
Sat Flow, veh/h	1841	1841	1618	1618	1313	231
Grp Volume(v), veh/h	181	106	80	924	0	695
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	11.8	6.6	6.0	29.6	0.0	27.6
Cycle Q Clear(g_c), s	11.8	6.6	6.0	29.6	0.0	27.6
Prop In Lane	1.00	1.00	1.00			0.15
Lane Grp Cap(c), veh/h	215	215	99	1324	0	1118
V/C Ratio(X)	0.84	0.49	0.81	0.70	0.00	0.62
Avail Cap(c_a), veh/h	331	331	159	1324	0	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	50.6	56.7	4.7	0.0	8.5
Incr Delay (d2), s/veh	11.2	1.8	14.5	3.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	3.1	2.8	6.8	0.0	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.1	52.4	71.1	7.8	0.0	11.1
LnGrp LOS	E	D	E	A	A	B
Approach Vol, veh/h	287			1004	695	
Approach Delay, s/veh	59.8			12.8	11.1	
Approach LOS	E			B	B	

Timer - Assigned Phs	2		5	6	8
Phs Duration (G+Y+Rc), s	104.0		11.5	92.5	18.3
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	100.0		12.0	84.0	22.0
Max Q Clear Time (g_c+I1), s	31.6		8.0	29.6	13.8
Green Ext Time (p_c), s	8.6		0.0	5.2	0.5

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

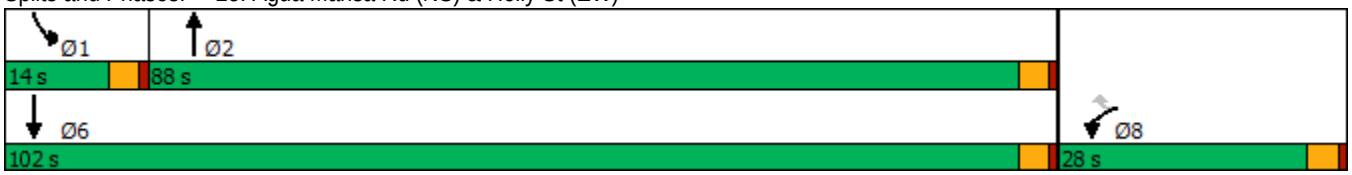


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	144	940	13	31	604
Future Volume (vph)	53	144	940	13	31	604
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3028	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3028	0	1421	1496
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		144	2			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	53	144	940	13	31	604
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	144	953	0	31	604
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

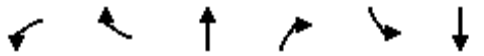
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	28.0	28.0	88.0		14.0	102.0
Total Split (%)	21.5%	21.5%	67.7%		10.8%	78.5%
Maximum Green (s)	24.0	24.0	84.0		10.0	98.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	9.6	9.6	92.7		7.8	100.6
Actuated g/C Ratio	0.08	0.08	0.78		0.07	0.85
v/c Ratio	0.42	0.63	0.40		0.33	0.47
Control Delay	60.5	20.5	5.7		61.4	3.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	60.5	20.5	5.7		61.4	3.9
LOS	E	C	A		E	A
Approach Delay	31.3		5.7			6.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)



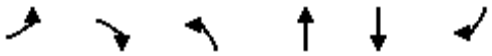
HCM 6th Signalized Intersection Summary
25: Agua Mansa Rd (NS) & Holly St (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	53	144	940	13	31	604
Future Volume (veh/h)	53	144	940	13	31	604
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1663	1596	1618	1618	1500	1500
Adj Flow Rate, veh/h	53	144	940	13	31	604
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	19	19	27	27
Cap, veh/h	180	173	2378	33	40	1236
Arrive On Green	0.11	0.11	0.76	0.76	0.03	0.82
Sat Flow, veh/h	1663	1596	3194	43	1500	1500
Grp Volume(v), veh/h	53	144	464	489	31	604
Grp Sat Flow(s),veh/h/ln	1663	1596	1537	1618	1500	1500
Q Serve(g_s), s	3.5	10.5	12.1	12.1	2.4	14.1
Cycle Q Clear(g_c), s	3.5	10.5	12.1	12.1	2.4	14.1
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	180	173	1174	1236	40	1236
V/C Ratio(X)	0.29	0.83	0.40	0.40	0.77	0.49
Avail Cap(c_a), veh/h	336	322	1174	1236	126	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	51.9	4.8	4.8	57.5	3.1
Incr Delay (d2), s/veh	0.9	9.9	1.0	0.9	25.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.7	3.1	3.3	1.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.7	61.8	5.8	5.7	82.9	4.5
LnGrp LOS	D	E	A	A	F	A
Approach Vol, veh/h	197		953			635
Approach Delay, s/veh	58.6		5.7			8.3
Approach LOS	E		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	94.8			102.0	16.9
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	10.0	84.0			98.0	24.0
Max Q Clear Time (g_c+I1), s	4.4	14.1			16.1	12.5
Green Ext Time (p_c), s	0.0	6.7			4.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	98	203	243	693	616	53
Future Volume (vph)	98	203	243	693	616	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		203				48
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	98	203	243	693	616	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	98	203	243	693	616	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

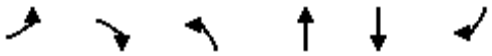
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	16.0	38.0	22.0	22.0
Total Split (%)	36.7%	36.7%	26.7%	63.3%	36.7%	36.7%
Maximum Green (s)	18.0	18.0	12.0	34.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	9.0	9.0	11.6	33.3	16.3	16.3
Actuated g/C Ratio	0.19	0.19	0.25	0.71	0.35	0.35
v/c Ratio	0.38	0.52	0.64	0.32	0.63	0.13
Control Delay	22.6	8.7	29.0	4.4	17.7	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	8.7	29.0	4.4	17.7	6.2
LOS	C	A	C	A	B	A
Approach Delay	13.3			10.8	16.8	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave



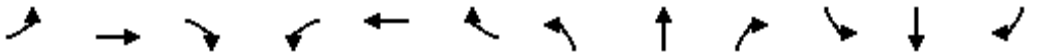
HCM 6th Signalized Intersection Summary
26: Agua Mansa Rd (NS) & Hall Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	98	203	243	693	616	53
Future Volume (veh/h)	98	203	243	693	616	53
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	98	203	243	693	616	53
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	272	272	302	1842	861	435
Arrive On Green	0.20	0.20	0.19	0.60	0.31	0.31
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	98	203	243	693	616	53
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.5	5.5	5.7	4.6	7.8	1.1
Cycle Q Clear(g_c), s	2.5	5.5	5.7	4.6	7.8	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	272	272	302	1842	861	435
V/C Ratio(X)	0.36	0.75	0.80	0.38	0.72	0.12
Avail Cap(c_a), veh/h	620	620	490	2635	1255	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	14.9	15.4	4.1	12.1	9.8
Incr Delay (d2), s/veh	0.8	4.0	5.0	0.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.3	2.0	0.4	1.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.5	19.0	20.4	4.2	13.2	9.9
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	301			936	669	
Approach Delay, s/veh	17.5			8.4	13.0	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		27.8		11.9	11.4	16.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	12.0	18.0
Max Q Clear Time (g_c+I1), s		6.6		7.5	7.7	9.8
Green Ext Time (p_c), s		4.7		0.7	0.3	2.5

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B



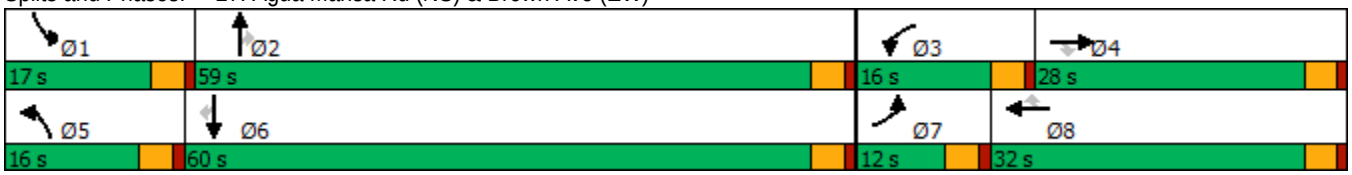
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	3	47	54	4	211	32	723	127	56	750	14
Future Volume (vph)	19	3	47	54	4	211	32	723	127	56	750	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			211			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	19	3	47	54	4	211	32	723	127	56	750	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	3	47	54	4	211	32	723	127	56	750	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lanes, Volumes, Timings
27: Agua Mansa Rd (NS) & Brown Ave (EW)

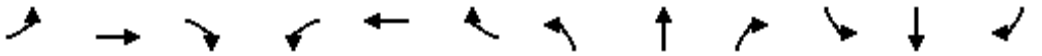
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	28.0	28.0	16.0	32.0	32.0	16.0	59.0	59.0	17.0	60.0	60.0
Total Split (%)	10.0%	23.3%	23.3%	13.3%	26.7%	26.7%	13.3%	49.2%	49.2%	14.2%	50.0%	50.0%
Maximum Green (s)	8.0	24.0	24.0	12.0	28.0	28.0	12.0	55.0	55.0	13.0	56.0	56.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.8	7.2	7.2	8.7	11.3	11.3	7.7	58.4	58.4	9.1	62.1	62.1
Actuated g/C Ratio	0.07	0.08	0.08	0.09	0.12	0.12	0.08	0.63	0.63	0.10	0.67	0.67
v/c Ratio	0.19	0.03	0.30	0.39	0.02	0.65	0.27	0.40	0.17	0.42	0.41	0.02
Control Delay	49.5	43.3	7.8	50.6	39.0	15.9	49.3	12.3	5.8	51.6	11.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	43.3	7.8	50.6	39.0	15.9	49.3	12.3	5.8	51.6	11.0	0.1
LOS	D	D	A	D	D	B	D	B	A	D	B	A
Approach Delay		20.8			23.2			12.7			13.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.9			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	3	47	54	4	211	32	723	127	56	750	14
Future Volume (veh/h)	19	3	47	54	4	211	32	723	127	56	750	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	19	3	47	54	4	211	32	723	127	56	750	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	31	200	192	92	284	273	54	1648	833	89	1638	828
Arrive On Green	0.02	0.14	0.14	0.06	0.18	0.18	0.04	0.57	0.57	0.06	0.60	0.60
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	19	3	47	54	4	211	32	723	127	56	750	14
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.3	0.2	3.0	3.2	0.2	12.6	2.0	13.8	3.9	3.6	14.6	0.4
Cycle Q Clear(g_c), s	1.3	0.2	3.0	3.2	0.2	12.6	2.0	13.8	3.9	3.6	14.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	200	192	92	284	273	54	1648	833	89	1638	828
V/C Ratio(X)	0.62	0.01	0.24	0.59	0.01	0.77	0.59	0.44	0.15	0.63	0.46	0.02
Avail Cap(c_a), veh/h	118	353	338	200	467	449	189	1648	833	195	1638	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	35.5	36.6	44.2	32.6	37.7	45.6	11.7	9.6	44.0	10.7	7.8
Incr Delay (d2), s/veh	18.2	0.0	0.7	5.9	0.0	4.7	9.7	0.9	0.4	7.0	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	1.0	1.4	0.1	5.0	0.9	4.0	1.3	1.4	3.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.8	35.5	37.3	50.1	32.6	42.4	55.3	12.6	10.0	51.0	11.6	7.9
LnGrp LOS	E	D	D	D	C	D	E	B	B	D	B	A
Approach Vol, veh/h		69			269			882			820	
Approach Delay, s/veh		44.8			43.8			13.8			14.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	59.0	9.5	17.6	7.5	61.5	6.1	21.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	55.0	12.0	24.0	12.0	56.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	7.6	17.8	7.2	7.0	6.0	18.6	5.3	16.6
Green Ext Time (p_c), s	0.0	5.6	0.0	0.1	0.0	5.6	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	24	981	43	84	777
Future Volume (vph)	46	24	981	43	84	777
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.284	
Satd. Flow (perm)	1107	991	2983	1335	428	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		24		43		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	46	24	981	43	84	777
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	24	981	43	84	777
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	98.0	98.0	98.0	98.0
Total Split (%)	18.3%	18.3%	81.7%	81.7%	81.7%	81.7%
Maximum Green (s)	18.0	18.0	94.0	94.0	94.0	94.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	10.3	10.3	103.1	103.1	103.1	103.1
Actuated g/C Ratio	0.09	0.09	0.87	0.87	0.87	0.87
v/c Ratio	0.48	0.22	0.38	0.04	0.23	0.59
Control Delay	67.3	22.3	2.6	0.7	3.8	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	22.3	2.6	0.7	3.8	5.4
LOS	E	C	A	A	A	A
Approach Delay	51.9		2.6			5.3
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



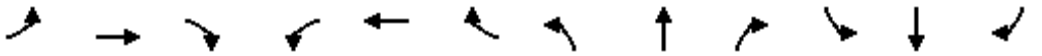
HCM 6th Signalized Intersection Summary
28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	24	981	43	84	777
Future Volume (veh/h)	46	24	981	43	84	777
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	46	24	981	43	84	777
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	56	56	2620	1379	425	1314
Arrive On Green	0.06	0.06	0.87	0.87	0.87	0.87
Sat Flow, veh/h	966	966	3098	1589	446	1515
Grp Volume(v), veh/h	46	24	981	43	84	777
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	446	1515
Q Serve(g_s), s	5.1	2.6	6.9	0.4	4.9	15.1
Cycle Q Clear(g_c), s	5.1	2.6	6.9	0.4	11.8	15.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	56	2620	1379	425	1314
V/C Ratio(X)	0.82	0.43	0.37	0.03	0.20	0.59
Avail Cap(c_a), veh/h	161	161	2620	1379	425	1314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	49.2	1.4	1.0	2.6	1.9
Incr Delay (d2), s/veh	23.7	5.0	0.4	0.0	1.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.7	0.4	0.1	0.4	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.1	54.3	1.8	1.0	3.6	3.9
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	70		1024			861
Approach Delay, s/veh	67.3		1.8			3.9
Approach LOS	E		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	98.0			98.0	10.3
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	94.0			94.0	18.0
Max Q Clear Time (g_c+I1), s	8.9			17.1	7.1
Green Ext Time (p_c), s	8.4			8.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A



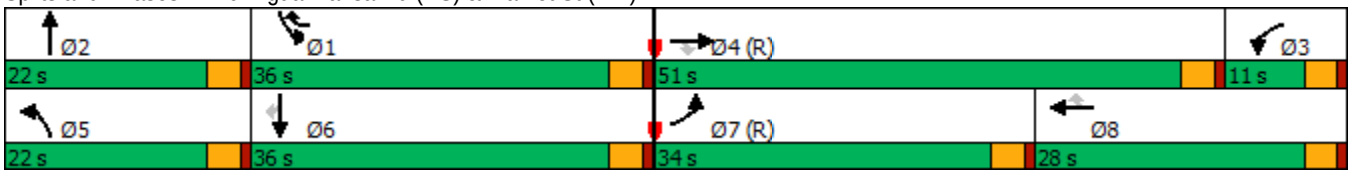
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	681	727	4	2	628	335	2	1	1	379	4	516
Future Volume (vph)	681	727	4	2	628	335	2	1	1	379	4	516
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	1		0	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	1.00	*1.00	*1.00
Frt			0.850			0.850		0.925				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	3455	1468	1656	3486	1482	1444	1406	0	1626	1712	2910
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	3455	1468	1656	3486	1482	1444	1406	0	1626	1712	2910
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			204		1				516
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	681	727	4	2	628	335	2	1	1	379	4	516
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	727	4	2	628	335	2	2	0	379	4	516
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8						6
Detector Phase	7	4	4	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.0	22.0	22.0	11.0	22.0	22.0	22.0	22.0		22.0	22.0	22.0
Total Split (s)	34.0	51.0	51.0	11.0	28.0	36.0	22.0	22.0		36.0	36.0	36.0
Total Split (%)	28.3%	42.5%	42.5%	9.2%	23.3%	30.0%	18.3%	18.3%		30.0%	30.0%	30.0%
Maximum Green (s)	30.0	47.0	47.0	7.0	24.0	32.0	18.0	18.0		32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	0
Act Effct Green (s)	30.0	55.4	55.4	7.0	23.6	55.6	18.4	18.4		32.0	32.0	32.0
Actuated g/C Ratio	0.25	0.46	0.46	0.06	0.20	0.46	0.15	0.15		0.27	0.27	0.27
v/c Ratio	0.86	0.46	0.01	0.02	0.92	0.42	0.01	0.01		0.88	0.01	0.45
Control Delay	63.7	31.1	0.0	54.0	66.7	5.7	43.5	37.0		64.1	32.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	63.7	31.1	0.0	54.0	66.7	5.7	43.5	37.0		64.1	32.5	4.2
LOS	E	C	A	D	E	A	D	D		E	C	A
Approach Delay		46.7			45.5			40.3			29.6	
Approach LOS		D			D			D			C	

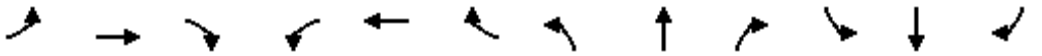
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 41.7		Intersection LOS: D	
Intersection Capacity Utilization 74.5%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)



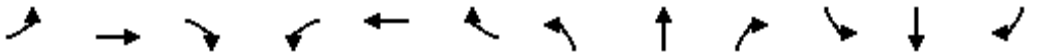
HCM 6th Signalized Intersection Summary
29: Agua Mansa Rd (NS) & Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	681	727	4	2	628	335	2	1	1	379	4	516
Future Volume (veh/h)	681	727	4	2	628	335	2	1	1	379	4	516
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	681	727	4	2	628	335	2	1	1	379	4	516
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	850	1372	686	103	707	824	229	115	115	463	463	926
Arrive On Green	0.25	0.39	0.39	0.06	0.20	0.20	0.15	0.15	0.15	0.27	0.27	0.27
Sat Flow, veh/h	3398	3504	1752	1767	3533	1767	1530	765	765	1737	1737	3474
Grp Volume(v), veh/h	681	727	4	2	628	335	2	0	2	379	4	516
Grp Sat Flow(s),veh/h/ln	1699	1752	1752	1767	1767	1767	1530	0	1530	1737	1737	1737
Q Serve(g_s), s	22.6	19.1	0.1	0.1	20.8	8.0	0.1	0.0	0.1	24.6	0.2	15.4
Cycle Q Clear(g_c), s	22.6	19.1	0.1	0.1	20.8	8.0	0.1	0.0	0.1	24.6	0.2	15.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	850	1372	686	103	707	824	229	0	229	463	463	926
V/C Ratio(X)	0.80	0.53	0.01	0.02	0.89	0.41	0.01	0.00	0.01	0.82	0.01	0.56
Avail Cap(c_a), veh/h	850	1372	686	103	707	824	229	0	229	463	463	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	1.00	1.00	1.00	1.00	0.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	42.2	28.0	9.2	53.3	46.7	8.4	43.4	0.0	43.4	41.3	32.3	37.9
Incr Delay (d2), s/veh	3.3	0.9	0.0	0.1	13.3	0.3	0.1	0.0	0.1	11.9	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	7.8	0.1	0.1	10.1	3.2	0.1	0.0	0.1	11.6	0.1	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	28.9	9.2	53.3	60.0	8.8	43.5	0.0	43.5	53.2	32.4	39.8
LnGrp LOS	D	C	A	D	E	A	D	A	D	D	C	D
Approach Vol, veh/h		1412			965			4			899	
Approach Delay, s/veh		36.8			42.2			43.5			45.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.0	22.0	11.0	51.0	22.0	36.0	34.0	28.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	32.0	18.0	7.0	47.0	18.0	32.0	30.0	24.0
Max Q Clear Time (g_c+I1), s	26.6	4.1	4.1	23.1	2.1	19.4	26.6	24.8
Green Ext Time (p_c), s	0.6	0.0	0.0	4.8	0.0	1.5	0.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

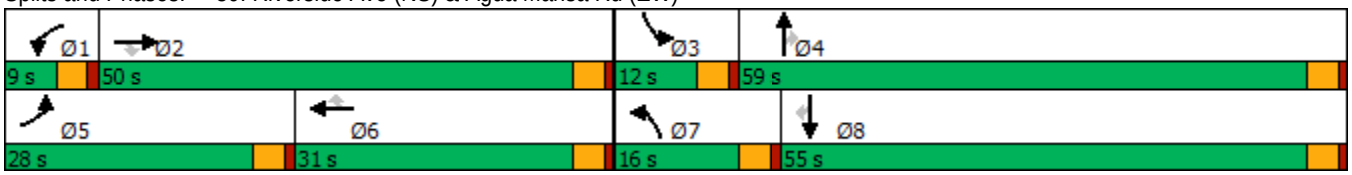


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Future Volume (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	1743	1482	1492	1570	1335	1626	3252	1455	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	1743	1482	1492	1570	1335	1626	3252	1455	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			76			109			109			127
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Shared Lane Traffic (%)												
Lane Group Flow (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

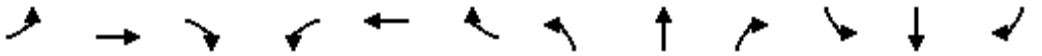
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	28.0	50.0	50.0	9.0	31.0	31.0	16.0	59.0	59.0	12.0	55.0	55.0
Total Split (%)	21.5%	38.5%	38.5%	6.9%	23.8%	23.8%	12.3%	45.4%	45.4%	9.2%	42.3%	42.3%
Maximum Green (s)	24.0	46.0	46.0	5.0	27.0	27.0	12.0	55.0	55.0	8.0	51.0	51.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.2	47.1	47.1	5.0	27.0	27.0	11.5	54.1	54.1	8.0	50.6	50.6
Actuated g/C Ratio	0.18	0.37	0.37	0.04	0.21	0.21	0.09	0.42	0.42	0.06	0.39	0.39
v/c Ratio	0.89	0.87	0.23	0.60	0.68	0.23	0.79	0.96	0.13	0.89	0.88	0.61
Control Delay	69.9	53.9	14.7	101.0	58.8	5.0	92.9	53.6	3.1	124.2	45.8	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	53.9	14.7	101.0	58.8	5.0	92.9	53.6	3.1	124.2	45.8	25.5
LOS	E	D	B	F	E	A	F	D	A	F	D	C
Approach Delay		56.4			50.1			53.6			45.2	
Approach LOS		E			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 128.3			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 51.1		Intersection LOS: D	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



HCM 6th Signalized Intersection Summary
39: Riverside Ave (NS) & Agua Mansa Rd (EW)

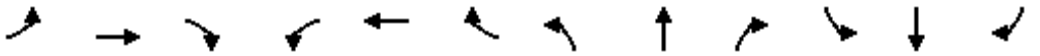


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	516	554	136	35	225	83	116	1321	91	92	1155	405
Future Volume (veh/h)	516	554	136	35	225	83	116	1321	91	92	1155	405
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	516	554	136	35	225	83	116	1321	91	92	1155	405
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	611	627	627	60	340	340	161	1394	734	109	1314	692
Arrive On Green	0.18	0.35	0.35	0.04	0.21	0.21	0.09	0.42	0.42	0.06	0.39	0.39
Sat Flow, veh/h	3427	1767	1767	1589	1589	1589	1737	3300	1737	1767	3357	1767
Grp Volume(v), veh/h	516	554	136	35	225	83	116	1321	91	92	1155	405
Grp Sat Flow(s),veh/h/ln	1714	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	18.9	38.2	7.0	2.8	16.8	5.6	8.4	50.0	4.1	6.7	41.4	23.5
Cycle Q Clear(g_c), s	18.9	38.2	7.0	2.8	16.8	5.6	8.4	50.0	4.1	6.7	41.4	23.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	611	627	627	60	340	340	161	1394	734	109	1314	692
V/C Ratio(X)	0.84	0.88	0.22	0.59	0.66	0.24	0.72	0.95	0.12	0.84	0.88	0.59
Avail Cap(c_a), veh/h	635	627	627	61	340	340	161	1400	737	109	1321	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	39.3	29.2	61.4	46.6	42.2	57.2	36.1	22.8	60.2	36.6	31.1
Incr Delay (d2), s/veh	9.9	16.6	0.8	13.0	9.7	1.7	14.6	13.5	0.1	42.1	7.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	18.8	3.0	1.3	7.4	2.3	4.2	21.1	1.6	4.2	17.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	55.9	30.0	74.4	56.4	43.9	71.8	49.6	22.9	102.3	43.7	32.4
LnGrp LOS	E	E	C	E	E	D	E	D	C	F	D	C
Approach Vol, veh/h		1206			343			1528			1652	
Approach Delay, s/veh		55.3			55.2			49.7			44.2	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	50.0	12.0	58.8	27.1	31.8	16.0	54.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	46.0	8.0	55.0	24.0	27.0	12.0	51.0
Max Q Clear Time (g_c+I1), s	6.8	42.2	10.7	54.0	22.9	20.8	12.4	45.4
Green Ext Time (p_c), s	0.0	1.3	0.0	0.8	0.2	0.7	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	49.6
HCM 6th LOS	D

YEAR 2035 WITH PROJECT – ALTERNATIVE 2

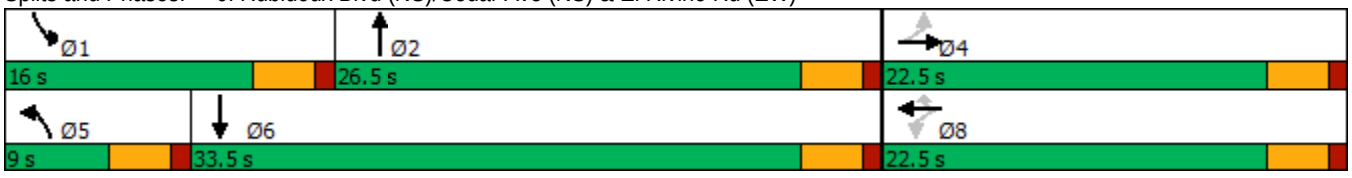


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	10	24	83	4	95	15	652	131	214	1119	8
Future Volume (vph)	21	10	24	83	4	95	15	652	131	214	1119	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941				0.850		0.975			0.999	
Flt Protected		0.981			0.954		0.950			0.950		
Satd. Flow (prot)	0	1609	0	0	1462	1302	1597	3115	0	1671	3339	0
Flt Permitted		0.865			0.696		0.950			0.950		
Satd. Flow (perm)	0	1419	0	0	1066	1302	1597	3115	0	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				151		39			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	21	10	24	83	4	95	15	652	131	214	1119	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	87	95	15	783	0	214	1127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	26.5		16.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%	34.6%	13.8%	40.8%		24.6%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5	18.5	5.0	22.5		12.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		9.7			9.7	9.7	5.0	25.7		10.9	39.8	
Actuated g/C Ratio		0.17			0.17	0.17	0.09	0.46		0.19	0.71	
v/c Ratio		0.21			0.48	0.27	0.11	0.54		0.66	0.48	
Control Delay		14.8			29.7	3.5	27.1	14.2		33.0	7.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		14.8			29.7	3.5	27.1	14.2		33.0	7.1	
LOS		B			C	A	C	B		C	A	
Approach Delay		14.8			16.0			14.4			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	10	24	83	4	95	15	652	131	214	1119	8
Future Volume (veh/h)	21	10	24	83	4	95	15	652	131	214	1119	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	21	10	24	83	4	95	15	652	131	214	1119	8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	148	76	98	308	11	216	32	1224	246	326	2090	15
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.02	0.44	0.44	0.18	0.61	0.61
Sat Flow, veh/h	361	543	699	1216	79	1544	1707	2772	557	1781	3449	25
Grp Volume(v), veh/h	55	0	0	87	0	95	15	381	402	214	549	578
Grp Sat Flow(s),veh/h/ln	1603	0	0	1296	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	2.9	0.4	8.8	8.8	5.7	9.6	9.6
Cycle Q Clear(g_c), s	2.7	0.0	0.0	2.6	0.0	2.9	0.4	8.8	8.8	5.7	9.6	9.6
Prop In Lane	0.38		0.44	0.95		1.00	1.00		0.33	1.00		0.01
Lane Grp Cap(c), veh/h	322	0	0	319	0	216	32	716	754	326	1025	1079
V/C Ratio(X)	0.17	0.00	0.00	0.27	0.00	0.44	0.47	0.53	0.53	0.66	0.54	0.54
Avail Cap(c_a), veh/h	659	0	0	576	0	561	168	716	754	419	1025	1079
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	0.0	20.0	0.0	20.1	24.8	10.4	10.4	19.3	5.9	5.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.5	0.0	1.4	10.2	2.8	2.7	2.4	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.9	0.0	1.0	0.2	2.6	2.7	2.1	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	0.0	20.4	0.0	21.5	35.0	13.2	13.1	21.7	7.9	7.8
LnGrp LOS	B	A	A	C	A	C	C	B	B	C	A	A
Approach Vol, veh/h		55			182			798			1341	
Approach Delay, s/veh		19.7			21.0			13.6			10.0	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	26.5		11.1	5.0	34.9		11.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	22.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	9.7	12.8		4.7	4.4	13.6		6.9				
Green Ext Time (p_c), s	0.1	3.0		0.2	0.0	6.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.3	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	788	15	0	1226
Future Volume (vph)	0	10	788	15	0	1226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	10	788	15	0	1226
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	10	803	0	0	1226
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	788	15	0	1226
Future Vol, veh/h	0	10	788	15	0	1226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	10	788	15	0	1226

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	402	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	604	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	604	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	604	-
HCM Lane V/C Ratio	-	-	0.017	-
HCM Control Delay (s)	-	-	11.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

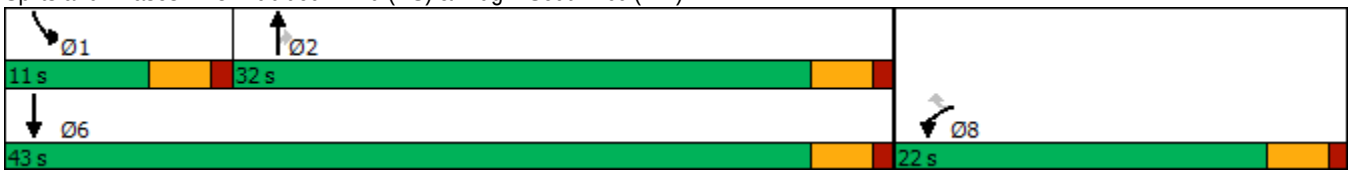


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	16	787	189	57	1169
Future Volume (vph)	67	16	787	189	57	1169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		16		189		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	67	16	787	189	57	1169
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	16	787	189	57	1169
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	33.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	18.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	7.5	7.5	39.7	39.7	6.6	46.4
Actuated g/C Ratio	0.13	0.13	0.70	0.70	0.12	0.82
v/c Ratio	0.28	0.07	0.35	0.18	0.30	0.43
Control Delay	24.2	11.6	7.3	2.0	26.7	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	11.6	7.3	2.0	26.7	3.4
LOS	C	B	A	A	C	A
Approach Delay	21.8		6.3			4.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 5.9		Intersection LOS: A	
Intersection Capacity Utilization 43.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



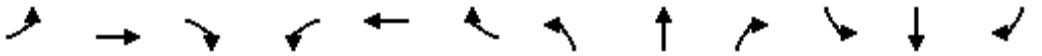
HCM 6th Signalized Intersection Summary
8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	16	787	189	57	1169
Future Volume (veh/h)	67	16	787	189	57	1169
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	67	16	787	189	57	1169
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	129	129	2074	1092	96	2595
Arrive On Green	0.07	0.07	0.64	0.64	0.05	0.77
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	67	16	787	189	57	1169
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	1.7	0.4	5.8	2.3	1.6	6.1
Cycle Q Clear(g_c), s	1.7	0.4	5.8	2.3	1.6	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	129	129	2074	1092	96	2595
V/C Ratio(X)	0.52	0.12	0.38	0.17	0.59	0.45
Avail Cap(c_a), veh/h	678	678	2074	1092	245	2595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	22.1	4.3	3.7	23.3	2.0
Incr Delay (d2), s/veh	3.2	0.4	0.5	0.3	5.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.8	0.4	0.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.9	22.5	4.9	4.0	29.0	2.6
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	83		976			1226
Approach Delay, s/veh	25.2		4.7			3.8
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.8	36.2			43.0	7.4
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	18.0
Max Q Clear Time (g_c+I1), s	3.6	7.8			8.1	3.7
Green Ext Time (p_c), s	0.0	5.3			9.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

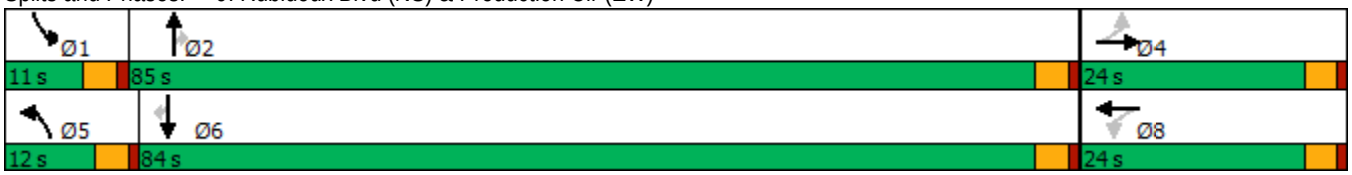


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1030	1	1	1212	11
Future Volume (vph)	5	0	15	1	0	0	19	1030	1	1	1212	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		178							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	5	0	15	1	0	0	19	1030	1	1	1212	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	15	0	1	0	0	19	1030	1	1	1212	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

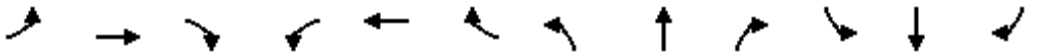
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		12.0	85.0	85.0	11.0	84.0	84.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		10.0%	70.8%	70.8%	9.2%	70.0%	70.0%
Maximum Green (s)	20.0	20.0		20.0	20.0		8.0	81.0	81.0	7.0	80.0	80.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.2	6.2		6.2			6.7	98.0	98.0	5.7	95.5	95.5
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.06	0.06		0.01			0.19	0.34	0.00	0.01	0.40	0.01
Control Delay	50.4	0.5		49.0			52.7	1.9	0.0	50.0	3.0	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	0.5		49.0			52.7	1.9	0.0	50.0	3.0	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.0			49.0			2.8			3.0	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 3.0		Intersection LOS: A	
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)



HCM 6th Signalized Intersection Summary
9: Rubidoux Blvd (NS) & Production Cir (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1030	1	1	1212	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1030	1	1	1212	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	5	0	15	1	0	0	19	1030	1	1	1212	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1421	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	5	0	15	1	0	0	19	1030	1	1	1212	11
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1421	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.5	0.0	1.1	0.1	0.0	0.0	1.1	6.6	0.0	0.1	9.1	0.1
Cycle Q Clear(g_c), s	0.5	0.0	1.1	1.1	0.0	0.0	1.1	6.6	0.0	0.1	9.1	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
V/C Ratio(X)	0.05	0.00	0.50	0.01	0.00	0.00	0.53	0.37	0.00	0.41	0.43	0.01
Avail Cap(c_a), veh/h	286	0	278	355	395	0	143	2786	1408	129	2793	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	0.0	46.5	47.0	0.0	0.0	46.6	1.5	1.1	48.0	2.1	1.4
Incr Delay (d2), s/veh	0.2	0.0	12.5	0.0	0.0	0.0	11.8	0.4	0.0	85.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.0	0.0	0.0	0.5	0.3	0.0	0.1	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	58.9	47.1	0.0	0.0	58.4	1.9	1.1	133.4	2.6	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		20			1			1050			1224	
Approach Delay, s/veh		55.8			47.1			2.9			2.7	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	85.9		6.1	6.0	84.0		6.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	81.0		20.0	8.0	80.0		20.0				
Max Q Clear Time (g_c+I1), s	2.1	8.6		3.1	3.1	11.1		3.1				
Green Ext Time (p_c), s	0.0	8.3		0.0	0.0	10.8		0.0				

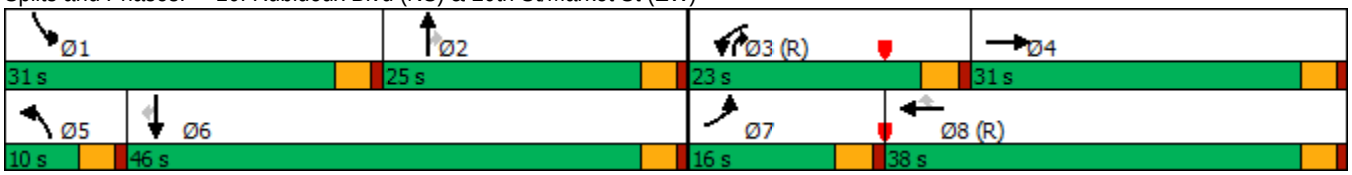
Intersection Summary			
HCM 6th Ctrl Delay		3.3	
HCM 6th LOS		A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	112	47	341	78	519	23	388	346	628	657	30
Future Volume (vph)	54	112	47	341	78	519	23	388	346	628	657	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.956				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				519			344			129
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	54	112	47	341	78	519	23	388	346	628	657	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	159	0	341	78	519	23	388	346	628	657	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

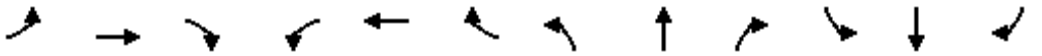
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	16.0	31.0		23.0	38.0	38.0	10.0	25.0	23.0	31.0	46.0	46.0
Total Split (%)	14.5%	28.2%		20.9%	34.5%	34.5%	9.1%	22.7%	20.9%	28.2%	41.8%	41.8%
Maximum Green (s)	12.0	27.0		19.0	34.0	34.0	6.0	21.0	19.0	27.0	42.0	42.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.8	27.0		19.0	38.1	38.1	5.9	23.5	46.5	24.5	48.0	48.0
Actuated g/C Ratio	0.09	0.25		0.17	0.35	0.35	0.05	0.21	0.42	0.22	0.44	0.44
v/c Ratio	0.57	0.57		0.64	0.14	0.63	0.28	0.58	0.44	0.84	0.43	0.04
Control Delay	70.3	41.6		53.1	49.7	26.6	58.7	43.6	4.3	51.6	23.5	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	41.6		53.1	49.7	27.1	58.7	43.6	4.3	51.6	23.5	0.1
LOS	E	D		D	D	C	E	D	A	D	C	A
Approach Delay		48.8			38.4			26.1			36.4	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 35.4		Intersection LOS: D	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	112	47	341	78	519	23	388	346	628	657	30
Future Volume (veh/h)	54	112	47	341	78	519	23	388	346	628	657	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	54	112	47	341	78	519	23	388	346	628	657	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	69	166	70	588	625	625	42	612	620	762	1335	703
Arrive On Green	0.08	0.27	0.27	0.18	0.37	0.37	0.03	0.19	0.19	0.21	0.38	0.38
Sat Flow, veh/h	877	618	259	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	54	0	159	341	78	519	23	388	346	628	657	30
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	6.6	0.0	17.8	10.5	3.4	30.7	1.5	12.4	18.1	18.5	15.7	1.1
Cycle Q Clear(g_c), s	6.6	0.0	17.8	10.5	3.4	30.7	1.5	12.4	18.1	18.5	15.7	1.1
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	0	235	588	625	625	42	612	620	762	1335	703
V/C Ratio(X)	0.79	0.00	0.68	0.58	0.12	0.83	0.55	0.63	0.56	0.82	0.49	0.04
Avail Cap(c_a), veh/h	96	0	235	588	625	625	91	612	620	877	1335	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.67	0.67	0.67	0.85	0.85	0.85	0.92	0.92	0.92
Uniform Delay (d), s/veh	49.8	0.0	36.0	41.4	22.9	31.6	53.0	40.8	27.3	41.3	25.9	21.4
Incr Delay (d2), s/veh	24.3	0.0	7.4	1.0	0.3	8.5	9.1	4.2	3.1	5.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	4.1	4.2	1.3	13.2	0.7	5.0	7.3	8.3	6.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	0.0	43.4	42.3	23.2	40.1	62.1	45.0	30.4	46.6	27.1	21.5
LnGrp LOS	E	A	D	D	C	D	E	D	C	D	C	C
Approach Vol, veh/h		213			938			757			1315	
Approach Delay, s/veh		51.2			39.5			38.8			36.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.5	25.3	23.7	33.5	6.8	46.0	12.6	44.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	27.0	21.0	19.0	27.0	6.0	42.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	22.5	22.1	12.5	19.8	5.5	19.7	10.6	34.7
Green Ext Time (p_c), s	1.0	0.0	0.6	0.4	0.0	4.0	0.0	0.0

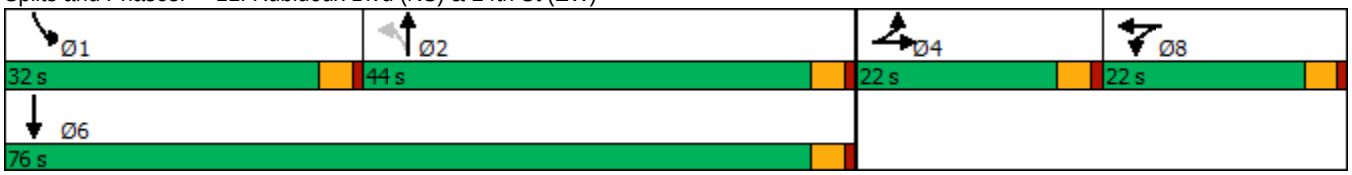
Intersection Summary	
HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	32	46	7	2	13	17	699	96	282	795	1
Future Volume (vph)	5	32	46	7	2	13	17	699	96	282	795	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.920			0.982				
Flt Protected		0.997			0.984		0.950			0.950		
Satd. Flow (prot)	0	1068	0	0	1433	0	1530	3004	0	1570	3139	0
Flt Permitted		0.997			0.984		0.351			0.950		
Satd. Flow (perm)	0	1068	0	0	1433	0	565	3004	0	1570	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			13			13				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	64%	64%	64%	20%	20%	20%	18%	18%	18%	15%	15%	15%
Adj. Flow (vph)	5	32	46	7	2	13	17	699	96	282	795	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	22	0	17	795	0	282	796	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	

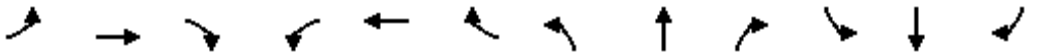
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		44.0	44.0		32.0	76.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		36.7%	36.7%		26.7%	63.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		40.0	40.0		28.0	72.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		9.4			6.5		48.2	48.2		21.0	74.3	
Actuated g/C Ratio		0.10			0.07		0.52	0.52		0.23	0.80	
v/c Ratio		0.56			0.20		0.06	0.51		0.79	0.32	
Control Delay		38.0			32.8		19.9	20.0		51.5	4.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		38.0			32.8		19.9	20.0		51.5	4.8	
LOS		D			C		B	B		D	A	
Approach Delay		38.0			32.8			20.0			17.0	
Approach LOS		D			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 52.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	32	46	7	2	13	17	699	96	282	795	1
Future Volume (veh/h)	5	32	46	7	2	13	17	699	96	282	795	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	952	952	913	1604	1604	1539	1633	1633	1568	1678	1678	1611
Adj Flow Rate, veh/h	5	32	46	7	2	13	17	699	96	282	795	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	64	64	64	20	20	20	18	18	18	15	15	15
Cap, veh/h	6	36	51	12	3	22	386	1462	201	319	2464	3
Arrive On Green	0.10	0.10	0.10	0.02	0.02	0.02	0.52	0.52	0.52	0.19	0.75	0.75
Sat Flow, veh/h	57	367	527	510	146	948	596	2800	385	1678	3267	4
Grp Volume(v), veh/h	83	0	0	22	0	0	17	387	408	282	388	408
Grp Sat Flow(s),veh/h/ln	952	0	0	1604	0	0	596	1552	1633	1678	1594	1678
Q Serve(g_s), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.2	15.2	15.6	7.6	7.6
Cycle Q Clear(g_c), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.2	15.2	15.6	7.6	7.6
Prop In Lane	0.06		0.55	0.32		0.59	1.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	92	0	0	37	0	0	386	810	853	319	1202	1265
V/C Ratio(X)	0.90	0.00	0.00	0.59	0.00	0.00	0.04	0.48	0.48	0.88	0.32	0.32
Avail Cap(c_a), veh/h	179	0	0	302	0	0	386	810	853	492	1202	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	0.0	46.2	0.0	0.0	11.2	14.5	14.5	37.6	3.8	3.8
Incr Delay (d2), s/veh	24.3	0.0	0.0	14.1	0.0	0.0	0.2	2.0	1.9	11.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.7	0.0	0.0	0.2	5.0	5.3	7.0	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	0.0	0.0	60.3	0.0	0.0	11.4	16.6	16.5	49.2	4.5	4.5
LnGrp LOS	E	A	A	E	A	A	B	B	B	D	A	A
Approach Vol, veh/h		83			22			812			1078	
Approach Delay, s/veh		66.9			60.3			16.4			16.2	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	22.2	53.8		13.3		76.0		6.2				
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s	28.0	40.0		18.0		72.0		18.0				
Max Q Clear Time (g_c+I1), s	17.6	17.2		10.2		9.6		3.3				
Green Ext Time (p_c), s	0.5	4.6		0.2		4.9		0.0				

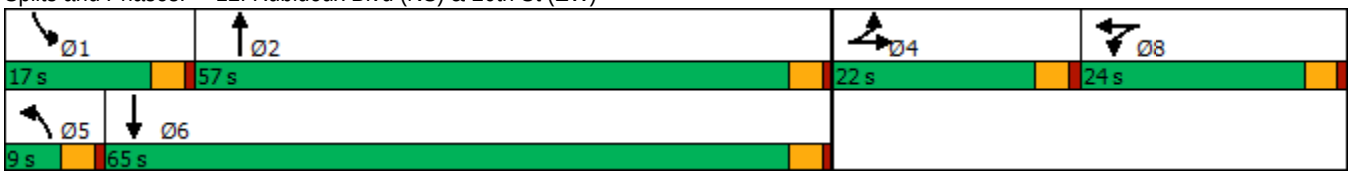
Intersection Summary												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	29	3	17	9	745	97	63	802	0
Future Volume (vph)	0	0	3	29	3	17	9	745	97	63	802	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.953			0.983				
Flt Protected					0.971		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Flt Permitted					0.971		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		375			17			15				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	44%	44%	44%	18%	18%	18%	19%	19%	19%
Adj. Flow (vph)	0	0	3	29	3	17	9	745	97	63	802	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	49	0	9	842	0	63	802	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

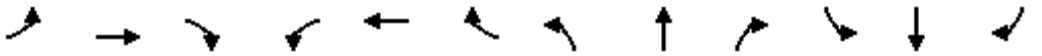
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	57.0		17.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	47.5%		14.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	53.0		13.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.5			8.0		5.0	62.5		9.1	71.8	
Actuated g/C Ratio		0.06			0.09		0.06	0.71		0.10	0.81	
v/c Ratio		0.01			0.39		0.10	0.39		0.41	0.32	
Control Delay		0.0			36.8		44.2	8.7		45.5	4.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			36.8		44.2	8.7		45.5	4.4	
LOS		A			D		D	A		D	A	
Approach Delay					36.8			9.1			7.4	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 88.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



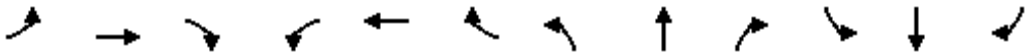
HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	29	3	17	9	745	97	63	802	0
Future Volume (veh/h)	0	0	3	29	3	17	9	745	97	63	802	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1248	1248	1248	1633	1633	1568	1618	1618	1554
Adj Flow Rate, veh/h	0	0	3	29	3	17	9	745	97	63	802	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	44	44	44	18	18	18	19	19	19
Cap, veh/h	0	0	8	32	3	19	18	1996	260	78	2292	0
Arrive On Green	0.00	0.00	0.00	0.04	0.04	0.04	0.01	0.71	0.71	0.05	0.75	0.00
Sat Flow, veh/h	0	0	1900	739	76	433	1633	2818	367	1618	3156	0
Grp Volume(v), veh/h	0	0	3	49	0	0	9	410	432	63	802	0
Grp Sat Flow(s),veh/h/ln	0	0	1900	1248	0	0	1633	1552	1633	1618	1537	0
Q Serve(g_s), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.6	8.6	3.2	7.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.6	8.6	3.2	7.4	0.0
Prop In Lane	0.00		1.00	0.59		0.35	1.00		0.22	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	8	55	0	0	18	1099	1157	78	2292	0
V/C Ratio(X)	0.00	0.00	0.39	0.90	0.00	0.00	0.49	0.37	0.37	0.80	0.35	0.00
Avail Cap(c_a), veh/h	0	0	418	305	0	0	100	1099	1157	257	2292	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	40.7	38.9	0.0	0.0	40.2	4.7	4.7	38.6	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	29.6	35.2	0.0	0.0	18.5	1.0	0.9	17.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.5	0.0	0.0	0.3	1.9	2.0	1.5	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	70.2	74.1	0.0	0.0	58.8	5.7	5.7	55.6	4.0	0.0
LnGrp LOS	A	A	E	E	A	A	E	A	A	E	A	A
Approach Vol, veh/h		3			49			851			865	
Approach Delay, s/veh		70.2			74.1			6.2			7.8	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	62.0		4.3	4.9	65.0		7.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	53.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	5.2	10.6		2.1	2.4	9.4		5.2				
Green Ext Time (p_c), s	0.1	5.3		0.0	0.0	5.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		9.0
HCM 6th LOS		A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	118	111	81	58	7	168	813	65	7	804	50
Future Volume (vph)	61	118	111	81	58	7	168	813	65	7	804	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.927			0.984			0.989			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1587	0	1583	1640	0	1543	3052	0	1543	3058	0
Flt Permitted	0.715			0.467			0.950			0.950		
Satd. Flow (perm)	1224	1587	0	778	1640	0	1543	3052	0	1543	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			7			17			11	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	11%	11%	14%	14%	14%	17%	17%	17%	17%	17%	17%
Adj. Flow (vph)	61	118	111	81	58	7	168	813	65	7	804	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	229	0	81	65	0	168	878	0	7	854	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

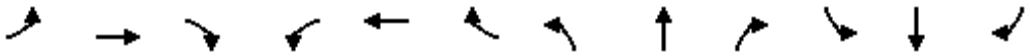
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		13.0	28.5		9.0	24.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		21.7%	47.5%		15.0%	40.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		9.0	24.5		5.0	20.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	10.5	10.5		10.5	10.5		8.7	31.9		5.0	20.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.17	0.61		0.10	0.40	
v/c Ratio	0.25	0.60		0.52	0.19		0.65	0.47		0.05	0.69	
Control Delay	19.4	18.7		30.5	16.5		36.8	8.2		24.4	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.4	18.7		30.5	16.5		36.8	8.2		24.4	18.0	
LOS	B	B		C	B		D	A		C	B	
Approach Delay		18.9			24.3			12.8			18.1	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 52			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



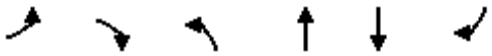
HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	118	111	81	58	7	168	813	65	7	804	50
Future Volume (veh/h)	61	118	111	81	58	7	168	813	65	7	804	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1668	1693	1693	1625	1648	1648	1648	1648	1648	1648
Adj Flow Rate, veh/h	61	118	111	81	58	7	168	813	65	7	804	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	11	11	11	14	14	14	17	17	17	17	17	17
Cap, veh/h	373	234	220	248	396	48	256	1529	122	15	1112	69
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.51	0.51	0.01	0.37	0.37
Sat Flow, veh/h	1241	895	842	1042	1510	182	1648	2976	238	1648	3026	188
Grp Volume(v), veh/h	61	0	229	81	0	65	168	428	450	7	416	438
Grp Sat Flow(s),veh/h/ln	1241	0	1737	1042	0	1693	1648	1566	1648	1648	1566	1648
Q Serve(g_s), s	2.3	0.0	6.2	4.2	0.0	1.6	5.3	10.2	10.2	0.2	12.8	12.8
Cycle Q Clear(g_c), s	6.0	0.0	6.2	12.4	0.0	1.6	5.3	10.2	10.2	0.2	12.8	12.8
Prop In Lane	1.00		0.48	1.00		0.11	1.00		0.14	1.00		0.11
Lane Grp Cap(c), veh/h	373	0	455	248	0	443	256	804	847	15	576	606
V/C Ratio(X)	0.16	0.00	0.50	0.33	0.00	0.15	0.66	0.53	0.53	0.46	0.72	0.72
Avail Cap(c_a), veh/h	460	0	576	321	0	562	266	804	847	148	576	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	17.5	23.7	0.0	15.8	22.2	9.1	9.1	27.5	15.2	15.2
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.8	0.0	0.2	5.5	2.5	2.4	20.2	7.7	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.4	1.0	0.0	0.6	2.1	2.8	2.9	0.2	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	18.4	24.5	0.0	15.9	27.6	11.6	11.5	47.7	22.9	22.5
LnGrp LOS	B	A	B	C	A	B	C	B	B	D	C	C
Approach Vol, veh/h		290			146			1046			861	
Approach Delay, s/veh		18.5			20.7			14.1			22.9	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	32.6		18.6	12.7	24.5		18.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	9.0	20.5		18.5				
Max Q Clear Time (g_c+I1), s	4.2	14.2		10.2	9.3	16.8		14.4				
Green Ext Time (p_c), s	0.0	3.6		0.9	0.0	1.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		18.3	
HCM 6th LOS		B	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	195	134	1052	954	35
Future Volume (vph)	0	195	134	1052	954	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1344	1556	3112	3139	1404
Flt Permitted			0.950			
Satd. Flow (perm)	0	1344	1556	3112	3139	1404
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	16%	16%	15%	15%
Adj. Flow (vph)	0	195	134	1052	954	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	195	134	1052	954	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

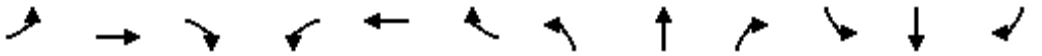
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	195	134	1052	954	35
Future Vol, veh/h	0	195	134	1052	954	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	16	16	15	15
Mvmt Flow	0	195	134	1052	954	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	477	989	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	4.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	2.36	-	-	-
Pot Cap-1 Maneuver	0	524	616	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	524	616	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	616	-	524	-	-
HCM Lane V/C Ratio	0.218	-	0.372	-	-
HCM Control Delay (s)	12.5	-	15.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	1.7	-	-

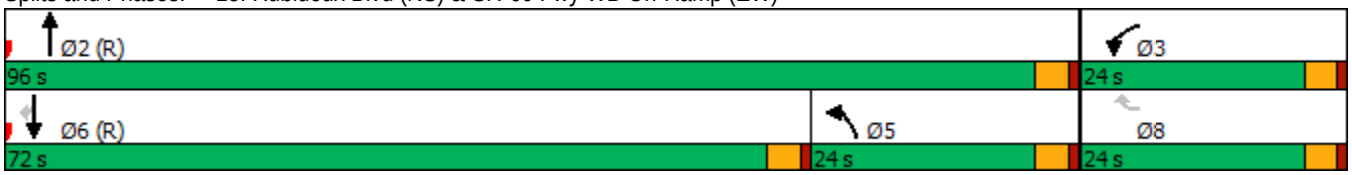


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Future Volume (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						250						578
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	12%	12%	12%
Adj. Flow (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

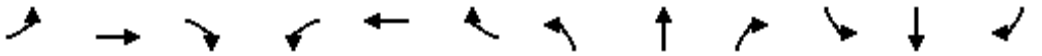
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				24.0		24.0	24.0	96.0			72.0	72.0
Total Split (%)				20.0%		20.0%	20.0%	80.0%			60.0%	60.0%
Maximum Green (s)				20.0		20.0	20.0	92.0			68.0	68.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				17.5		17.5	20.0	94.5			70.5	70.5
Actuated g/C Ratio				0.15		0.15	0.17	0.79			0.59	0.59
v/c Ratio				0.74		0.56	0.68	0.34			0.27	0.68
Control Delay				58.0		10.5	44.1	3.1			12.9	7.0
Queue Delay				0.0		0.0	0.0	0.3			0.0	0.0
Total Delay				58.0		10.5	44.1	3.4			12.9	7.0
LOS				E		B	D	A			B	A
Approach Delay					39.0			15.2			9.5	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



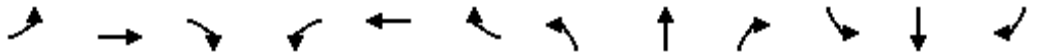
HCM 6th Signalized Intersection Summary
15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	377	0	250	352	866	0	0	511	738
Future Volume (veh/h)	0	0	0	377	0	250	352	866	0	0	511	738
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1722	1722
Adj Flow Rate, veh/h				377	0	250	352	866	0	0	511	738
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	12	12
Cap, veh/h				555	0	286	611	2561	0	0	1854	976
Arrive On Green				0.15	0.00	0.15	0.06	0.26	0.00	0.00	0.57	0.57
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3358	1722
Grp Volume(v), veh/h				377	0	250	352	866	0	0	511	738
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1636	1722
Q Serve(g_s), s				11.6	0.0	15.4	12.3	25.8	0.0	0.0	9.6	39.0
Cycle Q Clear(g_c), s				11.6	0.0	15.4	12.3	25.8	0.0	0.0	9.6	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				555	0	286	611	2561	0	0	1854	976
V/C Ratio(X)				0.68	0.00	0.87	0.58	0.34	0.00	0.00	0.28	0.76
Avail Cap(c_a), veh/h				614	0	317	611	2561	0	0	1854	976
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.2	0.0	49.8	51.9	19.2	0.0	0.0	13.4	19.7
Incr Delay (d2), s/veh				2.7	0.0	21.2	1.2	0.3	0.0	0.0	0.4	5.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	9.0	5.6	11.3	0.0	0.0	3.5	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.9	0.0	71.1	53.1	19.6	0.0	0.0	13.7	25.2
LnGrp LOS				D	A	E	D	B	A	A	B	C
Approach Vol, veh/h					627			1218			1249	
Approach Delay, s/veh					58.9			29.2			20.5	
Approach LOS					E			C			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	97.9		25.9	72.0		22.1						
Change Period (Y+Rc), s	4.0		4.0	4.0		4.0						
Max Green Setting (Gmax), s	92.0		20.0	68.0		20.0						
Max Q Clear Time (g_c+I1), s	27.8		14.3	41.0		17.4						
Green Ext Time (p_c), s	7.1		0.6	6.4		0.6						

Intersection Summary		
HCM 6th Ctrl Delay	31.7	
HCM 6th LOS	C	

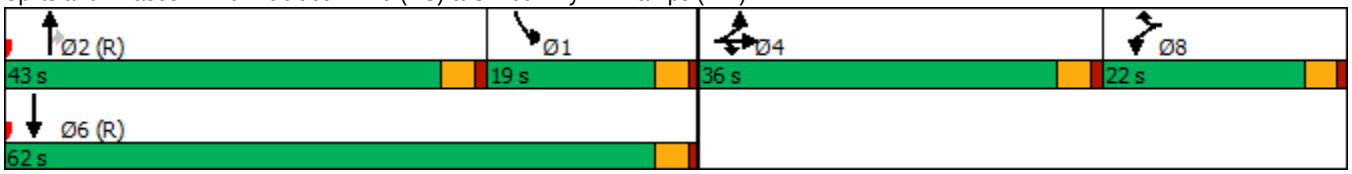


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	434	37	357	12	0	3	0	596	665	196	685	0
Future Volume (vph)	434	37	357	12	0	3	0	596	665	196	685	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.960		0.950						0.950		
Satd. Flow (prot)	1478	1494	1207	1805	0	1615	0	3471	1553	1703	3406	0
Flt Permitted	0.950	0.960		0.950						0.950		
Satd. Flow (perm)	1478	1494	1207	1805	0	1615	0	3471	1553	1703	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			82			665			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	16%	0%	0%	0%	4%	4%	4%	6%	6%	6%
Adj. Flow (vph)	434	37	357	12	0	3	0	596	665	196	685	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	234	237	357	12	0	3	0	596	665	196	685	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

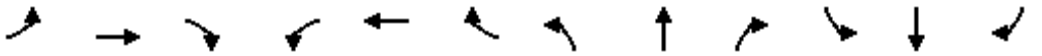
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	36.0	36.0	36.0	22.0		22.0		43.0	43.0	19.0	62.0	
Total Split (%)	30.0%	30.0%	30.0%	18.3%		18.3%		35.8%	35.8%	15.8%	51.7%	
Maximum Green (s)	32.0	32.0	32.0	18.0		18.0		39.0	39.0	15.0	58.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	26.0	26.0	26.0	6.4		6.4		62.5	62.5	15.0	81.5	
Actuated g/C Ratio	0.22	0.22	0.22	0.05		0.05		0.52	0.52	0.12	0.68	
v/c Ratio	0.73	0.73	0.84	0.12		0.02		0.33	0.59	0.92	0.30	
Control Delay	56.8	56.8	35.6	56.4		0.3		19.3	4.2	77.6	5.7	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.4	
Total Delay	56.8	56.8	35.6	56.4		0.3		19.3	4.2	77.6	6.1	
LOS	E	E	D	E		A		B	A	E	A	
Approach Delay		47.6			45.2			11.3			22.0	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 56 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



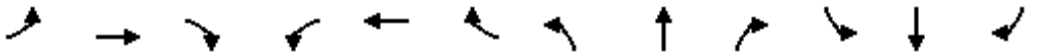
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	434	37	357	12	0	3	0	596	665	196	685	0
Future Volume (veh/h)	434	37	357	12	0	3	0	596	665	196	685	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1596	1900	0	1900	0	1841	1841	1811	1811	0
Adj Flow Rate, veh/h	460	0	357	12	0	3	0	596	665	196	685	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	16	0	0	0	0	4	4	6	6	0
Cap, veh/h	846	0	406	0	0	0	0	1137	598	580	2336	0
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.32	0.32	0.64	1.00	0.00
Sat Flow, veh/h	3326	0	1596		0		0	3589	1841	1811	3532	0
Grp Volume(v), veh/h	460	0	357		0.0		0	596	665	196	685	0
Grp Sat Flow(s),veh/h/ln	1663	0	1596				0	1749	1841	1811	1721	0
Q Serve(g_s), s	14.4	0.0	25.8				0.0	16.6	39.0	5.9	0.0	0.0
Cycle Q Clear(g_c), s	14.4	0.0	25.8				0.0	16.6	39.0	5.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	846	0	406				0	1137	598	580	2336	0
V/C Ratio(X)	0.54	0.00	0.88				0.00	0.52	1.11	0.34	0.29	0.00
Avail Cap(c_a), veh/h	887	0	426				0	1137	598	580	2336	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.88	0.88	0.00
Uniform Delay (d), s/veh	38.7	0.0	43.0				0.0	33.0	40.5	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	18.0				0.0	1.5	69.3	0.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	12.1				0.0	7.1	28.5	2.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	61.0				0.0	34.5	109.8	16.0	0.3	0.0
LnGrp LOS	D	A	E				A	C	F	B	A	A
Approach Vol, veh/h		817						1261			881	
Approach Delay, s/veh		48.8						74.2			3.8	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	42.5	43.0		34.5		85.5						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	15.0	39.0		32.0		58.0						
Max Q Clear Time (g_c+I1), s	9.9	41.0		29.8		4.0						
Green Ext Time (p_c), s	0.2	0.0		0.8		5.1						

Intersection Summary			
HCM 6th Ctrl Delay			46.2
HCM 6th LOS			D

Notes

User approved volume balancing among the lanes for turning movement.

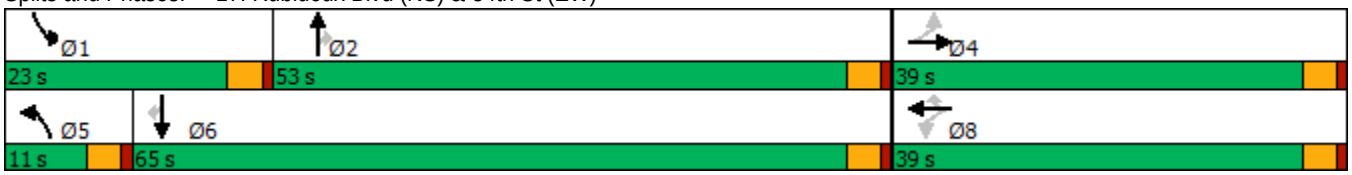


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	46	21	12	22	190	28	876	80	124	684	79
Future Volume (vph)	164	46	21	12	22	190	28	876	80	124	684	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.988				0.850			0.850			0.850
Flt Protected		0.966			0.983		0.950			0.950		
Satd. Flow (prot)	0	1727	0	0	1868	1400	1719	3438	1333	1703	3406	1320
Flt Permitted		0.768			0.907		0.950			0.950		
Satd. Flow (perm)	0	1373	0	0	1723	1400	1719	3438	1333	1703	3406	1320
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				190			85			50
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	5%	5%	5%	6%	6%	6%
Adj. Flow (vph)	164	46	21	12	22	190	28	876	80	124	684	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	34	190	28	876	80	124	684	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	39.0	39.0		39.0	39.0	39.0	11.0	53.0	53.0	23.0	65.0	65.0
Total Split (%)	33.9%	33.9%		33.9%	33.9%	33.9%	9.6%	46.1%	46.1%	20.0%	56.5%	56.5%
Maximum Green (s)	35.0	35.0		35.0	35.0	35.0	7.0	49.0	49.0	19.0	61.0	61.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		21.3			21.3	21.3	6.5	51.9	51.9	12.4	62.3	62.3
Actuated g/C Ratio		0.22			0.22	0.22	0.07	0.53	0.53	0.13	0.64	0.64
v/c Ratio		0.77			0.09	0.42	0.24	0.48	0.11	0.57	0.32	0.09
Control Delay		52.7			31.0	7.6	53.0	17.4	3.9	52.6	10.4	5.4
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		52.7			31.0	7.6	53.0	17.4	3.9	52.6	10.4	5.4
LOS		D			C	A	D	B	A	D	B	A
Approach Delay		52.7			11.2			17.3			15.9	
Approach LOS		D			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 97.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)



HCM 6th Signalized Intersection Summary
17: Rubidoux Blvd (NS) & 34th St (EW)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	46	21	12	22	190	28	876	80	124	684	79
Future Volume (veh/h)	164	46	21	12	22	190	28	876	80	124	684	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1824	1826	1826	1753	1811	1811	1739
Adj Flow Rate, veh/h	164	46	21	12	22	190	28	876	80	124	684	79
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	5	5	5	0	0	0	5	5	5	6	6	6
Cap, veh/h	247	58	24	159	270	406	55	1908	964	190	2150	1086
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.55	0.55	0.10	0.62	0.62
Sat Flow, veh/h	826	263	109	489	1215	1824	1826	3469	1753	1811	3441	1739
Grp Volume(v), veh/h	231	0	0	34	0	190	28	876	80	124	684	79
Grp Sat Flow(s),veh/h/ln	1197	0	0	1704	0	1824	1826	1735	1753	1811	1721	1739
Q Serve(g_s), s	16.4	0.0	0.0	0.0	0.0	8.8	1.5	14.8	2.1	6.4	9.1	1.7
Cycle Q Clear(g_c), s	18.4	0.0	0.0	1.4	0.0	8.8	1.5	14.8	2.1	6.4	9.1	1.7
Prop In Lane	0.71		0.09	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	0	0	429	0	406	55	1908	964	190	2150	1086
V/C Ratio(X)	0.70	0.00	0.00	0.08	0.00	0.47	0.51	0.46	0.08	0.65	0.32	0.07
Avail Cap(c_a), veh/h	504	0	0	655	0	654	131	1908	964	352	2150	1086
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	0.0	30.1	0.0	32.9	46.7	13.2	10.4	42.0	8.6	7.2
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.0	0.8	7.3	0.8	0.2	3.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	0.0	0.6	0.0	4.0	0.8	5.4	0.8	3.0	3.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	0.0	30.1	0.0	33.8	53.9	14.0	10.5	45.8	9.0	7.3
LnGrp LOS	D	A	A	C	A	C	D	B	B	D	A	A
Approach Vol, veh/h		231			224			984			887	
Approach Delay, s/veh		40.0			33.2			14.9			14.0	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	57.7		25.7	6.9	65.0		25.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	49.0		35.0	7.0	61.0		35.0				
Max Q Clear Time (g_c+I1), s	10.4	18.8		20.4	5.5	13.1		12.8				
Green Ext Time (p_c), s	0.2	6.8		1.3	0.0	5.3		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	349	6	12	183	0	12
Future Volume (vph)	349	6	12	183	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	349	6	12	183	0	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	349	6	12	183	0	12
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	349	6	12	183	0	12
Future Vol, veh/h	349	6	12	183	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	349	6	12	183	0	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	355	0	-	175
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	1057	-	0	844
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1057	-	-	844
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	1057	-
HCM Lane V/C Ratio	0.014	-	-	0.011	-
HCM Control Delay (s)	9.3	-	-	8.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	344	17	14	188	7	10
Future Volume (vph)	344	17	14	188	7	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3282	1468	1456	2911	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	344	17	14	188	7	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	17	14	188	7	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

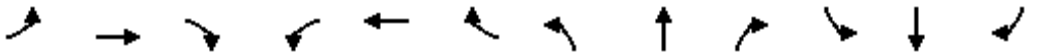
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	344	17	14	188	7	10
Future Vol, veh/h	344	17	14	188	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	344	17	14	188	7	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	361	0	466	172
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.58	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.44	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1051	-	530	848
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	896	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1051	-	523	848
Mov Cap-2 Maneuver	-	-	-	-	523	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	896	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	523	848	-	-	1051	-
HCM Lane V/C Ratio	0.013	0.012	-	-	0.013	-
HCM Control Delay (s)	12	9.3	-	-	8.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

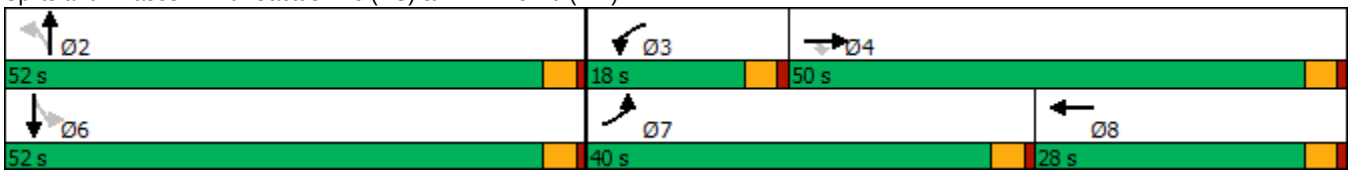


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	133	20	47	100	114	6	3	15	207	6	84
Future Volume (vph)	205	133	20	47	100	114	6	3	15	207	6	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.920			0.875			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2768	0	1805	1662	0	1626	1472	0
Flt Permitted	0.950			0.950			0.699			0.746		
Satd. Flow (perm)	1583	3167	1417	1504	2768	0	1328	1662	0	1277	1472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		114			15			84	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	205	133	20	47	100	114	6	3	15	207	6	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	205	133	20	47	214	0	6	18	0	207	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

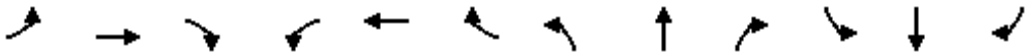
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	40.0	50.0	50.0	18.0	28.0		52.0	52.0		52.0	52.0	
Total Split (%)	33.3%	41.7%	41.7%	15.0%	23.3%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	36.0	46.0	46.0	14.0	24.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.3	21.3	21.3	8.2	8.7		48.3	48.3		48.3	48.3	
Actuated g/C Ratio	0.19	0.25	0.25	0.10	0.10		0.57	0.57		0.57	0.57	
v/c Ratio	0.68	0.17	0.05	0.33	0.56		0.01	0.02		0.29	0.10	
Control Delay	44.4	27.4	2.6	43.9	24.0		11.0	6.2		12.6	3.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.4	27.4	2.6	43.9	24.0		11.0	6.2		12.6	3.5	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		35.8			27.5			7.4			9.8	
Approach LOS		D			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 85.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 24.6		Intersection LOS: C	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	133	20	47	100	114	6	3	15	207	6	84
Future Volume (veh/h)	205	133	20	47	100	114	6	3	15	207	6	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	205	133	20	47	100	114	6	3	15	207	6	84
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	250	686	361	65	161	170	853	189	945	858	69	968
Arrive On Green	0.15	0.21	0.21	0.04	0.11	0.11	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1693	3216	1693	1604	1523	1604	1327	317	1583	1295	116	1621
Grp Volume(v), veh/h	205	133	20	47	100	114	6	0	18	207	0	90
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1327	0	1900	1295	0	1737
Q Serve(g_s), s	9.4	2.7	0.8	2.3	5.0	5.5	0.2	0.0	0.3	6.2	0.0	1.8
Cycle Q Clear(g_c), s	9.4	2.7	0.8	2.3	5.0	5.5	1.9	0.0	0.3	6.5	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		0.93
Lane Grp Cap(c), veh/h	250	686	361	65	161	170	853	0	1134	858	0	1037
V/C Ratio(X)	0.82	0.19	0.06	0.73	0.62	0.67	0.01	0.00	0.02	0.24	0.00	0.09
Avail Cap(c_a), veh/h	758	1840	968	279	455	479	853	0	1134	858	0	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	26.0	25.2	38.1	34.4	34.6	7.3	0.0	6.6	7.9	0.0	6.9
Incr Delay (d2), s/veh	6.6	0.1	0.1	14.2	3.8	4.5	0.0	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.0	0.3	1.2	2.0	2.3	0.0	0.0	0.1	1.7	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	26.1	25.2	52.3	38.2	39.1	7.3	0.0	6.6	8.6	0.0	7.0
LnGrp LOS	D	C	C	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		358			261			24			297	
Approach Delay, s/veh		33.9			41.1			6.8			8.1	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		52.0	7.2	21.1		52.0	15.9	12.5				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		48.0	14.0	46.0		48.0	36.0	24.0				
Max Q Clear Time (g_c+I1), s		3.9	4.3	4.7		8.5	11.4	7.5				
Green Ext Time (p_c), s		0.1	0.0	0.9		1.2	0.6	1.0				

Intersection Summary												
HCM 6th Ctrl Delay			27.1									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	351	4	5	260	0	3
Future Volume (vph)	351	4	5	260	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	351	4	5	260	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	351	4	5	260	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.7%		ICU Level of Service A	
Analysis Period (min) 15			

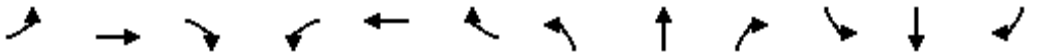
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	351	4	5	260	0	3
Future Vol, veh/h	351	4	5	260	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	351	4	5	260	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	355	0	-	176
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1081	-	0	843
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1081	-	-	843
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	843	-	-	1081	-
HCM Lane V/C Ratio	0.004	-	-	0.005	-
HCM Control Delay (s)	9.3	-	-	8.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

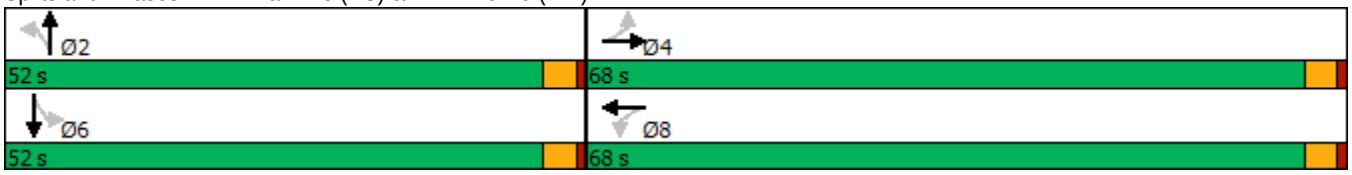


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	159	161	15	146	6	104	3	4	10	12	11
Future Volume (vph)	3	159	161	15	146	6	104	3	4	10	12	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925			0.994			0.914			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1612	0	1583	1657	0	1410	1357	0	1736	1695	0
Flt Permitted	0.615			0.296			0.742			0.753		
Satd. Flow (perm)	1072	1612	0	493	1657	0	1101	1357	0	1376	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65			3			4			11	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	3	159	161	15	146	6	104	3	4	10	12	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	320	0	15	152	0	104	7	0	10	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

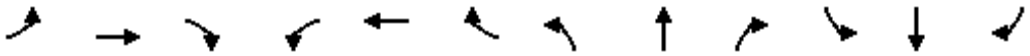
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	68.0	68.0		68.0	68.0		52.0	52.0		52.0	52.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	64.0	64.0		64.0	64.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	17.1	17.1		17.1	17.1		48.2	48.2		48.2	48.2	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.66	0.66		0.66	0.66	
v/c Ratio	0.01	0.75		0.13	0.39		0.14	0.01		0.01	0.02	
Control Delay	20.3	32.2		24.1	25.9		6.5	4.7		5.9	4.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	32.2		24.1	25.9		6.5	4.7		5.9	4.3	
LOS	C	C		C	C		A	A		A	A	
Approach Delay		32.1			25.7			6.4			4.8	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 73.3			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



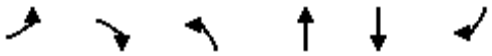
HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	159	161	15	146	6	104	3	4	10	12	11
Future Volume (veh/h)	3	159	161	15	146	6	104	3	4	10	12	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	3	159	161	15	146	6	104	3	4	10	12	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	274	199	201	152	368	15	826	422	563	1017	637	584
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1167	878	889	959	1626	67	1102	636	849	1386	960	880
Grp Volume(v), veh/h	3	0	320	15	0	152	104	0	7	10	0	23
Grp Sat Flow(s),veh/h/ln	1167	0	1767	959	0	1693	1102	0	1485	1386	0	1841
Q Serve(g_s), s	0.2	0.0	12.4	1.1	0.0	5.5	2.6	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	5.7	0.0	12.4	13.5	0.0	5.5	2.9	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.50	1.00		0.04	1.00		0.57	1.00		0.48
Lane Grp Cap(c), veh/h	274	0	400	152	0	383	826	0	985	1017	0	1221
V/C Ratio(X)	0.01	0.00	0.80	0.10	0.00	0.40	0.13	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	1042	0	1562	783	0	1497	826	0	985	1017	0	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	26.5	32.8	0.0	23.8	4.6	0.0	4.1	4.2	0.0	4.2
Incr Delay (d2), s/veh	0.0	0.0	3.8	0.3	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.1	0.2	0.0	2.1	0.5	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	30.2	33.1	0.0	24.5	5.0	0.0	4.1	4.2	0.0	4.2
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		323			167			111			33	
Approach Delay, s/veh		30.2			25.2			4.9			4.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		20.4		52.0		20.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		48.0		64.0		48.0		64.0				
Max Q Clear Time (g_c+I1), s		4.9		14.4		2.3		15.5				
Green Ext Time (p_c), s		0.5		1.9		0.1		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	13	14	107	179	9
Future Volume (vph)	4	13	14	107	179	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	902	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	902	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	100%	28%	11%	11%
Adj. Flow (vph)	4	13	14	107	179	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	13	14	107	179	9
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

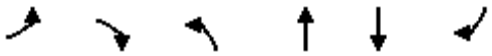
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	13	14	107	179	9
Future Vol, veh/h	4	13	14	107	179	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	100	28	11	11
Mvmt Flow	4	13	14	107	179	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	314	179	188	0	-	0
Stage 1	179	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.4	6.2	5.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	3.1	-	-	-
Pot Cap-1 Maneuver	683	869	964	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	673	869	964	-	-	-
Mov Cap-2 Maneuver	673	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	896	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	964	-	673	869	-	-
HCM Lane V/C Ratio	0.015	-	0.006	0.015	-	-
HCM Control Delay (s)	8.8	-	10.4	9.2	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

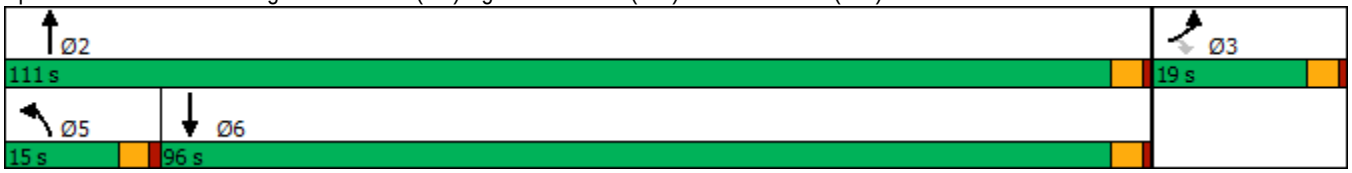


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	90	76	48	467	609	135
Future Volume (vph)	90	76	48	467	609	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.976	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	1380	1456	1532	1572	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	1380	1456	1532	1572	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		76			21	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	24%	24%	18%	18%
Adj. Flow (vph)	90	76	48	467	609	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	76	48	467	744	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

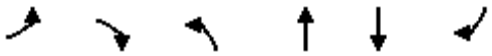
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	19.0	19.0	15.0	111.0	96.0	
Total Split (%)	14.6%	14.6%	11.5%	85.4%	73.8%	
Maximum Green (s)	15.0	15.0	11.0	107.0	92.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	12.1	12.1	9.0	107.0	96.0	
Actuated g/C Ratio	0.10	0.10	0.07	0.84	0.76	
v/c Ratio	0.62	0.38	0.47	0.36	0.62	
Control Delay	73.3	17.1	72.0	3.4	11.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	73.3	17.1	72.0	3.4	11.2	
LOS	E	B	E	A	B	
Approach Delay	47.5			9.8	11.2	
Approach LOS	D			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 127.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 51.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	76	48	467	609	135
Future Volume (veh/h)	90	76	48	467	609	135
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1648	1648	1544	1544	1633	1633
Adj Flow Rate, veh/h	90	76	48	467	609	135
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	24	24	18	18
Cap, veh/h	117	117	59	1335	1061	235
Arrive On Green	0.07	0.07	0.04	0.86	0.79	0.79
Sat Flow, veh/h	1648	1648	1544	1544	1337	296
Grp Volume(v), veh/h	90	76	48	467	0	744
Grp Sat Flow(s),veh/h/ln	1648	1648	1544	1544	0	1633
Q Serve(g_s), s	6.6	5.6	3.8	7.3	0.0	21.4
Cycle Q Clear(g_c), s	6.6	5.6	3.8	7.3	0.0	21.4
Prop In Lane	1.00	1.00	1.00			0.18
Lane Grp Cap(c), veh/h	117	117	59	1335	0	1296
V/C Ratio(X)	0.77	0.65	0.81	0.35	0.00	0.57
Avail Cap(c_a), veh/h	200	200	137	1335	0	1296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	56.0	59.1	1.6	0.0	4.8
Incr Delay (d2), s/veh	10.0	5.9	22.8	0.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.5	1.8	1.0	0.0	5.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.5	61.9	81.9	2.4	0.0	6.7
LnGrp LOS	E	E	F	A	A	A
Approach Vol, veh/h	166			515	744	
Approach Delay, s/veh	64.4			9.8	6.7	
Approach LOS	E			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		111.0			8.7	102.3	12.8
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		107.0			11.0	92.0	15.0
Max Q Clear Time (g_c+I1), s		9.3			5.8	23.4	8.6
Green Ext Time (p_c), s		3.0			0.0	5.8	0.2

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

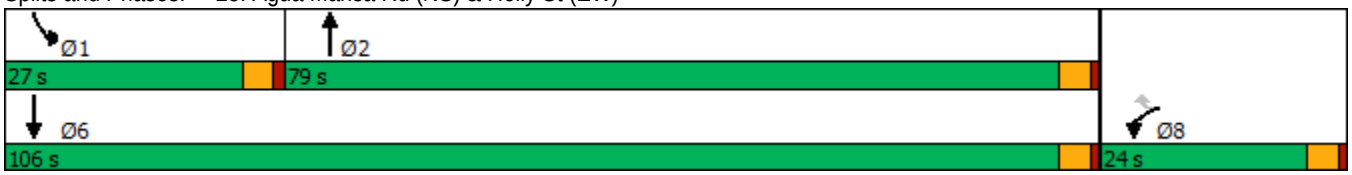


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	30	493	70	103	645
Future Volume (vph)	10	30	493	70	103	645
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.981			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1347	1045	2745	0	1504	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1347	1045	2745	0	1504	1583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		30	20			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	34%	34%	29%	29%	20%	20%
Adj. Flow (vph)	10	30	493	70	103	645
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	30	563	0	103	645
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	24.0	24.0	79.0		27.0	106.0
Total Split (%)	18.5%	18.5%	60.8%		20.8%	81.5%
Maximum Green (s)	20.0	20.0	75.0		23.0	102.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	6.8	6.8	90.4		13.4	109.3
Actuated g/C Ratio	0.06	0.06	0.76		0.11	0.92
v/c Ratio	0.13	0.34	0.27		0.61	0.44
Control Delay	55.7	28.4	5.6		64.8	2.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.7	28.4	5.6		64.8	2.4
LOS	E	C	A		E	A
Approach Delay	35.3		5.6			11.0
Approach LOS	D		A			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)



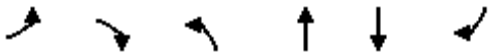
HCM 6th Signalized Intersection Summary
25: Agua Mansa Rd (NS) & Holly St (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	30	493	70	103	645
Future Volume (veh/h)	10	30	493	70	103	645
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1396	1340	1470	1470	1604	1604
Adj Flow Rate, veh/h	10	30	493	70	103	645
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	34	34	29	29	20	20
Cap, veh/h	44	42	1967	279	127	1440
Arrive On Green	0.03	0.03	0.78	0.78	0.08	0.90
Sat Flow, veh/h	1396	1340	2584	356	1604	1604
Grp Volume(v), veh/h	10	30	274	289	103	645
Grp Sat Flow(s),veh/h/ln	1396	1340	1397	1470	1604	1604
Q Serve(g_s), s	0.8	2.5	6.0	6.0	7.2	7.8
Cycle Q Clear(g_c), s	0.8	2.5	6.0	6.0	7.2	7.8
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	44	42	1095	1152	127	1440
V/C Ratio(X)	0.23	0.71	0.25	0.25	0.81	0.45
Avail Cap(c_a), veh/h	246	236	1095	1152	325	1440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	54.5	3.3	3.3	51.5	1.0
Incr Delay (d2), s/veh	2.6	19.5	0.5	0.5	11.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	1.3	1.3	3.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.2	74.0	3.9	3.8	63.1	2.0
LnGrp LOS	E	E	A	A	E	A
Approach Vol, veh/h	40		563			748
Approach Delay, s/veh	69.6		3.8			10.4
Approach LOS	E		A			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.0	93.0			106.0	7.6
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	23.0	75.0			102.0	20.0
Max Q Clear Time (g_c+I1), s	9.2	8.0			9.8	4.5
Green Ext Time (p_c), s	0.2	3.4			4.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	148	97	537	660	69
Future Volume (vph)	46	148	97	537	660	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		148				62
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	46	148	97	537	660	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	148	97	537	660	69
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

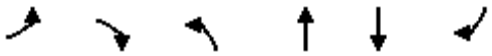
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	13.0	38.0	25.0	25.0
Total Split (%)	36.7%	36.7%	21.7%	63.3%	41.7%	41.7%
Maximum Green (s)	18.0	18.0	9.0	34.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	7.5	7.5	7.9	28.6	22.1	22.1
Actuated g/C Ratio	0.19	0.19	0.20	0.71	0.55	0.55
v/c Ratio	0.18	0.42	0.36	0.27	0.42	0.11
Control Delay	18.7	8.3	21.5	3.8	10.6	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	8.3	21.5	3.8	10.6	4.4
LOS	B	A	C	A	B	A
Approach Delay	10.8			6.5	10.0	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 40.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave



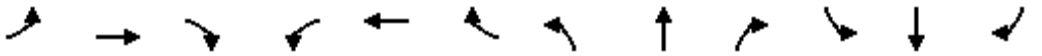
HCM 6th Signalized Intersection Summary
26: Agua Mansa Rd (NS) & Hall Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	46	148	97	537	660	69
Future Volume (veh/h)	46	148	97	537	660	69
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	46	148	97	537	660	69
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	210	210	133	1630	1079	545
Arrive On Green	0.14	0.14	0.09	0.60	0.37	0.37
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	46	148	97	537	660	69
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.8	2.8	2.0	3.0	5.6	0.9
Cycle Q Clear(g_c), s	0.8	2.8	2.0	3.0	5.6	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	210	210	133	1630	1079	545
V/C Ratio(X)	0.22	0.71	0.73	0.33	0.61	0.13
Avail Cap(c_a), veh/h	893	893	429	3077	2018	1019
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	12.4	13.4	3.1	7.7	6.3
Incr Delay (d2), s/veh	0.5	4.3	7.5	0.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.7	0.0	0.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	16.7	20.9	3.2	8.3	6.4
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	194			634	729	
Approach Delay, s/veh	15.6			5.9	8.1	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.0		8.2	6.8	15.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	9.0	21.0
Max Q Clear Time (g_c+I1), s		5.0		4.8	4.0	7.6
Green Ext Time (p_c), s		3.6		0.4	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A



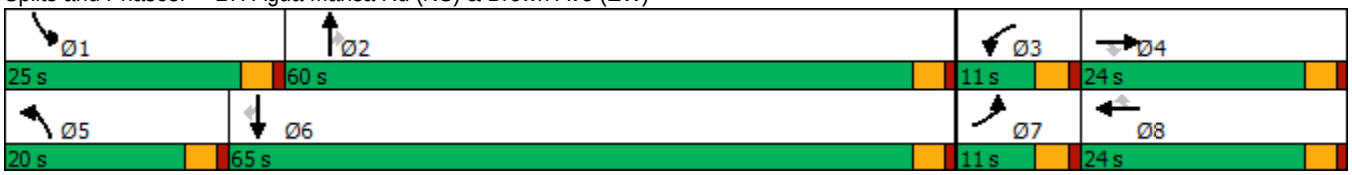
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	2	18	13	0	40	53	600	16	92	713	18
Future Volume (vph)	4	2	18	13	0	40	53	600	16	92	713	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			422			118			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	4	2	18	13	0	40	53	600	16	92	713	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	2	18	13	0	40	53	600	16	92	713	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lanes, Volumes, Timings
27: Agua Mansa Rd (NS) & Brown Ave (EW)

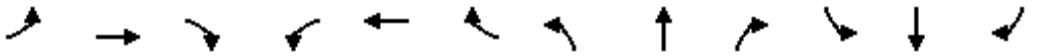
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	20.0	60.0	60.0	25.0	65.0	65.0
Total Split (%)	9.2%	20.0%	20.0%	9.2%	20.0%	20.0%	16.7%	50.0%	50.0%	20.8%	54.2%	54.2%
Maximum Green (s)	7.0	20.0	20.0	7.0	20.0	20.0	16.0	56.0	56.0	21.0	61.0	61.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.1	5.9	5.9	6.3		5.9	8.9	64.0	64.0	11.1	69.4	69.4
Actuated g/C Ratio	0.07	0.07	0.07	0.07		0.07	0.10	0.73	0.73	0.13	0.79	0.79
v/c Ratio	0.06	0.03	0.11	0.15		0.09	0.38	0.30	0.02	0.51	0.31	0.02
Control Delay	44.2	44.0	1.4	46.4		0.4	46.5	7.5	0.1	46.7	6.2	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	44.0	1.4	46.4		0.4	46.5	7.5	0.1	46.7	6.2	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		12.1			11.7			10.4			10.6	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 87.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	2	18	13	0	40	53	600	16	92	713	18
Future Volume (veh/h)	4	2	18	13	0	40	53	600	16	92	713	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	4	2	18	13	0	40	53	600	16	92	713	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	4	45	43	18	78	75	85	1769	894	143	1979	1000
Arrive On Green	0.01	0.06	0.06	0.02	0.00	0.07	0.06	0.65	0.65	0.09	0.69	0.69
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	4	2	18	13	0	40	53	600	16	92	713	18
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.4	0.2	2.0	1.0	0.0	3.1	3.2	8.8	0.4	5.2	9.1	0.3
Cycle Q Clear(g_c), s	0.4	0.2	2.0	1.0	0.0	3.1	3.2	8.8	0.4	5.2	9.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	45	43	18	78	75	85	1769	894	143	1979	1000
V/C Ratio(X)	0.96	0.04	0.42	0.73	0.00	0.54	0.62	0.34	0.02	0.64	0.36	0.02
Avail Cap(c_a), veh/h	62	178	171	91	261	251	257	1769	894	359	1979	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	39.6	40.4	43.5	0.0	40.0	40.7	6.9	5.4	38.7	5.8	4.4
Incr Delay (d2), s/veh	191.5	0.4	6.3	42.7	0.0	5.9	7.2	0.5	0.0	4.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.5	0.0	1.0	1.2	2.0	0.1	2.0	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	235.6	40.0	46.7	86.2	0.0	45.9	48.0	7.4	5.4	43.5	6.3	4.4
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		24			53			669			823	
Approach Delay, s/veh		77.7			55.8			10.5			10.4	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	61.9	5.4	9.1	9.3	65.0	4.5	10.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	56.0	7.0	20.0	16.0	61.0	7.0	20.0
Max Q Clear Time (g_c+I1), s	9.2	12.8	5.0	6.0	7.2	13.1	4.4	7.1
Green Ext Time (p_c), s	0.1	4.3	0.0	0.0	0.0	5.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	29	652	51	29	722
Future Volume (vph)	32	29	652	51	29	722
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.404	
Satd. Flow (perm)	1031	923	2654	1188	569	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		29		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	32	29	652	51	29	722
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	29	652	51	29	722
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	7.3	6.9	48.7	48.7	48.7	48.7
Actuated g/C Ratio	0.13	0.12	0.88	0.88	0.88	0.88
v/c Ratio	0.24	0.21	0.28	0.05	0.06	0.58
Control Delay	25.8	12.9	2.2	1.1	2.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	12.9	2.2	1.1	2.6	6.4
LOS	C	B	A	A	A	A
Approach Delay	19.6		2.1			6.2
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



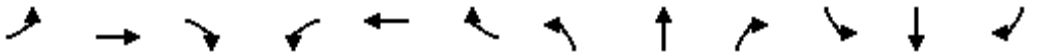
HCM 6th Signalized Intersection Summary
28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	32	29	652	51	29	722
Future Volume (veh/h)	32	29	652	51	29	722
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	32	29	652	51	29	722
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	47	47	1977	1040	536	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	549	1381
Grp Volume(v), veh/h	32	29	652	51	29	722
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	549	1381
Q Serve(g_s), s	1.8	1.6	3.6	0.4	0.8	11.7
Cycle Q Clear(g_c), s	1.8	1.6	3.6	0.4	4.4	11.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	47	47	1977	1040	536	1052
V/C Ratio(X)	0.68	0.62	0.33	0.05	0.05	0.69
Avail Cap(c_a), veh/h	318	318	1977	1040	536	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.7	1.3	2.4	2.7
Incr Delay (d2), s/veh	16.1	12.6	0.4	0.1	0.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.7	33.1	2.1	1.4	2.6	6.3
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	61		703			751
Approach Delay, s/veh	34.9		2.1			6.2
Approach LOS	C		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.7
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.6			13.7	3.8
Green Ext Time (p_c), s		4.6			5.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

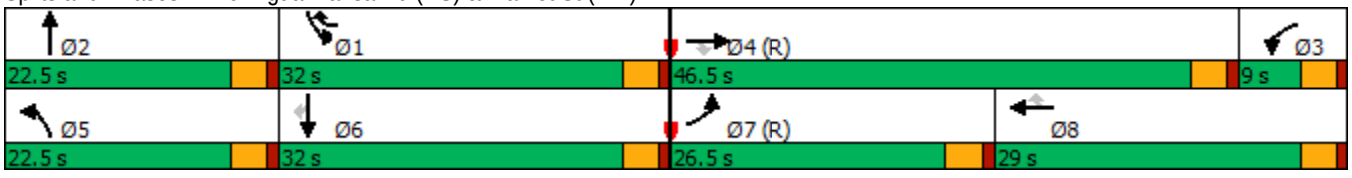


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	671	11	3	548	273	9	3	1	242	6	419
Future Volume (vph)	435	671	11	3	548	273	9	3	1	242	6	419
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	1		0	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	3282	1272	1626	3252	1261	1245	1261	0	1433	1508	1955
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	3282	1272	1626	3252	1261	1245	1261	0	1433	1508	1955
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89			204		1				419
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	435	671	11	3	548	273	9	3	1	242	6	419
Shared Lane Traffic (%)												
Lane Group Flow (vph)	435	671	11	3	548	273	9	4	0	242	6	419
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	4	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	26.5	46.5	46.5	9.0	29.0	32.0	22.5	22.5		32.0	32.0	32.0
Total Split (%)	24.1%	42.3%	42.3%	8.2%	26.4%	29.1%	20.5%	20.5%		29.1%	29.1%	29.1%
Maximum Green (s)	22.5	42.5	42.5	5.0	25.0	28.0	18.5	18.5		28.0	28.0	28.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	0
Act Effct Green (s)	22.5	47.2	47.2	5.0	22.5	50.5	21.0	21.0		28.0	28.0	28.0
Actuated g/C Ratio	0.20	0.43	0.43	0.05	0.20	0.46	0.19	0.19		0.25	0.25	0.25
v/c Ratio	0.67	0.48	0.02	0.04	0.82	0.40	0.04	0.02		0.66	0.02	0.52
Control Delay	56.1	40.4	0.1	51.3	52.7	4.2	38.9	35.0		47.0	31.0	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	56.1	40.4	0.1	51.3	52.7	4.2	38.9	35.0		47.0	31.0	5.7
LOS	E	D	A	D	D	A	D	C		D	C	A
Approach Delay		46.1			36.6			37.7			20.9	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 36.7		Intersection LOS: D	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)



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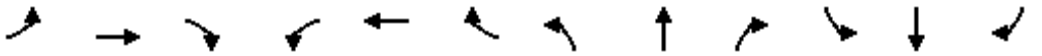
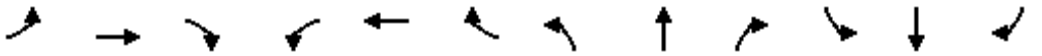
29: Agua Mansa Rd (NS) & Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	435	671	11	3	548	273	9	3	1	242	6	419
Future Volume (veh/h)	435	671	11	3	548	273	9	3	1	242	6	419
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	435	671	11	3	548	273	9	3	1	242	6	419
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	652	1286	650	79	792	825	207	156	52	386	386	651
Arrive On Green	0.38	0.77	0.77	0.05	0.24	0.24	0.17	0.17	0.17	0.25	0.25	0.25
Sat Flow, veh/h	3398	3328	1682	1737	3300	1668	1233	925	308	1515	1515	2559
Grp Volume(v), veh/h	435	671	11	3	548	273	9	0	4	242	6	419
Grp Sat Flow(s),veh/h/ln	1699	1664	1682	1737	1650	1668	1233	0	1233	1515	1515	1280
Q Serve(g_s), s	11.7	8.4	0.1	0.2	16.6	4.9	0.7	0.0	0.3	15.6	0.3	16.1
Cycle Q Clear(g_c), s	11.7	8.4	0.1	0.2	16.6	4.9	0.7	0.0	0.3	15.6	0.3	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	652	1286	650	79	792	825	207	0	207	386	386	651
V/C Ratio(X)	0.67	0.52	0.02	0.04	0.69	0.33	0.04	0.00	0.02	0.63	0.02	0.64
Avail Cap(c_a), veh/h	695	1286	650	79	792	825	207	0	207	386	386	651
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	31.0	8.6	2.8	50.2	38.1	6.2	38.3	0.0	38.2	36.4	30.7	36.5
Incr Delay (d2), s/veh	1.5	1.0	0.0	0.2	2.6	0.2	0.4	0.0	0.2	6.1	0.1	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.2	0.1	0.1	6.7	1.8	0.2	0.0	0.1	6.2	0.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	9.7	2.9	50.4	40.7	6.4	38.7	0.0	38.4	42.5	30.7	40.4
LnGrp LOS	C	A	A	D	D	A	D	A	D	D	C	D
Approach Vol, veh/h		1117			824			13			667	
Approach Delay, s/veh		18.5			29.4			38.6			41.1	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	22.5	9.0	46.5	22.5	32.0	25.1	30.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	18.5	5.0	42.5	18.5	28.0	22.5	25.0
Max Q Clear Time (g_c+I1), s	17.6	4.3	4.2	12.4	2.7	20.1	15.7	20.6
Green Ext Time (p_c), s	0.5	0.0	0.0	4.6	0.0	1.0	0.9	1.7

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

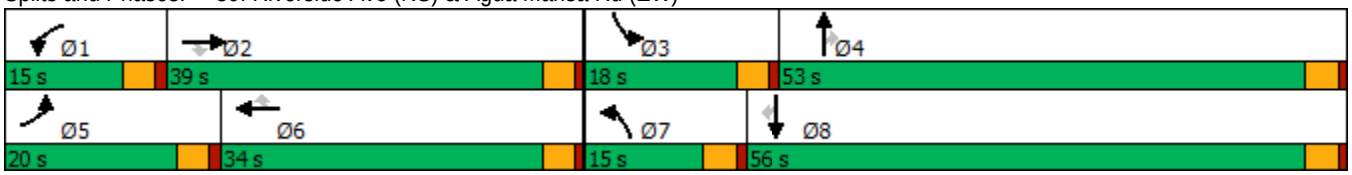


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Future Volume (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2894	1570	1335	1570	1652	1404	1570	3139	1404	1597	3195	1429
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2894	1570	1335	1570	1652	1404	1570	3139	1404	1597	3195	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			79			113			113			118
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	21%	15%	15%	15%	15%	15%	15%	13%	13%	13%
Adj. Flow (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Shared Lane Traffic (%)												
Lane Group Flow (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

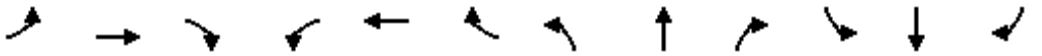
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	20.0	39.0	39.0	15.0	34.0	34.0	15.0	53.0	53.0	18.0	56.0	56.0
Total Split (%)	16.0%	31.2%	31.2%	12.0%	27.2%	27.2%	12.0%	42.4%	42.4%	14.4%	44.8%	44.8%
Maximum Green (s)	16.0	35.0	35.0	11.0	30.0	30.0	11.0	49.0	49.0	14.0	52.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	15.9	38.6	38.6	9.5	30.0	30.0	10.9	49.9	49.9	11.8	50.8	50.8
Actuated g/C Ratio	0.13	0.31	0.31	0.08	0.24	0.24	0.09	0.40	0.40	0.10	0.41	0.41
v/c Ratio	0.91	0.47	0.18	0.56	0.78	0.19	0.86	0.56	0.07	0.64	0.94	0.56
Control Delay	81.8	40.1	9.4	73.1	58.5	3.5	101.8	30.9	0.2	73.0	49.7	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.8	40.1	9.4	73.1	58.5	3.5	101.8	30.9	0.2	73.0	49.7	22.2
LOS	F	D	A	E	E	A	F	C	A	E	D	C
Approach Delay		57.7			51.1			38.9			45.1	
Approach LOS		E			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 123.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 46.6		Intersection LOS: D	
Intersection Capacity Utilization 80.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



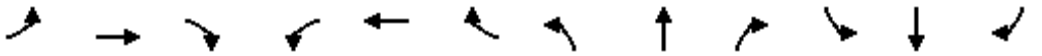
HCM 6th Signalized Intersection Summary
39: Riverside Ave (NS) & Agua Mansa Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	230	85	68	310	79	118	711	45	97	1237	370
Future Volume (veh/h)	338	230	85	68	310	79	118	711	45	97	1237	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1678	1678	1707	1707	1707
Adj Flow Rate, veh/h	338	230	85	68	310	79	118	711	45	97	1237	370
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	21	21	21	15	15	15	15	15	15	13	13	13
Cap, veh/h	397	485	485	109	405	405	149	1327	698	145	1337	704
Arrive On Green	0.13	0.31	0.31	0.06	0.24	0.24	0.09	0.42	0.42	0.08	0.41	0.41
Sat Flow, veh/h	3082	1589	1589	1678	1678	1678	1678	3188	1678	1707	3244	1707
Grp Volume(v), veh/h	338	230	85	68	310	79	118	711	45	97	1237	370
Grp Sat Flow(s),veh/h/ln	1541	1589	1589	1678	1678	1678	1678	1594	1678	1707	1622	1707
Q Serve(g_s), s	13.3	14.6	4.9	4.9	21.4	4.7	8.6	20.8	2.0	6.8	45.0	20.2
Cycle Q Clear(g_c), s	13.3	14.6	4.9	4.9	21.4	4.7	8.6	20.8	2.0	6.8	45.0	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	485	485	109	405	405	149	1327	698	145	1337	704
V/C Ratio(X)	0.85	0.47	0.18	0.62	0.77	0.19	0.79	0.54	0.06	0.67	0.92	0.53
Avail Cap(c_a), veh/h	397	485	485	149	405	405	149	1327	698	192	1358	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	35.0	31.7	56.6	43.8	37.5	55.5	27.2	21.7	55.2	34.7	27.4
Incr Delay (d2), s/veh	16.1	3.3	0.8	5.7	12.9	1.1	24.9	0.4	0.0	5.5	10.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	5.9	1.9	2.2	10.0	2.0	4.5	7.5	0.8	3.1	18.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	38.3	32.4	62.3	56.7	38.6	80.4	27.7	21.8	60.6	45.5	28.1
LnGrp LOS	E	D	C	E	E	D	F	C	C	E	D	C
Approach Vol, veh/h		653			457			874			1704	
Approach Delay, s/veh		53.4			54.4			34.5			42.6	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	41.9	14.5	55.7	20.0	34.0	15.0	55.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	35.0	14.0	49.0	16.0	30.0	11.0	52.0
Max Q Clear Time (g_c+I1), s	8.9	18.6	10.8	24.8	17.3	25.4	12.6	49.0
Green Ext Time (p_c), s	0.0	1.2	0.0	4.5	0.0	0.8	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	44.0
HCM 6th LOS	D

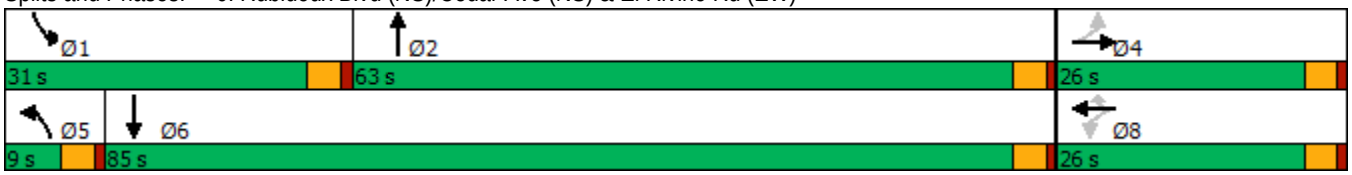


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	8	26	158	13	295	15	1291	121	321	1078	16
Future Volume (vph)	21	8	26	158	13	295	15	1291	121	321	1078	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.936				0.850		0.987			0.998	
Flt Protected		0.981			0.956		0.950			0.950		
Satd. Flow (prot)	0	1544	0	0	1514	1346	1597	3153	0	1612	3217	0
Flt Permitted		0.854			0.723		0.950			0.950		
Satd. Flow (perm)	0	1344	0	0	1145	1346	1597	3153	0	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				295		11			3	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	21	8	26	158	13	295	15	1291	121	321	1078	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	171	295	15	1412	0	321	1094	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	26.0	26.0		26.0	26.0	26.0	9.0	63.0		31.0	85.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%	21.7%	7.5%	52.5%		25.8%	70.8%	
Maximum Green (s)	22.0	22.0		22.0	22.0	22.0	5.0	59.0		27.0	81.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		20.2			20.2	20.2	5.0	59.1		25.6	85.2	
Actuated g/C Ratio		0.17			0.17	0.17	0.04	0.51		0.22	0.73	
v/c Ratio		0.22			0.87	0.62	0.22	0.88		0.91	0.47	
Control Delay		27.9			85.5	11.1	63.5	34.3		75.5	8.0	
Queue Delay		0.0			0.0	0.0	0.0	1.0		0.0	0.0	
Total Delay		27.9			85.5	11.1	63.5	35.4		75.5	8.0	
LOS		C			F	B	E	D		E	A	
Approach Delay		27.9			38.4			35.7			23.3	
Approach LOS		C			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 30.7		Intersection LOS: C	
Intersection Capacity Utilization 83.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	8	26	158	13	295	15	1291	121	321	1078	16
Future Volume (veh/h)	21	8	26	158	13	295	15	1291	121	321	1078	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	21	8	26	158	13	295	15	1291	121	321	1078	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	42	24	22	175	10	298	28	1516	142	370	2305	34
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.02	0.50	0.50	0.22	0.70	0.70
Sat Flow, veh/h	0	132	118	626	51	1604	1707	3044	285	1722	3309	49
Grp Volume(v), veh/h	55	0	0	171	0	295	15	688	724	321	533	561
Grp Sat Flow(s),veh/h/ln	250	0	0	677	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	21.7	1.0	43.8	43.8	21.3	17.4	17.4
Cycle Q Clear(g_c), s	22.0	0.0	0.0	22.0	0.0	21.7	1.0	43.8	43.8	21.3	17.4	17.4
Prop In Lane	0.38		0.47	0.92		1.00	1.00		0.17	1.00		0.03
Lane Grp Cap(c), veh/h	88	0	0	184	0	298	28	808	850	370	1139	1199
V/C Ratio(X)	0.62	0.00	0.00	0.93	0.00	0.99	0.53	0.85	0.85	0.87	0.47	0.47
Avail Cap(c_a), veh/h	88	0	0	184	0	298	72	808	850	392	1139	1199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	51.1	0.0	48.1	57.8	25.9	25.9	44.9	8.1	8.1
Incr Delay (d2), s/veh	12.7	0.0	0.0	46.2	0.0	49.5	14.6	11.0	10.5	17.5	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	7.5	0.0	12.7	0.5	17.7	18.5	10.5	5.3	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	0.0	0.0	97.3	0.0	97.6	72.4	36.9	36.4	62.4	9.5	9.4
LnGrp LOS	D	A	A	F	A	F	E	D	D	E	A	A
Approach Vol, veh/h		55			466			1427			1415	
Approach Delay, s/veh		54.8			97.5			37.0			21.4	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.5	63.0		26.0	6.0	86.5		26.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	27.0	59.0		22.0	5.0	81.0		22.0				
Max Q Clear Time (g_c+I1), s	25.3	47.8		24.0	5.0	21.4		25.7				
Green Ext Time (p_c), s	0.2	6.3		0.0	0.0	7.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		39.1	
HCM 6th LOS		D	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	28	1399	26	0	1262
Future Volume (vph)	0	28	1399	26	0	1262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	28	1399	26	0	1262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	1425	0	0	1262
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	1399	26	0	1262
Future Vol, veh/h	0	28	1399	26	0	1262
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	28	1399	26	0	1262

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	713	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	379	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	379	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	379	-
HCM Lane V/C Ratio	-	-	0.074	-
HCM Control Delay (s)	-	-	15.3	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

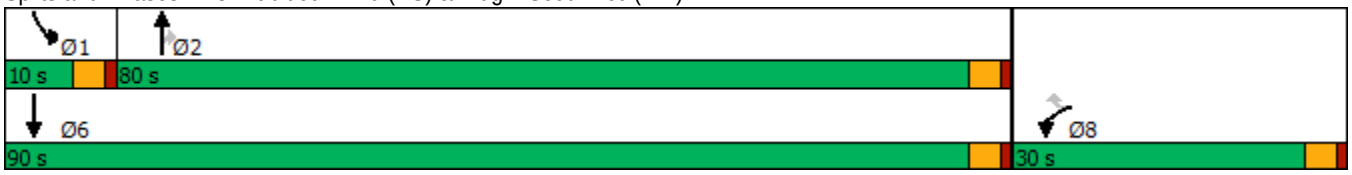


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	210	60	1365	96	27	1235
Future Volume (vph)	210	60	1365	96	27	1235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		60		96		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	210	60	1365	96	27	1235
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	60	1365	96	27	1235
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	30.0	30.0	80.0	80.0	10.0	90.0
Total Split (%)	25.0%	25.0%	66.7%	66.7%	8.3%	75.0%
Maximum Green (s)	26.0	26.0	76.0	76.0	6.0	86.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	18.5	18.5	82.2	82.2	5.9	88.1
Actuated g/C Ratio	0.16	0.16	0.72	0.72	0.05	0.77
v/c Ratio	0.72	0.19	0.60	0.09	0.32	0.48
Control Delay	59.7	11.3	10.9	1.8	63.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	59.7	11.3	10.9	1.8	63.3	6.4
LOS	E	B	B	A	E	A
Approach Delay	48.9		10.3			7.6
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 114.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 12.6		Intersection LOS: B	
Intersection Capacity Utilization 56.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



HCM 6th Signalized Intersection Summary
8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	210	60	1365	96	27	1235
Future Volume (veh/h)	210	60	1365	96	27	1235
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	210	60	1365	96	27	1235
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	250	250	2374	1249	45	2666
Arrive On Green	0.13	0.13	0.73	0.73	0.03	0.79
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	210	60	1365	96	27	1235
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	11.7	3.1	21.1	1.7	1.6	13.0
Cycle Q Clear(g_c), s	11.7	3.1	21.1	1.7	1.6	13.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	250	250	2374	1249	45	2666
V/C Ratio(X)	0.84	0.24	0.58	0.08	0.60	0.46
Avail Cap(c_a), veh/h	456	456	2374	1249	98	2666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	42.1	6.7	4.1	52.2	3.6
Incr Delay (d2), s/veh	7.3	0.5	1.0	0.1	11.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	1.5	5.4	0.5	0.8	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.2	42.6	7.7	4.2	64.0	4.2
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	270		1461			1262
Approach Delay, s/veh	50.9		7.5			5.5
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.8	83.2			90.0	18.3
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	6.0	76.0			86.0	26.0
Max Q Clear Time (g_c+I1), s	3.6	23.1			15.0	13.7
Green Ext Time (p_c), s	0.0	13.4			11.1	0.6

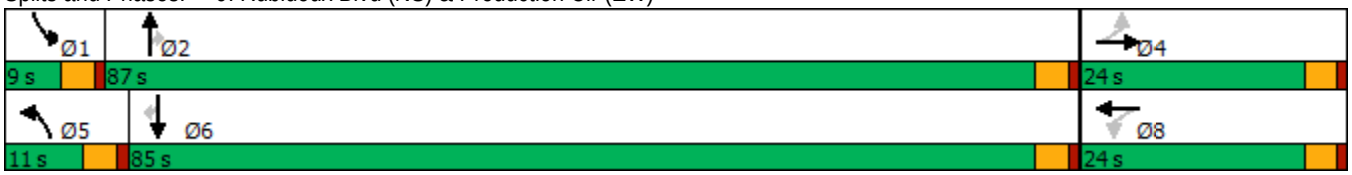
Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	0	37	1	0	3	18	1360	0	0	1426	17
Future Volume (vph)	23	0	37	1	0	3	18	1360	0	0	1426	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.733			0.950					
Satd. Flow (perm)	1355	1524	0	1393	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		125			138							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	23	0	37	1	0	3	18	1360	0	0	1426	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	37	0	1	3	0	18	1360	0	0	1426	17
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

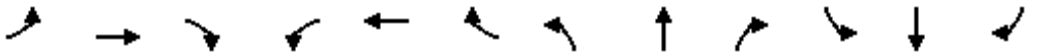
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		11.0	87.0	87.0	9.0	85.0	85.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		9.2%	72.5%	72.5%	7.5%	70.8%	70.8%
Maximum Green (s)	20.0	20.0		20.0	20.0		7.0	83.0	83.0	5.0	81.0	81.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.5	7.5		7.5	7.5		6.4	96.6			92.2	92.2
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.06	0.88			0.84	0.84
v/c Ratio	0.25	0.17		0.01	0.01		0.20	0.49			0.51	0.02
Control Delay	54.6	1.6		46.0	0.0		54.3	2.5			4.6	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.6	1.6		46.0	0.0		54.3	2.5			4.6	0.1
LOS	D	A		D	A		D	A			A	A
Approach Delay		21.9			11.5			3.2			4.6	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)



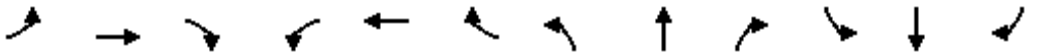
HCM 6th Signalized Intersection Summary
9: Rubidoux Blvd (NS) & Production Cir (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	37	1	0	3	18	1360	0	0	1426	17
Future Volume (veh/h)	23	0	37	1	0	3	18	1360	0	0	1426	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	23	0	37	1	0	3	18	1360	0	0	1426	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	128	0	76	103	0	79	33	2797	1413	2	2721	1375
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1393	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	23	0	37	1	0	3	18	1360	0	0	1426	17
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1393	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.6	0.0	2.0	0.1	0.0	0.2	1.1	9.0	0.0	0.0	13.6	0.2
Cycle Q Clear(g_c), s	1.8	0.0	2.0	2.0	0.0	0.2	1.1	9.0	0.0	0.0	13.6	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	0	76	103	0	79	33	2797	1413	2	2721	1375
V/C Ratio(X)	0.18	0.00	0.49	0.01	0.00	0.04	0.54	0.49	0.00	0.00	0.52	0.01
Avail Cap(c_a), veh/h	347	0	366	326	0	383	119	2797	1413	88	2721	1375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	0.0	46.4	47.4	0.0	45.6	48.1	1.3	0.0	0.0	2.9	1.7
Incr Delay (d2), s/veh	0.7	0.0	4.8	0.0	0.0	0.2	13.2	0.6	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.0	0.0	0.0	0.1	0.5	0.2	0.0	0.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	51.3	47.5	0.0	45.8	61.3	1.9	0.0	0.0	3.6	1.7
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		60			4			1378			1443	
Approach Delay, s/veh		49.7			46.2			2.7			3.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.0		8.1	6.0	85.0		8.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	7.0	81.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	11.0		4.0	3.1	15.6		4.0				
Green Ext Time (p_c), s	0.0	13.3		0.2	0.0	14.4		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			4.2									
HCM 6th LOS			A									



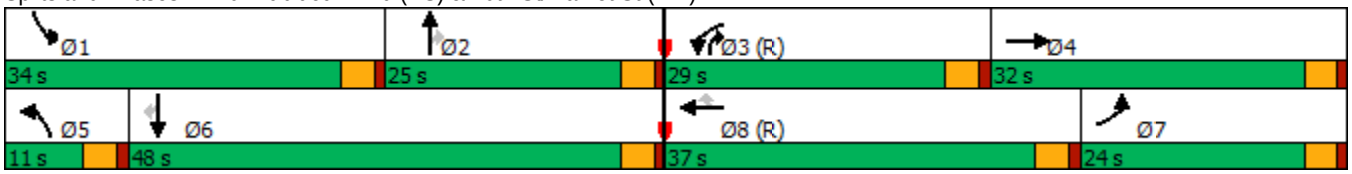
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	132	26	436	121	597	54	524	569	664	683	74
Future Volume (vph)	59	132	26	436	121	597	54	524	569	664	683	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	*1.00	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.975				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				597			269			118
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	59	132	26	436	121	597	54	524	569	664	683	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	158	0	436	121	597	54	524	569	664	683	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.0	22.0		11.0	22.0	22.0	11.0	22.0	11.0	11.0	22.0	22.0
Total Split (s)	24.0	32.0		29.0	37.0	37.0	11.0	25.0	29.0	34.0	48.0	48.0
Total Split (%)	20.0%	26.7%		24.2%	30.8%	30.8%	9.2%	20.8%	24.2%	28.3%	40.0%	40.0%
Maximum Green (s)	20.0	28.0		25.0	33.0	33.0	7.0	21.0	25.0	30.0	44.0	44.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.4	17.4		25.0	34.2	34.2	9.5	32.8	61.8	28.8	54.2	54.2
Actuated g/C Ratio	0.09	0.14		0.21	0.28	0.28	0.08	0.27	0.52	0.24	0.45	0.45
v/c Ratio	0.44	0.67		0.62	0.24	0.70	0.43	0.57	0.66	0.83	0.42	0.10
Control Delay	61.4	59.3		57.1	49.0	26.5	62.5	42.5	16.4	52.7	25.1	1.3
Queue Delay	0.0	0.0		0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	59.3		57.1	49.0	27.6	62.5	42.5	16.4	52.7	25.1	1.3
LOS	E	E		E	D	C	E	D	B	D	C	A
Approach Delay		59.9			41.0			30.5			36.7	
Approach LOS		E			D			C			D	

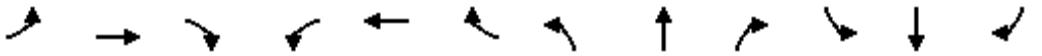
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 110 (92%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 37.4		Intersection LOS: D	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



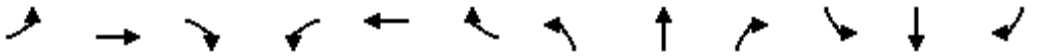
HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	132	26	436	121	597	54	524	569	664	683	74
Future Volume (veh/h)	59	132	26	436	121	597	54	524	569	664	683	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	59	132	26	436	121	597	54	524	569	664	683	74
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	282	276	54	883	494	494	92	678	759	786	1339	669
Arrive On Green	0.17	0.20	0.20	0.25	0.28	0.28	0.05	0.20	0.20	0.22	0.37	0.37
Sat Flow, veh/h	1648	1377	271	3593	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	59	0	158	436	121	597	54	524	569	664	683	74
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1796	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.7	0.0	10.2	12.5	6.3	19.9	3.7	17.4	23.8	21.5	17.5	2.0
Cycle Q Clear(g_c), s	3.7	0.0	10.2	12.5	6.3	19.9	3.7	17.4	23.8	21.5	17.5	2.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	0	331	883	494	494	92	678	759	786	1339	669
V/C Ratio(X)	0.21	0.00	0.48	0.49	0.24	1.21	0.59	0.77	0.75	0.85	0.51	0.11
Avail Cap(c_a), veh/h	282	0	385	883	494	494	100	678	759	886	1339	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.63	0.63	0.63	0.51	0.51	0.51	0.85	0.85	0.85
Uniform Delay (d), s/veh	42.7	0.0	42.4	38.8	33.8	15.8	55.5	45.5	27.8	44.7	29.6	9.8
Incr Delay (d2), s/veh	0.4	0.0	1.1	0.3	0.7	105.7	4.0	4.4	3.5	6.0	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.1	5.4	2.8	22.0	1.6	7.5	13.5	9.7	7.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	43.5	39.1	34.6	121.4	59.5	49.9	31.3	50.7	30.8	10.1
LnGrp LOS	D	A	D	D	C	F	E	D	C	D	C	B
Approach Vol, veh/h		217			1154			1147			1421	
Approach Delay, s/veh		43.4			81.2			41.2			39.0	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.6	27.8	33.5	28.1	10.4	48.0	24.6	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	30.0	21.0	25.0	28.0	7.0	44.0	20.0	33.0
Max Q Clear Time (g_c+I1), s	25.5	27.8	14.5	12.2	7.7	21.5	7.7	23.9
Green Ext Time (p_c), s	1.1	0.0	1.1	0.6	0.0	4.4	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D



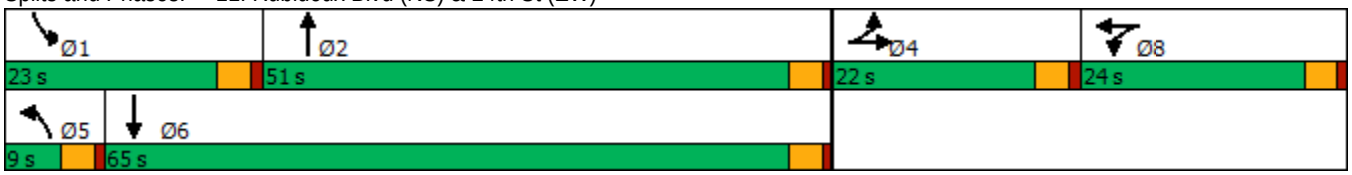
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	20	15	76	54	149	10	997	92	218	952	6
Future Volume (vph)	5	20	15	76	54	149	10	997	92	218	952	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949			0.928			0.987			0.999	
Flt Protected		0.994			0.987		0.950			0.950		
Satd. Flow (prot)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Flt Permitted		0.994			0.987		0.950			0.950		
Satd. Flow (perm)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			41			9			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	5	20	15	76	54	149	10	997	92	218	952	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	279	0	10	1089	0	218	958	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	

Lanes, Volumes, Timings
11: Rubidoux Blvd (NS) & 24th St (EW)

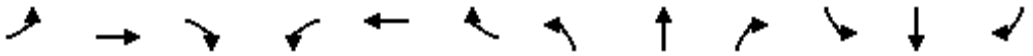
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	51.0		23.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	42.5%		19.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	47.0		19.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.2			18.9		5.0	47.4		17.6	67.4	
Actuated g/C Ratio		0.07			0.18		0.05	0.46		0.17	0.65	
v/c Ratio		0.30			0.83		0.14	0.79		0.80	0.46	
Control Delay		40.0			57.4		55.2	30.6		64.5	11.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		40.0			57.4		55.2	30.6		64.5	11.3	
LOS		D			E		E	C		E	B	
Approach Delay		40.0			57.4			30.8			21.1	
Approach LOS		D			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



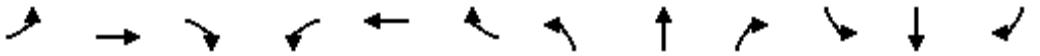
HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	20	15	76	54	149	10	997	92	218	952	6
Future Volume (veh/h)	5	20	15	76	54	149	10	997	92	218	952	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	5	20	15	76	54	149	10	997	92	218	952	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	8	31	23	86	61	169	19	1381	127	251	2042	13
Arrive On Green	0.03	0.03	0.03	0.18	0.18	0.18	0.01	0.48	0.48	0.15	0.62	0.62
Sat Flow, veh/h	226	906	679	493	351	967	1604	2863	264	1707	3308	21
Grp Volume(v), veh/h	40	0	0	279	0	0	10	531	558	218	467	491
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1604	1707	1622	1707
Q Serve(g_s), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.3	27.3	12.3	15.3	15.3
Cycle Q Clear(g_c), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.3	27.3	12.3	15.3	15.3
Prop In Lane	0.12		0.37	0.27		0.53	1.00		0.16	1.00		0.01
Lane Grp Cap(c), veh/h	61	0	0	317	0	0	19	735	773	251	1001	1054
V/C Ratio(X)	0.65	0.00	0.00	0.88	0.00	0.00	0.51	0.72	0.72	0.87	0.47	0.47
Avail Cap(c_a), veh/h	330	0	0	367	0	0	81	735	773	328	1001	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	0.0	39.8	0.0	0.0	48.5	20.3	20.3	41.2	10.2	10.2
Incr Delay (d2), s/veh	11.3	0.0	0.0	19.2	0.0	0.0	19.4	6.1	5.8	17.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	8.2	0.0	0.0	0.3	9.7	10.2	6.1	4.8	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	0.0	59.0	0.0	0.0	67.9	26.4	26.1	58.5	11.7	11.6
LnGrp LOS	E	A	A	E	A	A	E	C	C	E	B	B
Approach Vol, veh/h		40			279			1099			1176	
Approach Delay, s/veh		58.5			59.0			26.6			20.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.5	51.7		7.3	5.2	65.0		21.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	47.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	14.3	29.3		4.2	2.6	17.3		16.8				
Green Ext Time (p_c), s	0.2	6.1		0.1	0.0	6.3		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		27.8	
HCM 6th LOS		C	

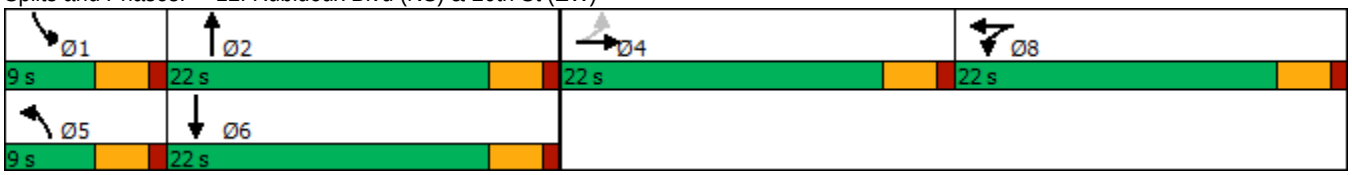


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	55	0	85	7	1036	62	38	1002	3
Future Volume (vph)	0	0	10	55	0	85	7	1036	62	38	1002	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.918			0.992				
Flt Protected					0.981		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1380	0	1517	3009	0	1612	3223	0
Flt Permitted					0.981		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1380	0	1517	3009	0	1612	3223	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		492			131			8				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	10	55	0	85	7	1036	62	38	1002	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	140	0	7	1098	0	38	1005	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

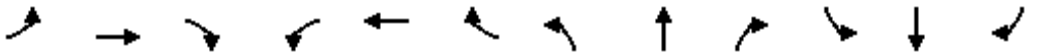
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4											
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		12.0%	29.3%		12.0%	29.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	18.0		5.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.7			6.8		5.2	24.7		5.2	24.7	
Actuated g/C Ratio		0.14			0.17		0.13	0.62		0.13	0.62	
v/c Ratio		0.02			0.41		0.04	0.58		0.18	0.50	
Control Delay		0.0			8.6		18.6	12.4		19.8	10.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			8.6		18.6	12.4		19.8	10.7	
LOS		A			A		B	B		B	B	
Approach Delay					8.6			12.5			11.1	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 39.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



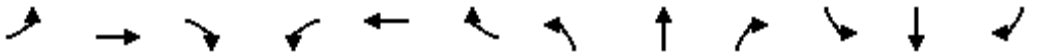
HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	55	0	85	7	1036	62	38	1002	3
Future Volume (veh/h)	0	0	10	55	0	85	7	1036	62	38	1002	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	10	55	0	85	7	1036	62	38	1002	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	25	72	0	112	15	1301	78	74	1575	5
Arrive On Green	0.00	0.00	0.01	0.12	0.00	0.12	0.01	0.44	0.44	0.04	0.47	0.47
Sat Flow, veh/h	0	0	1900	607	0	938	1618	2978	178	1722	3348	10
Grp Volume(v), veh/h	0	0	10	140	0	0	7	535	563	38	490	515
Grp Sat Flow(s),veh/h/ln	0	0	1900	1544	0	0	1618	1537	1618	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.4	12.4	0.9	9.3	9.3
Cycle Q Clear(g_c), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.4	12.4	0.9	9.3	9.3
Prop In Lane	0.00		1.00	0.39		0.61	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	25	184	0	0	15	672	707	74	769	810
V/C Ratio(X)	0.00	0.00	0.40	0.76	0.00	0.00	0.46	0.80	0.80	0.52	0.64	0.64
Avail Cap(c_a), veh/h	0	0	830	675	0	0	196	672	707	209	769	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.2	17.6	0.0	0.0	20.3	10.0	10.0	19.3	8.3	8.3
Incr Delay (d2), s/veh	0.0	0.0	10.1	6.4	0.0	0.0	20.4	9.5	9.1	5.5	4.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	1.4	0.0	0.0	0.1	4.0	4.1	0.4	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.2	24.0	0.0	0.0	40.7	19.5	19.1	24.8	12.2	12.1
LnGrp LOS	A	A	C	C	A	A	D	B	B	C	B	B
Approach Vol, veh/h		10			140			1105			1043	
Approach Delay, s/veh		30.2			24.0			19.4			12.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	22.0		4.5	4.4	23.4		8.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	2.9	14.4		2.2	2.2	11.3		5.6				
Green Ext Time (p_c), s	0.0	2.1		0.0	0.0	3.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		16.7	
HCM 6th LOS		B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	88	57	154	116	26	164	930	97	35	943	65
Future Volume (vph)	85	88	57	154	116	26	164	930	97	35	943	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.973			0.986			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1753	0	1736	1778	0	1583	3122	0	1703	3372	0
Flt Permitted	0.666			0.665			0.950			0.950		
Satd. Flow (perm)	1241	1753	0	1215	1778	0	1583	3122	0	1703	3372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			19			22			12	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	85	88	57	154	116	26	164	930	97	35	943	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	145	0	154	142	0	164	1027	0	35	1008	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

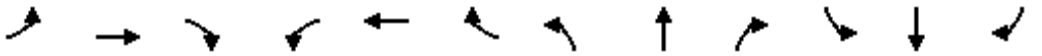
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		15.0	28.5		9.0	22.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		25.0%	47.5%		15.0%	37.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		11.0	24.5		5.0	18.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.5	11.5		11.8	11.8		9.5	32.3		5.1	24.6	
Actuated g/C Ratio	0.22	0.22		0.23	0.23		0.18	0.62		0.10	0.47	
v/c Ratio	0.31	0.33		0.56	0.34		0.57	0.53		0.21	0.63	
Control Delay	19.8	13.3		26.2	17.2		29.1	11.1		27.6	19.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.8	13.3		26.2	17.2		29.1	11.1		27.6	19.2	
LOS	B	B		C	B		C	B		C	B	
Approach Delay		15.7			21.9			13.6			19.5	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



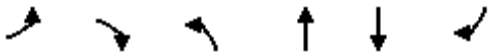
HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	88	57	154	116	26	164	930	97	35	943	65
Future Volume (veh/h)	85	88	57	154	116	26	164	930	97	35	943	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	85	88	57	154	116	26	164	930	97	35	943	65
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	347	304	197	343	403	90	259	1393	145	69	1160	80
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.15	0.47	0.47	0.04	0.35	0.35
Sat Flow, veh/h	1246	1135	735	1223	1504	337	1693	2989	312	1811	3304	228
Grp Volume(v), veh/h	85	0	145	154	0	142	164	500	527	35	491	517
Grp Sat Flow(s),veh/h/ln	1246	0	1870	1223	0	1841	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	3.2	0.0	3.2	6.3	0.0	3.2	4.8	12.7	12.7	1.0	13.7	13.7
Cycle Q Clear(g_c), s	8.4	0.0	3.2	11.5	0.0	3.2	4.8	12.7	12.7	1.0	13.7	13.7
Prop In Lane	1.00		0.39	1.00		0.18	1.00		0.18	1.00		0.13
Lane Grp Cap(c), veh/h	347	0	501	343	0	493	259	750	789	69	604	636
V/C Ratio(X)	0.24	0.00	0.29	0.45	0.00	0.29	0.63	0.67	0.67	0.51	0.81	0.81
Avail Cap(c_a), veh/h	451	0	657	445	0	646	353	750	789	172	604	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	15.3	20.8	0.0	15.3	20.9	10.9	10.9	24.9	15.5	15.5
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.9	0.0	0.3	2.6	4.7	4.4	5.7	11.4	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.3	1.7	0.0	1.2	1.7	3.9	4.0	0.5	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	15.6	21.8	0.0	15.6	23.5	15.6	15.3	30.5	26.9	26.4
LnGrp LOS	B	A	B	C	A	B	C	B	B	C	C	C
Approach Vol, veh/h		230			296			1191			1043	
Approach Delay, s/veh		17.2			18.8			16.6			26.8	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	28.6		18.1	12.1	22.5		18.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	11.0	18.5		18.5				
Max Q Clear Time (g_c+I1), s	5.0	16.7		10.4	8.8	17.7		13.5				
Green Ext Time (p_c), s	0.0	3.5		0.6	0.1	0.5		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	164	235	1124	1155	40
Future Volume (vph)	0	164	235	1124	1155	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1370	1597	3195	3282	1468
Flt Permitted			0.950			
Satd. Flow (perm)	0	1370	1597	3195	3282	1468
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	13%	13%	10%	10%
Adj. Flow (vph)	0	164	235	1124	1155	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	235	1124	1155	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

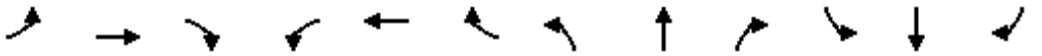
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	164	235	1124	1155	40
Future Vol, veh/h	0	164	235	1124	1155	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	13	13	10	10
Mvmt Flow	0	164	235	1124	1155	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	578	1195	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.36	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.33	-	-	-
Pot Cap-1 Maneuver	0	454	522	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	454	522	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	522	-	454	-	-
HCM Lane V/C Ratio	0.45	-	0.361	-	-
HCM Control Delay (s)	17.4	-	17.3	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	2.3	-	1.6	-	-

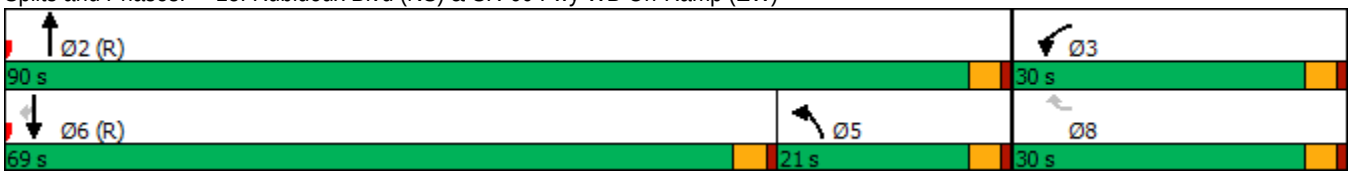


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Future Volume (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						146						700
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	6%	6%	6%
Adj. Flow (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

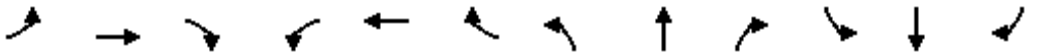
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				30.0		30.0	21.0	90.0			69.0	69.0
Total Split (%)				25.0%		25.0%	17.5%	75.0%			57.5%	57.5%
Maximum Green (s)				26.0		26.0	17.0	86.0			65.0	65.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				22.0		22.0	17.0	90.0			69.0	69.0
Actuated g/C Ratio				0.18		0.18	0.14	0.75			0.58	0.58
v/c Ratio				0.78		0.59	0.57	0.45			0.32	0.61
Control Delay				55.6		23.6	38.5	1.9			14.3	3.8
Queue Delay				0.0		0.0	0.0	0.1			0.0	0.0
Total Delay				55.6		23.6	38.5	2.0			14.3	3.8
LOS				E		C	D	A			B	A
Approach Delay					45.1			8.8			8.7	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



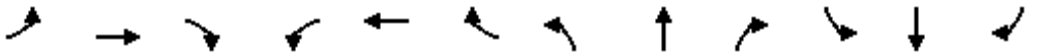
HCM 6th Signalized Intersection Summary
15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	0	244	252	1094	0	0	635	720
Future Volume (veh/h)	0	0	0	502	0	244	252	1094	0	0	635	720
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1811	1811
Adj Flow Rate, veh/h				502	0	244	252	1094	0	0	635	720
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	6	6
Cap, veh/h				602	0	310	652	2520	0	0	1864	981
Arrive On Green				0.16	0.00	0.16	0.39	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3532	1811
Grp Volume(v), veh/h				502	0	244	252	1094	0	0	635	720
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1721	1811
Q Serve(g_s), s				15.8	0.0	14.8	6.5	0.0	0.0	0.0	12.4	36.3
Cycle Q Clear(g_c), s				15.8	0.0	14.8	6.5	0.0	0.0	0.0	12.4	36.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				602	0	310	652	2520	0	0	1864	981
V/C Ratio(X)				0.83	0.00	0.79	0.39	0.43	0.00	0.00	0.34	0.73
Avail Cap(c_a), veh/h				799	0	412	652	2520	0	0	1864	981
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.6	0.0	48.2	31.4	0.0	0.0	0.0	15.5	20.9
Incr Delay (d2), s/veh				5.8	0.0	7.2	0.3	0.4	0.0	0.0	0.5	4.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	7.6	2.4	0.2	0.0	0.0	4.8	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				54.5	0.0	55.4	31.7	0.4	0.0	0.0	16.0	25.8
LnGrp LOS				D	A	E	C	A	A	A	B	C
Approach Vol, veh/h					746			1346			1355	
Approach Delay, s/veh					54.8			6.3			21.2	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	96.4		27.4	69.0		23.6						
Change Period (Y+Rc), s	4.0		4.0	4.0		4.0						
Max Green Setting (Gmax), s	86.0		17.0	65.0		26.0						
Max Q Clear Time (g_c+I1), s	2.0		8.5	38.3		17.8						
Green Ext Time (p_c), s	10.1		0.5	7.3		1.8						

Intersection Summary		
HCM 6th Ctrl Delay		22.6
HCM 6th LOS		C

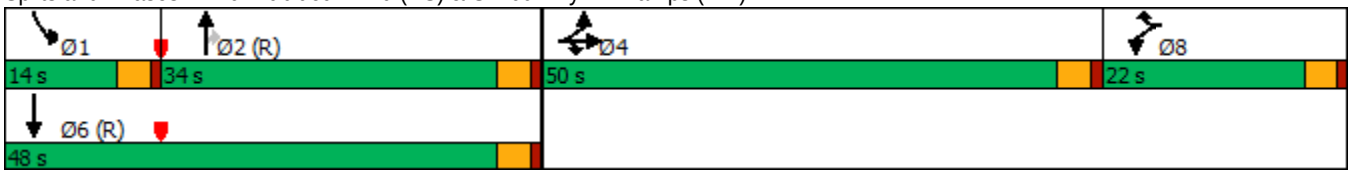


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	587	45	504	16	0	4	0	680	353	171	961	0
Future Volume (vph)	587	45	504	16	0	4	0	680	353	171	961	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			265			82			353			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	587	45	504	16	0	4	0	680	353	171	961	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	317	315	504	16	0	4	0	680	353	171	961	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

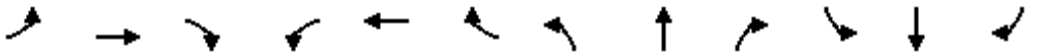
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	50.0	50.0	50.0	22.0		22.0		34.0	34.0	14.0	48.0	
Total Split (%)	41.7%	41.7%	41.7%	18.3%		18.3%		28.3%	28.3%	11.7%	40.0%	
Maximum Green (s)	46.0	46.0	46.0	18.0		18.0		30.0	30.0	10.0	44.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	37.3	37.3	37.3	6.7		6.7		44.8	44.8	21.1	69.9	
Actuated g/C Ratio	0.31	0.31	0.31	0.06		0.06		0.37	0.37	0.18	0.58	
v/c Ratio	0.68	0.67	0.89	0.16		0.02		0.51	0.43	0.55	0.47	
Control Delay	42.5	42.0	36.6	57.1		0.2		33.9	5.6	51.3	10.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.5	
Total Delay	42.5	42.0	36.6	57.1		0.2		33.9	5.6	51.3	10.7	
LOS	D	D	D	E		A		C	A	D	B	
Approach Delay		39.8			45.7			24.2			16.8	
Approach LOS		D			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 27.2		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



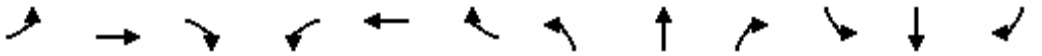
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	45	504	16	0	4	0	680	353	171	961	0
Future Volume (veh/h)	587	45	504	16	0	4	0	680	353	171	961	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	619	0	504	16	0	4	0	680	353	171	961	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	1176	0	565	0	0	0	0	1667	877	156	2082	0
Arrive On Green	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.47	0.47	0.17	1.00	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	619	0	504		0.0		0	680	353	171	961	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	17.5	0.0	35.2				0.0	15.1	14.8	10.0	0.0	0.0
Cycle Q Clear(g_c), s	17.5	0.0	35.2				0.0	15.1	14.8	10.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1176	0	565				0	1667	877	156	2082	0
V/C Ratio(X)	0.53	0.00	0.89				0.00	0.41	0.40	1.10	0.46	0.00
Avail Cap(c_a), veh/h	1298	0	623				0	1667	877	156	2082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.93	0.93	0.84	0.84	0.00
Uniform Delay (d), s/veh	31.3	0.0	37.0				0.0	20.9	20.8	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	14.3				0.0	0.7	1.3	94.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	16.0				0.0	6.2	6.6	8.3	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	51.3				0.0	21.6	22.1	144.4	0.6	0.0
LnGrp LOS	C	A	D				A	C	C	F	A	A
Approach Vol, veh/h		1123						1033			1132	
Approach Delay, s/veh		40.5						21.8			22.3	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.0	60.3		45.7		74.3						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	10.0	30.0		46.0		44.0						
Max Q Clear Time (g_c+I1), s	14.0	19.1		39.2		4.0						
Green Ext Time (p_c), s	0.0	4.1		2.5		7.8						

Intersection Summary			
HCM 6th Ctrl Delay			28.4
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

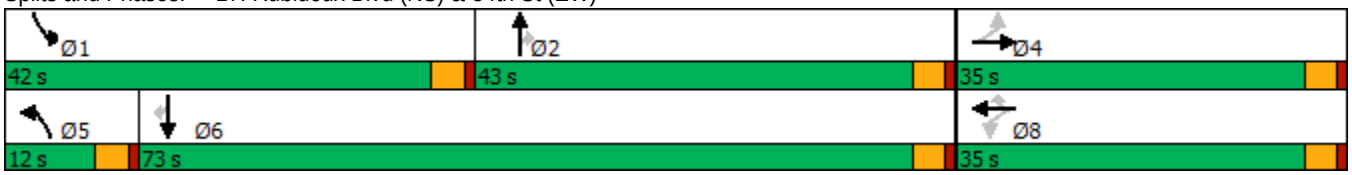


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	67	13	17	50	141	33	630	77	296	1021	167
Future Volume (vph)	110	67	13	17	50	141	33	630	77	296	1021	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.991				0.850			0.850			0.850
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1875	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.783			0.916		0.950			0.950		
Satd. Flow (perm)	0	1431	0	0	1740	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				141			82			75
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	110	67	13	17	50	141	33	630	77	296	1021	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	67	141	33	630	77	296	1021	167
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

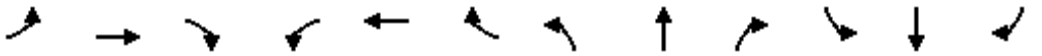
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0	35.0	12.0	43.0	43.0	42.0	73.0	73.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%	29.2%	10.0%	35.8%	35.8%	35.0%	60.8%	60.8%
Maximum Green (s)	31.0	31.0		31.0	31.0	31.0	8.0	39.0	39.0	38.0	69.0	69.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		18.6			18.6	18.6	7.0	49.8	49.8	22.5	69.9	69.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.48	0.48	0.22	0.68	0.68
v/c Ratio		0.73			0.21	0.38	0.28	0.38	0.11	0.77	0.43	0.18
Control Delay		56.5			38.1	9.3	55.7	20.0	4.9	52.5	10.0	5.5
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		56.5			38.1	9.3	55.7	20.0	4.9	52.5	10.0	5.5
LOS		E			D	A	E	B	A	D	A	A
Approach Delay		56.5			18.6			20.0			18.0	
Approach LOS		E			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)



HCM 6th Signalized Intersection Summary
17: Rubidoux Blvd (NS) & 34th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	67	13	17	50	141	33	630	77	296	1021	167
Future Volume (veh/h)	110	67	13	17	50	141	33	630	77	296	1021	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	110	67	13	17	50	141	33	630	77	296	1021	167
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	174	91	15	96	255	322	64	1778	898	368	2369	1197
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.03	0.51	0.51	0.20	0.67	0.67
Sat Flow, veh/h	670	513	87	297	1446	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	190	0	0	67	0	141	33	630	77	296	1021	167
Grp Sat Flow(s),veh/h/ln	1271	0	0	1743	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	12.1	0.0	0.0	0.0	0.0	7.1	1.8	11.1	2.3	15.6	13.7	3.5
Cycle Q Clear(g_c), s	15.2	0.0	0.0	3.1	0.0	7.1	1.8	11.1	2.3	15.6	13.7	3.5
Prop In Lane	0.58		0.07	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	0	0	352	0	322	64	1778	898	368	2369	1197
V/C Ratio(X)	0.68	0.00	0.00	0.19	0.00	0.44	0.52	0.35	0.09	0.80	0.43	0.14
Avail Cap(c_a), veh/h	455	0	0	567	0	551	143	1778	898	687	2369	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	0.0	36.1	0.0	37.7	48.7	15.1	13.0	39.3	7.8	6.1
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.3	0.0	0.9	6.4	0.6	0.2	4.2	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	1.5	0.0	3.3	0.9	4.2	0.9	7.3	4.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	36.3	0.0	38.7	55.1	15.7	13.2	43.4	8.3	6.3
LnGrp LOS	D	A	A	D	A	D	E	B	B	D	A	A
Approach Vol, veh/h		190			208			740			1484	
Approach Delay, s/veh		44.6			37.9			17.2			15.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	56.2		22.1	7.5	73.0		22.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	38.0	39.0		31.0	8.0	69.0		31.0				
Max Q Clear Time (g_c+I1), s	19.6	15.1		17.2	5.8	17.7		11.1				
Green Ext Time (p_c), s	0.7	4.3		0.9	0.0	9.4		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	497	20	16	579	0	40
Future Volume (vph)	497	20	16	579	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	497	20	16	579	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	497	20	16	579	0	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	497	20	16	579	0	40
Future Vol, veh/h	497	20	16	579	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	497	20	16	579	0	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	517	0	-	249
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	929	-	0	757
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	929	-	-	757
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	757	-	-	929	-
HCM Lane V/C Ratio	0.053	-	-	0.017	-
HCM Control Delay (s)	10	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	528	9	8	572	23	27
Future Volume (vph)	528	9	8	572	23	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2983	1335	1504	3008	1805	1615
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	528	9	8	572	23	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	528	9	8	572	23	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.8%		ICU Level of Service A	
Analysis Period (min) 15			

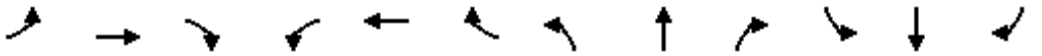
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	528	9	8	572	23	27
Future Vol, veh/h	528	9	8	572	23	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	528	9	8	572	23	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	537	0	830	264
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	302	-
Critical Hdwy	-	-	4.5	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.4	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	912	-	313	741
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	912	-	310	741
Mov Cap-2 Maneuver	-	-	-	-	310	-
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	310	741	-	-	912	-
HCM Lane V/C Ratio	0.074	0.036	-	-	0.009	-
HCM Control Delay (s)	17.5	10	-	-	9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	390	12	23	246	201	26	6	53	448	3	308
Future Volume (vph)	153	390	12	23	246	201	26	6	53	448	3	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.933			0.865			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2929	0	1805	1644	0	1556	1394	0
Flt Permitted	0.950			0.950			0.519			0.719		
Satd. Flow (perm)	1399	2798	1252	1570	2929	0	986	1644	0	1178	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			47		157			53			308	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	153	390	12	23	246	201	26	6	53	448	3	308
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	390	12	23	447	0	26	59	0	448	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
20: Cactus Ave (NS) & El Rivino Rd (EW)

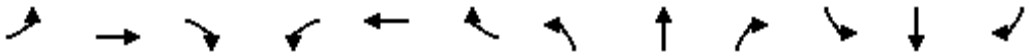
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	24.0	39.0	39.0	10.0	25.0		66.0	66.0		66.0	66.0	
Total Split (%)	20.9%	33.9%	33.9%	8.7%	21.7%		57.4%	57.4%		57.4%	57.4%	
Maximum Green (s)	20.0	35.0	35.0	6.0	21.0		62.0	62.0		62.0	62.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	15.8	32.2	32.2	5.9	16.1		62.4	62.4		62.4	62.4	
Actuated g/C Ratio	0.15	0.30	0.30	0.06	0.15		0.59	0.59		0.59	0.59	
v/c Ratio	0.74	0.46	0.03	0.26	0.78		0.04	0.06		0.65	0.33	
Control Delay	64.9	32.4	0.2	59.1	38.0		12.1	4.2		22.2	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	64.9	32.4	0.2	59.1	38.0		12.1	4.2		22.2	2.6	
LOS	E	C	A	E	D		B	A		C	A	
Approach Delay		40.7			39.0			6.6			14.2	
Approach LOS		D			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 106.3			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 63.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	390	12	23	246	201	26	6	53	448	3	308
Future Volume (veh/h)	153	390	12	23	246	201	26	6	53	448	3	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	153	390	12	23	246	201	26	6	53	448	3	308
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	179	732	385	39	294	241	619	116	1022	770	10	986
Arrive On Green	0.12	0.26	0.26	0.02	0.16	0.16	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1470	2793	1470	1678	1800	1471	1085	193	1707	1195	16	1647
Grp Volume(v), veh/h	153	390	12	23	218	229	26	0	59	448	0	311
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1085	0	1900	1195	0	1663
Q Serve(g_s), s	10.6	12.4	0.6	1.4	13.7	13.7	1.3	0.0	1.3	25.7	0.0	9.6
Cycle Q Clear(g_c), s	10.6	12.4	0.6	1.4	13.7	13.7	10.8	0.0	1.3	27.1	0.0	9.6
Prop In Lane	1.00		1.00	1.00		0.88	1.00		0.90	1.00		0.99
Lane Grp Cap(c), veh/h	179	732	385	39	261	274	619	0	1138	770	0	996
V/C Ratio(X)	0.85	0.53	0.03	0.59	0.84	0.84	0.04	0.00	0.05	0.58	0.00	0.31
Avail Cap(c_a), veh/h	284	944	497	97	323	340	619	0	1138	770	0	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	32.8	28.4	50.1	42.0	42.0	12.9	0.0	8.6	14.2	0.0	10.3
Incr Delay (d2), s/veh	13.5	0.6	0.0	13.2	14.4	13.7	0.1	0.0	0.1	3.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	4.2	0.2	0.7	6.4	6.7	0.3	0.0	0.6	7.1	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	33.4	28.5	63.2	56.3	55.7	13.1	0.0	8.7	17.4	0.0	11.1
LnGrp LOS	E	C	C	E	E	E	B	A	A	B	A	B
Approach Vol, veh/h		555			470			85			759	
Approach Delay, s/veh		40.1			56.4			10.0			14.8	
Approach LOS		D			E			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		66.0	6.4	31.1		66.0	16.6	20.9				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		62.0	6.0	35.0		62.0	20.0	21.0				
Max Q Clear Time (g_c+I1), s		12.8	3.4	14.4		29.1	12.6	15.7				
Green Ext Time (p_c), s		0.4	0.0	2.6		4.2	0.2	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	889	2	2	470	0	10
Future Volume (vph)	889	2	2	470	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	889	2	2	470	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	889	2	2	470	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.6%		ICU Level of Service A	
Analysis Period (min) 15			

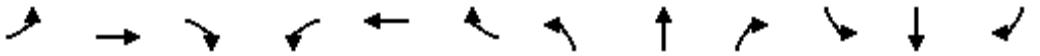
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	889	2	2	470	0	10
Future Vol, veh/h	889	2	2	470	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	889	2	2	470	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	891	0	-	445
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	680	-	0	566
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	680	-	-	566
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	566	-	-	680	-
HCM Lane V/C Ratio	0.018	-	-	0.003	-
HCM Control Delay (s)	11.5	-	-	10.3	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

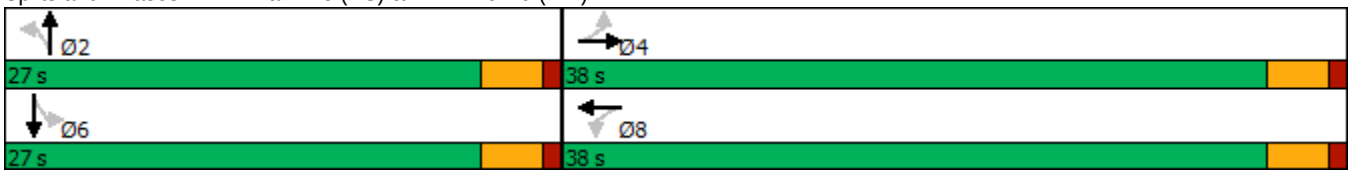


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	385	224	4	206	10	302	3	12	4	5	6
Future Volume (vph)	9	385	224	4	206	10	302	3	12	4	5	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.993			0.880			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1448	0	1583	1655	0	1517	1405	0	1805	1744	0
Flt Permitted	0.616			0.237			0.750			0.748		
Satd. Flow (perm)	944	1448	0	395	1655	0	1197	1405	0	1421	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			6			12			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	385	224	4	206	10	302	3	12	4	5	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	609	0	4	216	0	302	15	0	4	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

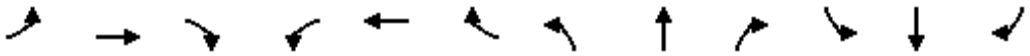
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	38.0	38.0		38.0	38.0		27.0	27.0		27.0	27.0	
Total Split (%)	58.5%	58.5%		58.5%	58.5%		41.5%	41.5%		41.5%	41.5%	
Maximum Green (s)	34.0	34.0		34.0	34.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	26.5	26.5		26.5	26.5		23.4	23.4		23.4	23.4	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.40	0.40		0.40	0.40	
v/c Ratio	0.02	0.87		0.02	0.28		0.63	0.03		0.01	0.02	
Control Delay	7.8	27.3		8.0	10.0		24.1	8.7		13.5	10.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.8	27.3		8.0	10.0		24.1	8.7		13.5	10.5	
LOS	A	C		A	A		C	A		B	B	
Approach Delay		27.0			9.9			23.4			11.3	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 22.6		Intersection LOS: C	
Intersection Capacity Utilization 64.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



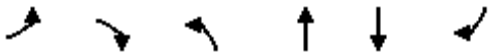
HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	385	224	4	206	10	302	3	12	4	5	6
Future Volume (veh/h)	9	385	224	4	206	10	302	3	12	4	5	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	385	224	4	206	10	302	3	12	4	5	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	482	437	254	193	723	35	621	133	530	702	354	424
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	962	976	568	735	1614	78	1214	324	1295	1421	864	1036
Grp Volume(v), veh/h	9	0	609	4	0	216	302	0	15	4	0	11
Grp Sat Flow(s),veh/h/ln	962	0	1544	735	0	1693	1214	0	1618	1421	0	1900
Q Serve(g_s), s	0.3	0.0	20.2	0.3	0.0	4.5	11.0	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	4.9	0.0	20.2	20.5	0.0	4.5	11.2	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.37	1.00		0.05	1.00		0.80	1.00		0.55
Lane Grp Cap(c), veh/h	482	0	692	193	0	758	621	0	663	702	0	778
V/C Ratio(X)	0.02	0.00	0.88	0.02	0.00	0.28	0.49	0.00	0.02	0.01	0.00	0.01
Avail Cap(c_a), veh/h	633	0	935	309	0	1025	621	0	663	702	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	0.0	14.1	23.5	0.0	9.8	13.2	0.0	9.9	10.0	0.0	9.8
Incr Delay (d2), s/veh	0.0	0.0	7.6	0.0	0.0	0.2	2.7	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	6.5	0.0	0.0	1.3	3.0	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	0.0	21.7	23.5	0.0	10.0	15.9	0.0	9.9	10.0	0.0	9.9
LnGrp LOS	B	A	C	C	A	B	B	A	A	B	A	A
Approach Vol, veh/h		618			220			317			15	
Approach Delay, s/veh		21.6			10.3			15.6			9.9	
Approach LOS		C			B			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		29.2		27.0		29.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		34.0		23.0		34.0				
Max Q Clear Time (g_c+I1), s		13.2		22.2		2.4		22.5				
Green Ext Time (p_c), s		0.9		3.0		0.0		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			17.7									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	49	6	307	229	4
Future Volume (vph)	10	49	6	307	229	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	10	49	6	307	229	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	49	6	307	229	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.2%		ICU Level of Service A	
Analysis Period (min) 15			

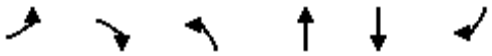
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	49	6	307	229	4
Future Vol, veh/h	10	49	6	307	229	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	10	49	6	307	229	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	548	229	233	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	319	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	501	815	1241	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	498	815	1241	-	-	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1241	-	498	815	-	-
HCM Lane V/C Ratio	0.005	-	0.02	0.06	-	-
HCM Control Delay (s)	7.9	-	12.4	9.7	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

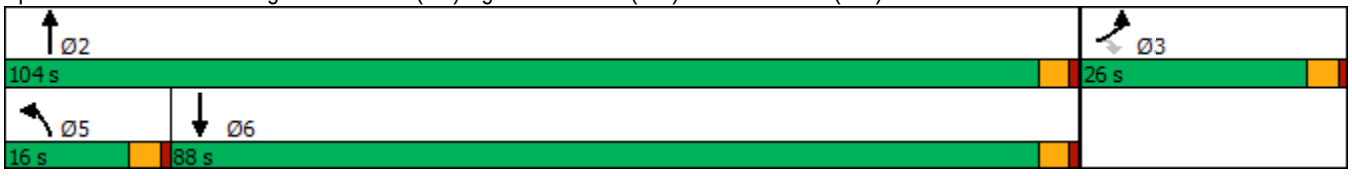


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	106	80	914	590	112
Future Volume (vph)	175	106	80	914	590	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.978	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1499	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1499	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		106			15	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	175	106	80	914	590	112
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	106	80	914	702	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

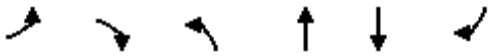
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	26.0	26.0	16.0	104.0	88.0	
Total Split (%)	20.0%	20.0%	12.3%	80.0%	67.7%	
Maximum Green (s)	22.0	22.0	12.0	100.0	84.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	17.3	17.3	10.5	100.2	88.0	
Actuated g/C Ratio	0.14	0.14	0.08	0.80	0.70	
v/c Ratio	0.74	0.35	0.63	0.72	0.67	
Control Delay	70.1	11.8	78.3	10.7	16.1	
Queue Delay	0.0	0.0	0.0	0.3	0.0	
Total Delay	70.1	11.8	78.3	11.0	16.1	
LOS	E	B	E	B	B	
Approach Delay	48.1			16.4	16.1	
Approach LOS	D			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 125.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 64.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	106	80	914	590	112
Future Volume (veh/h)	175	106	80	914	590	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	175	106	80	914	590	112
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	209	209	99	1328	943	179
Arrive On Green	0.11	0.11	0.06	0.82	0.73	0.73
Sat Flow, veh/h	1841	1841	1618	1618	1298	246
Grp Volume(v), veh/h	175	106	80	914	0	702
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	11.3	6.6	5.9	28.3	0.0	27.7
Cycle Q Clear(g_c), s	11.3	6.6	5.9	28.3	0.0	27.7
Prop In Lane	1.00	1.00	1.00			0.16
Lane Grp Cap(c), veh/h	209	209	99	1328	0	1122
V/C Ratio(X)	0.84	0.51	0.81	0.69	0.00	0.63
Avail Cap(c_a), veh/h	332	332	159	1328	0	1122
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	50.8	56.5	4.5	0.0	8.3
Incr Delay (d2), s/veh	10.1	1.9	14.3	2.9	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	3.1	2.8	6.4	0.0	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.0	52.7	70.8	7.4	0.0	11.0
LnGrp LOS	E	D	E	A	A	B
Approach Vol, veh/h	281			994	702	
Approach Delay, s/veh	59.1			12.5	11.0	
Approach LOS	E			B	B	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		104.0			11.5	92.5	17.8
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		100.0			12.0	84.0	22.0
Max Q Clear Time (g_c+I1), s		30.3			7.9	29.7	13.3
Green Ext Time (p_c), s		8.4			0.0	5.3	0.5

Intersection Summary		
HCM 6th Ctrl Delay		18.6
HCM 6th LOS		B

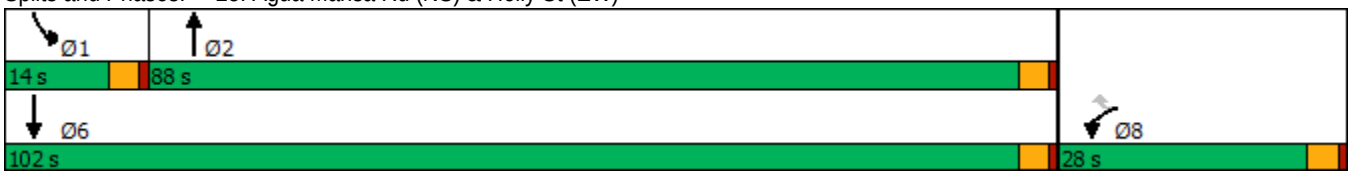


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	144	930	13	31	603
Future Volume (vph)	53	144	930	13	31	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3028	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3028	0	1421	1496
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		144	2			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	53	144	930	13	31	603
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	144	943	0	31	603
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

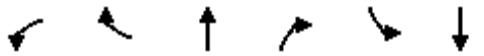
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	28.0	28.0	88.0		14.0	102.0
Total Split (%)	21.5%	21.5%	67.7%		10.8%	78.5%
Maximum Green (s)	24.0	24.0	84.0		10.0	98.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	9.6	9.6	92.7		7.8	100.6
Actuated g/C Ratio	0.08	0.08	0.78		0.07	0.85
v/c Ratio	0.42	0.63	0.40		0.33	0.47
Control Delay	60.5	20.5	5.6		61.4	3.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	60.5	20.5	5.6		61.4	3.9
LOS	E	C	A		E	A
Approach Delay	31.3		5.6			6.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)



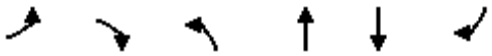
HCM 6th Signalized Intersection Summary
25: Agua Mansa Rd (NS) & Holly St (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	53	144	930	13	31	603
Future Volume (veh/h)	53	144	930	13	31	603
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1663	1596	1618	1618	1500	1500
Adj Flow Rate, veh/h	53	144	930	13	31	603
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	19	19	27	27
Cap, veh/h	180	173	2377	33	40	1236
Arrive On Green	0.11	0.11	0.76	0.76	0.03	0.82
Sat Flow, veh/h	1663	1596	3193	44	1500	1500
Grp Volume(v), veh/h	53	144	459	484	31	603
Grp Sat Flow(s),veh/h/ln	1663	1596	1537	1618	1500	1500
Q Serve(g_s), s	3.5	10.5	12.0	12.0	2.4	14.0
Cycle Q Clear(g_c), s	3.5	10.5	12.0	12.0	2.4	14.0
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	180	173	1174	1236	40	1236
V/C Ratio(X)	0.29	0.83	0.39	0.39	0.77	0.49
Avail Cap(c_a), veh/h	336	322	1174	1236	126	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	51.9	4.7	4.7	57.5	3.1
Incr Delay (d2), s/veh	0.9	9.9	1.0	0.9	25.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.7	3.1	3.2	1.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.7	61.8	5.7	5.7	82.9	4.4
LnGrp LOS	D	E	A	A	F	A
Approach Vol, veh/h	197		943			634
Approach Delay, s/veh	58.6		5.7			8.3
Approach LOS	E		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	94.8			102.0	16.9
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	10.0	84.0			98.0	24.0
Max Q Clear Time (g_c+I1), s	4.4	14.0			16.0	12.5
Green Ext Time (p_c), s	0.0	6.6			4.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	88	222	243	693	616	52
Future Volume (vph)	88	222	243	693	616	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		222				47
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	88	222	243	693	616	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	222	243	693	616	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

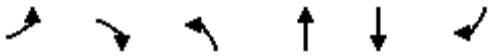
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	16.0	38.0	22.0	22.0
Total Split (%)	36.7%	36.7%	26.7%	63.3%	36.7%	36.7%
Maximum Green (s)	18.0	18.0	12.0	34.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	8.8	8.8	11.4	30.6	15.1	15.1
Actuated g/C Ratio	0.18	0.18	0.24	0.64	0.32	0.32
v/c Ratio	0.36	0.56	0.67	0.36	0.70	0.14
Control Delay	22.3	9.3	30.2	4.8	19.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	9.3	30.2	4.8	19.6	6.3
LOS	C	A	C	A	B	A
Approach Delay	13.0			11.4	18.6	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 47.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 14.2		Intersection LOS: B	
Intersection Capacity Utilization 45.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave



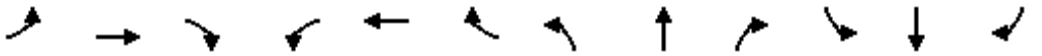
HCM 6th Signalized Intersection Summary
26: Agua Mansa Rd (NS) & Hall Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	222	243	693	616	52
Future Volume (veh/h)	88	222	243	693	616	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	88	222	243	693	616	52
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	289	289	301	1821	852	430
Arrive On Green	0.21	0.21	0.19	0.59	0.31	0.31
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	88	222	243	693	616	52
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.2	6.2	5.9	4.8	8.1	1.1
Cycle Q Clear(g_c), s	2.2	6.2	5.9	4.8	8.1	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	289	289	301	1821	852	430
V/C Ratio(X)	0.30	0.77	0.81	0.38	0.72	0.12
Avail Cap(c_a), veh/h	603	603	476	2563	1220	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	15.1	15.9	4.4	12.6	10.1
Incr Delay (d2), s/veh	0.6	4.3	5.4	0.1	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	2.1	0.5	1.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.1	19.4	21.3	4.5	13.8	10.3
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	310			936	668	
Approach Delay, s/veh	17.9			8.9	13.5	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.2		12.6	11.6	16.6
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	12.0	18.0
Max Q Clear Time (g_c+I1), s		6.8		8.2	7.9	10.1
Green Ext Time (p_c), s		4.7		0.7	0.3	2.5

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B



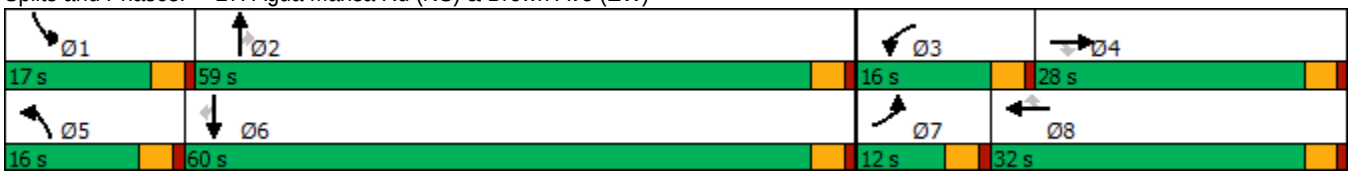
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	3	47	54	4	211	32	723	127	56	769	14
Future Volume (vph)	19	3	47	54	4	211	32	723	127	56	769	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			211			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	19	3	47	54	4	211	32	723	127	56	769	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	3	47	54	4	211	32	723	127	56	769	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lanes, Volumes, Timings
27: Agua Mansa Rd (NS) & Brown Ave (EW)

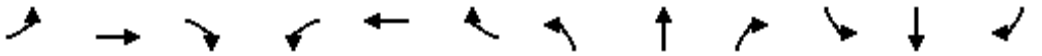
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	28.0	28.0	16.0	32.0	32.0	16.0	59.0	59.0	17.0	60.0	60.0
Total Split (%)	10.0%	23.3%	23.3%	13.3%	26.7%	26.7%	13.3%	49.2%	49.2%	14.2%	50.0%	50.0%
Maximum Green (s)	8.0	24.0	24.0	12.0	28.0	28.0	12.0	55.0	55.0	13.0	56.0	56.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.8	7.2	7.2	8.7	11.3	11.3	7.7	58.4	58.4	9.1	62.1	62.1
Actuated g/C Ratio	0.07	0.08	0.08	0.09	0.12	0.12	0.08	0.63	0.63	0.10	0.67	0.67
v/c Ratio	0.19	0.03	0.30	0.39	0.02	0.65	0.27	0.40	0.17	0.42	0.42	0.02
Control Delay	49.5	43.3	7.8	50.6	39.0	15.9	49.3	12.3	5.8	51.6	11.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	43.3	7.8	50.6	39.0	15.9	49.3	12.3	5.8	51.6	11.1	0.1
LOS	D	D	A	D	D	B	D	B	A	D	B	A
Approach Delay		20.8			23.2			12.7			13.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.9			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	3	47	54	4	211	32	723	127	56	769	14
Future Volume (veh/h)	19	3	47	54	4	211	32	723	127	56	769	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	19	3	47	54	4	211	32	723	127	56	769	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	31	200	192	92	284	273	54	1648	833	89	1638	828
Arrive On Green	0.02	0.14	0.14	0.06	0.18	0.18	0.04	0.57	0.57	0.06	0.60	0.60
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	19	3	47	54	4	211	32	723	127	56	769	14
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.3	0.2	3.0	3.2	0.2	12.6	2.0	13.8	3.9	3.6	15.1	0.4
Cycle Q Clear(g_c), s	1.3	0.2	3.0	3.2	0.2	12.6	2.0	13.8	3.9	3.6	15.1	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	200	192	92	284	273	54	1648	833	89	1638	828
V/C Ratio(X)	0.62	0.01	0.24	0.59	0.01	0.77	0.59	0.44	0.15	0.63	0.47	0.02
Avail Cap(c_a), veh/h	118	353	338	200	467	449	189	1648	833	195	1638	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	35.5	36.6	44.2	32.6	37.7	45.6	11.7	9.6	44.0	10.8	7.8
Incr Delay (d2), s/veh	18.2	0.0	0.7	5.9	0.0	4.7	9.7	0.9	0.4	7.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	1.0	1.4	0.1	5.0	0.9	4.0	1.3	1.4	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.8	35.5	37.3	50.1	32.6	42.4	55.3	12.6	10.0	51.0	11.7	7.9
LnGrp LOS	E	D	D	D	C	D	E	B	B	D	B	A
Approach Vol, veh/h		69			269			882			839	
Approach Delay, s/veh		44.8			43.8			13.8			14.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	59.0	9.5	17.6	7.5	61.5	6.1	21.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	55.0	12.0	24.0	12.0	56.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	7.6	17.8	7.2	7.0	6.0	19.1	5.3	16.6
Green Ext Time (p_c), s	0.0	5.6	0.0	0.1	0.0	5.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	24	981	43	84	796
Future Volume (vph)	46	24	981	43	84	796
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.284	
Satd. Flow (perm)	1107	991	2983	1335	428	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		24		43		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	46	24	981	43	84	796
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	24	981	43	84	796
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	98.0	98.0	98.0	98.0
Total Split (%)	18.3%	18.3%	81.7%	81.7%	81.7%	81.7%
Maximum Green (s)	18.0	18.0	94.0	94.0	94.0	94.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	10.3	10.3	103.1	103.1	103.1	103.1
Actuated g/C Ratio	0.09	0.09	0.87	0.87	0.87	0.87
v/c Ratio	0.48	0.22	0.38	0.04	0.23	0.61
Control Delay	67.3	22.3	2.6	0.7	3.8	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	22.3	2.6	0.7	3.8	5.6
LOS	E	C	A	A	A	A
Approach Delay	51.9		2.6			5.5
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 5.6		Intersection LOS: A	
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



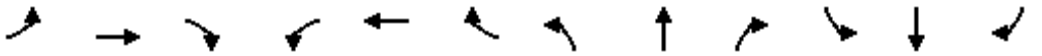
HCM 6th Signalized Intersection Summary
28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	24	981	43	84	796
Future Volume (veh/h)	46	24	981	43	84	796
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	46	24	981	43	84	796
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	56	56	2620	1379	425	1314
Arrive On Green	0.06	0.06	0.87	0.87	0.87	0.87
Sat Flow, veh/h	966	966	3098	1589	446	1515
Grp Volume(v), veh/h	46	24	981	43	84	796
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	446	1515
Q Serve(g_s), s	5.1	2.6	6.9	0.4	4.9	15.9
Cycle Q Clear(g_c), s	5.1	2.6	6.9	0.4	11.8	15.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	56	2620	1379	425	1314
V/C Ratio(X)	0.82	0.43	0.37	0.03	0.20	0.61
Avail Cap(c_a), veh/h	161	161	2620	1379	425	1314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	49.2	1.4	1.0	2.6	2.0
Incr Delay (d2), s/veh	23.7	5.0	0.4	0.0	1.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.7	0.4	0.1	0.4	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.1	54.3	1.8	1.0	3.6	4.1
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	70		1024			880
Approach Delay, s/veh	67.3		1.8			4.0
Approach LOS	E		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	98.0			98.0	10.3
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	94.0			94.0	18.0
Max Q Clear Time (g_c+I1), s	8.9			17.9	7.1
Green Ext Time (p_c), s	8.4			8.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A



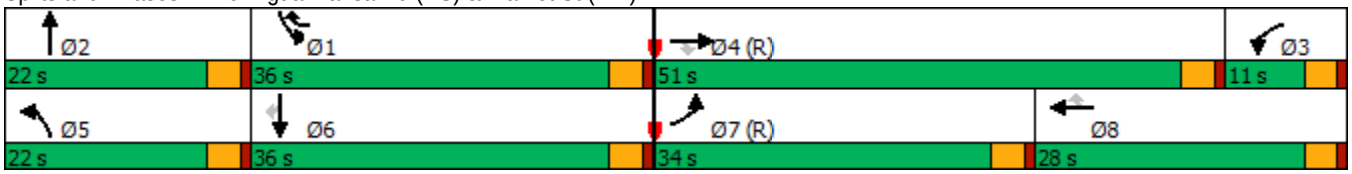
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	681	696	4	2	642	335	2	1	1	388	4	526
Future Volume (vph)	681	696	4	2	642	335	2	1	1	388	4	526
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	1		0	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	1.00	*1.00	*1.00
Frt			0.850			0.850		0.925				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	3455	1468	1656	3486	1482	1444	1406	0	1626	1712	2910
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	3455	1468	1656	3486	1482	1444	1406	0	1626	1712	2910
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			200		1				526
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	681	696	4	2	642	335	2	1	1	388	4	526
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	696	4	2	642	335	2	2	0	388	4	526
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8						6
Detector Phase	7	4	4	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.0	22.0	22.0	11.0	22.0	22.0	22.0	22.0		22.0	22.0	22.0
Total Split (s)	34.0	51.0	51.0	11.0	28.0	36.0	22.0	22.0		36.0	36.0	36.0
Total Split (%)	28.3%	42.5%	42.5%	9.2%	23.3%	30.0%	18.3%	18.3%		30.0%	30.0%	30.0%
Maximum Green (s)	30.0	47.0	47.0	7.0	24.0	32.0	18.0	18.0		32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	0
Act Effct Green (s)	30.0	55.5	55.5	7.0	23.7	55.7	18.3	18.3		32.0	32.0	32.0
Actuated g/C Ratio	0.25	0.46	0.46	0.06	0.20	0.46	0.15	0.15		0.27	0.27	0.27
v/c Ratio	0.86	0.44	0.01	0.02	0.93	0.42	0.01	0.01		0.90	0.01	0.45
Control Delay	64.1	30.1	0.0	54.0	68.6	5.8	43.5	37.0		66.9	32.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	64.1	30.1	0.0	54.0	68.6	5.8	43.5	37.0		66.9	32.5	4.2
LOS	E	C	A	D	E	A	D	D		E	C	A
Approach Delay		46.8			47.1			40.3			30.8	
Approach LOS		D			D			D			C	

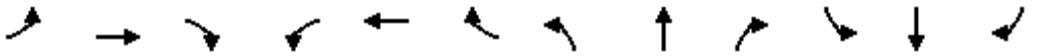
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 42.4		Intersection LOS: D	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)



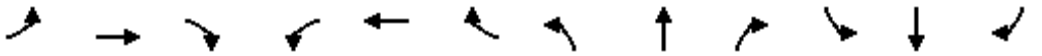
HCM 6th Signalized Intersection Summary
29: Agua Mansa Rd (NS) & Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	681	696	4	2	642	335	2	1	1	388	4	526
Future Volume (veh/h)	681	696	4	2	642	335	2	1	1	388	4	526
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	681	696	4	2	642	335	2	1	1	388	4	526
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	850	1372	686	103	707	824	229	115	115	463	463	926
Arrive On Green	0.25	0.39	0.39	0.06	0.20	0.20	0.15	0.15	0.15	0.27	0.27	0.27
Sat Flow, veh/h	3398	3504	1752	1767	3533	1767	1530	765	765	1737	1737	3474
Grp Volume(v), veh/h	681	696	4	2	642	335	2	0	2	388	4	526
Grp Sat Flow(s),veh/h/ln	1699	1752	1752	1767	1767	1767	1530	0	1530	1737	1737	1737
Q Serve(g_s), s	22.6	18.1	0.1	0.1	21.3	8.0	0.1	0.0	0.1	25.3	0.2	15.7
Cycle Q Clear(g_c), s	22.6	18.1	0.1	0.1	21.3	8.0	0.1	0.0	0.1	25.3	0.2	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	850	1372	686	103	707	824	229	0	229	463	463	926
V/C Ratio(X)	0.80	0.51	0.01	0.02	0.91	0.41	0.01	0.00	0.01	0.84	0.01	0.57
Avail Cap(c_a), veh/h	850	1372	686	103	707	824	229	0	229	463	463	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	0.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	42.2	27.7	9.2	53.3	46.9	8.4	43.4	0.0	43.4	41.5	32.3	38.0
Incr Delay (d2), s/veh	3.4	0.8	0.0	0.1	15.7	0.3	0.1	0.0	0.1	13.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	7.4	0.1	0.1	10.6	3.2	0.1	0.0	0.1	12.1	0.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.6	28.5	9.2	53.3	62.6	8.8	43.5	0.0	43.5	54.6	32.4	40.0
LnGrp LOS	D	C	A	D	E	A	D	A	D	D	C	D
Approach Vol, veh/h		1381			979			4			918	
Approach Delay, s/veh		36.9			44.2			43.5			46.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.0	22.0	11.0	51.0	22.0	36.0	34.0	28.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	32.0	18.0	7.0	47.0	18.0	32.0	30.0	24.0
Max Q Clear Time (g_c+I1), s	27.3	4.1	4.1	22.1	2.1	19.7	26.6	25.3
Green Ext Time (p_c), s	0.5	0.0	0.0	4.6	0.0	1.5	0.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

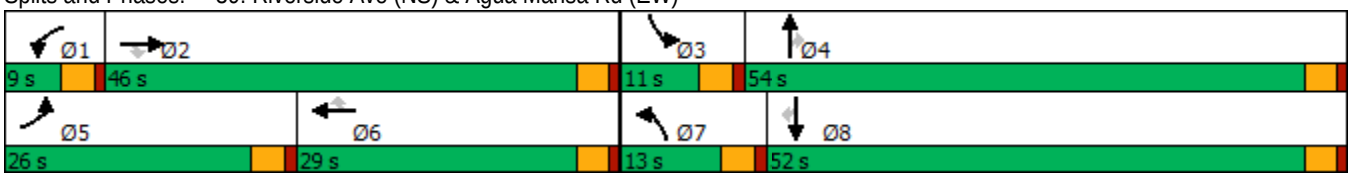


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Future Volume (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	1743	1482	1492	1570	1335	1626	3252	1455	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	1743	1482	1492	1570	1335	1626	3252	1455	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			118			118			141
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

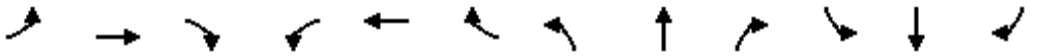
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	26.0	46.0	46.0	9.0	29.0	29.0	13.0	54.0	54.0	11.0	52.0	52.0
Total Split (%)	21.7%	38.3%	38.3%	7.5%	24.2%	24.2%	10.8%	45.0%	45.0%	9.2%	43.3%	43.3%
Maximum Green (s)	22.0	42.0	42.0	5.0	25.0	25.0	9.0	50.0	50.0	7.0	48.0	48.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	21.2	43.1	43.1	5.0	25.0	25.0	9.0	49.8	49.8	7.0	47.8	47.8
Actuated g/C Ratio	0.18	0.36	0.36	0.04	0.21	0.21	0.08	0.42	0.42	0.06	0.40	0.40
v/c Ratio	0.88	0.87	0.23	0.56	0.69	0.22	0.95	0.97	0.13	0.95	0.87	0.60
Control Delay	65.2	52.4	12.9	88.9	55.9	4.1	124.8	52.8	2.3	135.4	41.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	52.4	12.9	88.9	55.9	4.1	124.8	52.8	2.3	135.4	41.3	22.2
LOS	E	D	B	F	E	A	F	D	A	F	D	C
Approach Delay		53.3			46.8			55.3			41.8	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 49.4		Intersection LOS: D	
Intersection Capacity Utilization 88.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



HCM 6th Signalized Intersection Summary
39: Riverside Ave (NS) & Agua Mansa Rd (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	503	551	136	35	228	83	116	1321	91	92	1155	409
Future Volume (veh/h)	503	551	136	35	228	83	116	1321	91	92	1155	409
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	503	551	136	35	228	83	116	1321	91	92	1155	409
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	607	621	621	60	337	337	131	1381	727	103	1348	709
Arrive On Green	0.18	0.35	0.35	0.04	0.21	0.21	0.08	0.42	0.42	0.06	0.40	0.40
Sat Flow, veh/h	3427	1767	1767	1589	1589	1589	1737	3300	1737	1767	3357	1767
Grp Volume(v), veh/h	503	551	136	35	228	83	116	1321	91	92	1155	409
Grp Sat Flow(s),veh/h/ln	1714	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	16.9	35.1	6.5	2.6	15.8	5.2	7.9	46.4	3.8	6.2	37.5	21.5
Cycle Q Clear(g_c), s	16.9	35.1	6.5	2.6	15.8	5.2	7.9	46.4	3.8	6.2	37.5	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	621	621	60	337	337	131	1381	727	103	1348	709
V/C Ratio(X)	0.83	0.89	0.22	0.58	0.68	0.25	0.89	0.96	0.13	0.89	0.86	0.58
Avail Cap(c_a), veh/h	631	621	621	66	337	337	131	1381	727	103	1348	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	36.5	27.2	56.6	43.3	39.1	54.8	33.7	21.3	55.9	32.6	27.8
Incr Delay (d2), s/veh	8.8	17.1	0.8	10.2	10.4	1.7	46.4	15.1	0.1	54.9	5.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	17.3	2.7	1.2	7.0	2.1	5.0	19.8	1.5	4.2	15.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	53.7	28.1	66.7	53.7	40.9	101.2	48.9	21.4	110.8	38.3	29.0
LnGrp LOS	E	D	C	E	D	D	F	D	C	F	D	C
Approach Vol, veh/h		1190			346			1528			1656	
Approach Delay, s/veh		51.8			51.9			51.2			40.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	46.0	11.0	54.0	25.2	29.4	13.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	42.0	7.0	50.0	22.0	25.0	9.0	48.0
Max Q Clear Time (g_c+I1), s	6.6	39.1	10.2	50.4	20.9	19.8	11.9	41.5
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.2	0.6	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

APPENDIX L

LEVEL OF SERVICE WORKSHEETS – ALTERNATIVE ANALYSIS

EXISTING PLUS PROJECT – ALTERNATIVE 1

Viridian

Vistro File: C:\...\AME.vistro

Scenario 2 Existing Plus Project Morning Peak Hour - Alternative 1

Report File: C:\...\AMEP1.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.639	17.1	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.003	11.2	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	WB Left	0.642	4.4	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	113.9	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.862	31.4	C
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.006	9.4	A
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.268	5.1	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	SB Left	0.243	9.7	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.002	8.8	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.004	13.2	B
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.009	9.6	A
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.027	14.2	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.075	12.7	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.489	11.6	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.267	7.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	75.855	133.0	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	566	50	71	911	7	20	8	19	64	4	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	150	99	32	0	0	0	0	47	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	572	200	170	943	7	20	8	19	111	4	90
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	168	59	50	277	2	6	2	6	33	1	26
Total Analysis Volume [veh/h]	9	672	235	200	1108	8	24	9	22	130	5	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	58	58	13	69	69	17	17	17
g / C, Green / Cycle	0.02	0.58	0.58	0.13	0.69	0.69	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.00	0.25	0.25	0.11	0.29	0.29	0.20	0.16	0.07
s, saturation flow rate [veh/h]	1810	1900	1734	1810	1900	1895	272	860	1615
c, Capacity [veh/h]	29	1096	1000	240	1318	1315	98	217	275
d1, Uniform Delay [s]	48.70	11.94	11.94	42.32	6.65	6.65	37.04	40.86	36.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.76	1.25	1.36	7.29	1.00	1.00	4.96	2.90	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

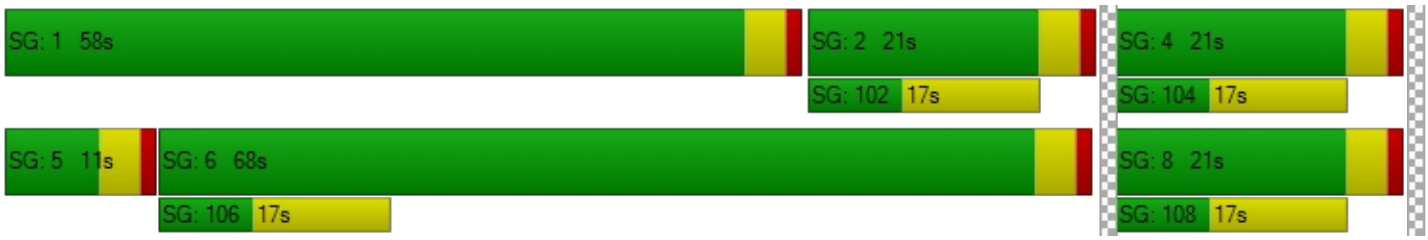
X, volume / capacity	0.31	0.43	0.43	0.83	0.42	0.42	0.56	0.62	0.39
d, Delay for Lane Group [s/veh]	54.46	13.18	13.30	49.61	7.65	7.66	42.00	43.76	37.78
Lane Group LOS	D	B	B	D	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	5.98	5.49	5.26	4.81	4.80	1.28	3.41	2.36
50th-Percentile Queue Length [ft/ln]	6.71	149.42	137.24	131.52	120.31	120.08	32.01	85.19	58.93
95th-Percentile Queue Length [veh/ln]	0.48	9.99	9.33	9.02	8.41	8.40	2.31	6.13	4.24
95th-Percentile Queue Length [ft/ln]	12.07	249.66	233.30	225.56	210.25	209.94	57.63	153.34	106.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.46	13.22	13.30	49.61	7.66	7.66	42.00	42.00	42.00	43.76	43.76	37.78
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.64			14.03			42.00			41.13		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.08											
Intersection LOS	B											
Intersection V/C	0.639											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	154	20	0	79	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	778	20	0	1073	0	2
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	205	6	0	282	0	1
Total Analysis Volume [veh/h]	819	24	0	1129	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.16
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.26
d_A, Approach Delay [s/veh]	0.00		0.00		11.16	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	170	72	33	46	18	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	794	72	33	1040	18	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	209	19	9	274	5	1
Total Analysis Volume [veh/h]	836	76	35	1095	19	4
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	62	0	17	79	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	23	23	23	23	23	23
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	1	14	1	1
g / C, Green / Cycle	0.38	0.38	0.06	0.62	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.23	0.05	0.02	0.30	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1389	620	114	2232	78	70
d1, Uniform Delay [s]	5.81	4.69	10.54	2.48	10.89	10.80
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.09	1.49	0.17	1.58	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.12	0.31	0.49	0.24	0.06
d, Delay for Lane Group [s/veh]	6.24	4.78	12.03	2.65	12.47	11.14
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.70	0.11	0.16	0.05	0.10	0.02
50th-Percentile Queue Length [ft/ln]	17.43	2.64	4.06	1.30	2.47	0.50
95th-Percentile Queue Length [veh/ln]	1.26	0.19	0.29	0.09	0.18	0.04
95th-Percentile Queue Length [ft/ln]	31.38	4.74	7.30	2.34	4.44	0.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.24	4.78	12.03	2.65	12.47	11.14
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	6.11		2.94		12.24	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.44					
Intersection LOS	A					
Intersection V/C	0.642					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	113.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	242	1	1	63	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	919	1	1	1073	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	266	0	0	310	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	1064	1	1	1242	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.13	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	11.66	0.00	0.00	10.45	0.00	0.00	85.48	113.91	18.29	73.37	111.07	13.52
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	2.91	0.00	0.00	0.11	0.06	0.00	14.78	14.78	14.78	1.41	1.41	1.41
d_A, Approach Delay [s/veh]	0.23			0.01			34.42			73.37		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	0.50											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.862

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	103	21	38	26	0	0	0	0	8	0	140
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	324	283	554	560	17	14	29	11	270	36	463
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	87	76	148	150	5	4	8	3	72	10	0
Total Analysis Volume [veh/h]	14	347	303	593	600	18	15	31	12	289	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	37	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	21	21	34	53	53	6	6	20	20
g / C, Green / Cycle	0.02	0.22	0.22	0.35	0.55	0.55	0.06	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.19	0.33	0.17	0.01	0.01	0.02	0.18	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	1820	1615
c, Capacity [veh/h]	41	791	353	640	1988	888	104	104	372	330
d1, Uniform Delay [s]	46.45	32.59	36.27	29.98	11.74	9.90	43.25	43.93	37.25	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.77	0.38	6.08	6.41	0.08	0.01	0.63	2.62	6.87	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

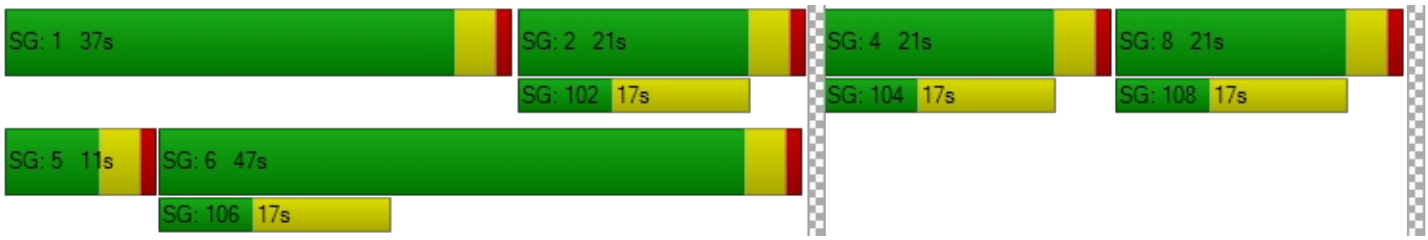
X, volume / capacity	0.34	0.44	0.86	0.93	0.30	0.02	0.14	0.41	0.88	0.00
d, Delay for Lane Group [s/veh]	51.22	32.98	42.36	36.39	11.82	9.91	43.88	46.56	44.12	0.00
Lane Group LOS	D	C	D	D	B	A	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.38	3.50	7.32	13.86	3.32	0.17	0.36	1.06	8.08	0.00
50th-Percentile Queue Length [ft/ln]	9.58	87.59	183.11	346.48	83.12	4.23	8.91	26.51	201.96	0.00
95th-Percentile Queue Length [veh/ln]	0.69	6.31	11.76	19.96	5.98	0.30	0.64	1.91	12.74	0.00
95th-Percentile Queue Length [ft/ln]	17.24	157.67	294.06	499.11	149.61	7.62	16.04	47.71	318.49	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.22	32.98	42.36	36.39	11.82	9.91	43.88	46.56	46.56	44.12	44.12	0.00
Movement LOS	D	C	D	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	37.64			23.82			45.87			44.12		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	31.39											
Intersection LOS	C											
Intersection V/C	0.862											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	237	12	35	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	366	12	35	205
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	96	3	9	54
Total Analysis Volume [veh/h]	0	5	385	13	37	216
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	9.40	0.00	0.00	8.17	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.10	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.46	0.00	0.00	2.44	0.00
d_A, Approach Delay [s/veh]	9.40		0.00		1.20	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.268

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	10	114	128	14	73
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	10	243	128	14	203
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	3	64	34	4	53
Total Analysis Volume [veh/h]	39	11	256	135	15	214
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	21	0	68	0	11	79
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	6	6	1	11
g / C, Green / Cycle	0.09	0.09	0.30	0.30	0.03	0.53
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.07	0.08	0.01	0.06
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	163	146	1104	493	56	1908
d1, Uniform Delay [s]	8.85	8.72	5.44	5.51	9.91	2.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.22	0.11	0.30	2.49	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.08	0.23	0.27	0.27	0.11
d, Delay for Lane Group [s/veh]	9.60	8.94	5.54	5.81	12.39	2.51
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.04	0.17	0.21	0.08	0.01
50th-Percentile Queue Length [ft/ln]	3.22	0.88	4.29	5.17	2.00	0.17
95th-Percentile Queue Length [veh/ln]	0.23	0.06	0.31	0.37	0.14	0.01
95th-Percentile Queue Length [ft/ln]	5.79	1.58	7.73	9.31	3.60	0.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.60	8.94	5.54	5.81	12.39	2.51
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.45		5.63		3.16	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.07					
Intersection LOS	A					
Intersection V/C	0.268					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.243

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	48	0	39	57	80	0	0	79	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	3	18	0	6	0	1	43	80	49	57	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	18	48	6	39	58	123	80	49	136	54
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	5	13	2	11	16	34	22	14	38	15
Total Analysis Volume [veh/h]	34	3	20	54	7	44	65	138	90	55	152	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	24	0	0	31	75	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	3	3	13	13	6	6
g / C, Green / Cycle	0.09	0.09	0.09	0.10	0.43	0.43	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.03	0.04	0.04	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1810	1647	1810	1810	3618	1615	1900	1726
c, Capacity [veh/h]	164	149	157	181	1544	689	370	336
d1, Uniform Delay [s]	12.77	12.71	13.02	12.73	5.17	5.27	10.40	10.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.48	1.30	1.21	0.02	0.08	0.42	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

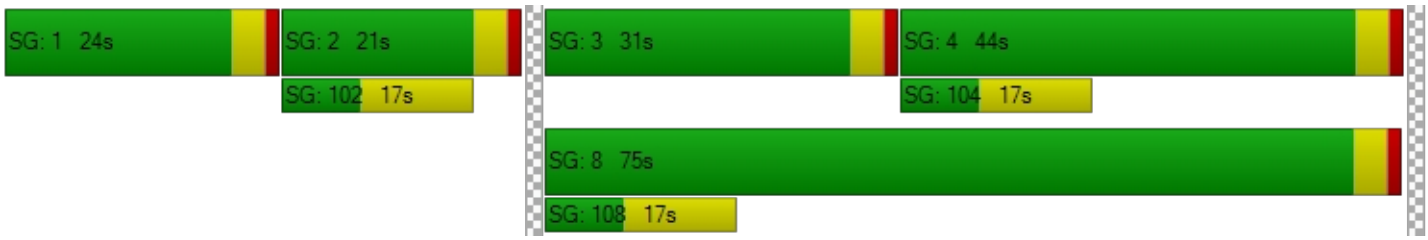
X, volume / capacity	0.21	0.15	0.34	0.36	0.09	0.13	0.29	0.32
d, Delay for Lane Group [s/veh]	13.39	13.18	14.32	13.93	5.20	5.35	10.82	11.00
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.13	0.32	0.37	0.14	0.20	0.48	0.49
50th-Percentile Queue Length [ft/ln]	4.81	3.26	8.05	9.37	3.57	4.98	11.98	12.20
95th-Percentile Queue Length [veh/ln]	0.35	0.23	0.58	0.67	0.26	0.36	0.86	0.88
95th-Percentile Queue Length [ft/ln]	8.66	5.86	14.49	16.86	6.43	8.96	21.56	21.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.39	13.18	13.18	14.32	0.00	0.00	13.93	5.20	5.35	0.00	10.88	11.00
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	13.31			14.32			7.18			10.91		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	9.66											
Intersection LOS	A											
Intersection V/C	0.243											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	128	0	0	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	41	20	4	106
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	169	20	4	255
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	44	5	1	67
Total Analysis Volume [veh/h]	0	2	178	21	4	268
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.77	0.00	0.00	7.61	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.16	0.00	0.00	0.22	0.00
d_A, Approach Delay [s/veh]	8.77		0.00		0.11	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	2	2	9	6	11	2	88	38	1	101	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	0	1	0	0	0	0	15	28	4	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	2	3	9	6	11	2	103	66	5	158	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	1	1	3	2	3	1	32	20	2	49	2
Total Analysis Volume [veh/h]	111	2	4	11	7	14	2	127	82	6	195	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.10	13.22	10.74	11.58	12.18	9.53	7.61	0.00	0.00	7.63	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.77	0.77	0.77	0.15	0.15	0.15	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	19.30	19.30	19.30	3.87	3.87	3.87	0.11	0.11	0.11	0.27	0.27	0.27
d_A, Approach Delay [s/veh]	13.02			10.82			0.07			0.22		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.40											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	45	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	47	18	14	7	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	88	63	14	7	8
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	23	17	4	2	2
Total Analysis Volume [veh/h]	19	93	66	15	7	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.62	8.62
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.03	0.02
95th-Percentile Queue Length [ft/ln]	0.94	0.00	0.00	0.00	0.67	0.60
d_A, Approach Delay [s/veh]	1.25		0.00		9.08	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.33					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	329	60	105	443	10	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	0	0	67	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	353	60	105	510	10	42
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	16	28	138	3	11
Total Analysis Volume [veh/h]	381	65	113	550	11	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.10	0.01	0.03	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	8.56	0.00	14.21	11.02
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.33	0.00	0.08	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	8.35	0.00	2.11	5.63
d_A, Approach Delay [s/veh]	0.00		1.46		11.65	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	408	543	22	18	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	6	15	52	18	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	414	558	74	36	51
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	109	147	19	9	13
Total Analysis Volume [veh/h]	55	435	587	78	38	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.01	0.00	0.08	0.08
d_M, Delay for Movement [s/veh]	9.10	0.00	0.00	0.00	12.73	10.50
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.19	0.00	0.00	0.00	0.24	0.25
95th-Percentile Queue Length [ft/ln]	4.69	0.00	0.00	0.00	6.09	6.17
d_A, Approach Delay [s/veh]	1.02		0.00		11.42	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.24					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	407	15	105	500	4	0	3	11	28	0	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	13	0	0	8	15	6	0	16	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	420	15	105	508	19	6	3	27	28	0	59
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	112	4	28	136	5	2	1	7	7	0	16
Total Analysis Volume [veh/h]	75	449	16	112	543	20	6	3	29	30	0	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	26	0	42	57	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	31	31	31	31	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	7	7	4	8	8	0	2	2	2	3	3
g / C, Green / Cycle	0.11	0.23	0.23	0.14	0.26	0.26	0.01	0.06	0.06	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.01	0.06	0.15	0.01	0.00	0.00	0.02	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	203	816	364	262	934	417	23	109	93	99	189	161
d1, Uniform Delay [s]	12.71	10.58	9.36	12.05	10.00	8.61	15.12	13.75	13.98	14.05	0.00	13.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	0.58	0.05	1.11	0.58	0.05	6.08	0.10	1.89	1.72	0.00	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

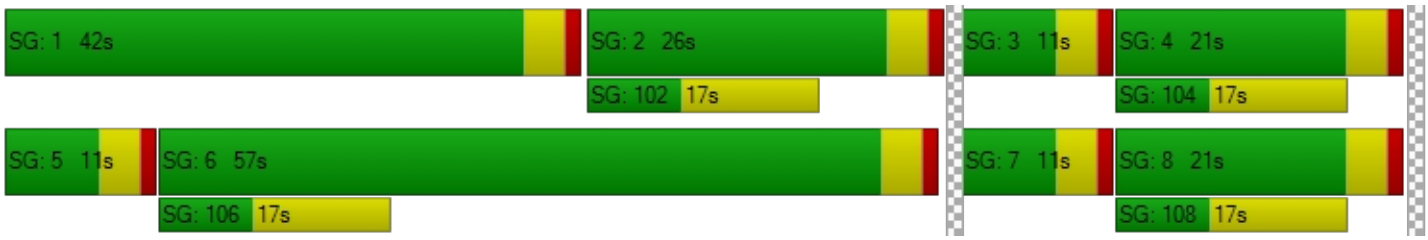
X, volume / capacity	0.37	0.55	0.04	0.43	0.58	0.05	0.26	0.03	0.31	0.30	0.00	0.39
d, Delay for Lane Group [s/veh]	13.83	11.16	9.41	13.16	10.58	8.66	21.20	13.85	15.86	15.77	0.00	14.59
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	1.02	0.07	0.61	1.17	0.08	0.07	0.02	0.20	0.21	0.00	0.38
50th-Percentile Queue Length [ft/ln]	10.77	25.47	1.63	15.20	29.33	1.88	1.79	0.46	5.03	5.13	0.00	9.61
95th-Percentile Queue Length [veh/ln]	0.78	1.83	0.12	1.09	2.11	0.14	0.13	0.03	0.36	0.37	0.00	0.69
95th-Percentile Queue Length [ft/ln]	19.38	45.84	2.93	27.36	52.79	3.38	3.22	0.83	9.05	9.23	0.00	17.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.83	11.16	9.41	13.16	10.58	8.66	21.20	13.85	15.86	15.77	0.00	14.59
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.48			10.95			16.54			14.97		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.60											
Intersection LOS	B											
Intersection V/C	0.489											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.267

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	441	78	41	533	53	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	24	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	511	78	41	557	53	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	22	12	158	15	14
Total Analysis Volume [veh/h]	580	89	47	632	60	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	32	0	0	87	68	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	81	81	0	0	11	11
g / C, Green / Cycle	0.81	0.81	0.00	0.00	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.16	0.06	0.06	0.33	0.07	0.03
s, saturation flow rate [veh/h]	3618	1615	847	1900	807	1615
c, Capacity [veh/h]	2916	1302	72	0	147	184
d1, Uniform Delay [s]	2.24	1.99	50.00	0.00	44.50	40.66
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.10	37.85	0.00	1.83	0.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.07	0.65	0.00	0.41	0.30
d, Delay for Lane Group [s/veh]	2.40	2.09	87.85	0.00	46.33	41.58
Lane Group LOS	A	A	F	A	D	D
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.93	0.27	2.00	0.00	1.52	1.31
50th-Percentile Queue Length [ft/ln]	23.28	6.84	49.89	0.00	38.03	32.67
95th-Percentile Queue Length [veh/ln]	1.68	0.49	3.59	0.00	2.74	2.35
95th-Percentile Queue Length [ft/ln]	41.91	12.32	89.80	0.00	68.45	58.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.40	2.09	87.85	0.00	46.33	41.58
Movement LOS	A	A	F	A	D	D
d_A, Approach Delay [s/veh]	2.36		6.08		44.04	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.39					
Intersection LOS	A					
Intersection V/C	0.267					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	133.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	75.855

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	16	0	8	21	38	0	0	140	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	133	4	289	326	558	13	3	464	199
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	34	1	75	84	144	3	1	120	51
Total Analysis Volume [veh/h]	10	3	2	137	4	298	336	576	13	3	479	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	65	0	0	65	0	14	24	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	61	61	61	61	10	26	26	1	17	17
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.10	0.26	0.26	0.01	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.69	0.00	66.43	0.18	0.19	0.16	0.01	0.00	0.13	0.13
s, saturation flow rate [veh/h]	19	1615	2	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	75	985	72	985	184	957	427	10	610	272
d1, Uniform Delay [s]	25.89	7.62	49.06	9.33	44.92	32.16	27.26	49.52	39.85	39.60
k, delay calibration	0.16	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.60	0.00	474.05	0.17	376.44	2.80	0.13	15.41	9.83	17.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.00	1.95	0.30	1.83	0.60	0.03	0.30	0.79	0.75
d, Delay for Lane Group [s/veh]	27.49	7.62	523.11	9.51	421.36	34.96	27.39	64.94	49.68	57.05
Lane Group LOS	C	A	F	A	F	C	C	E	D	E
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.25	0.02	11.32	2.95	23.76	6.38	0.25	0.12	6.41	6.06
50th-Percentile Queue Length [ft/ln]	6.29	0.40	282.90	73.81	594.06	159.56	6.14	2.94	160.18	151.53
95th-Percentile Queue Length [veh/ln]	0.45	0.03	20.37	5.31	37.85	10.53	0.44	0.21	10.56	10.10
95th-Percentile Queue Length [ft/ln]	11.32	0.73	509.22	132.86	946.16	263.14	11.05	5.30	263.96	252.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.49	27.49	7.62	523.11	523.11	9.51	421.36	34.96	27.39	64.94	49.68	57.05
Movement LOS	C	C	A	F	F	A	F	C	C	E	D	E
d_A, Approach Delay [s/veh]	24.84			174.47			175.21			51.94		
Approach LOS	C			F			F			D		
d_I, Intersection Delay [s/veh]	132.97											
Intersection LOS	F											
Intersection V/C	75.855											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 2 Existing Plus Project Evening Peak Hour - Alternative 1

Report File: C:\...\PMEP1.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	1.008	34.8	C
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.050	14.9	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.636	5.8	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	241.6	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.947	64.6	E
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.053	10.6	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.497	6.7	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.411	9.8	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.000	10.0	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.474	25.5	D
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.031	10.5	B
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.479	23.6	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.260	15.3	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.614	15.7	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.783	3.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	325.877	263.2	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.008

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1142	77	308	947	15	19	8	19	62	14	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	44	81	46	3	0	0	0	0	171	0	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	1186	158	354	950	15	19	8	19	233	14	255
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	307	41	92	246	4	5	2	5	60	4	66
Total Analysis Volume [veh/h]	12	1226	163	366	982	16	20	8	20	241	14	264
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	45	0	26	60	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	41	41	22	61	61	25	25	25
g / C, Green / Cycle	0.02	0.41	0.41	0.22	0.61	0.61	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.01	0.37	0.37	0.20	0.26	0.26	0.24	0.31	0.16
s, saturation flow rate [veh/h]	1810	1900	1823	1810	1900	1889	201	821	1615
c, Capacity [veh/h]	39	780	748	398	1157	1150	101	275	404
d1, Uniform Delay [s]	48.34	27.73	27.86	38.27	10.41	10.42	31.45	40.05	33.69
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.49	16.05	17.41	9.06	1.18	1.19	3.42	12.85	1.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

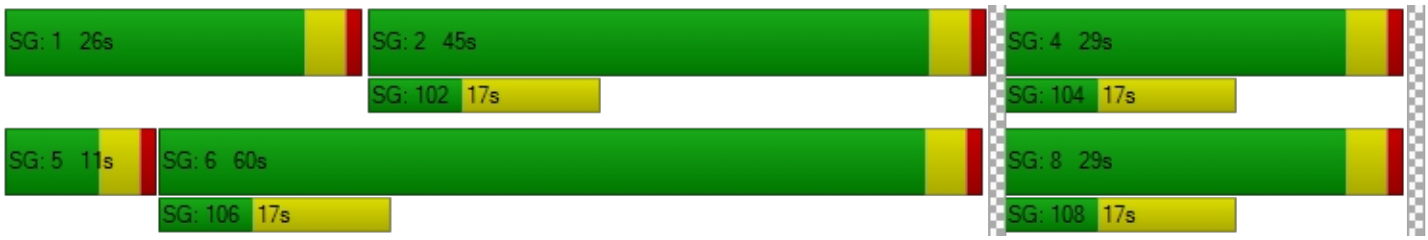
X, volume / capacity	0.31	0.91	0.91	0.92	0.43	0.43	0.47	0.93	0.65
d, Delay for Lane Group [s/veh]	52.82	43.78	45.27	47.33	11.59	11.61	34.87	52.91	35.48
Lane Group LOS	D	D	D	D	B	B	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.34	18.65	18.36	9.64	5.80	5.77	0.98	7.34	5.87
50th-Percentile Queue Length [ft/ln]	8.56	466.19	459.00	241.06	144.90	144.32	24.57	183.49	146.84
95th-Percentile Queue Length [veh/ln]	0.62	25.73	25.39	14.73	9.74	9.71	1.77	11.78	9.85
95th-Percentile Queue Length [ft/ln]	15.40	643.24	634.68	368.37	243.61	242.83	44.23	294.57	246.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.82	44.41	45.27	47.33	11.60	11.61	34.87	34.87	34.87	52.91	52.91	35.48
Movement LOS	D	D	D	D	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	44.59			21.19			34.87			44.04		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	34.78											
Intersection LOS	C											
Intersection V/C	1.008											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	109	3	0	174	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1340	3	0	1202	0	16
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	353	1	0	316	0	5
Total Analysis Volume [veh/h]	1411	4	0	1265	0	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.92
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	3.91
d_A, Approach Delay [s/veh]	0.00		0.00		14.92	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	83	10	3	171	82	29
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1314	10	3	1199	82	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	346	3	1	316	22	8
Total Analysis Volume [veh/h]	1383	11	3	1262	86	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	68	0	11	79	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	0	24	5	5
g / C, Green / Cycle	0.54	0.54	0.01	0.65	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.38	0.01	0.00	0.35	0.05	0.02
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1954	872	11	2362	241	215
d1, Uniform Delay [s]	6.40	3.98	18.50	3.46	14.75	14.33
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	0.01	13.34	0.19	0.89	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.01	0.28	0.53	0.36	0.14
d, Delay for Lane Group [s/veh]	6.88	3.99	31.84	3.65	15.65	14.63
Lane Group LOS	A	A	C	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.24	0.02	0.06	0.75	0.61	0.21
50th-Percentile Queue Length [ft/ln]	56.00	0.56	1.56	18.81	15.26	5.27
95th-Percentile Queue Length [veh/ln]	4.03	0.04	0.11	1.35	1.10	0.38
95th-Percentile Queue Length [ft/ln]	100.81	1.00	2.80	33.87	27.47	9.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.88	3.99	31.84	3.65	15.65	14.63
Movement LOS	A	A	C	A	B	B
d_A, Approach Delay [s/veh]	6.86		3.71		15.38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.79					
Intersection LOS	A					
Intersection V/C	0.636					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	241.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	0	0	253	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1291	0	0	1282	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	329	0	0	326	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1315	0	0	1305	15	22	0	35	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.64	0.00	0.09	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	12.03	0.00	0.00	11.76	0.00	0.00	182.91	241.60	87.71	118.73	170.88	15.12
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	0.00	0.00	3.44	3.44	3.44	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	2.63	0.00	0.00	0.00	0.00	0.00	86.11	86.11	86.11	2.97	2.97	2.97
d_A, Approach Delay [s/veh]	0.16			0.00			124.45			41.02		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	2.75											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	64.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	41	10	143	110	0	0	0	0	28	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	416	462	601	568	22	29	58	3	315	39	511
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	4	108	119	155	147	6	7	15	1	81	10	0
Total Analysis Volume [veh/h]	16	430	478	622	587	23	30	60	3	326	40	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	37	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	210	210	210	210	210	210	210	210	210	210
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	65	65	75	136	136	9	9	45	45
g / C, Green / Cycle	0.02	0.31	0.31	0.36	0.65	0.65	0.04	0.04	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.30	0.34	0.16	0.01	0.02	0.03	0.20	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	1819	1615
c, Capacity [veh/h]	37	1127	503	644	2342	1045	79	82	387	343
d1, Uniform Delay [s]	101.58	56.42	70.61	66.29	15.58	13.24	97.58	99.29	81.39	0.00
k, delay calibration	0.11	0.11	0.12	0.18	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.95	0.21	10.62	14.52	0.06	0.01	3.01	13.93	11.84	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

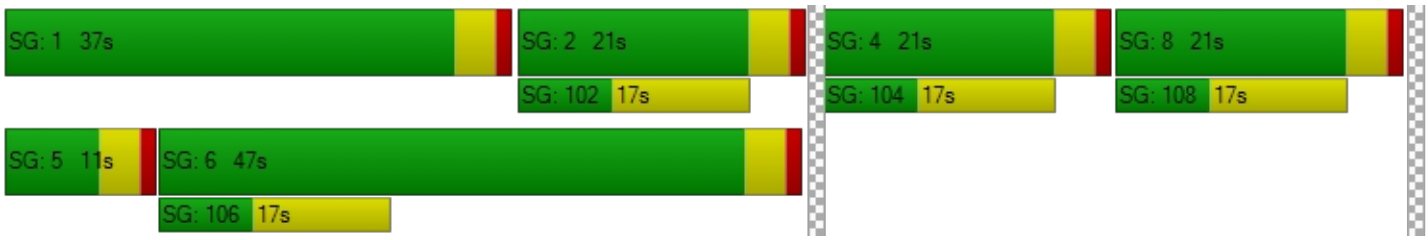
X, volume / capacity	0.44	0.38	0.95	0.97	0.25	0.02	0.38	0.77	0.95	0.00
d, Delay for Lane Group [s/veh]	109.53	56.63	81.23	80.81	15.63	13.25	100.60	113.22	93.24	0.00
Lane Group LOS	F	E	F	F	B	B	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.95	9.11	26.73	35.39	6.20	0.41	1.68	3.76	20.95	0.00
50th-Percentile Queue Length [ft/ln]	23.87	227.66	668.28	884.77	155.03	10.36	41.90	93.94	523.68	0.00
95th-Percentile Queue Length [veh/ln]	1.72	14.06	35.21	45.15	10.29	0.75	3.02	6.76	28.45	0.00
95th-Percentile Queue Length [ft/ln]	42.97	351.39	880.26	1128.68	257.13	18.64	75.43	169.09	711.33	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	109.53	56.63	81.23	80.81	15.63	13.25	100.60	113.22	113.22	93.24	93.24	0.00
Movement LOS	F	E	F	F	B	B	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	70.27			48.49			109.15			93.24		
Approach LOS	E			D			F			F		
d_I, Intersection Delay [s/veh]	64.61											
Intersection LOS	E											
Intersection V/C	0.947											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	126	1	4	272
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	34	610	1	4	548
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	161	0	1	144
Total Analysis Volume [veh/h]	0	36	642	1	4	577
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	10.58	0.00	0.00	8.80	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.18	0.00	0.00	0.32	0.00
d_A, Approach Delay [s/veh]	10.58		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.33					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	140	27	94	65	7	135
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	27	578	65	7	411
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	7	152	17	2	108
Total Analysis Volume [veh/h]	147	28	608	68	7	433
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	52	0	37	0	11	48
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	7	7	0	12
g / C, Green / Cycle	0.20	0.20	0.29	0.29	0.01	0.47
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.17	0.04	0.00	0.12
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	368	329	1064	475	26	1705
d1, Uniform Delay [s]	8.49	7.94	7.37	6.40	11.99	3.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	0.11	0.49	0.14	5.26	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

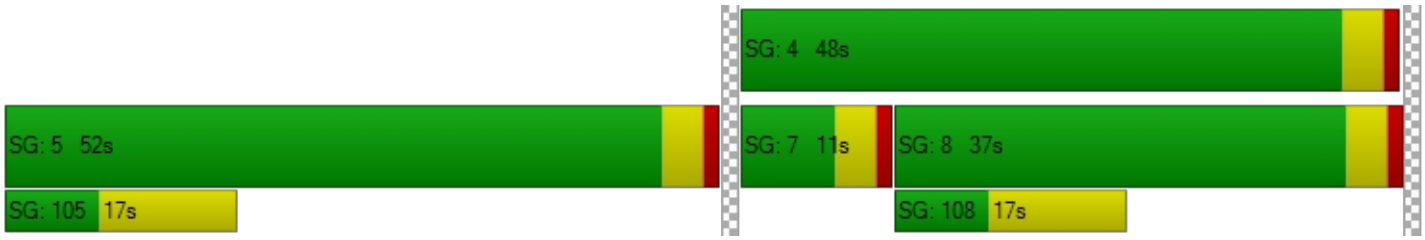
X, volume / capacity	0.40	0.09	0.57	0.14	0.27	0.25
d, Delay for Lane Group [s/veh]	9.19	8.05	7.85	6.53	17.25	3.98
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.48	0.08	0.77	0.15	0.07	0.19
50th-Percentile Queue Length [ft/ln]	11.92	2.06	19.31	3.85	1.63	4.83
95th-Percentile Queue Length [veh/ln]	0.86	0.15	1.39	0.28	0.12	0.35
95th-Percentile Queue Length [ft/ln]	21.46	3.70	34.77	6.94	2.94	8.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.19	8.05	7.85	6.53	17.25	3.98
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.01		7.72		4.19	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.69					
Intersection LOS	A					
Intersection V/C	0.497					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.411

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	0	65	104	380	0	0	211	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	6	68	0	3	0	4	75	43	24	28	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	6	68	31	3	65	108	455	43	24	239	62
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	2	18	8	1	17	29	121	12	7	63	16
Total Analysis Volume [veh/h]	121	6	72	33	3	69	115	484	48	27	254	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	43	74	0	12	43	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	29	29	29	29	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	6	4	9	9	1	6	6
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.15	0.32	0.32	0.05	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.05	0.02	0.04	0.06	0.13	0.03	0.01	0.09	0.09
s, saturation flow rate [veh/h]	1349	1634	1342	1625	1810	3618	1615	1810	1900	1768
c, Capacity [veh/h]	397	355	392	353	266	1166	520	87	424	395
d1, Uniform Delay [s]	12.64	9.36	11.87	9.32	11.30	7.71	6.88	13.38	9.60	9.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	0.31	0.09	0.28	1.11	0.24	0.08	2.01	0.57	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

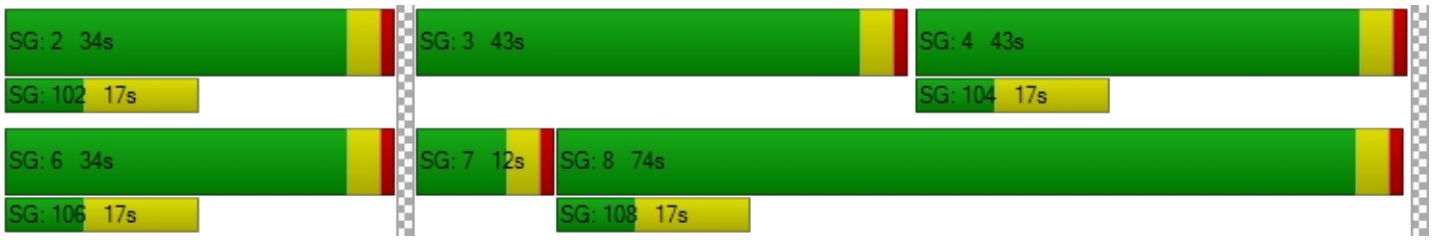
X, volume / capacity	0.31	0.22	0.08	0.20	0.43	0.42	0.09	0.31	0.39	0.40
d, Delay for Lane Group [s/veh]	13.07	9.67	11.97	9.61	12.41	7.95	6.96	15.39	10.17	10.27
Lane Group LOS	B	A	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.62	0.31	0.16	0.29	0.58	0.77	0.14	0.18	0.68	0.66
50th-Percentile Queue Length [ft/ln]	15.45	7.79	3.90	7.16	14.43	19.22	3.51	4.52	16.94	16.42
95th-Percentile Queue Length [veh/ln]	1.11	0.56	0.28	0.52	1.04	1.38	0.25	0.33	1.22	1.18
95th-Percentile Queue Length [ft/ln]	27.81	14.02	7.02	12.88	25.97	34.60	6.32	8.14	30.49	29.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.07	9.67	9.67	11.97	9.61	9.61	12.41	7.95	6.96	15.39	10.20	10.27
Movement LOS	B	A	A	B	A	A	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	11.74			10.35			8.67			10.62		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	9.80											
Intersection LOS	A											
Intersection V/C	0.411											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	411	0	0	271
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	133	10	2	53
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	544	10	2	324
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	143	3	1	85
Total Analysis Volume [veh/h]	0	0	573	11	2	341
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.03	0.00	0.00	8.61	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.15	0.00
d_A, Approach Delay [s/veh]	10.03		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	25.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	1	1	3	4	5	7	314	89	0	160	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	0	2	0	0	0	0	65	68	2	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	1	3	3	4	5	7	379	157	2	178	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	0	1	1	1	1	2	105	43	1	49	3
Total Analysis Volume [veh/h]	157	1	3	3	4	6	8	419	174	2	197	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.47	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	25.53	25.09	20.97	15.99	16.85	9.51	7.64	0.00	0.00	8.63	0.00	0.00
Movement LOS	D	D	C	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.51	2.51	2.51	0.09	0.09	0.09	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	62.64	62.64	62.64	2.24	2.24	2.24	0.38	0.38	0.38	0.15	0.15	0.15
d_A, Approach Delay [s/veh]	25.44			13.27			0.10			0.08		
Approach LOS	D			B			A			A		
d_I, Intersection Delay [s/veh]	4.40											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	107	93	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	19	64	6	20	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	126	157	6	20	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	33	41	2	5	7
Total Analysis Volume [veh/h]	9	133	165	6	21	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.03	0.03
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	0.00	10.49	9.20
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.48	0.00	0.00	0.00	2.40	2.45
d_A, Approach Delay [s/veh]	0.48		0.00		9.75	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.51					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	23.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	723	21	44	359	60	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	0	0	26	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	799	21	44	385	60	167
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	209	5	11	101	16	44
Total Analysis Volume [veh/h]	835	22	46	402	63	175
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.00	0.15	0.48
d_M, Delay for Movement [s/veh]	0.00	0.00	9.83	0.00	15.46	23.60
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.18	0.00	0.54	2.50
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.62	0.00	13.57	62.43
d_A, Approach Delay [s/veh]	0.00		1.01		21.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.60					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.260

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	496	389	23	39	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	15	6	20	61	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	511	395	43	100	109
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	158	122	13	31	34
Total Analysis Volume [veh/h]	106	631	488	53	123	135
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.00	0.26	0.18
d_M, Delay for Movement [s/veh]	8.86	0.00	0.00	0.00	15.27	10.73
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.34	0.00	0.00	0.00	1.03	0.64
95th-Percentile Queue Length [ft/ln]	8.51	0.00	0.00	0.00	25.77	16.00
d_A, Approach Delay [s/veh]	1.27		0.00		12.90	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.78					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	348	160	75	390	9	9	6	17	80	5	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	7	0	0	30	6	15	0	55	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	355	160	75	420	15	24	6	72	80	5	224
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	111	50	23	131	5	7	2	22	25	2	70
Total Analysis Volume [veh/h]	49	443	200	94	524	19	30	7	90	100	6	279
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	31	0	16	36	0	11	37	0	16	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	8	8	5	10	10	2	6	6	5	9	9
g / C, Green / Cycle	0.07	0.20	0.20	0.12	0.24	0.24	0.05	0.16	0.16	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.12	0.05	0.14	0.01	0.02	0.00	0.06	0.06	0.00	0.17
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	136	738	330	209	885	395	92	299	254	216	429	365
d1, Uniform Delay [s]	17.42	14.30	14.32	16.35	13.22	11.44	18.15	14.12	14.90	16.26	11.91	14.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	0.79	1.80	1.51	0.64	0.05	2.04	0.03	0.84	1.54	0.01	3.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.60	0.61	0.45	0.59	0.05	0.33	0.02	0.35	0.46	0.01	0.76
d, Delay for Lane Group [s/veh]	19.03	15.09	16.13	17.87	13.86	11.49	20.20	14.15	15.74	17.80	11.92	17.71
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	1.56	1.50	0.76	1.73	0.11	0.28	0.05	0.67	0.81	0.04	2.23
50th-Percentile Queue Length [ft/ln]	10.65	38.88	37.46	19.08	43.30	2.73	7.04	1.18	16.63	20.22	0.88	55.78
95th-Percentile Queue Length [veh/ln]	0.77	2.80	2.70	1.37	3.12	0.20	0.51	0.09	1.20	1.46	0.06	4.02
95th-Percentile Queue Length [ft/ln]	19.18	69.98	67.43	34.35	77.93	4.92	12.67	2.13	29.94	36.40	1.59	100.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.03	15.09	16.13	17.87	13.86	11.49	20.20	14.15	15.74	17.80	11.92	17.71
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.67			14.38			16.71			17.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.71											
Intersection LOS	B											
Intersection V/C	0.614											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	580	70	94	371	56	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	84	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	614	70	94	455	56	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	166	19	25	123	15	9
Total Analysis Volume [veh/h]	663	76	102	491	60	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	57	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.39	0.39	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.18	0.05	0.13	0.26	0.07	0.02
s, saturation flow rate [veh/h]	3618	1615	784	1900	920	1615
c, Capacity [veh/h]	1408	629	407	0	461	256
d1, Uniform Delay [s]	4.04	3.46	8.84	0.00	8.37	6.41
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.09	1.47	0.00	0.13	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.12	0.25	0.00	0.13	0.15
d, Delay for Lane Group [s/veh]	4.28	3.55	10.31	0.00	8.50	6.68
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.02	0.40	0.00	0.13	0.07
50th-Percentile Queue Length [ft/ln]	2.19	0.57	10.02	0.00	3.18	1.68
95th-Percentile Queue Length [veh/ln]	0.16	0.04	0.72	0.00	0.23	0.12
95th-Percentile Queue Length [ft/ln]	3.95	1.02	18.04	0.00	5.72	3.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.28	3.55	10.31	0.00	8.50	6.68
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.21		1.77		7.79	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.44					
Intersection LOS	A					
Intersection V/C	0.783					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	263.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	325.877

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	57	0	28	10	143	0	0	50	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	202	1	340	503	584	4	1	501	184
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	54	0	91	134	156	1	0	134	49
Total Analysis Volume [veh/h]	3	1	1	216	1	363	537	623	4	1	535	196
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	63	0	0	63	0	16	26	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	59	59	12	29	29	0	17	17
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.12	0.29	0.29	0.00	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.19	0.00	286.33	0.22	0.30	0.17	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	22	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	76	953	72	953	220	1043	466	3	609	272
d1, Uniform Delay [s]	25.43	8.42	49.86	10.85	43.91	30.60	25.39	49.84	40.57	39.35
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.00	936.89	0.25	650.23	2.53	0.03	40.19	16.36	15.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

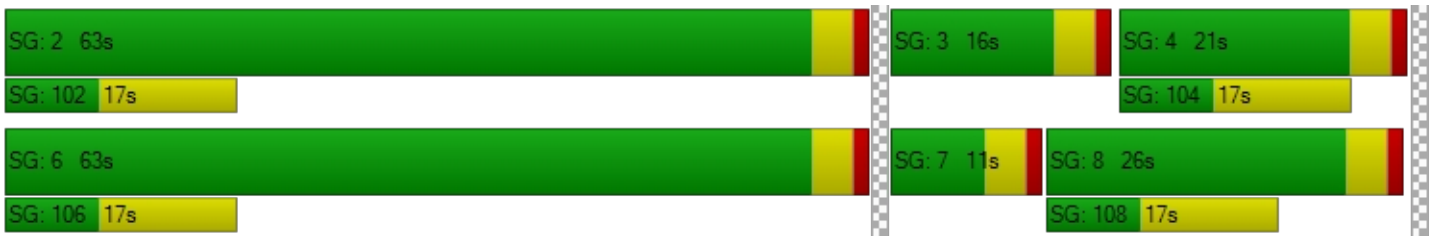
X, volume / capacity	0.05	0.00	3.00	0.38	2.44	0.60	0.01	0.29	0.88	0.72
d, Delay for Lane Group [s/veh]	25.72	8.42	986.75	11.10	694.14	33.13	25.43	90.03	56.93	54.56
Lane Group LOS	C	A	F	B	F	C	C	F	E	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.01	20.61	4.05	45.18	6.72	0.07	0.06	7.72	5.65
50th-Percentile Queue Length [ft/ln]	1.77	0.22	515.26	101.25	1129.45	168.03	1.80	1.59	193.11	141.36
95th-Percentile Queue Length [veh/ln]	0.13	0.02	37.10	7.29	70.55	10.97	0.13	0.11	12.28	9.55
95th-Percentile Queue Length [ft/ln]	3.19	0.39	927.46	182.24	1763.66	274.33	3.24	2.86	307.06	238.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.72	25.72	8.42	986.75	986.75	11.10	694.14	33.13	25.43	90.03	56.93	54.56
Movement LOS	C	C	A	F	F	B	F	C	C	F	E	D
d_A, Approach Delay [s/veh]	22.26			376.13			338.05			56.34		
Approach LOS	C			F			F			E		
d_I, Intersection Delay [s/veh]	263.20											
Intersection LOS	F											
Intersection V/C	325.877											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 3 Existing Plus Project Morning Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\AMEP1-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	EB Right	0.557	3.1	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.760	20.5	C
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.646	18.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	242	1	1	63	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	919	1	1	1073	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	266	0	0	310	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	1064	1	1	1242	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	79	0	0	79	0	0	21	0	0	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	13	13	1	1	1	1
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.59	0.59	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.00	0.00	0.34	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	455	3618	1615	539	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	462	2117	945	513	2117	945	337	86	336	101
d1, Uniform Delay [s]	5.68	2.70	1.90	4.70	2.90	1.92	10.93	10.04	10.91	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.19	0.00	0.00	0.26	0.01	0.02	1.28	0.00	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.50	0.00	0.00	0.59	0.01	0.02	0.22	0.00	0.00
d, Delay for Lane Group [s/veh]	5.72	2.88	1.90	4.71	3.16	1.92	10.95	11.31	10.92	0.00
Lane Group LOS	A	A	A	A	A	A	B	B	B	A
Critical Lane Group	No	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	0.05	0.00	0.00	0.08	0.00	0.02	0.09	0.00	0.00
50th-Percentile Queue Length [ft/ln]	1.09	1.36	0.00	0.04	1.91	0.03	0.53	2.18	0.09	0.00
95th-Percentile Queue Length [veh/ln]	0.08	0.10	0.00	0.00	0.14	0.00	0.04	0.16	0.01	0.00
95th-Percentile Queue Length [ft/ln]	1.97	2.45	0.01	0.08	3.44	0.06	0.96	3.92	0.16	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.72	2.88	1.90	4.71	3.16	1.92	10.95	11.31	11.31	10.92	0.00	0.00
Movement LOS	A	A	A	A	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	2.94			3.15			11.23			10.92		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.14											
Intersection LOS	A											
Intersection V/C	0.557											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	103	21	38	26	0	0	0	0	8	0	140
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	324	283	554	560	17	14	29	11	270	36	463
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	87	76	148	150	5	4	8	3	72	10	0
Total Analysis Volume [veh/h]	14	347	303	593	600	18	15	31	12	289	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	42	24	24	41	23	0	11	21	0	14	24	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	10	27	25	33	33	2	4	13	15	15
g / C, Green / Cycle	0.02	0.14	0.40	0.36	0.49	0.49	0.03	0.06	0.19	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.19	0.33	0.17	0.01	0.01	0.02	0.08	0.02	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	3514	1900	1615
c, Capacity [veh/h]	44	525	644	661	1758	785	46	105	684	431	366
d1, Uniform Delay [s]	32.32	27.23	14.97	20.19	10.66	9.00	32.23	30.62	23.80	20.56	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.15	1.44	0.53	4.68	0.11	0.01	3.97	2.57	0.42	0.09	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

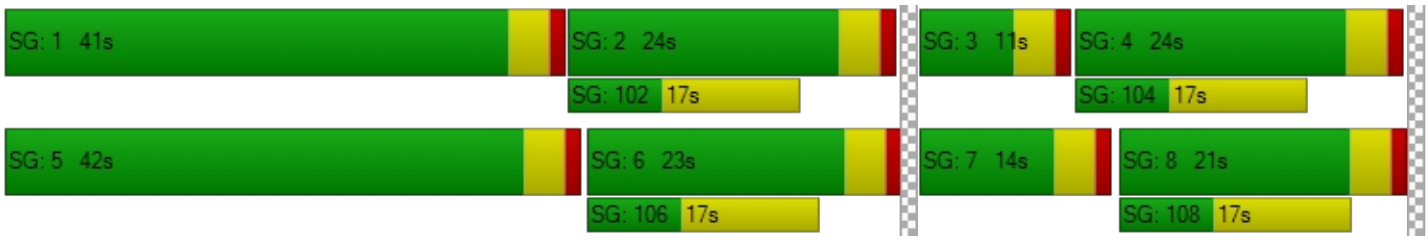
X, volume / capacity	0.32	0.66	0.47	0.90	0.34	0.02	0.32	0.41	0.42	0.09	0.00
d, Delay for Lane Group [s/veh]	36.47	28.66	15.51	24.87	10.78	9.01	36.20	33.19	24.22	20.65	0.00
Lane Group LOS	D	C	B	C	B	A	D	C	C	C	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	2.61	3.21	8.77	2.44	0.12	0.28	0.72	1.95	0.47	0.00
50th-Percentile Queue Length [ft/ln]	6.67	65.36	80.14	219.31	61.08	3.12	7.06	18.06	48.83	11.77	0.00
95th-Percentile Queue Length [veh/ln]	0.48	4.71	5.77	13.63	4.40	0.22	0.51	1.30	3.52	0.85	0.00
95th-Percentile Queue Length [ft/ln]	12.00	117.64	144.25	340.75	109.95	5.62	12.71	32.51	87.90	21.19	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.47	28.66	15.51	24.87	10.78	9.01	36.20	33.19	33.19	24.22	20.65	0.00
Movement LOS	D	C	B	C	B	A	D	C	C	C	C	A
d_A, Approach Delay [s/veh]	22.82			17.65			33.97			23.79		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	20.48											
Intersection LOS	C											
Intersection V/C	0.760											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	16	0	8	21	38	0	0	140	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	133	4	289	326	558	13	3	464	199
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	34	1	75	84	144	3	1	120	51
Total Analysis Volume [veh/h]	10	3	2	137	4	298	336	576	13	3	479	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	51	0	0	51	0	28	38	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	12	23	23	0	10	10
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.23	0.41	0.41	0.01	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.00	0.10	0.19	0.19	0.16	0.01	0.00	0.13	0.13
s, saturation flow rate [veh/h]	660	1615	1436	1618	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	355	586	339	587	412	1495	668	10	692	309
d1, Uniform Delay [s]	12.07	11.19	22.24	13.74	20.15	11.27	9.55	27.26	20.75	20.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.00	0.78	0.70	3.96	0.16	0.01	14.28	1.25	2.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

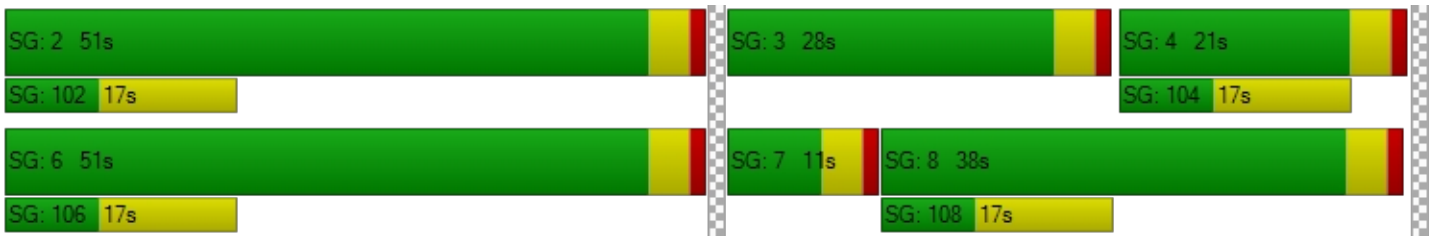
X, volume / capacity	0.04	0.00	0.40	0.51	0.81	0.39	0.02	0.29	0.69	0.66
d, Delay for Lane Group [s/veh]	12.11	11.19	23.02	14.44	24.11	11.43	9.56	41.54	22.01	23.07
Lane Group LOS	B	B	C	B	C	B	A	D	C	C
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.01	1.61	2.65	4.14	2.12	0.08	0.08	2.74	2.44
50th-Percentile Queue Length [ft/ln]	2.34	0.35	40.31	66.28	103.44	53.10	2.05	1.96	68.47	60.92
95th-Percentile Queue Length [veh/ln]	0.17	0.03	2.90	4.77	7.45	3.82	0.15	0.14	4.93	4.39
95th-Percentile Queue Length [ft/ln]	4.21	0.63	72.56	119.31	186.19	95.58	3.70	3.53	123.24	109.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.11	12.11	11.19	23.02	14.44	14.44	24.11	11.43	9.56	41.54	22.01	23.07
Movement LOS	B	B	B	C	B	B	C	B	A	D	C	C
d_A, Approach Delay [s/veh]	11.99			17.12			16.01			22.41		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.34											
Intersection LOS	B											
Intersection V/C	0.646											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 3 Existing Plus Project Evening Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\PMEP1-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	WB Left	0.539	3.6	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.971	46.8	D
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.753	35.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	0	0	253	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1291	0	0	1282	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	329	0	0	326	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1315	0	0	1305	15	22	0	35	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	43	0	0	43	0	0	57	0	0	57	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17	17	17	17	2	2	2	2
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.09	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.04	0.36	0.00	0.00	0.36	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	428	3618	1615	424	3618	1615	1436	1615	1395	1615
c, Capacity [veh/h]	401	2260	1009	399	2260	1009	282	144	259	144
d1, Uniform Delay [s]	6.45	3.09	0.00	0.00	3.08	1.99	13.72	11.86	13.96	11.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.24	0.00	0.00	0.23	0.01	0.12	0.87	0.01	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

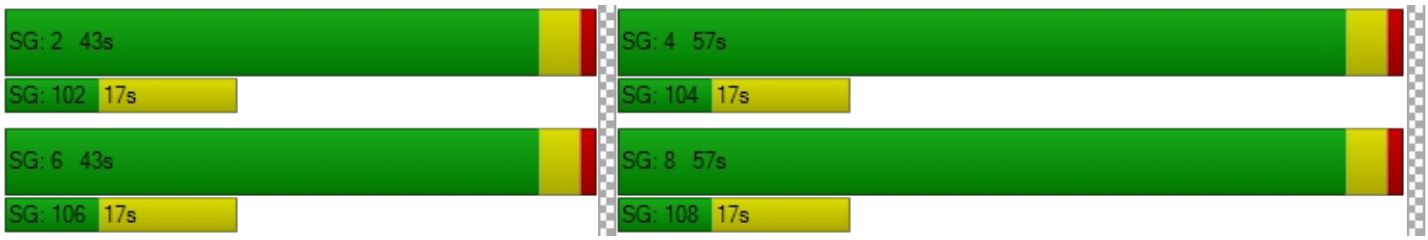
X, volume / capacity	0.04	0.58	0.00	0.00	0.58	0.01	0.08	0.24	0.00	0.02
d, Delay for Lane Group [s/veh]	6.50	3.33	0.00	0.00	3.31	1.99	13.84	12.73	13.97	11.68
Lane Group LOS	A	A	A	A	A	A	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	0.11	0.00	0.00	0.11	0.00	0.12	0.18	0.01	0.01
50th-Percentile Queue Length [ft/ln]	1.20	2.68	0.00	0.00	2.63	0.05	2.89	4.62	0.13	0.37
95th-Percentile Queue Length [veh/ln]	0.09	0.19	0.00	0.00	0.19	0.00	0.21	0.33	0.01	0.03
95th-Percentile Queue Length [ft/ln]	2.16	4.82	0.00	0.00	4.74	0.09	5.20	8.32	0.24	0.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.50	3.33	0.00	0.00	3.31	1.99	13.84	12.73	12.73	13.97	11.68	11.68
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	3.37			3.30			13.16			12.25		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.55											
Intersection LOS	A											
Intersection V/C	0.539											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	46.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.971

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	41	10	143	110	0	0	0	0	28	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	416	462	601	568	22	29	58	3	315	39	511
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	108	119	155	147	6	7	15	1	81	10	132
Total Analysis Volume [veh/h]	16	430	478	622	587	23	30	60	3	326	40	528
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	36	46	0	11	21	0	22	32	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	142	142	142	142	142	142	142	142	142	142	142
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	21	52	51	69	69	5	27	27	49	49
g / C, Green / Cycle	0.02	0.15	0.37	0.36	0.49	0.49	0.03	0.19	0.19	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.30	0.34	0.16	0.01	0.02	0.03	0.09	0.02	0.33
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	3514	1900	1615
c, Capacity [veh/h]	42	531	594	654	1755	784	62	351	678	656	558
d1, Uniform Delay [s]	68.67	58.92	40.49	44.30	22.56	19.17	67.65	48.83	51.20	31.23	45.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.66	3.01	2.62	8.34	0.11	0.02	5.78	0.24	0.53	0.04	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

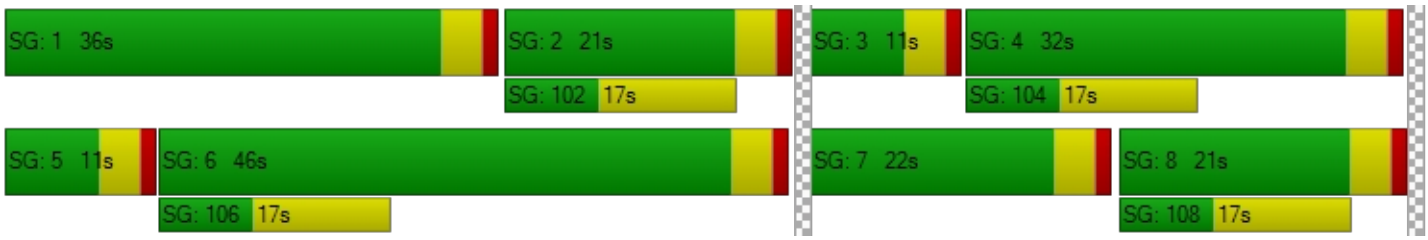
X, volume / capacity	0.38	0.81	0.80	0.95	0.33	0.03	0.48	0.18	0.48	0.06	0.95
d, Delay for Lane Group [s/veh]	74.33	61.92	43.11	52.64	22.67	19.18	73.42	49.07	51.73	31.27	54.44
Lane Group LOS	E	E	D	D	C	B	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.64	7.76	15.46	22.73	6.15	0.41	1.18	1.93	5.27	0.95	19.46
50th-Percentile Queue Length [ft/ln]	16.08	193.91	386.49	568.29	153.86	10.28	29.43	48.35	131.75	23.70	486.54
95th-Percentile Queue Length [veh/ln]	1.16	12.32	21.91	30.55	10.22	0.74	2.12	3.48	9.03	1.71	26.70
95th-Percentile Queue Length [ft/ln]	28.94	308.09	547.70	763.76	255.57	18.51	52.97	87.02	225.87	42.66	667.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.33	61.92	43.11	52.64	22.67	19.18	73.42	49.07	49.07	51.73	31.27	54.44
Movement LOS	E	E	D	D	C	B	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	52.40			37.74			56.93			52.42		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	46.79											
Intersection LOS	D											
Intersection V/C	0.971											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	57	0	28	10	143	0	0	50	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	202	1	340	503	584	4	1	501	184
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	54	0	91	134	156	1	0	134	49
Total Analysis Volume [veh/h]	3	1	1	216	1	363	537	623	4	1	535	196
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	41	0	0	41	0	38	48	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	109	109	109	109	109	109	109	109	109	109
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	43	35	54	54	0	19	19
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.32	0.50	0.50	0.00	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.15	0.23	0.30	0.17	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	616	1615	1439	1616	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	299	633	323	633	578	1793	801	3	644	288
d1, Uniform Delay [s]	22.09	20.11	43.19	25.94	35.80	16.71	13.86	54.20	43.11	41.81
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	2.40	0.83	7.16	0.12	0.00	40.10	2.85	2.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

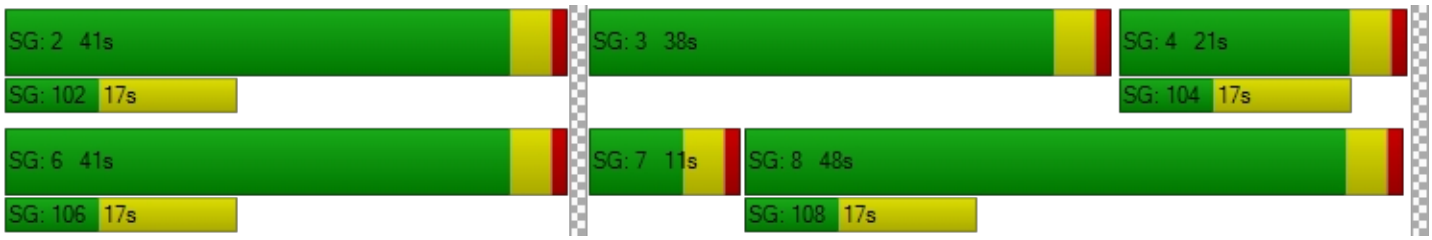
X, volume / capacity	0.01	0.00	0.67	0.57	0.93	0.35	0.00	0.29	0.83	0.68
d, Delay for Lane Group [s/veh]	22.10	20.11	45.59	26.77	42.96	16.82	13.87	94.29	45.97	44.65
Lane Group LOS	C	C	D	C	D	B	B	F	D	D
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.06	0.02	5.78	7.41	14.63	4.67	0.05	0.07	7.14	5.12
50th-Percentile Queue Length [ft/ln]	1.59	0.39	144.61	185.22	365.77	116.82	1.25	1.65	178.43	127.93
95th-Percentile Queue Length [veh/ln]	0.11	0.03	9.73	11.87	20.90	8.22	0.09	0.12	11.52	8.83
95th-Percentile Queue Length [ft/ln]	2.85	0.70	243.22	296.81	522.60	205.45	2.25	2.97	287.97	220.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.10	22.10	20.11	45.59	26.77	26.77	42.96	16.82	13.87	94.29	45.97	44.65
Movement LOS	C	C	C	D	C	C	D	B	B	F	D	D
d_A, Approach Delay [s/veh]	21.71			33.78			28.87			45.68		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	34.96											
Intersection LOS	C											
Intersection V/C	0.753											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



EXISTING PLUS PROJECT – ALTERNATIVE 2

Viridian

Vistro File: C:\...\AME.vistro

Scenario 4 Existing Plus Project Morning Peak Hour - Alternative 2

Report File: C:\...\AMEP2.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.637	17.0	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.020	11.2	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.687	4.2	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	103.7	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.863	31.3	C
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.016	9.4	A
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.268	5.2	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	SB Left	0.233	9.5	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.002	8.8	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Thru	0.004	12.8	B
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.009	9.6	A
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Left	0.027	14.1	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.073	12.7	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.491	11.6	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.267	7.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	75.780	112.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	566	50	71	911	7	20	8	19	64	4	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	150	93	15	0	0	0	0	47	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	579	200	164	926	7	20	8	19	111	4	90
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	170	59	48	272	2	6	2	6	33	1	26
Total Analysis Volume [veh/h]	9	680	235	193	1088	8	24	9	22	130	5	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	58	68	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	58	58	13	69	69	17	17	17
g / C, Green / Cycle	0.02	0.58	0.58	0.13	0.69	0.69	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.00	0.25	0.25	0.11	0.29	0.29	0.20	0.16	0.07
s, saturation flow rate [veh/h]	1810	1900	1735	1810	1900	1895	272	860	1615
c, Capacity [veh/h]	29	1104	1008	233	1318	1315	98	217	275
d1, Uniform Delay [s]	48.70	11.74	11.75	42.53	6.60	6.61	37.04	40.86	36.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.76	1.24	1.36	7.31	0.97	0.97	4.96	2.90	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

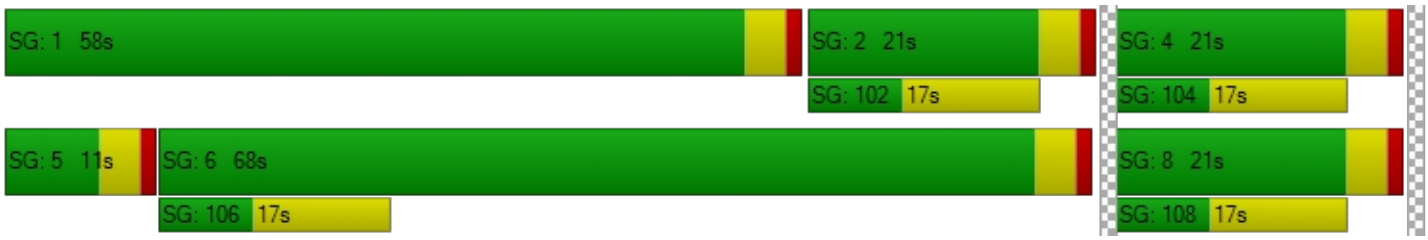
X, volume / capacity	0.31	0.43	0.43	0.83	0.42	0.42	0.56	0.62	0.39
d, Delay for Lane Group [s/veh]	54.46	12.98	13.10	49.84	7.57	7.58	42.00	43.76	37.78
Lane Group LOS	D	B	B	D	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	5.97	5.49	5.08	4.69	4.68	1.28	3.41	2.36
50th-Percentile Queue Length [ft/ln]	6.71	149.25	137.17	127.12	117.23	117.00	32.01	85.19	58.93
95th-Percentile Queue Length [veh/ln]	0.48	9.98	9.33	8.78	8.24	8.23	2.31	6.13	4.24
95th-Percentile Queue Length [ft/ln]	12.07	249.43	233.21	219.57	206.02	205.70	57.63	153.34	106.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.46	13.02	13.10	49.84	7.58	7.58	42.00	42.00	42.00	43.76	43.76	37.78
Movement LOS	D	B	B	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.44			13.91			42.00			41.13		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	16.97											
Intersection LOS	B											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	153	15	0	62	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	777	15	0	1056	0	10
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	204	5	0	278	0	3
Total Analysis Volume [veh/h]	818	18	0	1112	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	11.24
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.06
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.56
d_A, Approach Delay [s/veh]	0.00		0.00		11.24	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.687

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	624	0	0	994	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	165	20	16	46	17	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	789	20	16	1040	17	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	208	5	4	274	4	1
Total Analysis Volume [veh/h]	831	21	17	1095	18	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	27	0	52	79	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	1	13	1	1
g / C, Green / Cycle	0.38	0.38	0.03	0.60	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.23	0.01	0.01	0.30	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1391	621	59	2164	72	65
d1, Uniform Delay [s]	5.44	4.24	10.44	2.56	10.29	10.21
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	0.02	2.60	0.18	1.77	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

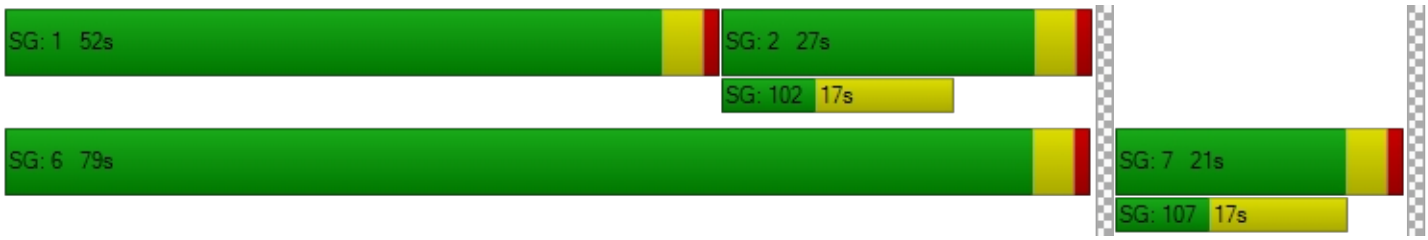
X, volume / capacity	0.60	0.03	0.29	0.51	0.25	0.05
d, Delay for Lane Group [s/veh]	5.85	4.27	13.04	2.74	12.06	10.50
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.56	0.02	0.10	0.06	0.09	0.01
50th-Percentile Queue Length [ft/ln]	13.96	0.57	2.38	1.38	2.25	0.36
95th-Percentile Queue Length [veh/ln]	1.01	0.04	0.17	0.10	0.16	0.03
95th-Percentile Queue Length [ft/ln]	25.13	1.02	4.28	2.49	4.05	0.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.85	4.27	13.04	2.74	12.06	10.50
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.81		2.90		11.84	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.24					
Intersection LOS	A					
Intersection V/C	0.687					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	103.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	677	0	0	1010	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	185	1	1	62	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	862	1	1	1072	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	249	0	0	310	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	21	998	1	1	1241	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.12	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	11.65	0.00	0.00	10.14	0.00	0.00	80.70	103.72	17.84	65.82	100.99	12.91
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	2.91	0.00	0.00	0.11	0.05	0.00	14.08	14.08	14.08	1.26	1.26	1.26
d_A, Approach Delay [s/veh]	0.24			0.01			32.93			65.82		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	0.50											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	31.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.863

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	221	262	516	534	17	14	29	11	262	36	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	21	36	27	0	0	0	0	10	0	106
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	301	283	552	561	17	14	29	11	272	36	429
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	3	81	76	148	150	5	4	8	3	73	10	0
Total Analysis Volume [veh/h]	14	322	303	591	601	18	15	31	12	291	39	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	37	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	21	21	34	53	53	6	6	20	20
g / C, Green / Cycle	0.02	0.22	0.22	0.35	0.55	0.55	0.06	0.06	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.09	0.19	0.33	0.17	0.01	0.01	0.02	0.18	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1811	1820	1615
c, Capacity [veh/h]	41	789	352	638	1983	885	104	104	374	332
d1, Uniform Delay [s]	46.36	32.33	36.25	29.98	11.80	9.95	43.16	43.85	37.13	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.77	0.34	6.17	6.40	0.09	0.01	0.63	2.62	6.85	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

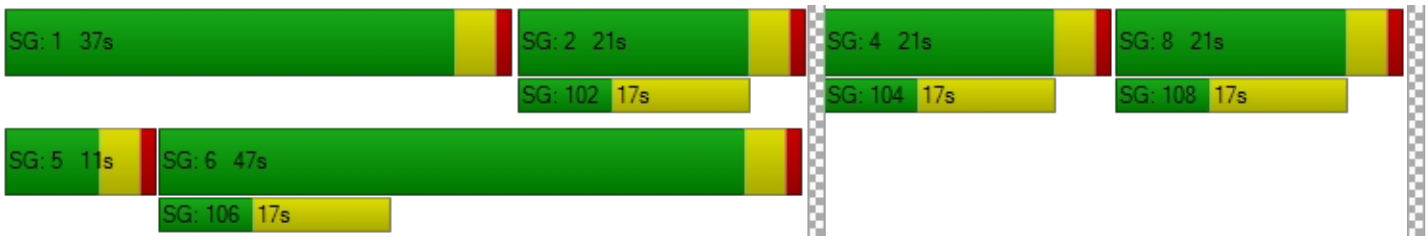
X, volume / capacity	0.34	0.41	0.86	0.93	0.30	0.02	0.14	0.41	0.88	0.00
d, Delay for Lane Group [s/veh]	51.13	32.67	42.42	36.37	11.89	9.96	43.80	46.46	43.98	0.00
Lane Group LOS	D	C	D	D	B	A	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.38	3.22	7.32	13.79	3.34	0.17	0.36	1.06	8.11	0.00
50th-Percentile Queue Length [ft/ln]	9.56	80.51	183.06	344.70	83.46	4.24	8.89	26.45	202.68	0.00
95th-Percentile Queue Length [veh/ln]	0.69	5.80	11.76	19.88	6.01	0.31	0.64	1.90	12.78	0.00
95th-Percentile Queue Length [ft/ln]	17.21	144.92	294.00	496.94	150.23	7.64	16.00	47.61	319.42	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.13	32.67	42.42	36.37	11.89	9.96	43.80	46.46	46.46	43.98	43.98	0.00
Movement LOS	D	C	D	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	37.70			23.82			45.77			43.98		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	31.33											
Intersection LOS	C											
Intersection V/C	0.863											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	237	6	12	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	366	6	12	205
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	96	2	3	54
Total Analysis Volume [veh/h]	0	13	385	6	13	216
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	9.45	0.00	0.00	8.09	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.20	0.00	0.00	0.84	0.00
d_A, Approach Delay [s/veh]	9.45		0.00		0.46	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.268

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	129	0	0	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	10	121	128	14	50
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	10	250	128	14	180
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	3	66	34	4	47
Total Analysis Volume [veh/h]	39	11	263	135	15	189
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	21	0	68	0	11	79
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	6	6	1	11
g / C, Green / Cycle	0.09	0.09	0.31	0.31	0.03	0.53
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.07	0.08	0.01	0.05
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	163	146	1108	494	56	1910
d1, Uniform Delay [s]	8.87	8.73	5.44	5.51	9.92	2.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.22	0.11	0.30	2.49	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.08	0.24	0.27	0.27	0.10
d, Delay for Lane Group [s/veh]	9.61	8.95	5.55	5.80	12.41	2.48
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.04	0.18	0.21	0.08	0.01
50th-Percentile Queue Length [ft/ln]	3.23	0.88	4.42	5.17	2.00	0.15
95th-Percentile Queue Length [veh/ln]	0.23	0.06	0.32	0.37	0.14	0.01
95th-Percentile Queue Length [ft/ln]	5.81	1.59	7.96	9.31	3.61	0.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.61	8.95	5.55	5.80	12.41	2.48
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.47		5.64		3.21	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.17					
Intersection LOS	A					
Intersection V/C	0.268					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.233

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	48	0	39	57	80	0	0	79	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	3	18	0	6	3	2	49	80	49	31	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	18	48	6	42	59	129	80	49	110	54
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	5	13	2	12	17	36	22	14	31	15
Total Analysis Volume [veh/h]	34	3	20	54	7	47	66	145	90	55	123	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	26	0	0	30	73	0	0	43	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	3	3	13	13	6	6
g / C, Green / Cycle	0.09	0.09	0.09	0.10	0.42	0.42	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.03	0.04	0.04	0.06	0.05	0.05
s, saturation flow rate [veh/h]	1810	1647	1810	1810	3618	1615	1900	1701
c, Capacity [veh/h]	164	149	157	183	1523	680	353	316
d1, Uniform Delay [s]	12.60	12.54	12.85	12.53	5.22	5.31	10.41	10.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.47	1.29	1.19	0.03	0.09	0.39	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

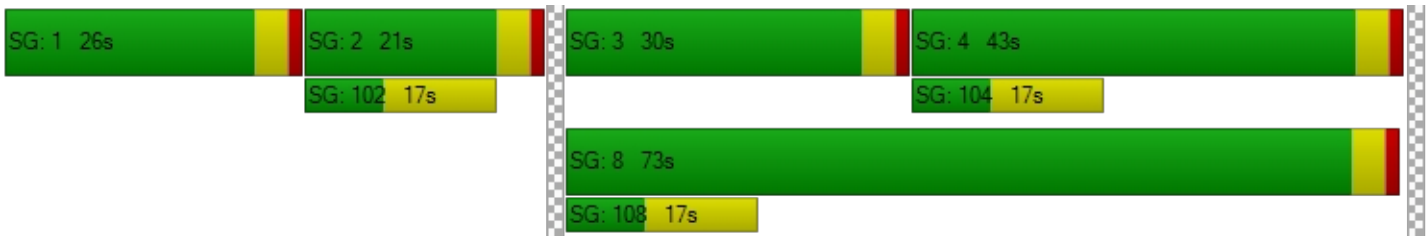
X, volume / capacity	0.21	0.15	0.34	0.36	0.10	0.13	0.26	0.29
d, Delay for Lane Group [s/veh]	13.21	13.01	14.13	13.72	5.25	5.40	10.80	10.98
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.13	0.32	0.37	0.15	0.20	0.41	0.42
50th-Percentile Queue Length [ft/ln]	4.72	3.19	7.90	9.30	3.74	4.95	10.25	10.46
95th-Percentile Queue Length [veh/ln]	0.34	0.23	0.57	0.67	0.27	0.36	0.74	0.75
95th-Percentile Queue Length [ft/ln]	8.50	5.75	14.22	16.74	6.73	8.91	18.45	18.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.21	13.01	13.01	14.13	0.00	0.00	13.72	5.25	5.40	0.00	10.85	10.98
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	13.13			14.13			7.15			10.89		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	9.51											
Intersection LOS	A											
Intersection V/C	0.233											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	128	0	0	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	47	20	4	80
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	175	20	4	229
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	46	5	1	60
Total Analysis Volume [veh/h]	0	2	184	21	4	241
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.78	0.00	0.00	7.62	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.16	0.00	0.00	0.22	0.00
d_A, Approach Delay [s/veh]	8.78		0.00		0.12	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	2	2	9	6	11	2	88	38	1	101	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	0	1	0	0	0	0	18	31	4	42	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	2	3	9	6	11	2	106	69	5	143	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	1	1	3	2	3	1	33	21	2	44	2
Total Analysis Volume [veh/h]	98	2	4	11	7	14	2	131	85	6	177	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.69	12.83	10.48	11.45	12.07	9.42	7.57	0.00	0.00	7.65	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.65	0.65	0.65	0.15	0.15	0.15	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	16.31	16.31	16.31	3.79	3.79	3.79	0.11	0.11	0.11	0.28	0.28	0.28
d_A, Approach Delay [s/veh]	12.61			10.70			0.07			0.24		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.16											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	45	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	36	21	14	7	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	77	66	14	7	8
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	20	17	4	2	2
Total Analysis Volume [veh/h]	19	81	69	15	7	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	0.00	9.56	8.63
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.03	0.02
95th-Percentile Queue Length [ft/ln]	0.95	0.00	0.00	0.00	0.67	0.60
d_A, Approach Delay [s/veh]	1.40		0.00		9.07	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	329	60	105	443	10	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	56	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	352	60	105	499	10	42
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	16	28	135	3	11
Total Analysis Volume [veh/h]	380	65	113	538	11	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.10	0.01	0.03	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	8.55	0.00	14.09	11.01
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.33	0.00	0.08	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	8.35	0.00	2.08	5.62
d_A, Approach Delay [s/veh]	0.00		1.48		11.62	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.40					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.073

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	408	543	22	18	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	6	15	41	17	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	414	558	63	35	55
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	109	147	17	9	14
Total Analysis Volume [veh/h]	55	435	587	66	37	58
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.01	0.00	0.07	0.08
d_M, Delay for Movement [s/veh]	9.05	0.00	0.00	0.00	12.71	10.53
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.19	0.00	0.00	0.00	0.24	0.27
95th-Percentile Queue Length [ft/ln]	4.64	0.00	0.00	0.00	5.92	6.66
d_A, Approach Delay [s/veh]	1.02		0.00		11.38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.28					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	407	15	105	500	4	0	3	11	28	0	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	13	0	0	12	15	6	0	16	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	420	15	105	512	19	6	3	27	28	0	59
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	112	4	28	137	5	2	1	7	7	0	16
Total Analysis Volume [veh/h]	75	449	16	112	548	20	6	3	29	30	0	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	26	0	42	57	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	31	31	31	31	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	7	7	4	8	8	0	2	2	2	3	3
g / C, Green / Cycle	0.11	0.23	0.23	0.14	0.26	0.26	0.01	0.06	0.06	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.01	0.06	0.15	0.01	0.00	0.00	0.02	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	203	816	364	262	934	417	23	109	93	99	189	161
d1, Uniform Delay [s]	12.71	10.58	9.36	12.05	10.02	8.61	15.12	13.75	13.98	14.05	0.00	13.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	0.58	0.05	1.11	0.59	0.05	6.07	0.10	1.88	1.72	0.00	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

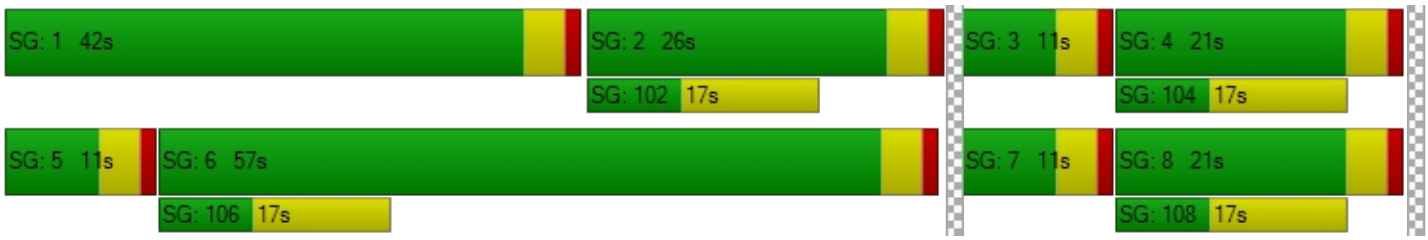
X, volume / capacity	0.37	0.55	0.04	0.43	0.59	0.05	0.26	0.03	0.31	0.30	0.00	0.39
d, Delay for Lane Group [s/veh]	13.83	11.16	9.41	13.16	10.61	8.66	21.19	13.85	15.86	15.77	0.00	14.59
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	1.02	0.07	0.61	1.19	0.08	0.07	0.02	0.20	0.21	0.00	0.38
50th-Percentile Queue Length [ft/ln]	10.77	25.47	1.63	15.20	29.68	1.88	1.79	0.46	5.03	5.13	0.00	9.61
95th-Percentile Queue Length [veh/ln]	0.78	1.83	0.12	1.09	2.14	0.14	0.13	0.03	0.36	0.37	0.00	0.69
95th-Percentile Queue Length [ft/ln]	19.39	45.85	2.93	27.36	53.42	3.38	3.22	0.83	9.05	9.24	0.00	17.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.83	11.16	9.41	13.16	10.61	8.66	21.19	13.85	15.86	15.77	0.00	14.59
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.48			10.97			16.54			14.97		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.61											
Intersection LOS	B											
Intersection V/C	0.491											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.267

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	441	78	41	533	53	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	28	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	511	78	41	561	53	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	22	12	159	15	14
Total Analysis Volume [veh/h]	580	89	47	637	60	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	34	0	0	92	66	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	81	81	0	0	11	11
g / C, Green / Cycle	0.81	0.81	0.00	0.00	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.16	0.06	0.06	0.34	0.07	0.03
s, saturation flow rate [veh/h]	3618	1615	847	1900	804	1615
c, Capacity [veh/h]	2914	1301	72	0	146	185
d1, Uniform Delay [s]	2.25	2.00	50.00	0.00	44.49	40.63
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.10	37.85	0.00	1.83	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.07	0.65	0.00	0.41	0.30
d, Delay for Lane Group [s/veh]	2.40	2.10	87.85	0.00	46.32	41.54
Lane Group LOS	A	A	F	A	D	D
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.93	0.27	2.00	0.00	1.52	1.31
50th-Percentile Queue Length [ft/ln]	23.37	6.87	49.89	0.00	38.03	32.65
95th-Percentile Queue Length [veh/ln]	1.68	0.49	3.59	0.00	2.74	2.35
95th-Percentile Queue Length [ft/ln]	42.06	12.36	89.80	0.00	68.45	58.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.40	2.10	87.85	0.00	46.32	41.54
Movement LOS	A	A	F	A	D	D
d_A, Approach Delay [s/veh]	2.36		6.04		44.01	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.36					
Intersection LOS	A					
Intersection V/C	0.267					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	112.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	75.780

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	3	2	117	4	281	305	520	13	3	324	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	18	0	10	21	36	0	0	106	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	3	2	135	4	291	326	556	13	3	430	199
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	35	1	75	84	143	3	1	111	51
Total Analysis Volume [veh/h]	10	3	2	139	4	300	336	574	13	3	444	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	63	0	0	63	0	16	26	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	59	59	12	28	28	1	17	17
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.12	0.28	0.28	0.01	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.67	0.00	66.37	0.19	0.19	0.16	0.01	0.00	0.12	0.13
s, saturation flow rate [veh/h]	19	1615	2	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	75	953	72	953	220	1029	460	10	610	272
d1, Uniform Delay [s]	25.51	8.42	49.11	10.33	43.92	30.42	25.80	49.52	39.40	39.59
k, delay calibration	0.15	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.45	0.00	486.12	0.19	242.18	2.18	0.11	15.41	7.45	17.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

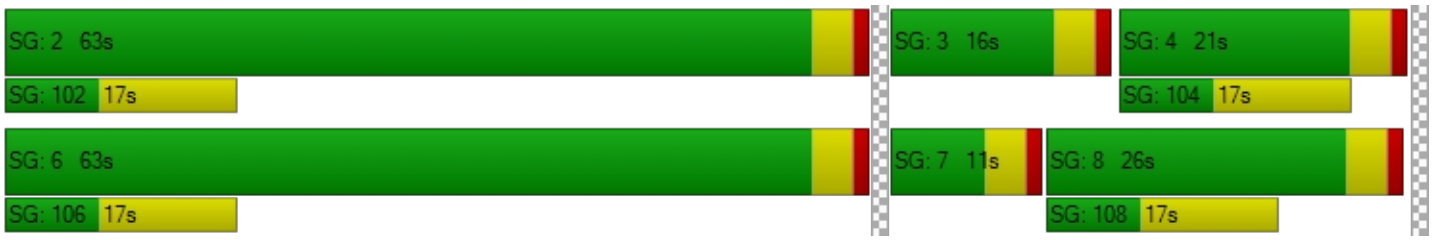
X, volume / capacity	0.17	0.00	1.98	0.31	1.53	0.56	0.03	0.30	0.73	0.75
d, Delay for Lane Group [s/veh]	26.97	8.42	535.22	10.52	286.10	32.60	25.91	64.94	46.85	57.02
Lane Group LOS	C	A	F	B	F	C	C	E	D	E
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.02	11.56	3.18	20.20	6.11	0.24	0.12	5.74	6.06
50th-Percentile Queue Length [ft/ln]	6.03	0.43	288.92	79.60	504.92	152.70	5.93	2.94	143.53	151.48
95th-Percentile Queue Length [veh/ln]	0.43	0.03	20.80	5.73	31.99	10.16	0.43	0.21	9.67	10.10
95th-Percentile Queue Length [ft/ln]	10.86	0.78	520.06	143.28	799.84	254.02	10.68	5.30	241.77	252.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.97	26.97	8.42	535.22	535.22	10.52	286.10	32.60	25.91	64.94	46.85	57.02
Movement LOS	C	C	A	F	F	B	F	C	C	E	D	E
d_A, Approach Delay [s/veh]	24.49			179.89			124.79			50.13		
Approach LOS	C			F			F			D		
d_I, Intersection Delay [s/veh]	112.11											
Intersection LOS	F											
Intersection V/C	75.780											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 4 Existing Plus Project Evening Peak Hour - Alternative 2

Report File: C:\...\PMEP2.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	1.020	36.5	D
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.090	15.4	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.629	4.5	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	222.7	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.940	58.9	E
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.062	10.6	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.499	6.7	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.415	9.9	A
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.000	10.0	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.477	25.9	D
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.031	10.6	B
25	Agua Mansa Rd (NS) at Holly St (EW)	Two-way stop	HCM 2010	WB Right	0.472	23.1	C
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.235	14.9	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.618	15.7	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.786	3.4	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	325.016	318.9	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	36.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.020

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1142	77	308	947	15	19	8	19	62	14	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	40	81	65	6	0	0	0	0	171	0	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	1182	158	373	953	15	19	8	19	233	14	255
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	306	41	96	246	4	5	2	5	60	4	66
Total Analysis Volume [veh/h]	13	1222	163	386	986	16	20	8	20	241	14	264
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	44	0	27	60	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	40	40	23	61	61	25	25	25
g / C, Green / Cycle	0.02	0.40	0.40	0.23	0.61	0.61	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.01	0.37	0.37	0.21	0.26	0.26	0.24	0.31	0.16
s, saturation flow rate [veh/h]	1810	1900	1823	1810	1900	1889	201	821	1615
c, Capacity [veh/h]	41	760	729	417	1154	1148	101	275	404
d1, Uniform Delay [s]	48.23	28.68	28.82	37.76	10.50	10.51	31.45	40.05	33.69
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.32	19.01	20.62	9.22	1.20	1.20	3.42	12.85	1.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

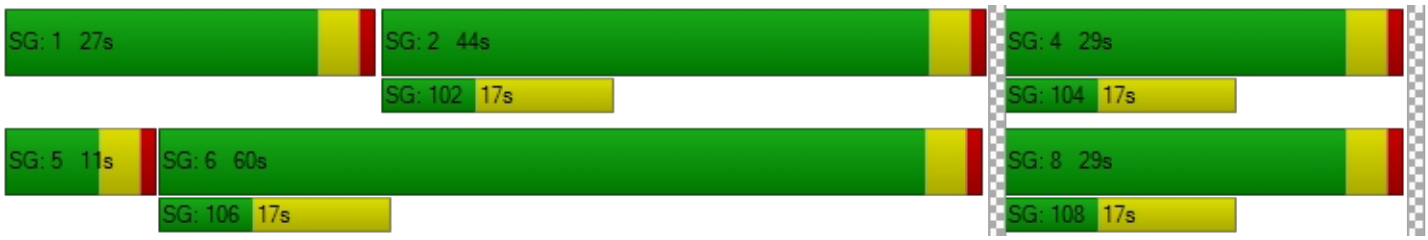
X, volume / capacity	0.32	0.93	0.93	0.93	0.44	0.44	0.47	0.93	0.65
d, Delay for Lane Group [s/veh]	52.55	47.69	49.43	46.98	11.70	11.71	34.87	52.91	35.48
Lane Group LOS	D	D	D	D	B	B	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.37	19.45	19.17	10.16	5.86	5.83	0.98	7.34	5.87
50th-Percentile Queue Length [ft/ln]	9.19	486.19	479.23	254.07	146.39	145.83	24.57	183.49	146.84
95th-Percentile Queue Length [veh/ln]	0.66	26.68	26.35	15.39	9.82	9.79	1.77	11.78	9.85
95th-Percentile Queue Length [ft/ln]	16.55	666.99	658.74	384.77	245.60	244.85	44.23	294.57	246.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.55	48.43	49.43	46.98	11.71	11.71	34.87	34.87	34.87	52.91	52.91	35.48
Movement LOS	D	D	D	D	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	48.59			21.51			34.87			44.04		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	36.48											
Intersection LOS	D											
Intersection V/C	1.020											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.090

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	94	26	0	177	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1325	26	0	1205	0	28
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	349	8	0	317	0	8
Total Analysis Volume [veh/h]	1395	31	0	1268	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.09
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.44
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	7.34
d_A, Approach Delay [s/veh]	0.00		0.00		15.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.19					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1231	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	106	11	6	171	30	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1337	11	6	1199	30	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	352	3	2	316	8	4
Total Analysis Volume [veh/h]	1407	12	6	1262	32	15
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	68	0	11	79	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	0	24	3	3
g / C, Green / Cycle	0.57	0.57	0.01	0.69	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.39	0.01	0.00	0.35	0.02	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2048	914	21	2509	136	121
d1, Uniform Delay [s]	5.32	3.28	16.94	2.49	15.06	14.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.01	7.08	0.16	0.88	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.01	0.28	0.50	0.24	0.12
d, Delay for Lane Group [s/veh]	5.74	3.28	24.02	2.65	15.94	15.38
Lane Group LOS	A	A	C	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.58	0.02	0.08	0.10	0.23	0.11
50th-Percentile Queue Length [ft/ln]	39.61	0.42	2.03	2.62	5.70	2.64
95th-Percentile Queue Length [veh/ln]	2.85	0.03	0.15	0.19	0.41	0.19
95th-Percentile Queue Length [ft/ln]	71.29	0.76	3.66	4.71	10.25	4.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.74	3.28	24.02	2.65	15.94	15.38
Movement LOS	A	A	C	A	B	B
d_A, Approach Delay [s/veh]	5.72		2.75		15.76	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.51					
Intersection LOS	A					
Intersection V/C	0.629					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	222.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1201	0	0	1029	15	22	0	34	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	114	0	0	201	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1315	0	0	1230	15	22	0	34	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	335	0	0	313	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1339	0	0	1253	15	22	0	35	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.59	0.00	0.08	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	11.71	0.00	0.00	11.90	0.00	0.00	163.74	222.66	75.32	117.80	163.90	15.27
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	2.51	0.00	0.00	0.00	0.00	0.00	80.26	80.26	80.26	2.96	2.96	2.96
d_A, Approach Delay [s/veh]	0.16			0.00			109.45			40.90		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	2.46											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	58.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.940

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	375	452	458	458	22	29	58	3	287	39	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	10	112	89	0	0	0	0	38	0	64
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	426	462	570	547	22	29	58	3	325	39	525
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	4	110	119	147	141	6	7	15	1	84	10	0
Total Analysis Volume [veh/h]	16	441	478	589	566	23	30	60	3	336	40	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	23	0	35	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	191	191	191	191	191	191	191	191	191	191
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	60	60	65	120	120	8	8	42	42
g / C, Green / Cycle	0.02	0.31	0.31	0.34	0.63	0.63	0.04	0.04	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.30	0.33	0.16	0.01	0.02	0.03	0.21	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1884	1819	1615
c, Capacity [veh/h]	38	1134	506	614	2284	1020	80	84	399	355
d1, Uniform Delay [s]	92.44	51.33	64.02	61.91	15.40	13.18	88.77	90.32	73.41	0.00
k, delay calibration	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.23	0.22	9.48	10.37	0.06	0.01	2.86	12.74	11.08	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

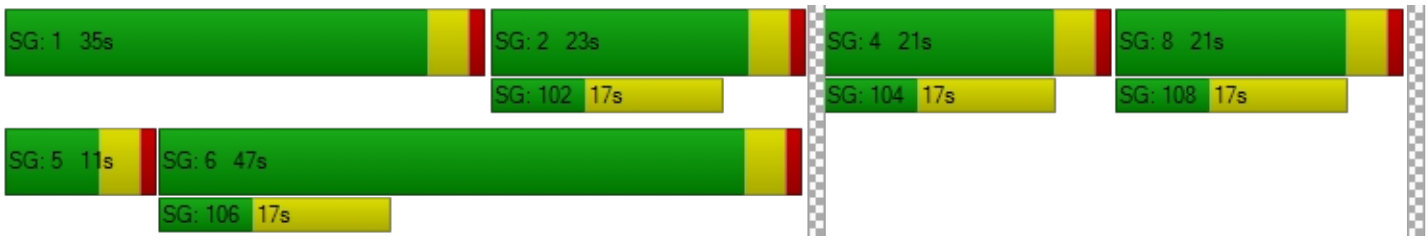
X, volume / capacity	0.42	0.39	0.94	0.96	0.25	0.02	0.37	0.75	0.94	0.00
d, Delay for Lane Group [s/veh]	99.66	51.54	73.50	72.28	15.45	13.18	91.63	103.05	84.49	0.00
Lane Group LOS	F	D	E	E	B	B	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	8.45	24.09	29.85	5.61	0.39	1.52	3.41	19.48	0.00
50th-Percentile Queue Length [ft/ln]	21.69	211.31	602.32	746.29	140.21	9.78	38.03	85.26	486.91	0.00
95th-Percentile Queue Length [veh/ln]	1.56	13.22	32.14	38.81	9.49	0.70	2.74	6.14	26.71	0.00
95th-Percentile Queue Length [ft/ln]	39.04	330.50	803.57	970.30	237.31	17.61	68.46	153.46	667.85	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	99.66	51.54	73.50	72.28	15.45	13.18	91.63	103.05	103.05	84.49	84.49	0.00
Movement LOS	F	D	E	E	B	B	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	63.59			43.82			99.37			84.49		
Approach LOS	E			D			F			F		
d_I, Intersection Delay [s/veh]	58.90											
Intersection LOS	E											
Intersection V/C	0.940											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	126	20	16	272
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	40	610	20	16	548
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	11	161	5	4	144
Total Analysis Volume [veh/h]	0	42	642	21	17	577
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	10.64	0.00	0.00	8.92	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.20	0.00	0.00	0.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.92	0.00	0.00	1.39	0.00
d_A, Approach Delay [s/veh]	10.64		0.00		0.26	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	484	0	0	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	140	27	100	65	7	147
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	27	584	65	7	423
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	7	154	17	2	111
Total Analysis Volume [veh/h]	147	28	615	68	7	445
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	52	0	37	0	11	48
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	7	7	0	12
g / C, Green / Cycle	0.20	0.20	0.29	0.29	0.01	0.47
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.17	0.04	0.00	0.12
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	368	328	1072	479	26	1711
d1, Uniform Delay [s]	8.53	7.98	7.37	6.38	12.03	3.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	0.11	0.49	0.13	5.27	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

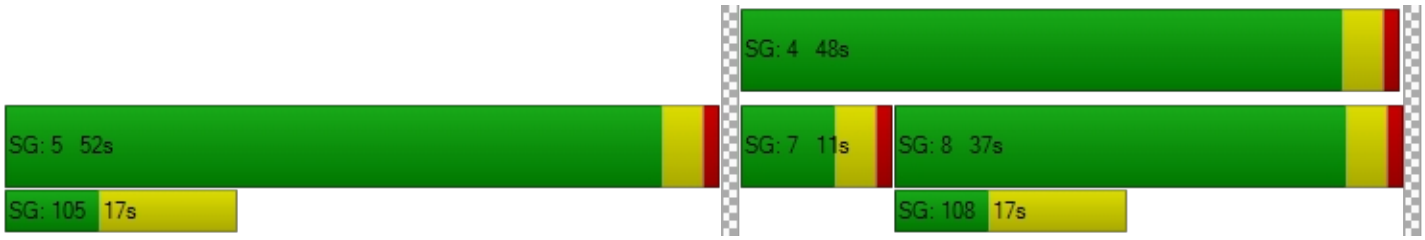
X, volume / capacity	0.40	0.09	0.57	0.14	0.27	0.26
d, Delay for Lane Group [s/veh]	9.24	8.09	7.85	6.52	17.30	3.99
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.48	0.08	0.78	0.15	0.07	0.20
50th-Percentile Queue Length [ft/ln]	12.01	2.07	19.60	3.86	1.64	5.00
95th-Percentile Queue Length [veh/ln]	0.87	0.15	1.41	0.28	0.12	0.36
95th-Percentile Queue Length [ft/ln]	21.63	3.73	35.28	6.94	2.95	9.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.24	8.09	7.85	6.52	17.30	3.99
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.05		7.72		4.20	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.68					
Intersection LOS	A					
Intersection V/C	0.499					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.415

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	0	65	104	380	0	0	211	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	6	68	0	3	5	7	78	43	24	35	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	6	68	31	3	70	111	458	43	24	246	62
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	2	18	8	1	19	29	122	12	7	65	16
Total Analysis Volume [veh/h]	121	6	72	33	3	74	118	487	48	27	261	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	53	63	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	29	29	29	29	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	7	4	9	9	1	7	7
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.15	0.32	0.32	0.05	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.05	0.02	0.05	0.07	0.13	0.03	0.01	0.09	0.09
s, saturation flow rate [veh/h]	1343	1634	1342	1624	1810	3618	1615	1810	1900	1771
c, Capacity [veh/h]	396	362	395	360	267	1166	521	86	422	393
d1, Uniform Delay [s]	12.73	9.34	11.88	9.34	11.41	7.79	6.95	13.53	9.74	9.77
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	0.29	0.09	0.29	1.15	0.24	0.08	2.07	0.60	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

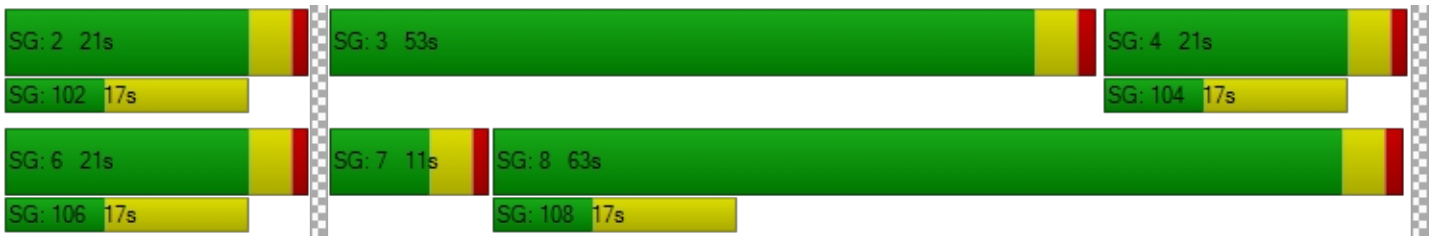
X, volume / capacity	0.31	0.22	0.08	0.21	0.44	0.42	0.09	0.31	0.40	0.41
d, Delay for Lane Group [s/veh]	13.16	9.64	11.97	9.63	12.56	8.03	7.03	15.60	10.35	10.45
Lane Group LOS	B	A	B	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.63	0.31	0.16	0.31	0.60	0.79	0.14	0.18	0.71	0.69
50th-Percentile Queue Length [ft/ln]	15.68	7.83	3.93	7.73	15.03	19.71	3.57	4.60	17.70	17.17
95th-Percentile Queue Length [veh/ln]	1.13	0.56	0.28	0.56	1.08	1.42	0.26	0.33	1.27	1.24
95th-Percentile Queue Length [ft/ln]	28.22	14.10	7.08	13.92	27.06	35.49	6.43	8.27	31.87	30.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.16	9.64	9.64	11.97	9.63	9.63	12.56	8.03	7.03	15.60	10.38	10.45
Movement LOS	B	A	A	B	A	A	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	11.78			10.33			8.78			10.79		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	9.90											
Intersection LOS	A											
Intersection V/C	0.415											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	411	0	0	271
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	136	10	2	60
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	547	10	2	331
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	144	3	1	87
Total Analysis Volume [veh/h]	0	0	576	11	2	348
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.04	0.00	0.00	8.61	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.15	0.00
d_A, Approach Delay [s/veh]	10.04		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	25.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	105	1	1	3	4	5	7	314	89	0	160	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	2	0	0	0	0	59	77	2	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	1	3	3	4	5	7	373	166	2	186	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	0	1	1	1	1	2	103	46	1	51	3
Total Analysis Volume [veh/h]	156	1	3	3	4	6	8	413	184	2	206	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	25.90	25.43	21.19	16.13	17.07	9.57	7.66	0.00	0.00	8.65	0.00	0.00
Movement LOS	D	D	C	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.53	2.53	2.53	0.09	0.09	0.09	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	63.22	63.22	63.22	2.27	2.27	2.27	0.39	0.39	0.39	0.15	0.15	0.15
d_A, Approach Delay [s/veh]	25.81			13.39			0.10			0.08		
Approach LOS	D			B			A			A		
d_I, Intersection Delay [s/veh]	4.39											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	107	93	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	18	73	6	20	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	125	166	6	20	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	33	44	2	5	7
Total Analysis Volume [veh/h]	9	132	175	6	21	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.03	0.03
d_M, Delay for Movement [s/veh]	7.58	0.00	0.00	0.00	10.56	9.26
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.48	0.00	0.00	0.00	2.43	2.48
d_A, Approach Delay [s/veh]	0.48		0.00		9.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Agua Mansa Rd (NS) at Holly St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	723	21	44	359	60	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	0	0	25	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	789	21	44	384	60	167
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	206	5	11	100	16	44
Total Analysis Volume [veh/h]	824	22	46	401	63	175
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.00	0.15	0.47
d_M, Delay for Movement [s/veh]	0.00	0.00	9.78	0.00	15.33	23.11
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.18	0.00	0.54	2.44
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.57	0.00	13.41	61.01
d_A, Approach Delay [s/veh]	0.00		1.01		21.05	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.235

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	79	496	389	23	39	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	15	6	19	51	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	511	395	42	90	128
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	158	122	13	28	40
Total Analysis Volume [veh/h]	106	631	488	52	111	158
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.00	0.23	0.21
d_M, Delay for Movement [s/veh]	8.86	0.00	0.00	0.00	14.94	10.95
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.34	0.00	0.00	0.00	0.90	0.78
95th-Percentile Queue Length [ft/ln]	8.50	0.00	0.00	0.00	22.56	19.40
d_A, Approach Delay [s/veh]	1.27		0.00		12.59	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.80					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	348	160	75	390	9	9	6	17	80	5	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	7	0	0	49	6	15	0	55	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	355	160	75	439	15	24	6	72	80	5	224
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	111	50	23	137	5	7	2	22	25	2	70
Total Analysis Volume [veh/h]	49	443	200	94	547	19	30	7	90	100	6	279
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	31	0	17	37	0	11	36	0	16	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	8	8	5	10	10	2	6	6	5	9	9
g / C, Green / Cycle	0.07	0.20	0.20	0.12	0.24	0.24	0.05	0.16	0.16	0.12	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.12	0.05	0.15	0.01	0.02	0.00	0.06	0.06	0.00	0.17
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	136	738	330	209	885	395	92	299	254	216	429	365
d1, Uniform Delay [s]	17.43	14.30	14.33	16.36	13.32	11.44	18.16	14.12	14.90	16.26	11.91	14.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	0.79	1.80	1.51	0.71	0.05	2.04	0.03	0.84	1.54	0.01	3.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.60	0.61	0.45	0.62	0.05	0.33	0.02	0.35	0.46	0.01	0.76
d, Delay for Lane Group [s/veh]	19.04	15.09	16.13	17.87	14.03	11.49	20.20	14.16	15.74	17.80	11.92	17.70
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	1.56	1.50	0.76	1.83	0.11	0.28	0.05	0.67	0.81	0.04	2.23
50th-Percentile Queue Length [ft/ln]	10.66	38.88	37.47	19.09	45.67	2.73	7.04	1.18	16.64	20.22	0.88	55.78
95th-Percentile Queue Length [veh/ln]	0.77	2.80	2.70	1.37	3.29	0.20	0.51	0.09	1.20	1.46	0.06	4.02
95th-Percentile Queue Length [ft/ln]	19.18	69.99	67.44	34.35	82.20	4.92	12.67	2.13	29.95	36.40	1.59	100.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.04	15.09	16.13	17.87	14.03	11.49	20.20	14.16	15.74	17.80	11.92	17.70
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.67			14.51			16.71			17.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.73											
Intersection LOS	B											
Intersection V/C	0.618											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.786

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	580	70	94	371	56	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	103	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	614	70	94	474	56	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	166	19	25	128	15	9
Total Analysis Volume [veh/h]	663	76	102	512	60	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	57	79	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	0	3	3
g / C, Green / Cycle	0.39	0.39	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.18	0.05	0.13	0.27	0.07	0.02
s, saturation flow rate [veh/h]	3618	1615	784	1900	902	1615
c, Capacity [veh/h]	1408	629	407	0	460	256
d1, Uniform Delay [s]	4.04	3.46	8.84	0.00	8.38	6.41
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.09	1.47	0.00	0.13	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.12	0.25	0.00	0.13	0.15
d, Delay for Lane Group [s/veh]	4.28	3.55	10.31	0.00	8.51	6.68
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.02	0.40	0.00	0.13	0.07
50th-Percentile Queue Length [ft/ln]	2.20	0.57	10.02	0.00	3.18	1.68
95th-Percentile Queue Length [veh/ln]	0.16	0.04	0.72	0.00	0.23	0.12
95th-Percentile Queue Length [ft/ln]	3.96	1.02	18.04	0.00	5.73	3.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.28	3.55	10.31	0.00	8.51	6.68
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.21		1.71		7.80	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.39					
Intersection LOS	A					
Intersection V/C	0.786					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	318.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	325.016

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	1	145	1	312	493	441	4	1	451	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	66	0	38	10	112	0	0	64	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	1	211	1	350	503	553	4	1	515	184
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	56	0	93	134	148	1	0	137	49
Total Analysis Volume [veh/h]	3	1	1	225	1	374	537	590	4	1	550	196
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	65	0	0	65	0	14	24	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	61	61	61	61	10	27	27	0	17	17
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.10	0.27	0.27	0.00	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.19	0.00	285.56	0.23	0.30	0.16	0.00	0.00	0.15	0.12
s, saturation flow rate [veh/h]	21	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	76	985	72	985	184	970	433	3	609	272
d1, Uniform Delay [s]	25.82	7.62	49.86	9.91	44.91	31.99	26.84	49.84	40.79	39.36
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.00	991.49	0.24	864.00	2.83	0.04	40.19	19.17	15.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.00	3.12	0.38	2.91	0.61	0.01	0.29	0.90	0.72
d, Delay for Lane Group [s/veh]	26.10	7.62	1041.35	10.15	908.91	34.82	26.88	90.03	59.96	54.63
Lane Group LOS	C	A	F	B	F	C	C	F	E	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.01	21.72	3.94	48.78	6.53	0.07	0.06	8.17	5.66
50th-Percentile Queue Length [ft/ln]	1.83	0.20	542.98	98.41	1219.46	163.26	1.87	1.59	204.28	141.45
95th-Percentile Queue Length [veh/ln]	0.13	0.01	39.09	7.09	75.36	10.72	0.13	0.11	12.86	9.56
95th-Percentile Queue Length [ft/ln]	3.29	0.36	977.36	177.13	1884.06	268.04	3.36	2.86	321.48	238.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.10	26.10	7.62	1041.35	1041.35	10.15	908.91	34.82	26.88	90.03	59.96	54.63
Movement LOS	C	C	A	F	F	B	F	C	C	F	E	D
d_A, Approach Delay [s/veh]	22.41			398.57			449.81			58.60		
Approach LOS	C			F			F			E		
d_I, Intersection Delay [s/veh]	318.87											
Intersection LOS	F											
Intersection V/C	325.016											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 1

Viridian

Vistro File: C:\...\AME.vistro

Scenario 8 Opening Year (2020) With Project Morning Peak Hour - Alternative 1

Report File: C:\...\AMOYW1.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.876	22.5	C
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.004	12.5	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	WB Left	0.639	4.4	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	230.1	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.970	99.8	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.007	10.1	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.355	5.2	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.424	12.9	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.002	9.0	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.336	17.0	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.010	10.2	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.091	14.3	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.545	11.9	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.371	4.2	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	118.777	203.2	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	143	237	195	122	0	0	2	8	76	1	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	718	288	268	1060	8	22	10	28	141	5	121
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	211	85	79	311	2	6	3	8	41	1	36
Total Analysis Volume [veh/h]	18	844	338	315	1246	9	26	12	33	166	6	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	33	43	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	31	31	15	44	44	17	17	17
g / C, Green / Cycle	0.03	0.41	0.41	0.20	0.58	0.58	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.33	0.33	0.17	0.33	0.33	0.20	0.23	0.09
s, saturation flow rate [veh/h]	1810	1900	1718	1810	1900	1895	352	733	1615
c, Capacity [veh/h]	55	777	703	370	1108	1105	145	260	366
d1, Uniform Delay [s]	35.68	19.46	19.51	28.80	9.75	9.76	24.65	29.29	24.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.42	8.32	9.33	5.58	2.10	2.11	2.53	2.85	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

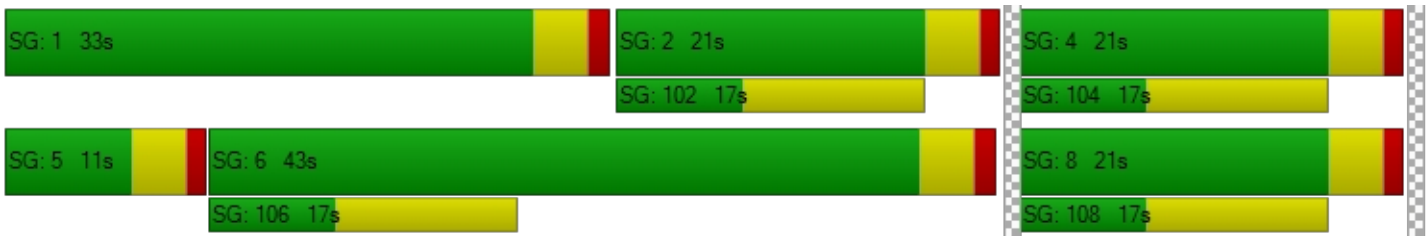
X, volume / capacity	0.33	0.80	0.80	0.85	0.57	0.57	0.49	0.66	0.39
d, Delay for Lane Group [s/veh]	39.10	27.78	28.84	34.37	11.86	11.87	27.17	32.15	25.29
Lane Group LOS	D	C	C	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.37	10.45	9.71	5.81	6.09	6.08	1.08	3.18	2.13
50th-Percentile Queue Length [ft/ln]	9.19	261.33	242.75	145.16	152.17	152.06	27.04	79.57	53.24
95th-Percentile Queue Length [veh/ln]	0.66	15.76	14.82	9.76	10.13	10.13	1.95	5.73	3.83
95th-Percentile Queue Length [ft/ln]	16.54	393.89	370.51	243.95	253.33	253.17	48.68	143.22	95.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.10	28.06	28.84	34.37	11.86	11.87	27.17	27.17	27.17	32.15	32.15	25.29
Movement LOS	D	C	C	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	28.45			16.38			27.17			29.05		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	22.47											
Intersection LOS	C											
Intersection V/C	0.876											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1023	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	385	20	0	206	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1019	20	0	1229	0	2
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	268	6	0	323	0	1
Total Analysis Volume [veh/h]	1073	24	0	1294	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.45
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.31
d_A, Approach Delay [s/veh]	0.00		0.00		12.45	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1024	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	401	72	33	173	18	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1035	72	33	1197	18	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	272	19	9	315	5	1
Total Analysis Volume [veh/h]	1089	76	35	1260	19	4
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	11	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	2	18	1	1
g / C, Green / Cycle	0.46	0.46	0.06	0.67	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.30	0.05	0.02	0.35	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1663	742	111	2411	76	68
d1, Uniform Delay [s]	5.74	4.21	12.34	2.34	12.73	12.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	0.06	1.61	0.18	1.68	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.10	0.32	0.52	0.25	0.06
d, Delay for Lane Group [s/veh]	6.18	4.27	13.95	2.52	14.41	12.99
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.06	0.11	0.20	0.06	0.12	0.02
50th-Percentile Queue Length [ft/ln]	26.47	2.76	5.04	1.48	3.00	0.61
95th-Percentile Queue Length [veh/ln]	1.91	0.20	0.36	0.11	0.22	0.04
95th-Percentile Queue Length [ft/ln]	47.65	4.96	9.07	2.66	5.41	1.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.18	4.27	13.95	2.52	14.41	12.99
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	6.05		2.83		14.17	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.45					
Intersection LOS	A					
Intersection V/C	0.639					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	230.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	473	1	1	190	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1159	1	1	1234	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	335	0	0	357	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1341	1	1	1428	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.00	0.01	0.00	0.23	0.00	0.05	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	12.92	0.00	0.00	11.94	0.00	0.00	154.74	230.11	29.12	140.59	222.21	18.79
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.01	0.00	0.00	1.02	1.02	1.02	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	3.79	0.00	0.00	0.14	0.07	0.00	25.44	25.44	25.44	2.74	2.74	2.74
d_A, Approach Delay [s/veh]	0.22			0.01			59.27			140.59		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	0.68											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	99.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.970

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	196	93	109	64	18	43	30	37	39	8	235
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	421	374	640	618	38	61	68	52	321	52	562
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	113	100	171	165	10	16	18	14	86	14	0
Total Analysis Volume [veh/h]	34	451	400	685	662	41	65	73	56	344	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	22	0	31	42	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	303	303	303	303	303	303	303	303	303	303
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	78	78	116	187	187	24	24	69	69
g / C, Green / Cycle	0.02	0.26	0.26	0.38	0.62	0.62	0.08	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.25	0.38	0.18	0.03	0.04	0.07	0.22	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1765	1822	1615
c, Capacity [veh/h]	43	930	415	694	2231	996	145	142	412	365
d1, Uniform Delay [s]	146.65	95.23	110.80	92.39	27.17	22.78	132.54	137.86	115.86	0.00
k, delay calibration	0.11	0.11	0.20	0.45	0.11	0.11	0.11	0.11	0.14	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.81	0.39	20.17	29.50	0.07	0.02	2.15	19.10	17.56	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

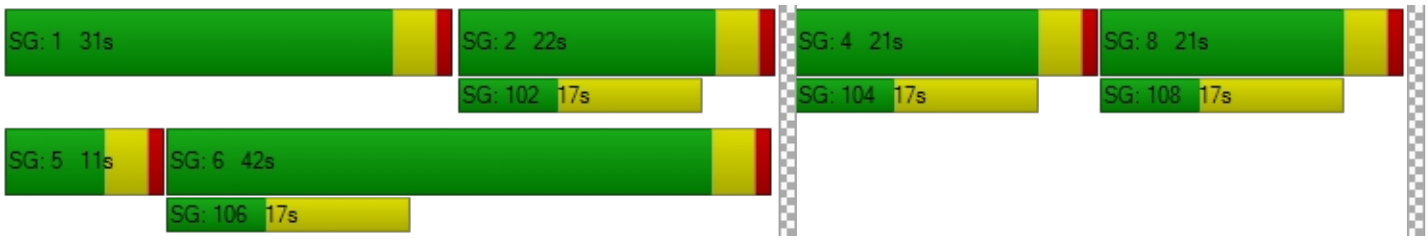
X, volume / capacity	0.78	0.48	0.96	0.99	0.30	0.04	0.45	0.91	0.97	0.00
d, Delay for Lane Group [s/veh]	172.46	95.62	130.96	121.89	27.25	22.80	134.70	156.96	133.42	0.00
Lane Group LOS	F	F	F	F	C	C	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.06	15.41	34.02	59.68	11.92	1.24	5.11	11.12	33.89	0.00
50th-Percentile Queue Length [ft/ln]	76.40	385.17	850.47	1492.04	298.00	31.00	127.74	277.97	847.31	0.00
95th-Percentile Queue Length [veh/ln]	5.50	21.84	43.58	72.35	17.58	2.23	8.82	16.59	43.44	0.00
95th-Percentile Queue Length [ft/ln]	137.52	546.10	1089.61	1808.78	439.55	55.80	220.41	414.68	1086.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	172.46	95.62	130.96	121.89	27.25	22.80	134.70	156.96	156.96	133.42	133.42	0.00
Movement LOS	F	F	F	F	C	C	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	114.55			73.83			149.50			133.42		
Approach LOS	F			E			F			F		
d_I, Intersection Delay [s/veh]	99.83											
Intersection LOS	F											
Intersection V/C	0.970											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	422	12	35	134
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	554	12	35	267
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	146	3	9	70
Total Analysis Volume [veh/h]	0	5	583	13	37	281
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	10.10	0.00	0.00	8.78	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.12	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.53	0.00	0.00	2.91	0.00
d_A, Approach Delay [s/veh]	10.10		0.00		1.02	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.41					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.355

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	10	299	128	14	132
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	10	431	128	14	265
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	3	113	34	4	70
Total Analysis Volume [veh/h]	39	11	454	135	15	279
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	21	0	33	0	11	44
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	7	7	1	11
g / C, Green / Cycle	0.09	0.09	0.32	0.32	0.03	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.13	0.08	0.01	0.08
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	163	145	1158	517	56	1945
d1, Uniform Delay [s]	9.09	8.95	5.67	5.42	10.16	2.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.22	0.22	0.27	2.49	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

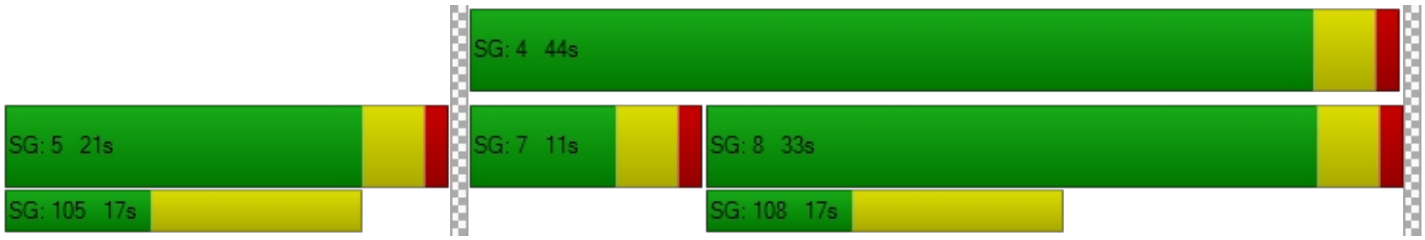
X, volume / capacity	0.24	0.08	0.39	0.26	0.27	0.14
d, Delay for Lane Group [s/veh]	9.84	9.17	5.89	5.68	12.66	2.52
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.04	0.33	0.21	0.08	0.01
50th-Percentile Queue Length [ft/ln]	3.36	0.92	8.29	5.17	2.06	0.23
95th-Percentile Queue Length [veh/ln]	0.24	0.07	0.60	0.37	0.15	0.02
95th-Percentile Queue Length [ft/ln]	6.05	1.66	14.93	9.30	3.71	0.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.84	9.17	5.89	5.68	12.66	2.52
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.69		5.84		3.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.17					
Intersection LOS	A					
Intersection V/C	0.355					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	67	0	43	58	83	0	0	80	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	3	18	16	6	49	154	75	80	49	65	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	18	83	6	92	212	158	80	49	145	101
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	5	23	2	26	59	44	22	14	41	28
Total Analysis Volume [veh/h]	34	3	20	93	7	103	238	177	90	55	163	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	21	0	0	47	78	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	4	7	17	17	7	7
g / C, Green / Cycle	0.09	0.09	0.12	0.18	0.47	0.47	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.05	0.13	0.05	0.06	0.07	0.08
s, saturation flow rate [veh/h]	1810	1647	1810	1810	3618	1615	1900	1660
c, Capacity [veh/h]	155	141	214	325	1697	757	342	299
d1, Uniform Delay [s]	15.64	15.56	15.03	14.21	5.44	5.48	13.30	13.45
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	0.54	1.38	3.17	0.03	0.07	0.77	1.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.16	0.43	0.73	0.10	0.12	0.40	0.46
d, Delay for Lane Group [s/veh]	16.34	16.10	16.41	17.39	5.47	5.55	14.06	14.56
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.17	0.68	1.78	0.24	0.25	0.88	0.91
50th-Percentile Queue Length [ft/ln]	6.31	4.26	16.95	44.55	6.00	6.35	22.06	22.78
95th-Percentile Queue Length [veh/ln]	0.45	0.31	1.22	3.21	0.43	0.46	1.59	1.64
95th-Percentile Queue Length [ft/ln]	11.36	7.67	30.50	80.19	10.81	11.43	39.72	41.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.34	16.10	16.10	16.41	0.00	0.00	17.39	5.47	5.55	0.00	14.14	14.56
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	16.24			16.41			11.10			14.31		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.90											
Intersection LOS	B											
Intersection V/C	0.424											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	151	0	0	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	89	20	4	152
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	240	20	4	312
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	63	5	1	82
Total Analysis Volume [veh/h]	0	2	253	21	4	328
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.98	0.00	0.00	7.78	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.17	0.00	0.00	0.23	0.00
d_A, Approach Delay [s/veh]	8.98		0.00		0.09	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.336

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	79	0	3	0	0	0	0	44	47	14	76	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	2	5	10	8	12	2	142	98	15	179	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	1	2	3	2	4	1	44	30	5	55	2
Total Analysis Volume [veh/h]	153	2	6	12	10	15	2	176	121	19	221	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.00	0.01	0.03	0.02	0.02	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	17.00	16.86	13.55	13.13	13.84	9.86	7.66	0.00	0.00	7.86	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.54	1.54	1.54	0.22	0.22	0.22	0.00	0.00	0.00	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	38.44	38.44	38.44	5.38	5.38	5.38	0.11	0.11	0.11	0.89	0.89	0.89
d_A, Approach Delay [s/veh]	16.87			12.00			0.05			0.61		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.47											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	49	60	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	75	47	14	7	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	124	107	14	7	8
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	33	28	4	2	2
Total Analysis Volume [veh/h]	19	131	113	15	7	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	0.00	10.17	8.84
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.98	0.00	0.00	0.00	0.75	0.64
d_A, Approach Delay [s/veh]	0.95		0.00		9.46	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.97					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.091

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	47	441	579	23	19	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	79	47	61	18	24
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	520	626	84	37	75
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	137	165	22	10	20
Total Analysis Volume [veh/h]	118	547	658	88	39	79
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.01	0.01	0.00	0.09	0.12
d_M, Delay for Movement [s/veh]	9.78	0.00	0.00	0.00	14.27	11.06
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.47	0.00	0.00	0.00	0.30	0.40
95th-Percentile Queue Length [ft/ln]	11.69	0.00	0.00	0.00	7.49	9.93
d_A, Approach Delay [s/veh]	1.74		0.00		12.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.69					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	446	15	106	546	4	0	3	11	28	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	61	138	0	0	56	15	6	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	584	15	106	602	19	6	3	28	28	0	64
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	156	4	28	161	5	2	1	7	7	0	17
Total Analysis Volume [veh/h]	80	625	16	113	644	20	6	3	30	30	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	63	0	25	68	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	9	9	5	10	10	0	2	2	2	3	3
g / C, Green / Cycle	0.11	0.26	0.26	0.14	0.29	0.29	0.01	0.06	0.06	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.01	0.06	0.18	0.01	0.00	0.00	0.02	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	205	959	428	253	1055	471	22	115	98	96	193	164
d1, Uniform Delay [s]	13.67	10.84	9.06	13.11	10.13	8.43	16.26	14.68	14.94	15.14	0.00	14.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	0.75	0.04	1.24	0.58	0.04	6.64	0.09	1.76	1.83	0.00	1.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.65	0.04	0.45	0.61	0.04	0.28	0.03	0.31	0.31	0.00	0.42
d, Delay for Lane Group [s/veh]	14.88	11.59	9.09	14.35	10.71	8.47	22.90	14.78	16.70	16.98	0.00	15.68
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	1.56	0.07	0.69	1.50	0.08	0.08	0.02	0.22	0.23	0.00	0.46
50th-Percentile Queue Length [ft/ln]	12.72	38.99	1.67	17.27	37.54	1.95	1.93	0.50	5.58	5.65	0.00	11.43
95th-Percentile Queue Length [veh/ln]	0.92	2.81	0.12	1.24	2.70	0.14	0.14	0.04	0.40	0.41	0.00	0.82
95th-Percentile Queue Length [ft/ln]	22.90	70.18	3.00	31.08	67.57	3.51	3.48	0.91	10.04	10.17	0.00	20.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.88	11.59	9.09	14.35	10.71	8.47	22.90	14.78	16.70	16.98	0.00	15.68
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.90			11.18			17.51			16.08		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.94											
Intersection LOS	B											
Intersection V/C	0.545											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.371

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	483	80	41	576	54	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	198	0	0	73	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	681	80	41	649	54	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	193	23	12	184	15	14
Total Analysis Volume [veh/h]	773	91	47	737	61	57
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	42	39	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	0	0	8	8
g / C, Green / Cycle	0.73	0.73	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.07	0.39	0.08	0.04
s, saturation flow rate [veh/h]	3618	1615	708	1900	732	1615
c, Capacity [veh/h]	2642	1180	120	0	194	220
d1, Uniform Delay [s]	2.77	2.31	30.01	0.00	26.48	23.20
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.13	9.34	0.00	0.92	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

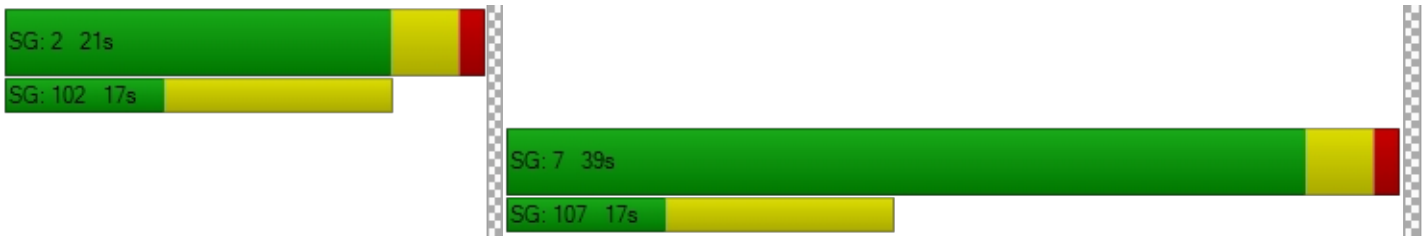
X, volume / capacity	0.29	0.08	0.39	0.00	0.32	0.26
d, Delay for Lane Group [s/veh]	3.06	2.44	39.35	0.00	27.40	23.82
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.90	0.20	1.01	0.00	0.85	0.72
50th-Percentile Queue Length [ft/ln]	22.53	4.96	25.13	0.00	21.36	17.93
95th-Percentile Queue Length [veh/ln]	1.62	0.36	1.81	0.00	1.54	1.29
95th-Percentile Queue Length [ft/ln]	40.55	8.92	45.24	0.00	38.45	32.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.06	2.44	39.35	0.00	27.40	23.82
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	2.99		2.36		25.67	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.23					
Intersection LOS	A					
Intersection V/C	0.371					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	203.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	118.777

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	54	0	19	73	159	0	0	263	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	184	4	324	403	696	13	3	595	290
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	47	1	84	104	180	3	1	154	75
Total Analysis Volume [veh/h]	10	4	3	190	4	334	416	718	13	3	614	299
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	61	0	0	61	0	13	23	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	57	57	9	25	25	1	17	17
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.10	0.27	0.27	0.01	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.52	0.00	103.36	0.21	0.23	0.20	0.01	0.00	0.17	0.19
s, saturation flow rate [veh/h]	27	1615	2	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	81	969	76	969	175	971	433	10	640	286
d1, Uniform Delay [s]	24.28	7.62	46.87	9.59	42.90	31.73	25.64	47.05	38.75	39.09
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	0.00	733.62	0.21	621.80	5.05	0.13	15.33	26.75	65.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

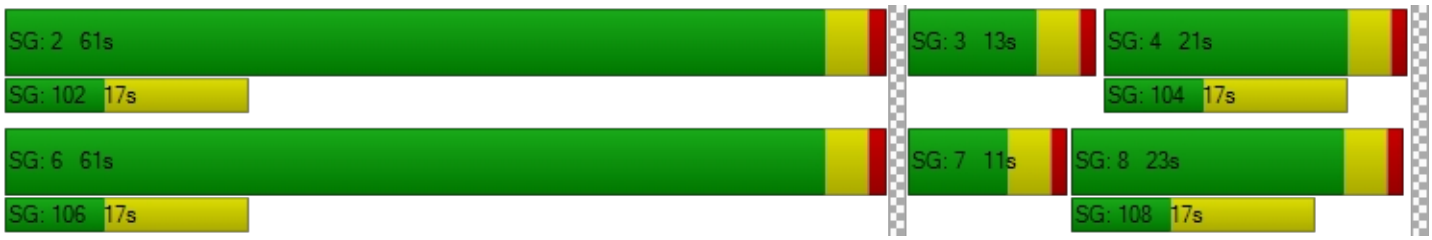
X, volume / capacity	0.17	0.00	2.55	0.34	2.37	0.74	0.03	0.30	0.96	1.05
d, Delay for Lane Group [s/veh]	25.27	7.62	780.49	9.80	664.70	36.78	25.77	62.38	65.50	104.79
Lane Group LOS	C	A	F	A	F	D	C	E	E	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.02	17.30	3.29	34.35	8.04	0.23	0.11	9.33	11.75
50th-Percentile Queue Length [ft/ln]	6.03	0.59	432.61	82.21	858.65	200.98	5.77	2.84	233.37	293.82
95th-Percentile Queue Length [veh/ln]	0.43	0.04	31.15	5.92	53.98	12.69	0.42	0.20	14.35	17.77
95th-Percentile Queue Length [ft/ln]	10.85	1.05	778.69	147.97	1349.40	317.23	10.38	5.10	358.64	444.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.27	25.27	7.62	780.49	780.49	9.80	664.70	36.78	25.77	62.38	65.50	104.79
Movement LOS	C	C	A	F	F	A	F	D	C	E	E	F
d_A, Approach Delay [s/veh]	22.16			292.97			264.39			78.31		
Approach LOS	C			F			F			E		
d_I, Intersection Delay [s/veh]	203.24											
Intersection LOS	F											
Intersection V/C	118.777											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 8 Opening Year (2020) With Project Evening Peak Hour - Alternative 1

Report File: C:\...\PMOYW1.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	1.291	77.6	E
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.058	16.6	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.655	5.6	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	717.9	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	1.143	175.4	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.057	11.0	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.539	6.5	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.632	14.2	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.000	10.7	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.758	52.0	F
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.036	11.4	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.362	20.1	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.678	16.6	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.869	3.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	30.359	320.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	77.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.291

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	159	122	88	161	0	0	1	2	275	2	211
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1333	200	400	1129	15	21	9	23	338	16	367
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	345	52	103	292	4	5	2	6	87	4	95
Total Analysis Volume [veh/h]	14	1378	207	414	1168	16	22	9	24	350	17	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	23	51	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	35	35	19	52	52	29	29	29
g / C, Green / Cycle	0.02	0.37	0.37	0.20	0.54	0.54	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.43	0.23	0.31	0.31	0.30	0.47	0.24
s, saturation flow rate [veh/h]	1810	1900	1815	1810	1900	1891	185	784	1615
c, Capacity [veh/h]	44	700	668	363	1034	1029	109	313	493
d1, Uniform Delay [s]	45.70	30.09	30.09	38.09	14.37	14.39	27.30	36.54	30.06
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.05	82.63	91.73	71.30	2.31	2.33	3.55	85.14	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	1.15	1.17	1.14	0.57	0.57	0.50	1.17	0.77
d, Delay for Lane Group [s/veh]	49.75	112.73	121.82	109.38	16.68	16.72	30.85	121.68	32.65
Lane Group LOS	D	F	F	F	B	B	C	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.37	31.36	31.64	15.46	8.54	8.53	0.99	14.78	8.04
50th-Percentile Queue Length [ft/ln]	9.32	783.89	791.11	386.62	213.48	213.18	24.65	369.41	201.10
95th-Percentile Queue Length [veh/ln]	0.67	44.44	45.29	23.43	13.33	13.32	1.78	23.05	12.70
95th-Percentile Queue Length [ft/ln]	16.78	1111.01	1132.28	585.67	333.29	332.91	44.38	576.14	317.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.75	116.52	121.82	109.38	16.70	16.72	30.85	30.85	30.85	121.68	121.68	32.65
Movement LOS	D	F	F	F	B	B	C	C	C	F	F	C
d_A, Approach Delay [s/veh]	116.62			40.71			30.85			76.39		
Approach LOS	F			D			C			E		
d_I, Intersection Delay [s/veh]	77.59											
Intersection LOS	E											
Intersection V/C	1.291											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	267	3	0	438	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1531	3	0	1490	0	16
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	403	1	0	392	0	5
Total Analysis Volume [veh/h]	1612	4	0	1568	0	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.64
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.18
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	4.59
d_A, Approach Delay [s/veh]	0.00		0.00		16.64	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	5.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	241	10	3	435	82	29
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1505	10	3	1487	82	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	396	3	1	391	22	8
Total Analysis Volume [veh/h]	1584	11	3	1565	86	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	88	0	11	99	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	0	33	5	5
g / C, Green / Cycle	0.62	0.62	0.01	0.71	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.44	0.01	0.00	0.43	0.05	0.02
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2244	1002	11	2574	213	190
d1, Uniform Delay [s]	6.01	3.40	23.20	3.43	19.15	18.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	0.00	13.65	0.23	1.23	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.01	0.28	0.61	0.40	0.16
d, Delay for Lane Group [s/veh]	6.42	3.40	36.85	3.67	20.38	19.00
Lane Group LOS	A	A	D	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.02	0.02	0.07	1.28	0.85	0.29
50th-Percentile Queue Length [ft/ln]	75.47	0.60	1.77	31.89	21.18	7.30
95th-Percentile Queue Length [veh/ln]	5.43	0.04	0.13	2.30	1.53	0.53
95th-Percentile Queue Length [ft/ln]	135.85	1.08	3.18	57.40	38.13	13.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.42	3.40	36.85	3.67	20.38	19.00
Movement LOS	A	A	D	A	C	B
d_A, Approach Delay [s/veh]	6.40		3.73		20.02	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	5.61					
Intersection LOS	A					
Intersection V/C	0.655					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	717.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	248	0	0	517	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1484	0	0	1561	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	378	0	0	397	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1511	0	0	1590	15	24	0	37	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.02	0.00	0.00	0.02	0.00	1.37	0.00	0.11	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	14.12	0.00	0.00	13.03	0.00	0.00	584.35	717.86	389.54	220.60	352.40	19.44
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00	6.18	6.18	6.18	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.41	0.00	0.00	0.00	0.00	0.00	154.58	154.58	154.58	5.24	5.24	5.24
d_A, Approach Delay [s/veh]	0.17			0.00			466.19			69.73		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	9.06											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	175.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.143

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	93	56	251	220	47	26	21	23	107	38	130
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	485	531	714	698	75	58	85	26	416	90	606
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	125	137	185	180	19	15	22	7	108	23	0
Total Analysis Volume [veh/h]	62	502	549	738	722	78	60	88	27	430	93	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	27	0	43	57	0	0	21	0	0	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	400	400	400	400	400	400	400	400	400	400
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	27	27	116	116
g / C, Green / Cycle	0.04	0.30	0.30	0.30	0.56	0.56	0.07	0.07	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.41	0.20	0.05	0.03	0.06	0.29	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1824	1825	1615
c, Capacity [veh/h]	71	1086	485	543	2030	906	124	125	531	470
d1, Uniform Delay [s]	190.96	113.60	139.82	139.82	48.06	40.42	179.33	185.04	140.83	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.45	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.69	0.31	82.40	172.93	0.11	0.04	2.91	22.17	33.65	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

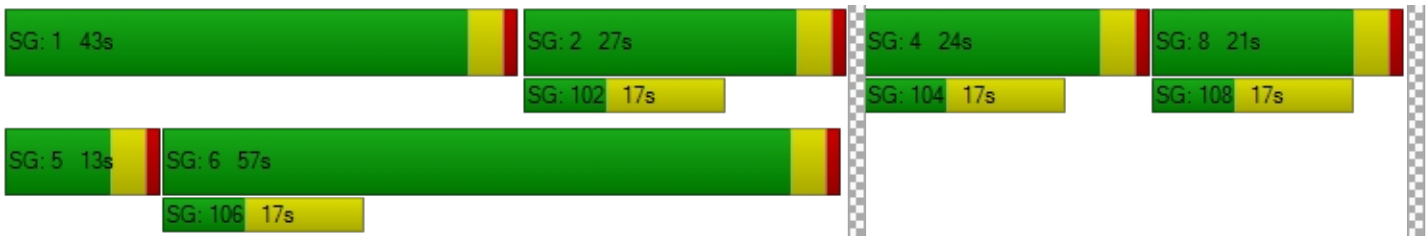
X, volume / capacity	0.87	0.46	1.13	1.36	0.36	0.09	0.48	0.92	0.99	0.00
d, Delay for Lane Group [s/veh]	216.65	113.91	222.22	312.75	48.17	40.46	182.23	207.21	174.48	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.17	21.85	62.96	84.20	20.72	3.77	6.34	13.11	60.56	0.00
50th-Percentile Queue Length [ft/ln]	179.28	546.37	1573.96	2105.12	517.89	94.23	158.50	327.77	1514.01	0.00
95th-Percentile Queue Length [veh/ln]	11.56	29.52	82.61	118.82	28.18	6.78	10.47	19.05	73.32	0.00
95th-Percentile Queue Length [ft/ln]	289.07	738.04	2065.29	2970.46	704.50	169.61	261.73	476.22	1833.07	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	216.65	113.91	222.22	312.75	48.17	40.46	182.23	207.21	207.21	174.48	174.48	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	173.06			174.73			198.65			174.48		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	175.39											
Intersection LOS	F											
Intersection V/C	1.143											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	210	1	4	488
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	34	703	1	4	845
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	185	0	1	222
Total Analysis Volume [veh/h]	0	36	740	1	4	889
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.03	0.00	0.00	9.13	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.18	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.51	0.00	0.00	0.34	0.00
d_A, Approach Delay [s/veh]	11.03		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	140	27	178	65	7	352
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	27	671	65	7	709
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	7	177	17	2	187
Total Analysis Volume [veh/h]	147	28	706	68	7	746
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	34	0	75	0	11	86
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	8	8	0	13
g / C, Green / Cycle	0.20	0.20	0.32	0.32	0.01	0.49
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.20	0.04	0.00	0.21
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	359	320	1171	523	26	1782
d1, Uniform Delay [s]	9.06	8.47	7.36	6.18	12.62	4.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.12	0.50	0.11	5.29	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

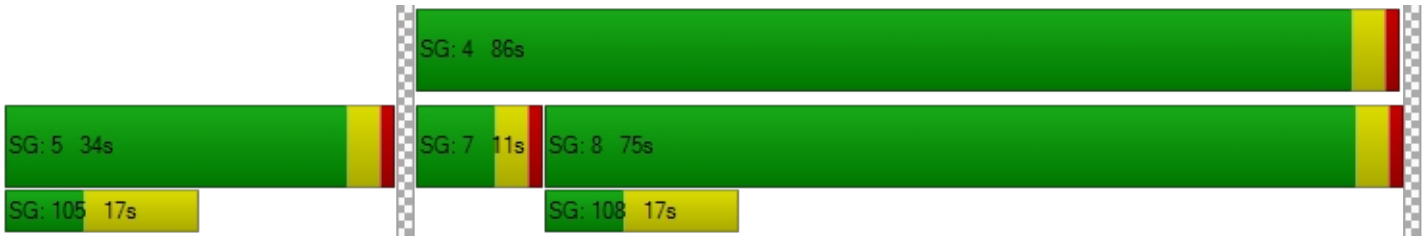
X, volume / capacity	0.41	0.09	0.60	0.13	0.27	0.42
d, Delay for Lane Group [s/veh]	9.81	8.58	7.86	6.29	17.92	4.35
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.53	0.09	0.94	0.16	0.07	0.39
50th-Percentile Queue Length [ft/ln]	13.28	2.29	23.52	3.88	1.70	9.75
95th-Percentile Queue Length [veh/ln]	0.96	0.16	1.69	0.28	0.12	0.70
95th-Percentile Queue Length [ft/ln]	23.90	4.12	42.33	6.98	3.05	17.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.81	8.58	7.86	6.29	17.92	4.35
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.61		7.72		4.48	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.48					
Intersection LOS	A					
Intersection V/C	0.539					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	137	0	143	108	385	0	0	214	112
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	6	68	46	3	175	78	85	43	24	63	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	6	68	183	3	318	186	470	43	24	277	136
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	2	18	49	1	84	49	125	12	7	74	36
Total Analysis Volume [veh/h]	121	6	72	194	3	338	198	499	48	27	294	145
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	73	0	0	73	0	11	36	0	11	36	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	40	40	40	40	40	40	40	40	40	40
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	14	6	12	12	2	8	8
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.16	0.30	0.30	0.05	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.14	0.21	0.11	0.14	0.03	0.01	0.12	0.12
s, saturation flow rate [veh/h]	1056	1634	1342	1617	1810	3618	1615	1810	1900	1694
c, Capacity [veh/h]	323	584	554	578	282	1087	485	84	363	324
d1, Uniform Delay [s]	17.02	8.80	12.26	10.61	16.23	11.51	10.22	18.72	15.08	15.14
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.10	0.38	0.96	3.19	0.30	0.09	2.19	1.80	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

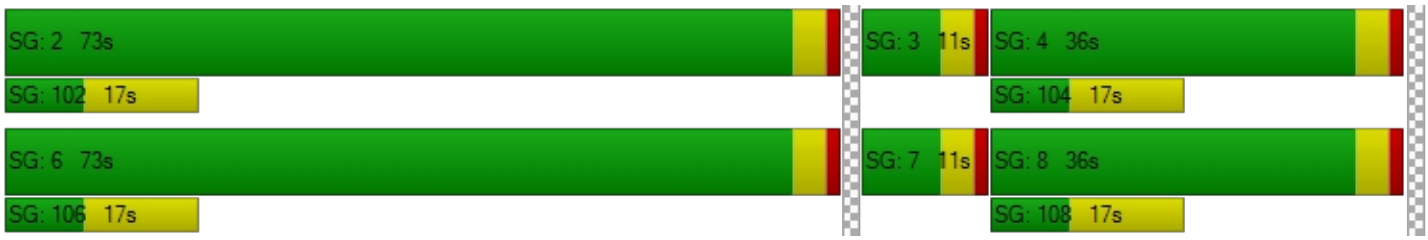
X, volume / capacity	0.37	0.13	0.35	0.59	0.70	0.46	0.10	0.32	0.63	0.65
d, Delay for Lane Group [s/veh]	17.73	8.90	12.64	11.58	19.42	11.81	10.31	20.91	16.88	17.33
Lane Group LOS	B	A	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.99	0.37	1.24	2.03	1.72	1.48	0.26	0.27	1.79	1.68
50th-Percentile Queue Length [ft/ln]	24.85	9.29	30.90	50.66	42.89	37.12	6.45	6.63	44.87	42.12
95th-Percentile Queue Length [veh/ln]	1.79	0.67	2.22	3.65	3.09	2.67	0.46	0.48	3.23	3.03
95th-Percentile Queue Length [ft/ln]	44.72	16.71	55.61	91.18	77.20	66.81	11.60	11.94	80.77	75.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.73	8.90	8.90	12.64	11.58	11.58	19.42	11.81	10.31	20.91	16.98	17.33
Movement LOS	B	A	A	B	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.27			11.96			13.74			17.32		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.16											
Intersection LOS	B											
Intersection V/C	0.632											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	522	0	0	326
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	189	10	2	110
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	711	10	2	436
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	187	3	1	115
Total Analysis Volume [veh/h]	0	0	748	11	2	459
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.72	0.00	0.00	9.19	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.17	0.00
d_A, Approach Delay [s/veh]	10.72		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	52.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	63	0	11	0	0	0	0	88	101	4	49	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	1	12	3	4	5	7	414	198	4	217	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	0	3	1	1	1	2	114	55	1	60	3
Total Analysis Volume [veh/h]	211	1	13	3	4	6	8	458	219	4	240	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.76	0.00	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	52.04	51.21	45.94	18.33	19.22	9.84	7.74	0.00	0.00	8.91	0.00	0.00
Movement LOS	F	F	E	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	6.12	6.12	6.12	0.10	0.10	0.10	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	153.07	153.07	153.07	2.62	2.62	2.62	0.40	0.40	0.40	0.33	0.33	0.33
d_A, Approach Delay [s/veh]	51.68			14.69			0.09			0.14		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	10.10											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	130	101	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	54	99	6	20	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	184	200	6	20	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	48	53	2	5	7
Total Analysis Volume [veh/h]	9	194	211	6	21	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.03
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	0.00	11.35	9.47
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.11	0.10
95th-Percentile Queue Length [ft/ln]	0.50	0.00	0.00	0.00	2.78	2.60
d_A, Approach Delay [s/veh]	0.34		0.00		10.27	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.22					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.362

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	533	427	23	39	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	61	86	20	70	88
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	594	513	43	109	181
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	183	158	13	34	56
Total Analysis Volume [veh/h]	152	733	633	53	135	223
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.01	0.01	0.00	0.36	0.33
d_M, Delay for Movement [s/veh]	9.70	0.00	0.00	0.00	20.06	12.77
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.59	0.00	0.00	0.00	1.62	1.41
95th-Percentile Queue Length [ft/ln]	14.81	0.00	0.00	0.00	40.43	35.32
d_A, Approach Delay [s/veh]	1.67		0.00		15.52	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.64					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	407	163	76	441	10	9	6	17	82	5	227
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	72	0	0	168	6	15	0	58	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	479	163	76	609	16	24	6	75	82	5	227
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	149	51	24	190	5	7	2	23	26	2	71
Total Analysis Volume [veh/h]	54	597	203	95	759	20	30	7	94	102	6	283
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	25	0	16	30	0	11	68	0	11	68	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	11	11	5	13	13	2	7	7	5	10	10
g / C, Green / Cycle	0.08	0.25	0.25	0.11	0.28	0.28	0.05	0.16	0.16	0.11	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.13	0.05	0.21	0.01	0.02	0.00	0.06	0.06	0.00	0.18
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	141	915	408	200	1032	461	90	305	259	207	428	364
d1, Uniform Delay [s]	19.38	14.78	14.12	18.47	14.30	11.44	20.31	15.64	16.54	18.38	13.32	16.09
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.70	0.79	0.94	1.76	1.04	0.04	2.15	0.03	0.85	1.81	0.01	3.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.65	0.50	0.48	0.74	0.04	0.33	0.02	0.36	0.49	0.01	0.78
d, Delay for Lane Group [s/veh]	21.08	15.57	15.05	20.23	15.34	11.48	22.45	15.67	17.39	20.20	13.33	19.71
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.53	2.34	1.56	0.90	2.96	0.12	0.32	0.05	0.80	0.96	0.04	2.63
50th-Percentile Queue Length [ft/ln]	13.34	58.45	38.98	22.48	74.10	3.09	8.00	1.36	19.97	24.08	1.03	65.72
95th-Percentile Queue Length [veh/ln]	0.96	4.21	2.81	1.62	5.34	0.22	0.58	0.10	1.44	1.73	0.07	4.73
95th-Percentile Queue Length [ft/ln]	24.02	105.22	70.17	40.46	133.38	5.56	14.41	2.45	35.94	43.34	1.86	118.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.08	15.57	15.05	20.23	15.34	11.48	22.45	15.67	17.39	20.20	13.33	19.71
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.80			15.78			18.46			19.74		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.63											
Intersection LOS	B											
Intersection V/C	0.678											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.869

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	645	71	95	425	57	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	100	0	0	226	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	745	71	95	651	57	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	201	19	26	176	15	9
Total Analysis Volume [veh/h]	805	77	103	703	62	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	51	0	0	124	69	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	0	0	3	3
g / C, Green / Cycle	0.41	0.41	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.22	0.05	0.15	0.37	0.08	0.02
s, saturation flow rate [veh/h]	3618	1615	687	1900	756	1615
c, Capacity [veh/h]	1488	664	387	0	435	257
d1, Uniform Delay [s]	4.15	3.39	9.31	0.00	8.84	6.74
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.08	1.68	0.00	0.15	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

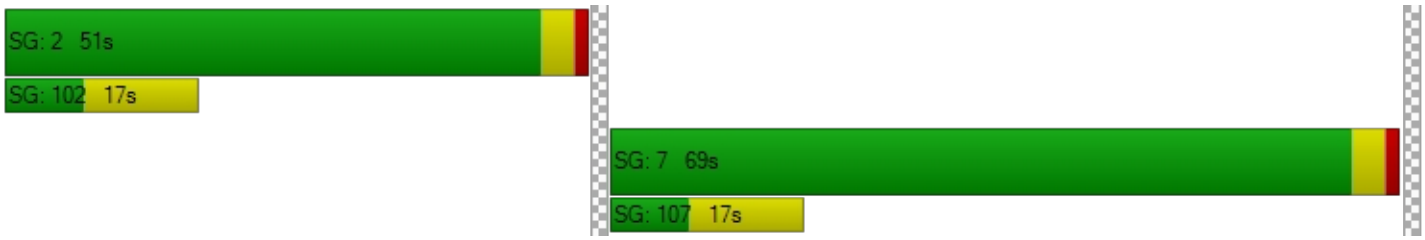
X, volume / capacity	0.54	0.12	0.27	0.00	0.14	0.15
d, Delay for Lane Group [s/veh]	4.46	3.47	11.00	0.00	8.99	7.00
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.14	0.03	0.45	0.00	0.15	0.07
50th-Percentile Queue Length [ft/ln]	3.44	0.64	11.32	0.00	3.71	1.87
95th-Percentile Queue Length [veh/ln]	0.25	0.05	0.82	0.00	0.27	0.13
95th-Percentile Queue Length [ft/ln]	6.19	1.16	20.38	0.00	6.68	3.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.46	3.47	11.00	0.00	8.99	7.00
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.37		1.41		8.23	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.25					
Intersection LOS	A					
Intersection V/C	0.869					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	320.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	30.359

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	139	0	87	34	294	0	0	188	66
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	305	2	431	561	740	4	2	648	247
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	81	1	115	150	197	1	1	173	66
Total Analysis Volume [veh/h]	3	2	2	326	2	460	599	790	4	2	692	264
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	68	0	0	68	0	25	36	0	11	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	64	64	64	64	21	39	39	0	18	18
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.18	0.34	0.34	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.12	0.00	26.67	0.28	0.33	0.22	0.00	0.00	0.19	0.16
s, saturation flow rate [veh/h]	43	1615	12	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	74	897	69	897	332	1215	542	9	570	254
d1, Uniform Delay [s]	28.44	11.41	57.60	15.94	47.07	32.52	25.48	57.13	48.55	48.55
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.00	1718.12	0.46	365.63	2.71	0.02	12.77	112.14	66.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

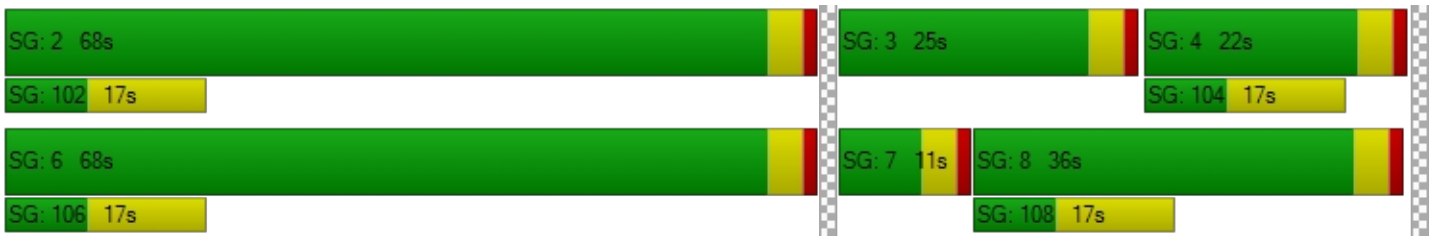
X, volume / capacity	0.07	0.00	4.75	0.51	1.81	0.65	0.01	0.23	1.21	1.04
d, Delay for Lane Group [s/veh]	28.82	11.42	1775.71	16.40	412.70	35.23	25.51	69.90	160.69	115.31
Lane Group LOS	C	B	F	B	F	D	C	E	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	0.02	34.99	7.39	43.11	9.74	0.08	0.09	17.01	11.98
50th-Percentile Queue Length [ft/ln]	2.37	0.57	874.84	184.85	1077.69	243.42	1.93	2.22	425.22	299.53
95th-Percentile Queue Length [veh/ln]	0.17	0.04	62.99	11.85	67.19	14.85	0.14	0.16	25.95	17.98
95th-Percentile Queue Length [ft/ln]	4.27	1.03	1574.71	296.33	1679.78	371.36	3.48	4.00	648.79	449.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.82	28.82	11.42	1775.71	1775.71	16.40	412.70	35.23	25.51	69.90	160.69	115.31
Movement LOS	C	C	B	F	F	B	F	D	C	E	F	F
d_A, Approach Delay [s/veh]	23.85			748.70			197.51			148.00		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	320.11											
Intersection LOS	F											
Intersection V/C	30.359											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 9 Opening Year (2020) With Project Morning Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\AMOYW1-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.647	17.0	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.637	5.3	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.697	27.0	C
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.513	6.0	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.712	25.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.647

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	143	237	195	122	0	0	2	8	76	1	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	718	288	268	1060	8	22	10	28	141	5	121
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	211	85	79	311	2	6	3	8	41	1	36
Total Analysis Volume [veh/h]	18	844	338	315	1246	9	26	12	33	166	6	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	26	26	13	38	38	13	13	13	13
g / C, Green / Cycle	0.03	0.40	0.40	0.20	0.58	0.58	0.21	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.21	0.17	0.33	0.33	0.02	0.03	0.12	0.09
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1895	1259	1682	1383	1625
c, Capacity [veh/h]	55	1463	653	370	1100	1097	227	347	319	335
d1, Uniform Delay [s]	30.89	15.04	14.58	24.91	8.61	8.62	27.37	21.04	26.66	22.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.44	1.66	2.92	5.53	2.15	2.16	0.22	0.17	1.32	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

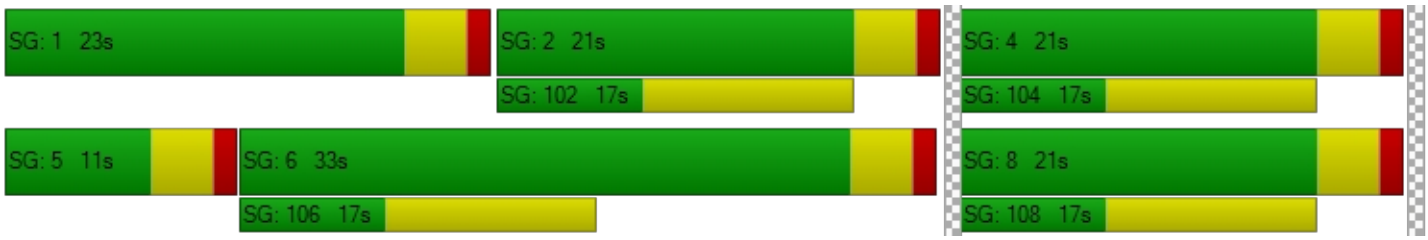
X, volume / capacity	0.33	0.58	0.52	0.85	0.57	0.57	0.11	0.13	0.52	0.44
d, Delay for Lane Group [s/veh]	34.33	16.70	17.50	30.43	10.77	10.78	27.59	21.21	27.98	23.45
Lane Group LOS	C	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.32	4.67	3.89	4.95	5.09	5.08	0.37	0.55	2.47	1.95
50th-Percentile Queue Length [ft/ln]	7.96	116.74	97.33	123.72	127.16	127.07	9.32	13.64	61.66	48.73
95th-Percentile Queue Length [veh/ln]	0.57	8.21	7.01	8.60	8.79	8.78	0.67	0.98	4.44	3.51
95th-Percentile Queue Length [ft/ln]	14.33	205.33	175.19	214.92	219.63	219.51	16.77	24.54	110.98	87.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.33	16.70	17.50	30.43	10.78	10.78	27.59	21.21	21.21	27.98	23.45	23.45
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.19			14.72			23.55			25.84		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.97											
Intersection LOS	B											
Intersection V/C	0.647											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	473	1	1	190	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1159	1	1	1234	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	335	0	0	357	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1341	1	1	1428	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	21	21	0	20	20	2	2	2	2
g / C, Green / Cycle	0.04	0.61	0.61	0.00	0.57	0.57	0.04	0.04	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.37	0.00	0.00	0.39	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	74	2218	990	4	2077	927	205	71	205	83
d1, Uniform Delay [s]	16.40	4.19	2.64	17.53	5.27	3.21	17.59	16.27	17.59	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.37	0.27	0.00	35.92	0.41	0.01	0.06	1.99	0.01	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.60	0.00	0.27	0.69	0.01	0.03	0.27	0.00	0.00
d, Delay for Lane Group [s/veh]	18.76	4.45	2.64	53.45	5.68	3.22	17.65	18.27	17.60	0.00
Lane Group LOS	B	A	A	D	A	A	B	B	B	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.20	1.03	0.00	0.04	1.62	0.02	0.04	0.16	0.01	0.00
50th-Percentile Queue Length [ft/ln]	4.98	25.87	0.03	1.08	40.40	0.42	1.12	4.08	0.18	0.00
95th-Percentile Queue Length [veh/ln]	0.36	1.86	0.00	0.08	2.91	0.03	0.08	0.29	0.01	0.00
95th-Percentile Queue Length [ft/ln]	8.97	46.57	0.05	1.95	72.72	0.75	2.01	7.34	0.33	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.76	4.45	2.64	53.45	5.68	3.22	17.65	18.27	18.27	17.60	0.00	0.00
Movement LOS	B	A	A	D	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	4.69			5.69			18.12			17.60		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.32											
Intersection LOS	A											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.697

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	196	93	109	64	18	43	30	37	39	8	235
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	421	374	640	618	38	61	68	52	321	52	562
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	113	100	171	165	10	16	18	14	86	14	0
Total Analysis Volume [veh/h]	34	451	400	685	662	41	65	73	56	344	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	38	48	0	15	21	0	15	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	38	53	22	55	55	6	9	11	14	14
g / C, Green / Cycle	0.04	0.40	0.55	0.23	0.58	0.58	0.06	0.09	0.12	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.25	0.19	0.18	0.03	0.04	0.07	0.10	0.03	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1765	3514	1900	1615
c, Capacity [veh/h]	81	1427	892	806	2096	936	111	162	408	279	237
d1, Uniform Delay [s]	44.28	19.94	12.66	35.11	10.31	8.65	43.50	42.34	41.22	35.71	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.46	0.58	1.63	2.63	0.40	0.09	4.83	8.52	4.80	0.35	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

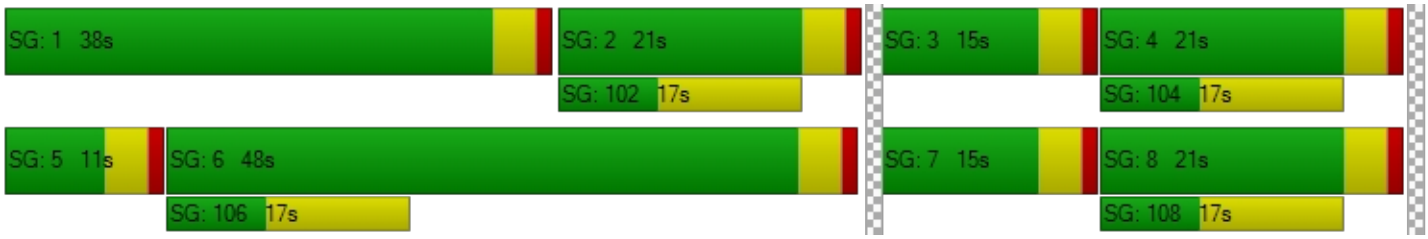
X, volume / capacity	0.42	0.32	0.45	0.85	0.32	0.04	0.59	0.80	0.84	0.20	0.00
d, Delay for Lane Group [s/veh]	47.73	20.52	14.29	37.74	10.71	8.73	48.33	50.86	46.02	36.06	0.00
Lane Group LOS	D	C	B	D	B	A	D	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.85	3.49	5.14	7.74	3.44	0.37	1.63	3.32	4.17	1.16	0.00
50th-Percentile Queue Length [ft/ln]	21.31	87.15	128.52	193.38	86.03	9.21	40.68	83.05	104.36	29.04	0.00
95th-Percentile Queue Length [veh/ln]	1.53	6.27	8.86	12.30	6.19	0.66	2.93	5.98	7.51	2.09	0.00
95th-Percentile Queue Length [ft/ln]	38.36	156.87	221.48	307.41	154.86	16.57	73.22	149.49	187.85	52.26	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.73	20.52	14.29	37.74	10.71	8.73	48.33	50.86	50.86	46.02	36.06	0.00
Movement LOS	D	C	B	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	18.75			23.99			50.01			44.62		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	27.01											
Intersection LOS	C											
Intersection V/C	0.697											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	79	0	3	0	0	0	0	44	47	14	76	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	2	5	10	8	12	2	142	98	15	179	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	1	2	3	2	4	1	44	30	5	55	2
Total Analysis Volume [veh/h]	153	2	6	12	10	15	2	176	121	19	221	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	5	5	5	5
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.11	0.00	0.01	0.01	0.00	0.17	0.02	0.12
s, saturation flow rate [veh/h]	1408	1678	1430	1718	1172	1773	1099	1891
c, Capacity [veh/h]	576	381	590	390	550	559	491	596
d1, Uniform Delay [s]	7.65	5.25	6.75	5.30	6.81	4.92	7.67	4.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.02	0.01	0.07	0.00	0.79	0.03	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.02	0.02	0.06	0.00	0.53	0.04	0.38
d, Delay for Lane Group [s/veh]	7.89	5.27	6.77	5.37	6.81	5.71	7.70	5.05
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.28	0.01	0.02	0.03	0.00	0.27	0.04	0.17
50th-Percentile Queue Length [ft/ln]	6.91	0.23	0.46	0.72	0.08	6.76	0.88	4.34
95th-Percentile Queue Length [veh/ln]	0.50	0.02	0.03	0.05	0.01	0.49	0.06	0.31
95th-Percentile Queue Length [ft/ln]	12.44	0.41	0.83	1.30	0.14	12.17	1.59	7.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.89	5.27	5.27	6.77	5.37	5.37	6.81	5.71	5.71	7.70	5.05	5.05
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.76			5.82			5.71			5.26		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	6.01											
Intersection LOS	A											
Intersection V/C	0.513											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	54	0	19	73	159	0	0	263	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	184	4	324	403	696	13	3	595	290
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	47	1	84	104	180	3	1	154	75
Total Analysis Volume [veh/h]	10	4	3	190	4	334	416	718	13	3	614	299
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	40	50	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	24	60	60	1	37	37
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.25	0.64	0.64	0.01	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.13	0.00	0.21	0.23	0.20	0.01	0.00	0.17	0.19
s, saturation flow rate [veh/h]	1486	1615	1435	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	411	377	367	443	377	461	2295	1025	11	1395	623
d1, Uniform Delay [s]	28.19	28.03	34.83	28.03	35.27	34.28	7.93	6.41	47.06	21.62	22.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.01	1.13	0.01	7.12	6.70	0.36	0.02	12.09	1.01	2.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

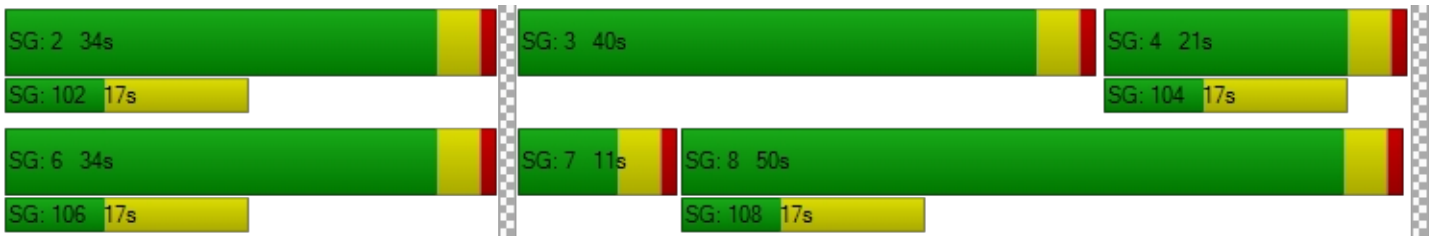
X, volume / capacity	0.03	0.01	0.52	0.01	0.89	0.90	0.31	0.01	0.27	0.44	0.48
d, Delay for Lane Group [s/veh]	28.22	28.03	35.97	28.04	42.38	40.98	8.28	6.43	59.14	22.63	24.66
Lane Group LOS	C	C	D	C	D	D	A	A	E	C	C
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.05	4.10	0.07	8.06	9.93	3.14	0.09	0.11	5.12	5.34
50th-Percentile Queue Length [ft/ln]	6.22	1.33	102.41	1.77	201.57	248.36	78.41	2.37	2.70	127.98	133.56
95th-Percentile Queue Length [veh/ln]	0.45	0.10	7.37	0.13	12.72	15.10	5.65	0.17	0.19	8.83	9.13
95th-Percentile Queue Length [ft/ln]	11.20	2.39	184.34	3.18	317.99	377.58	141.14	4.27	4.86	220.75	228.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.22	28.22	28.03	35.97	28.04	42.38	40.98	8.28	6.43	59.14	22.63	24.66
Movement LOS	C	C	C	D	C	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	28.19			39.97			20.12			23.41		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	25.35											
Intersection LOS	C											
Intersection V/C	0.712											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 9 Opening Year (2020) With Project Evening Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\PMOYW1-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.956	39.7	D
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.638	6.0	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	1.002	39.0	D
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.735	8.1	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.917	35.2	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.956

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	159	122	88	161	0	0	1	2	275	2	211
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1333	200	400	1129	15	21	9	23	338	16	367
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	345	52	103	292	4	5	2	6	87	4	95
Total Analysis Volume [veh/h]	14	1378	207	414	1168	16	22	9	24	350	17	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	52	0	33	74	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	48	48	29	74	74	31	31	31	31
g / C, Green / Cycle	0.02	0.40	0.40	0.24	0.62	0.62	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.01	0.38	0.13	0.23	0.31	0.31	0.02	0.02	0.25	0.24
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1891	1003	1684	1398	1625
c, Capacity [veh/h]	42	1446	646	438	1176	1170	62	435	381	420
d1, Uniform Delay [s]	57.84	34.99	24.85	44.80	12.70	12.72	60.11	33.72	47.47	43.74
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.68	14.81	1.31	10.75	1.55	1.56	3.43	0.07	9.26	10.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.95	0.32	0.95	0.50	0.51	0.36	0.08	0.92	0.94
d, Delay for Lane Group [s/veh]	62.52	49.80	26.16	55.56	14.25	14.28	63.54	33.79	56.72	54.71
Lane Group LOS	E	D	C	E	B	B	E	C	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.47	22.05	4.30	13.34	8.97	8.95	0.73	0.74	11.64	12.76
50th-Percentile Queue Length [ft/ln]	11.84	551.28	107.62	333.51	224.15	223.80	18.24	18.62	290.93	319.11
95th-Percentile Queue Length [veh/ln]	0.85	29.75	7.71	19.33	13.88	13.86	1.31	1.34	17.23	18.62
95th-Percentile Queue Length [ft/ln]	21.31	743.81	192.68	483.27	346.92	346.47	32.83	33.51	430.79	465.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.52	49.80	26.16	55.56	14.26	14.28	63.54	33.79	33.79	56.72	54.71	54.71
Movement LOS	E	D	C	E	B	B	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	46.85			24.96			45.69			55.65		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	39.73											
Intersection LOS	D											
Intersection V/C	0.956											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	248	0	0	517	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1484	0	0	1561	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	378	0	0	397	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1511	0	0	1590	15	24	0	37	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	84	0	15	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	30	30	0	29	29	4	4	4	4
g / C, Green / Cycle	0.03	0.66	0.66	0.00	0.63	0.63	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.44	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1393	1615
c, Capacity [veh/h]	57	2381	1063	0	2267	1012	211	134	182	134
d1, Uniform Delay [s]	21.94	4.65	0.00	0.00	5.76	3.26	21.76	19.94	22.31	19.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.10	0.28	0.00	0.00	0.40	0.01	0.24	1.11	0.01	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.63	0.00	0.00	0.70	0.01	0.11	0.28	0.01	0.02
d, Delay for Lane Group [s/veh]	25.04	4.93	0.00	0.00	6.17	3.27	21.99	21.05	22.32	19.59
Lane Group LOS	C	A	A	A	A	A	C	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	2.05	0.00	0.00	2.84	0.03	0.24	0.38	0.01	0.03
50th-Percentile Queue Length [ft/ln]	5.57	51.35	0.00	0.00	71.07	0.77	6.12	9.45	0.26	0.73
95th-Percentile Queue Length [veh/ln]	0.40	3.70	0.00	0.00	5.12	0.06	0.44	0.68	0.02	0.05
95th-Percentile Queue Length [ft/ln]	10.03	92.42	0.00	0.00	127.92	1.38	11.02	17.02	0.46	1.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.04	4.93	0.00	0.00	6.17	3.27	21.99	21.05	21.05	22.32	19.59	19.59
Movement LOS	C	A	A	A	A	A	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	5.17			6.14			21.42			20.27		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	5.98											
Intersection LOS	A											
Intersection V/C	0.638											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.002

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	93	56	251	220	47	26	21	23	107	38	130
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	485	531	714	698	75	58	85	26	416	90	606
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	125	137	185	180	19	15	22	7	108	23	157
Total Analysis Volume [veh/h]	62	502	549	738	722	78	60	88	27	430	93	627
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	26	36	0	11	21	0	32	42	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	17	44	22	33	33	6	22	23	39	39
g / C, Green / Cycle	0.06	0.17	0.44	0.22	0.33	0.33	0.06	0.22	0.23	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.21	0.20	0.05	0.03	0.06	0.12	0.05	0.39
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1824	3514	1900	1615
c, Capacity [veh/h]	104	616	713	773	1204	537	103	398	814	747	635
d1, Uniform Delay [s]	45.99	39.97	23.60	38.51	27.81	23.39	46.01	32.62	33.65	19.37	30.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.35	11.33	7.83	7.69	2.21	0.57	5.17	0.40	0.53	0.07	14.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.81	0.77	0.95	0.60	0.15	0.58	0.29	0.53	0.12	0.99
d, Delay for Lane Group [s/veh]	51.34	51.30	31.43	46.19	30.03	23.96	51.17	33.01	34.18	19.45	44.15
Lane Group LOS	D	D	C	D	C	C	D	C	C	B	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.65	6.85	12.07	9.60	7.43	1.37	1.59	2.35	4.59	1.38	16.80
50th-Percentile Queue Length [ft/ln]	41.26	171.18	301.68	239.96	185.75	34.19	39.86	58.82	114.69	34.55	419.91
95th-Percentile Queue Length [veh/ln]	2.97	11.14	17.76	14.68	11.90	2.46	2.87	4.23	8.10	2.49	23.52
95th-Percentile Queue Length [ft/ln]	74.26	278.46	444.10	366.99	297.51	61.55	71.75	105.87	202.51	62.19	587.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.34	51.30	31.43	46.19	30.03	23.96	51.17	33.01	33.01	34.18	19.45	44.15
Movement LOS	D	D	C	D	C	C	D	C	C	C	B	D
d_A, Approach Delay [s/veh]	41.50			37.48			39.24			38.42		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	38.96											
Intersection LOS	D											
Intersection V/C	1.002											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.735

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	63	0	11	0	0	0	0	88	101	4	49	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	1	12	3	4	5	7	414	198	4	217	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	0	3	1	1	1	2	114	55	1	60	3
Total Analysis Volume [veh/h]	211	1	13	3	4	6	8	458	219	4	240	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	54	0	0	54	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	7	13	13	13	13
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.15	0.01	0.00	0.01	0.01	0.38	0.01	0.13
s, saturation flow rate [veh/h]	1427	1632	1422	1718	1144	1797	774	1883
c, Capacity [veh/h]	505	401	501	422	640	842	328	882
d1, Uniform Delay [s]	11.21	8.03	9.63	8.01	6.24	6.34	11.60	4.56
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.04	0.00	0.02	0.01	1.86	0.01	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

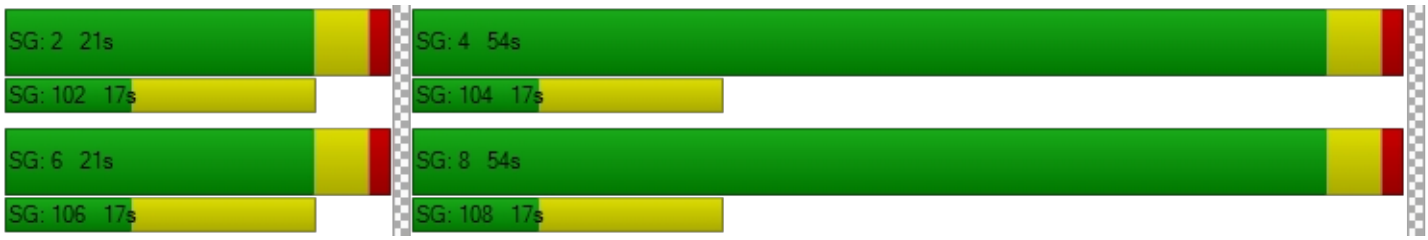
X, volume / capacity	0.42	0.03	0.01	0.02	0.01	0.80	0.01	0.29
d, Delay for Lane Group [s/veh]	11.77	8.06	9.63	8.03	6.24	8.20	11.61	4.74
Lane Group LOS	B	A	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.95	0.05	0.01	0.03	0.02	1.81	0.02	0.41
50th-Percentile Queue Length [ft/ln]	23.66	1.14	0.28	0.81	0.50	45.35	0.46	10.37
95th-Percentile Queue Length [veh/ln]	1.70	0.08	0.02	0.06	0.04	3.27	0.03	0.75
95th-Percentile Queue Length [ft/ln]	42.59	2.05	0.51	1.45	0.90	81.63	0.82	18.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.77	8.06	8.06	9.63	8.03	8.03	6.24	8.20	8.20	11.61	4.74	4.74
Movement LOS	B	A	A	A	A	A	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	11.54			8.40			8.17			4.85		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	8.09											
Intersection LOS	A											
Intersection V/C	0.735											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	35.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.917

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	139	0	87	34	294	0	0	188	66
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	305	2	431	561	740	4	2	648	247
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	81	1	115	150	197	1	1	173	66
Total Analysis Volume [veh/h]	3	2	2	326	2	460	599	790	4	2	692	264
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	44	54	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	30	30	35	57	57	0	23	23
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.35	0.57	0.57	0.00	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.23	0.00	0.28	0.33	0.22	0.00	0.00	0.19	0.16
s, saturation flow rate [veh/h]	1576	1615	1437	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	534	488	458	574	488	635	2076	927	7	821	366
d1, Uniform Delay [s]	24.43	24.39	34.61	24.39	34.07	31.49	11.63	9.11	49.68	36.99	35.76
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	2.06	0.00	9.55	7.76	0.53	0.01	18.55	10.31	11.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

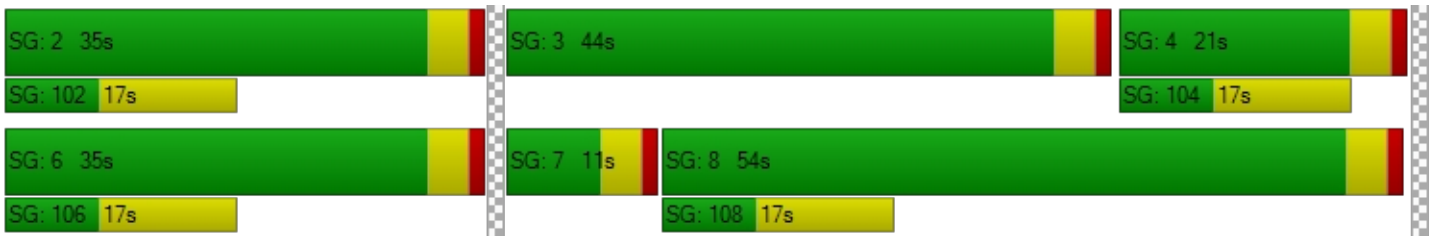
X, volume / capacity	0.01	0.00	0.71	0.00	0.94	0.94	0.38	0.00	0.27	0.84	0.72
d, Delay for Lane Group [s/veh]	24.44	24.40	36.67	24.39	43.61	39.26	12.16	9.12	68.23	47.29	47.36
Lane Group LOS	C	C	D	C	D	D	B	A	E	D	D
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	0.03	7.62	0.03	11.91	14.93	4.68	0.04	0.09	9.13	7.05
50th-Percentile Queue Length [ft/ln]	2.09	0.84	190.42	0.84	297.86	373.14	116.90	0.95	2.19	228.35	176.31
95th-Percentile Queue Length [veh/ln]	0.15	0.06	12.14	0.06	17.58	21.26	8.22	0.07	0.16	14.09	11.41
95th-Percentile Queue Length [ft/ln]	3.77	1.51	303.58	1.50	439.38	531.54	205.56	1.71	3.94	352.26	285.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.44	24.44	24.40	36.67	24.39	43.61	39.26	12.16	9.12	68.23	47.29	47.36
Movement LOS	C	C	C	D	C	D	D	B	A	E	D	D
d_A, Approach Delay [s/veh]	24.42			40.69			23.80			47.36		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	35.21											
Intersection LOS	D											
Intersection V/C	0.917											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 2

Viridian

Vistro File: C:\...\AME.vistro

Scenario 10 Opening Year (2020) With Project Morning Peak Hour - Alternative 2

Report File: C:\...\AMOYW2.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	0.901	26.5	C
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.025	12.6	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.672	4.2	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	208.4	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.970	100.0	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.018	10.2	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.359	5.2	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.414	12.7	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.002	9.0	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.301	16.2	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.010	10.1	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.089	14.2	B
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.545	11.9	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.372	4.2	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	127.124	168.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.901

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	150	237	189	105	0	0	2	8	76	1	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	725	288	262	1043	8	22	10	28	141	5	121
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	213	85	77	306	2	6	3	8	41	1	36
Total Analysis Volume [veh/h]	18	852	338	308	1226	9	26	12	33	166	6	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	27	0	17	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	23	23	13	34	34	17	17	17
g / C, Green / Cycle	0.03	0.36	0.36	0.20	0.53	0.53	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.01	0.33	0.33	0.17	0.33	0.33	0.19	0.23	0.09
s, saturation flow rate [veh/h]	1810	1900	1719	1810	1900	1895	364	734	1615
c, Capacity [veh/h]	57	683	618	356	998	995	170	299	419
d1, Uniform Delay [s]	30.88	19.87	19.93	25.33	10.88	10.89	20.02	23.30	19.59
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.18	18.54	20.67	6.33	2.89	2.90	1.63	1.75	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

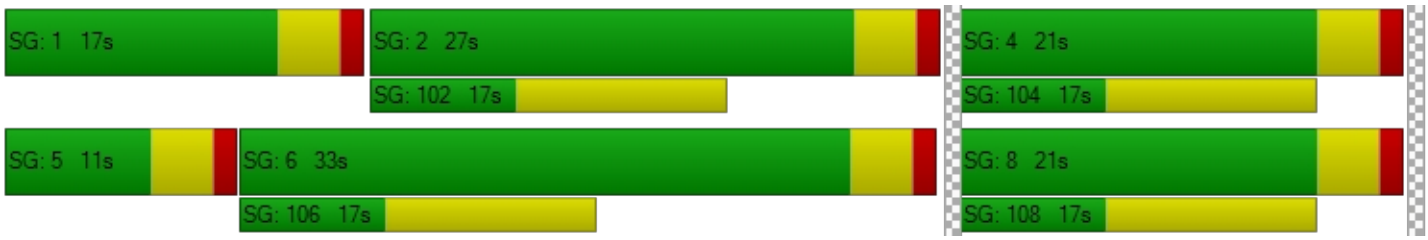
X, volume / capacity	0.32	0.91	0.92	0.86	0.62	0.62	0.42	0.58	0.34
d, Delay for Lane Group [s/veh]	34.06	38.41	40.59	31.66	13.77	13.79	21.65	25.04	20.07
Lane Group LOS	C	D	D	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.32	11.56	10.88	4.95	6.00	6.00	0.86	2.51	1.69
50th-Percentile Queue Length [ft/ln]	7.90	288.98	272.11	123.73	150.02	149.90	21.38	62.68	42.31
95th-Percentile Queue Length [veh/ln]	0.57	17.14	16.30	8.60	10.02	10.01	1.54	4.51	3.05
95th-Percentile Queue Length [ft/ln]	14.22	428.38	407.38	214.95	250.46	250.30	38.48	112.82	76.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.06	39.00	40.59	31.66	13.78	13.79	21.65	21.65	21.65	25.04	25.04	20.07
Movement LOS	C	D	D	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	39.37			17.35			21.65			22.79		
Approach LOS	D			B			C			C		
d_I, Intersection Delay [s/veh]	26.47											
Intersection LOS	C											
Intersection V/C	0.901											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1023	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	384	15	0	189	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1018	15	0	1212	0	10
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	268	5	0	319	0	3
Total Analysis Volume [veh/h]	1072	18	0	1276	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.57
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.89
d_A, Approach Delay [s/veh]	0.00		0.00		12.57	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	634	0	0	1024	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	396	20	16	173	17	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1030	20	16	1197	17	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	271	5	4	315	4	1
Total Analysis Volume [veh/h]	1084	21	17	1260	18	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	11	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	1	17	1	1
g / C, Green / Cycle	0.46	0.46	0.03	0.65	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.30	0.01	0.01	0.35	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1676	748	59	2354	72	64
d1, Uniform Delay [s]	5.31	3.77	12.21	2.42	12.04	11.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.02	2.65	0.19	1.81	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.03	0.29	0.54	0.25	0.05
d, Delay for Lane Group [s/veh]	5.73	3.78	14.86	2.61	13.85	12.24
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	0.02	0.11	0.06	0.11	0.02
50th-Percentile Queue Length [ft/ln]	20.96	0.59	2.81	1.55	2.71	0.43
95th-Percentile Queue Length [veh/ln]	1.51	0.04	0.20	0.11	0.20	0.03
95th-Percentile Queue Length [ft/ln]	37.72	1.06	5.07	2.80	4.88	0.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.73	3.78	14.86	2.61	13.85	12.24
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.70		2.77		13.62	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.21					
Intersection LOS	A					
Intersection V/C	0.672					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	208.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	416	1	1	189	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1102	1	1	1233	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	319	0	0	357	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1275	1	1	1427	12	6	0	19	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.00	0.01	0.00	0.21	0.00	0.05	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	12.92	0.00	0.00	11.55	0.00	0.00	145.38	208.42	27.59	125.18	200.85	17.34
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.01	0.00	0.00	0.96	0.96	0.96	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	3.78	0.00	0.00	0.14	0.07	0.00	24.10	24.10	24.10	2.44	2.44	2.44
d_A, Approach Delay [s/veh]	0.23			0.01			55.86			125.18		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	100.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.970

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	173	93	107	65	18	43	30	37	41	8	201
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	398	374	638	619	38	61	68	52	323	52	528
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	107	100	171	166	10	16	18	14	86	14	0
Total Analysis Volume [veh/h]	34	426	400	683	663	41	65	73	56	346	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	23	0	35	47	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	304	304	304	304	304	304	304	304	304	304
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	78	78	116	187	187	24	24	69	69
g / C, Green / Cycle	0.02	0.26	0.26	0.38	0.62	0.62	0.08	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.25	0.38	0.18	0.03	0.04	0.07	0.22	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1765	1822	1615
c, Capacity [veh/h]	43	930	415	692	2227	994	145	142	414	367
d1, Uniform Delay [s]	147.01	94.74	111.11	92.75	27.41	22.97	132.87	138.20	115.96	0.00
k, delay calibration	0.11	0.11	0.20	0.45	0.11	0.11	0.11	0.11	0.15	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.78	0.35	20.32	29.45	0.07	0.02	2.15	19.07	17.72	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

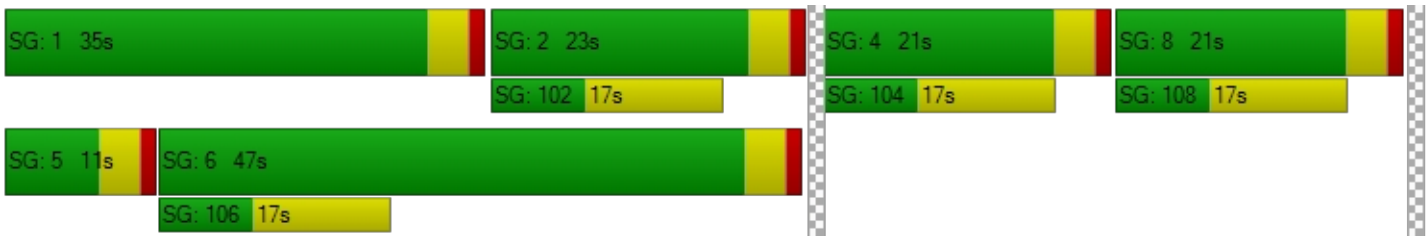
X, volume / capacity	0.78	0.46	0.96	0.99	0.30	0.04	0.45	0.91	0.97	0.00
d, Delay for Lane Group [s/veh]	172.79	95.10	131.42	122.20	27.48	22.98	135.02	157.26	133.68	0.00
Lane Group LOS	F	F	F	F	C	C	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.06	14.47	34.12	59.62	12.01	1.25	5.12	11.14	34.15	0.00
50th-Percentile Queue Length [ft/ln]	76.56	361.83	852.88	1490.57	300.22	31.17	128.03	278.54	853.76	0.00
95th-Percentile Queue Length [veh/ln]	5.51	20.71	43.69	72.29	17.69	2.24	8.83	16.62	43.73	0.00
95th-Percentile Queue Length [ft/ln]	137.80	517.81	1092.36	1807.16	442.31	56.11	220.81	415.40	1093.36	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	172.79	95.10	131.42	122.20	27.48	22.98	135.02	157.26	157.26	133.68	133.68	0.00
Movement LOS	F	F	F	F	C	C	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	115.06			73.99			149.81			133.68		
Approach LOS	F			E			F			F		
d_I, Intersection Delay [s/veh]	100.03											
Intersection LOS	F											
Intersection V/C	0.970											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	422	6	12	134
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	554	6	12	267
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	146	2	3	70
Total Analysis Volume [veh/h]	0	13	583	6	13	281
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	10.16	0.00	0.00	8.66	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.06	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.40	0.00	0.00	0.99	0.00
d_A, Approach Delay [s/veh]	10.16		0.00		0.38	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.27					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	132	0	0	133
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	10	306	128	14	109
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	10	438	128	14	242
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	3	115	34	4	64
Total Analysis Volume [veh/h]	39	11	461	135	15	255
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	21	0	33	0	11	44
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	7	7	1	11
g / C, Green / Cycle	0.09	0.09	0.32	0.32	0.03	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.13	0.08	0.01	0.07
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	163	145	1159	518	56	1945
d1, Uniform Delay [s]	9.09	8.96	5.69	5.41	10.17	2.47
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.22	0.22	0.26	2.49	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

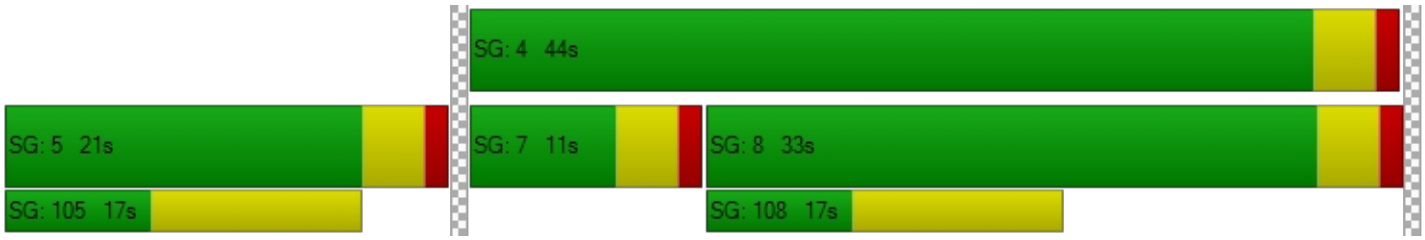
X, volume / capacity	0.24	0.08	0.40	0.26	0.27	0.13
d, Delay for Lane Group [s/veh]	9.84	9.18	5.91	5.68	12.66	2.50
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.04	0.34	0.21	0.08	0.01
50th-Percentile Queue Length [ft/ln]	3.37	0.92	8.45	5.17	2.06	0.20
95th-Percentile Queue Length [veh/ln]	0.24	0.07	0.61	0.37	0.15	0.01
95th-Percentile Queue Length [ft/ln]	6.06	1.66	15.21	9.30	3.71	0.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.84	9.18	5.91	5.68	12.66	2.50
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.70		5.86		3.06	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.24					
Intersection LOS	A					
Intersection V/C	0.359					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	67	0	43	58	83	0	0	80	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	3	18	16	6	52	155	81	80	49	39	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	18	83	6	95	213	164	80	49	119	101
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	5	23	2	27	60	46	22	14	33	28
Total Analysis Volume [veh/h]	34	3	20	93	7	107	239	184	90	55	133	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	22	0	0	48	77	0	0	29	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	4	7	17	17	6	6
g / C, Green / Cycle	0.09	0.09	0.12	0.18	0.47	0.47	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.05	0.13	0.05	0.06	0.06	0.08
s, saturation flow rate [veh/h]	1810	1647	1810	1810	3618	1615	1900	1635
c, Capacity [veh/h]	155	141	215	327	1689	754	336	289
d1, Uniform Delay [s]	15.56	15.48	14.95	14.12	5.46	5.49	13.23	13.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	0.54	1.37	3.16	0.03	0.07	0.67	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

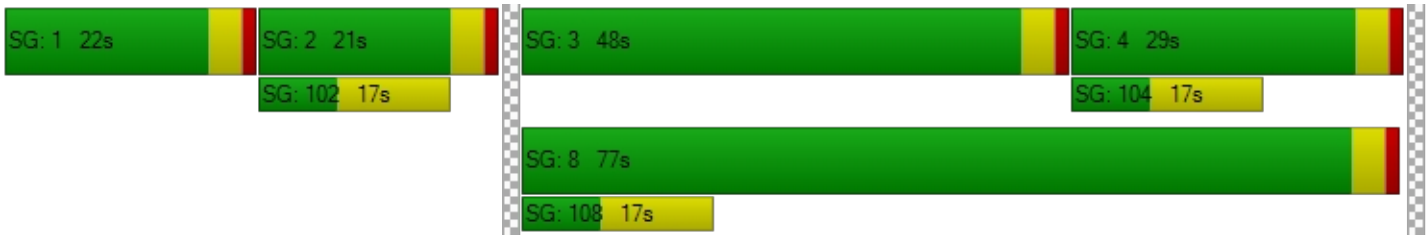
X, volume / capacity	0.22	0.16	0.43	0.73	0.11	0.12	0.37	0.43
d, Delay for Lane Group [s/veh]	16.26	16.02	16.32	17.28	5.49	5.56	13.89	14.37
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.17	0.67	1.78	0.25	0.25	0.78	0.80
50th-Percentile Queue Length [ft/ln]	6.27	4.23	16.82	44.38	6.24	6.34	19.42	20.06
95th-Percentile Queue Length [veh/ln]	0.45	0.30	1.21	3.20	0.45	0.46	1.40	1.44
95th-Percentile Queue Length [ft/ln]	11.28	7.62	30.28	79.89	11.23	11.41	34.96	36.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.26	16.02	16.02	16.32	0.00	0.00	17.28	5.49	5.56	0.00	13.93	14.37
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	16.16			16.32			11.00			14.13		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.71											
Intersection LOS	B											
Intersection V/C	0.414											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	151	0	0	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	95	20	4	126
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	246	20	4	286
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	65	5	1	75
Total Analysis Volume [veh/h]	0	2	259	21	4	301
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.00	0.00	0.00	7.79	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.17	0.00	0.00	0.23	0.00
d_A, Approach Delay [s/veh]	9.00		0.00		0.10	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.301

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	0	3	0	0	0	0	47	50	14	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	2	5	10	8	12	2	145	101	15	164	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	1	2	3	2	4	1	45	31	5	51	2
Total Analysis Volume [veh/h]	140	2	6	12	10	15	2	179	125	19	203	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.00	0.01	0.03	0.02	0.02	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	16.18	16.07	12.92	12.96	13.71	9.74	7.62	0.00	0.00	7.88	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.32	1.32	1.32	0.21	0.21	0.21	0.00	0.00	0.00	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	33.09	33.09	33.09	5.27	5.27	5.27	0.11	0.11	0.11	0.90	0.90	0.90
d_A, Approach Delay [s/veh]	16.04			11.86			0.05			0.66		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.14											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	49	60	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	64	50	14	7	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	113	110	14	7	8
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	30	29	4	2	2
Total Analysis Volume [veh/h]	19	119	116	15	7	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.49	0.00	0.00	0.00	10.11	8.86
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.98	0.00	0.00	0.00	0.74	0.64
d_A, Approach Delay [s/veh]	1.03		0.00		9.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.089

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	47	441	579	23	19	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	79	47	50	17	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	520	626	73	36	79
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	137	165	19	9	21
Total Analysis Volume [veh/h]	118	547	658	77	38	83
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.01	0.01	0.00	0.09	0.12
d_M, Delay for Movement [s/veh]	9.73	0.00	0.00	0.00	14.24	11.10
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.46	0.00	0.00	0.00	0.29	0.42
95th-Percentile Queue Length [ft/ln]	11.57	0.00	0.00	0.00	7.27	10.50
d_A, Approach Delay [s/veh]	1.73		0.00		12.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	446	15	106	546	4	0	3	11	28	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	61	138	0	0	60	15	6	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	584	15	106	606	19	6	3	28	28	0	64
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	156	4	28	162	5	2	1	7	7	0	17
Total Analysis Volume [veh/h]	80	625	16	113	648	20	6	3	30	30	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	63	0	25	65	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	9	9	5	10	10	0	2	2	2	3	3
g / C, Green / Cycle	0.11	0.26	0.26	0.14	0.29	0.29	0.01	0.06	0.06	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.01	0.06	0.18	0.01	0.00	0.00	0.02	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	205	959	428	253	1055	471	22	115	98	96	193	164
d1, Uniform Delay [s]	13.67	10.84	9.06	13.11	10.15	8.43	16.26	14.68	14.94	15.14	0.00	14.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	0.75	0.04	1.24	0.58	0.04	6.64	0.09	1.76	1.83	0.00	1.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.65	0.04	0.45	0.61	0.04	0.28	0.03	0.31	0.31	0.00	0.42
d, Delay for Lane Group [s/veh]	14.88	11.59	9.09	14.35	10.73	8.47	22.90	14.78	16.70	16.98	0.00	15.68
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	1.56	0.07	0.69	1.51	0.08	0.08	0.02	0.22	0.23	0.00	0.46
50th-Percentile Queue Length [ft/ln]	12.72	38.99	1.67	17.27	37.84	1.95	1.93	0.50	5.58	5.65	0.00	11.43
95th-Percentile Queue Length [veh/ln]	0.92	2.81	0.12	1.24	2.72	0.14	0.14	0.04	0.40	0.41	0.00	0.82
95th-Percentile Queue Length [ft/ln]	22.90	70.18	3.00	31.08	68.11	3.51	3.48	0.91	10.04	10.17	0.00	20.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.88	11.59	9.09	14.35	10.73	8.47	22.90	14.78	16.70	16.98	0.00	15.68
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.90			11.20			17.51			16.08		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.95											
Intersection LOS	B											
Intersection V/C	0.545											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	483	80	41	576	54	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	198	0	0	77	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	681	80	41	653	54	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	193	23	12	185	15	14
Total Analysis Volume [veh/h]	773	91	47	741	61	57
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	42	39	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	0	0	8	8
g / C, Green / Cycle	0.73	0.73	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.21	0.06	0.07	0.39	0.08	0.04
s, saturation flow rate [veh/h]	3618	1615	708	1900	730	1615
c, Capacity [veh/h]	2641	1179	120	0	194	221
d1, Uniform Delay [s]	2.78	2.32	30.01	0.00	26.47	23.19
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.13	9.34	0.00	0.92	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

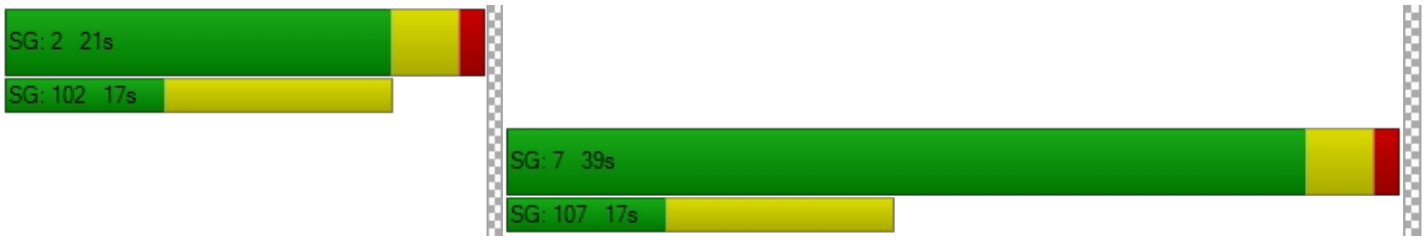
X, volume / capacity	0.29	0.08	0.39	0.00	0.32	0.26
d, Delay for Lane Group [s/veh]	3.06	2.44	39.35	0.00	27.39	23.80
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.90	0.20	1.01	0.00	0.85	0.72
50th-Percentile Queue Length [ft/ln]	22.59	4.97	25.13	0.00	21.36	17.92
95th-Percentile Queue Length [veh/ln]	1.63	0.36	1.81	0.00	1.54	1.29
95th-Percentile Queue Length [ft/ln]	40.67	8.95	45.24	0.00	38.44	32.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.06	2.44	39.35	0.00	27.39	23.80
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	3.00		2.35		25.66	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.22					
Intersection LOS	A					
Intersection V/C	0.372					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	168.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	127.124

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	56	0	21	73	157	0	0	229	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	186	4	326	403	694	13	3	561	290
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	48	1	84	104	179	3	1	145	75
Total Analysis Volume [veh/h]	10	4	3	192	4	336	416	716	13	3	579	299
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	62	0	0	62	0	17	27	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	58	58	58	58	13	29	29	1	17	17
g / C, Green / Cycle	0.58	0.58	0.58	0.58	0.13	0.29	0.29	0.01	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.53	0.00	111.45	0.21	0.23	0.20	0.01	0.00	0.16	0.19
s, saturation flow rate [veh/h]	26	1615	2	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	77	936	72	936	238	1066	476	10	610	272
d1, Uniform Delay [s]	25.24	8.84	49.37	11.15	43.42	31.02	25.08	49.52	41.16	41.58
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	0.00	807.79	0.23	339.48	3.38	0.11	15.40	25.99	83.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

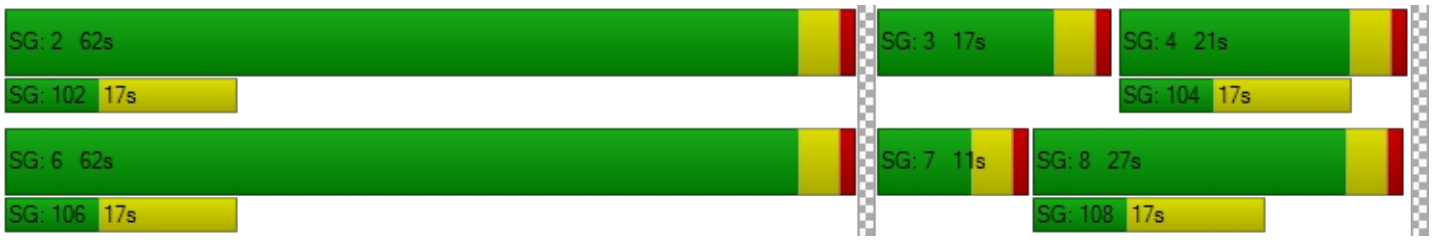
X, volume / capacity	0.18	0.00	2.71	0.36	1.75	0.67	0.03	0.30	0.95	1.10
d, Delay for Lane Group [s/veh]	26.36	8.84	857.15	11.38	382.90	34.40	25.19	64.93	67.15	125.15
Lane Group LOS	C	A	F	B	F	C	C	E	E	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.03	18.02	3.79	28.30	7.96	0.23	0.12	9.16	12.93
50th-Percentile Queue Length [ft/ln]	6.16	0.67	450.48	94.69	707.51	199.01	5.83	2.94	229.03	323.16
95th-Percentile Queue Length [veh/ln]	0.44	0.05	32.43	6.82	44.60	12.59	0.42	0.21	14.12	19.69
95th-Percentile Queue Length [ft/ln]	11.09	1.20	810.86	170.44	1115.04	314.69	10.49	5.30	353.12	492.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.36	26.36	8.84	857.15	857.15	11.38	382.90	34.40	25.19	64.93	67.15	125.15
Movement LOS	C	C	A	F	F	B	F	C	C	E	E	F
d_A, Approach Delay [s/veh]	23.27			322.98			160.91			86.83		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	168.14											
Intersection LOS	F											
Intersection V/C	127.124											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 10 Opening Year (2020) With Project Evening Peak Hour - Alternative 2

Report File: C:\...\PMOYW2.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Right	1.264	84.8	F
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.104	17.3	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.638	4.3	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	656.4	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	1.131	172.5	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.066	11.1	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.544	6.5	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.638	14.4	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.000	10.7	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.763	53.1	F
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.036	11.4	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.327	19.3	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.682	16.7	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.874	3.2	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	598.738	152.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	84.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.264

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	155	122	107	164	0	0	1	2	275	2	211
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1329	200	419	1132	15	21	9	23	338	16	367
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	344	52	108	293	4	5	2	6	87	4	95
Total Analysis Volume [veh/h]	16	1374	207	433	1171	16	22	9	24	350	17	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	48	0	29	66	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	44	44	25	66	66	39	39	39
g / C, Green / Cycle	0.02	0.37	0.37	0.21	0.55	0.55	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.43	0.24	0.31	0.31	0.40	0.47	0.24
s, saturation flow rate [veh/h]	1810	1900	1815	1810	1900	1891	138	783	1615
c, Capacity [veh/h]	46	697	665	378	1045	1040	87	313	525
d1, Uniform Delay [s]	57.63	38.08	38.08	47.58	17.72	17.74	33.69	44.27	35.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	83.66	92.76	73.26	2.25	2.27	7.45	85.31	1.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	1.15	1.17	1.15	0.57	0.57	0.63	1.17	0.72
d, Delay for Lane Group [s/veh]	62.11	121.74	130.84	120.84	19.97	20.01	41.14	129.58	37.74
Lane Group LOS	E	F	F	F	B	C	D	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	36.25	36.31	18.91	11.13	11.12	1.29	16.96	10.04
50th-Percentile Queue Length [ft/ln]	13.40	906.35	907.83	472.78	278.28	277.92	32.36	423.97	250.97
95th-Percentile Queue Length [veh/ln]	0.96	50.70	51.32	27.98	16.60	16.58	2.33	26.02	15.23
95th-Percentile Queue Length [ft/ln]	24.11	1267.44	1283.08	699.49	415.08	414.62	58.25	650.50	380.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.11	125.54	130.84	120.84	19.99	20.01	41.14	41.14	41.14	129.58	129.58	37.74
Movement LOS	E	F	F	F	B	C	D	D	D	F	F	D
d_A, Approach Delay [s/veh]	125.59			46.94			41.14			82.86		
Approach LOS	F			D			D			F		
d_I, Intersection Delay [s/veh]	84.79											
Intersection LOS	F											
Intersection V/C	1.264											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.104

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	252	26	0	441	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1516	26	0	1493	0	28
Peak Hour Factor	0.9500	0.8290	0.8290	0.9500	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	399	8	0	393	0	8
Total Analysis Volume [veh/h]	1596	31	0	1572	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.35
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.35
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	8.67
d_A, Approach Delay [s/veh]	0.00		0.00		17.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1264	0	0	1052	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	264	11	6	435	30	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1528	11	6	1487	30	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	402	3	2	391	8	4
Total Analysis Volume [veh/h]	1608	12	6	1565	32	15
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	88	0	11	99	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	1	33	3	3
g / C, Green / Cycle	0.65	0.65	0.01	0.75	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.44	0.01	0.00	0.43	0.02	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2345	1047	21	2712	127	113
d1, Uniform Delay [s]	4.95	2.77	21.76	2.45	19.54	19.37
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.00	7.49	0.20	1.03	0.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.01	0.29	0.58	0.25	0.13
d, Delay for Lane Group [s/veh]	5.31	2.77	29.25	2.65	20.57	19.90
Lane Group LOS	A	A	C	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.21	0.02	0.10	0.35	0.32	0.15
50th-Percentile Queue Length [ft/ln]	55.36	0.47	2.47	8.66	7.88	3.65
95th-Percentile Queue Length [veh/ln]	3.99	0.03	0.18	0.62	0.57	0.26
95th-Percentile Queue Length [ft/ln]	99.65	0.84	4.45	15.59	14.19	6.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.31	2.77	29.25	2.65	20.57	19.90
Movement LOS	A	A	C	A	C	B
d_A, Approach Delay [s/veh]	5.29		2.75		20.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.28					
Intersection LOS	A					
Intersection V/C	0.638					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	656.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	272	0	0	465	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1508	0	0	1509	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	384	0	0	384	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1536	0	0	1537	15	24	0	37	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.02	0.00	0.00	0.02	0.00	1.27	0.00	0.11	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	13.68	0.00	0.00	13.21	0.00	0.00	523.20	656.39	342.46	218.63	337.35	19.58
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.00	0.00	0.00	5.95	5.95	5.95	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.25	0.00	0.00	0.00	0.00	0.00	148.78	148.78	148.78	5.21	5.21	5.21
d_A, Approach Delay [s/veh]	0.16			0.00			413.57			69.34		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	8.12											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	172.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.131

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	103	56	220	199	47	26	21	23	117	38	144
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	495	531	683	677	75	58	85	26	426	90	620
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	128	137	177	175	19	15	22	7	110	23	0
Total Analysis Volume [veh/h]	62	512	549	706	700	78	60	88	27	441	93	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	27	37	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	403	403	403	403	403	403	403	403	403	403
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	28	28	119	119
g / C, Green / Cycle	0.04	0.30	0.30	0.30	0.56	0.56	0.07	0.07	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.39	0.19	0.05	0.03	0.06	0.29	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1824	1825	1615
c, Capacity [veh/h]	71	1078	481	539	2013	899	124	125	540	478
d1, Uniform Delay [s]	192.50	115.66	141.41	141.42	49.12	41.63	180.77	186.54	141.11	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.47	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.82	0.33	85.88	152.31	0.10	0.04	2.91	22.26	34.99	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

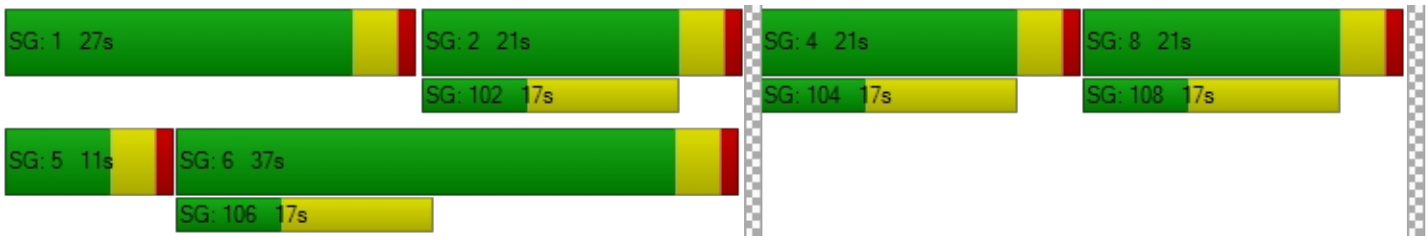
X, volume / capacity	0.87	0.48	1.14	1.31	0.35	0.09	0.48	0.92	0.99	0.00
d, Delay for Lane Group [s/veh]	218.32	115.98	227.30	293.73	49.22	41.67	183.68	208.80	176.10	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.23	22.63	63.36	80.94	20.33	3.84	6.39	13.22	62.55	0.00
50th-Percentile Queue Length [ft/ln]	180.71	565.70	1584.00	2023.40	508.28	96.11	159.79	330.39	1563.66	0.00
95th-Percentile Queue Length [veh/ln]	11.64	30.43	83.47	112.62	27.73	6.92	10.54	19.18	75.52	0.00
95th-Percentile Queue Length [ft/ln]	290.94	760.73	2086.83	2815.54	693.15	173.00	263.45	479.44	1887.91	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	218.32	115.98	227.30	293.73	49.22	41.67	183.68	208.80	208.80	176.10	176.10	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	176.05			165.15			200.19			176.10		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	172.45											
Intersection LOS	F											
Intersection V/C	1.131											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.066

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	210	20	16	488
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	40	703	20	16	845
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	11	185	5	4	222
Total Analysis Volume [veh/h]	0	42	740	21	17	889
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.07	0.01	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	11.09	0.00	0.00	9.27	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.21	0.00	0.00	0.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	5.32	0.00	0.00	1.51	0.00
d_A, Approach Delay [s/veh]	11.09		0.00		0.17	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	493	0	0	357
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	140	27	184	65	7	364
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	27	677	65	7	721
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	7	178	17	2	190
Total Analysis Volume [veh/h]	147	28	713	68	7	759
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	34	0	75	0	11	86
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	8	8	0	13
g / C, Green / Cycle	0.20	0.20	0.32	0.32	0.01	0.49
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.20	0.04	0.00	0.21
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	358	320	1179	526	26	1788
d1, Uniform Delay [s]	9.10	8.51	7.36	6.17	12.67	4.21
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.12	0.50	0.11	5.30	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

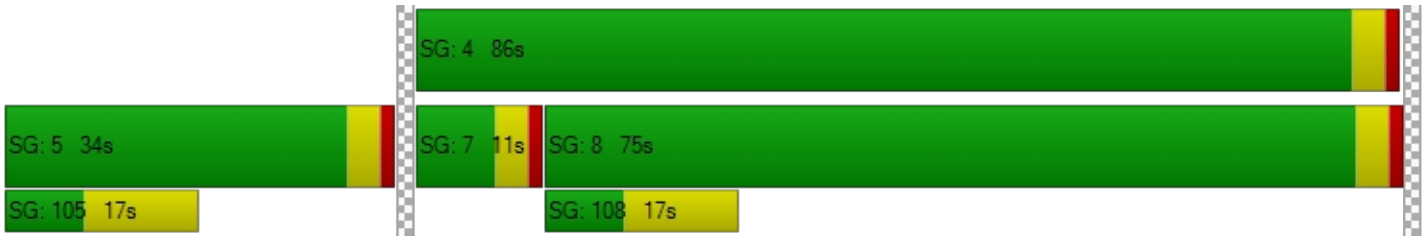
X, volume / capacity	0.41	0.09	0.60	0.13	0.27	0.42
d, Delay for Lane Group [s/veh]	9.85	8.62	7.86	6.28	17.97	4.37
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.54	0.09	0.95	0.16	0.07	0.40
50th-Percentile Queue Length [ft/ln]	13.38	2.31	23.83	3.88	1.70	10.00
95th-Percentile Queue Length [veh/ln]	0.96	0.17	1.72	0.28	0.12	0.72
95th-Percentile Queue Length [ft/ln]	24.09	4.16	42.90	6.99	3.06	18.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.85	8.62	7.86	6.28	17.97	4.37
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.66		7.72		4.49	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.48					
Intersection LOS	A					
Intersection V/C	0.544					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	137	0	143	108	385	0	0	214	112
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	6	68	46	3	180	81	88	43	24	70	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	6	68	183	3	323	189	473	43	24	284	136
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.8920	0.9410	0.9410	0.9410	0.8920	0.8920	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	2	18	49	1	86	50	126	12	7	75	36
Total Analysis Volume [veh/h]	121	6	72	194	3	343	201	503	48	27	302	145
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	11	21	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	15	6	12	12	2	8	8
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.15	0.30	0.30	0.05	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.12	0.05	0.14	0.21	0.11	0.14	0.03	0.01	0.12	0.13
s, saturation flow rate [veh/h]	1051	1634	1342	1617	1810	3618	1615	1810	1900	1697
c, Capacity [veh/h]	322	590	558	584	280	1090	487	84	366	327
d1, Uniform Delay [s]	17.22	8.83	12.29	10.70	16.55	11.67	10.36	19.01	15.29	15.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	0.10	0.37	0.97	3.43	0.30	0.09	2.19	1.83	2.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

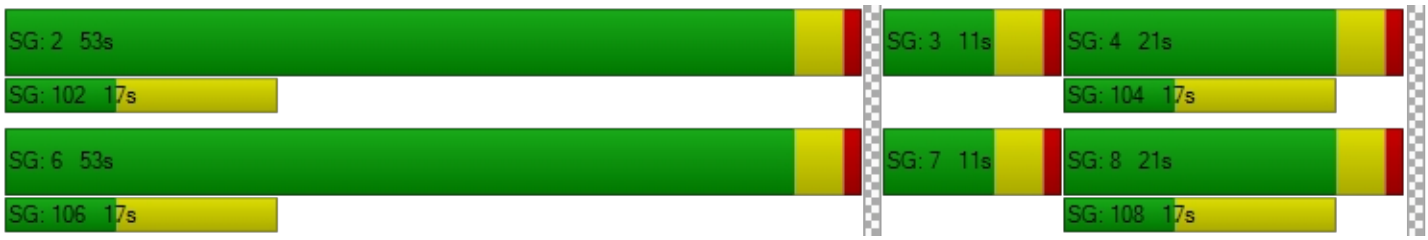
X, volume / capacity	0.38	0.13	0.35	0.59	0.72	0.46	0.10	0.32	0.64	0.65
d, Delay for Lane Group [s/veh]	17.94	8.93	12.66	11.67	19.98	11.98	10.44	21.21	17.12	17.57
Lane Group LOS	B	A	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.01	0.38	1.25	2.09	1.79	1.53	0.26	0.27	1.86	1.75
50th-Percentile Queue Length [ft/ln]	25.31	9.42	31.27	52.32	44.80	38.24	6.58	6.74	46.57	43.71
95th-Percentile Queue Length [veh/ln]	1.82	0.68	2.25	3.77	3.23	2.75	0.47	0.49	3.35	3.15
95th-Percentile Queue Length [ft/ln]	45.55	16.96	56.29	94.18	80.64	68.83	11.84	12.14	83.83	78.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.94	8.93	8.93	12.66	11.67	11.67	19.98	11.98	10.44	21.21	17.22	17.57
Movement LOS	B	A	A	B	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.41			12.02			14.02			17.55		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.36											
Intersection LOS	B											
Intersection V/C	0.638											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	522	0	0	326
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	192	10	2	117
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	714	10	2	443
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	188	3	1	117
Total Analysis Volume [veh/h]	0	0	752	11	2	466
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.74	0.00	0.00	9.20	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.18	0.00
d_A, Approach Delay [s/veh]	10.74		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	53.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.763

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	62	0	11	0	0	0	0	82	110	4	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	1	12	3	4	5	7	408	207	4	225	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	0	3	1	1	1	2	113	57	1	62	3
Total Analysis Volume [veh/h]	210	1	13	3	4	6	8	451	229	4	249	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.76	0.00	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	53.11	52.26	46.86	18.49	19.46	9.90	7.76	0.00	0.00	8.92	0.00	0.00
Movement LOS	F	F	E	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	6.18	6.18	6.18	0.11	0.11	0.11	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	154.58	154.58	154.58	2.66	2.66	2.66	0.40	0.40	0.40	0.33	0.33	0.33
d_A, Approach Delay [s/veh]	52.75			14.83			0.09			0.13		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	10.16											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	130	101	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	53	108	6	20	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	183	209	6	20	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	48	55	2	5	7
Total Analysis Volume [veh/h]	9	193	220	6	21	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.03
d_M, Delay for Movement [s/veh]	7.68	0.00	0.00	0.00	11.43	9.52
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.50	0.00	0.00	0.00	2.81	2.63
d_A, Approach Delay [s/veh]	0.34		0.00		10.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.21					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.327

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	533	427	23	39	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	61	86	19	60	107
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	594	513	42	99	200
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	183	158	13	31	62
Total Analysis Volume [veh/h]	152	733	633	52	122	247
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.01	0.01	0.00	0.33	0.36
d_M, Delay for Movement [s/veh]	9.70	0.00	0.00	0.00	19.30	13.19
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.59	0.00	0.00	0.00	1.40	1.64
95th-Percentile Queue Length [ft/ln]	14.79	0.00	0.00	0.00	34.96	41.05
d_A, Approach Delay [s/veh]	1.67		0.00		15.21	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.65					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	407	163	76	441	10	9	6	17	82	5	227
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	72	0	0	187	6	15	0	58	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	479	163	76	628	16	24	6	75	82	5	227
Peak Hour Factor	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020	0.8020
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	149	51	24	196	5	7	2	23	26	2	71
Total Analysis Volume [veh/h]	54	597	203	95	783	20	30	7	94	102	6	283
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	25	0	16	30	0	11	68	0	11	68	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	12	12	5	13	13	2	7	7	5	10	10
g / C, Green / Cycle	0.08	0.26	0.26	0.11	0.29	0.29	0.05	0.16	0.16	0.11	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.13	0.05	0.22	0.01	0.02	0.00	0.06	0.06	0.00	0.18
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	140	941	420	198	1056	472	90	306	260	205	427	363
d1, Uniform Delay [s]	19.71	14.73	14.07	18.81	14.38	11.41	20.64	15.88	16.80	18.72	13.55	16.37
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.72	0.71	0.86	1.80	1.05	0.04	2.16	0.03	0.84	1.86	0.01	3.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.63	0.48	0.48	0.74	0.04	0.33	0.02	0.36	0.50	0.01	0.78
d, Delay for Lane Group [s/veh]	21.43	15.45	14.93	20.60	15.42	11.44	22.80	15.91	17.64	20.58	13.56	20.03
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.54	2.35	1.57	0.92	3.11	0.12	0.33	0.06	0.81	0.98	0.04	2.69
50th-Percentile Queue Length [ft/ln]	13.61	58.78	39.18	22.98	77.77	3.12	8.15	1.39	20.37	24.62	1.06	67.16
95th-Percentile Queue Length [veh/ln]	0.98	4.23	2.82	1.65	5.60	0.22	0.59	0.10	1.47	1.77	0.08	4.84
95th-Percentile Queue Length [ft/ln]	24.50	105.81	70.52	41.36	139.98	5.61	14.68	2.50	36.66	44.32	1.90	120.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.43	15.45	14.93	20.60	15.42	11.44	22.80	15.91	17.64	20.58	13.56	20.03
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	15.70			15.88			18.73			20.07		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.70											
Intersection LOS	B											
Intersection V/C	0.682											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	645	71	95	425	57	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	100	0	0	245	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	745	71	95	670	57	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	201	19	26	181	15	9
Total Analysis Volume [veh/h]	805	77	103	724	62	38
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	51	0	0	124	69	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	18	18	18	18	18	18
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	0	0	3	3
g / C, Green / Cycle	0.41	0.41	0.00	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.22	0.05	0.15	0.38	0.08	0.02
s, saturation flow rate [veh/h]	3618	1615	687	1900	741	1615
c, Capacity [veh/h]	1488	664	387	0	434	257
d1, Uniform Delay [s]	4.15	3.39	9.31	0.00	8.85	6.74
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.08	1.68	0.00	0.15	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

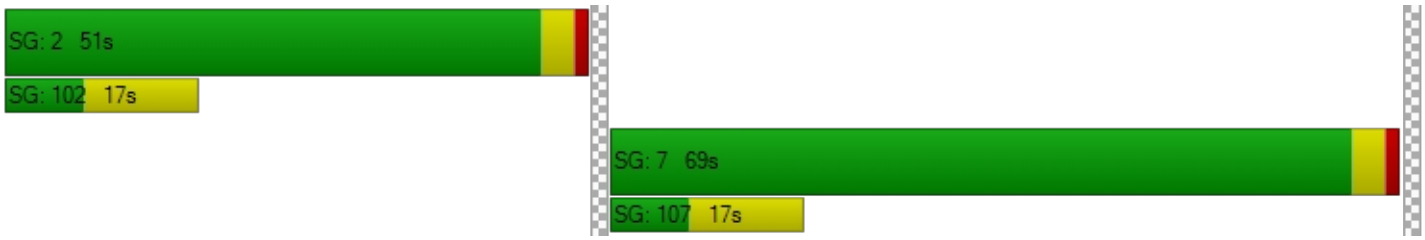
X, volume / capacity	0.54	0.12	0.27	0.00	0.14	0.15
d, Delay for Lane Group [s/veh]	4.46	3.47	11.00	0.00	9.00	7.00
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.14	0.03	0.45	0.00	0.15	0.07
50th-Percentile Queue Length [ft/ln]	3.44	0.64	11.32	0.00	3.72	1.87
95th-Percentile Queue Length [veh/ln]	0.25	0.05	0.82	0.00	0.27	0.13
95th-Percentile Queue Length [ft/ln]	6.19	1.16	20.38	0.00	6.69	3.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.46	3.47	11.00	0.00	9.00	7.00
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	4.37		1.37		8.24	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.21					
Intersection LOS	A					
Intersection V/C	0.874					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	152.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	598.738

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	148	0	97	34	263	0	0	202	66
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	314	2	441	561	709	4	2	662	247
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	84	1	118	150	189	1	1	177	66
Total Analysis Volume [veh/h]	3	2	2	335	2	471	599	757	4	2	707	264
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	18	28	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17	17	14	31	31	0	17	17
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.23	0.51	0.51	0.00	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	478.50	0.29	0.33	0.21	0.00	0.00	0.20	0.16
s, saturation flow rate [veh/h]	149	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	138	458	120	458	417	1855	828	7	1035	462
d1, Uniform Delay [s]	17.50	15.44	30.02	21.51	23.10	9.02	7.15	29.81	19.01	18.28
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.00	838.89	27.47	199.18	0.67	0.01	18.52	3.65	5.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.00	2.81	1.03	1.44	0.41	0.00	0.27	0.68	0.57
d, Delay for Lane Group [s/veh]	17.61	15.44	868.91	48.99	222.28	9.68	7.16	48.33	22.66	23.34
Lane Group LOS	B	B	F	F	F	A	A	D	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.02	29.56	9.28	28.46	2.68	0.02	0.07	4.50	3.50
50th-Percentile Queue Length [ft/ln]	1.24	0.47	739.00	232.01	711.51	66.99	0.59	1.64	112.39	87.53
95th-Percentile Queue Length [veh/ln]	0.09	0.03	51.30	14.51	44.12	4.82	0.04	0.12	7.97	6.30
95th-Percentile Queue Length [ft/ln]	2.23	0.84	1282.49	362.78	1102.89	120.59	1.05	2.95	199.33	157.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.61	17.61	15.44	868.91	868.91	48.99	222.28	9.68	7.16	48.33	22.66	23.34
Movement LOS	B	B	B	F	F	F	F	A	A	D	C	C
d_A, Approach Delay [s/veh]	16.99			390.96			103.31			22.89		
Approach LOS	B			F			F			C		
d_I, Intersection Delay [s/veh]	152.09											
Intersection LOS	F											
Intersection V/C	598.738											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 11 Opening Year (2020) With Project Morning Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\AMOYW2-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.645	16.9	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.637	5.3	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Thru	0.697	27.1	C
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.509	5.9	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.713	25.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	575	51	73	938	8	22	8	20	65	4	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	150	237	189	105	0	0	2	8	76	1	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	725	288	262	1043	8	22	10	28	141	5	121
Peak Hour Factor	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510	0.8510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	213	85	77	306	2	6	3	8	41	1	36
Total Analysis Volume [veh/h]	18	852	338	308	1226	9	26	12	33	166	6	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	27	27	13	38	38	13	13	13	13
g / C, Green / Cycle	0.03	0.41	0.41	0.20	0.58	0.58	0.21	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.21	0.17	0.33	0.33	0.02	0.03	0.12	0.09
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1895	1259	1682	1383	1625
c, Capacity [veh/h]	55	1477	659	363	1100	1097	227	347	319	335
d1, Uniform Delay [s]	30.89	14.89	14.40	25.03	8.55	8.55	27.37	21.04	26.66	22.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.44	1.65	2.83	5.51	2.08	2.09	0.22	0.17	1.32	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

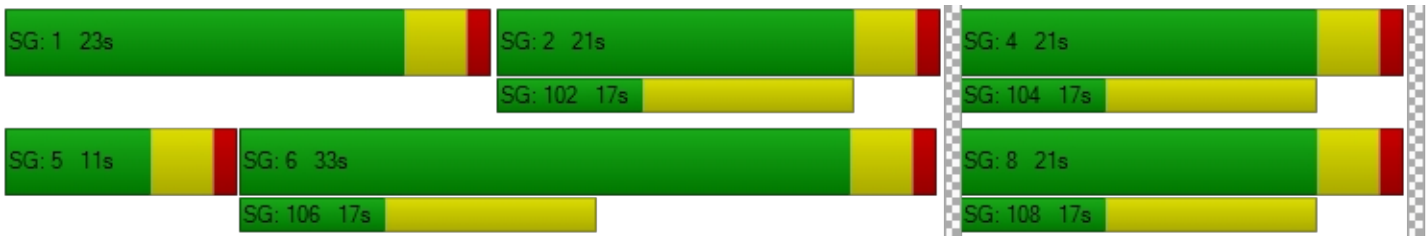
X, volume / capacity	0.33	0.58	0.51	0.85	0.56	0.56	0.11	0.13	0.52	0.44
d, Delay for Lane Group [s/veh]	34.33	16.54	17.23	30.54	10.62	10.64	27.59	21.21	27.98	23.45
Lane Group LOS	C	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.32	4.68	3.85	4.84	4.96	4.95	0.37	0.55	2.47	1.95
50th-Percentile Queue Length [ft/ln]	7.96	117.12	96.34	121.11	123.97	123.86	9.32	13.64	61.66	48.73
95th-Percentile Queue Length [veh/ln]	0.57	8.23	6.94	8.45	8.61	8.60	0.67	0.98	4.44	3.51
95th-Percentile Queue Length [ft/ln]	14.33	205.86	173.41	211.35	215.27	215.12	16.77	24.54	110.98	87.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.33	16.54	17.23	30.54	10.63	10.64	27.59	21.21	21.21	27.98	23.45	23.45
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.00			14.60			23.55			25.84		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.85											
Intersection LOS	B											
Intersection V/C	0.645											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	686	0	0	1044	10	5	0	16	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	416	1	1	189	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1102	1	1	1233	10	5	0	16	1	0	0
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	319	0	0	357	3	1	0	5	0	0	0
Total Analysis Volume [veh/h]	23	1275	1	1	1427	12	6	0	19	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	21	21	0	20	20	2	2	2	2
g / C, Green / Cycle	0.04	0.61	0.61	0.00	0.57	0.57	0.04	0.04	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.35	0.00	0.00	0.39	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1416	1900
c, Capacity [veh/h]	74	2216	989	4	2076	927	205	71	205	83
d1, Uniform Delay [s]	16.38	4.07	2.64	17.51	5.27	3.21	17.57	16.25	17.57	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.37	0.24	0.00	35.91	0.41	0.01	0.06	1.99	0.01	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.58	0.00	0.27	0.69	0.01	0.03	0.27	0.00	0.00
d, Delay for Lane Group [s/veh]	18.74	4.31	2.64	53.42	5.68	3.22	17.63	18.25	17.58	0.00
Lane Group LOS	B	A	A	D	A	A	B	B	B	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.20	0.95	0.00	0.04	1.61	0.02	0.04	0.16	0.01	0.00
50th-Percentile Queue Length [ft/ln]	4.97	23.82	0.03	1.08	40.33	0.42	1.11	4.07	0.18	0.00
95th-Percentile Queue Length [veh/ln]	0.36	1.71	0.00	0.08	2.90	0.03	0.08	0.29	0.01	0.00
95th-Percentile Queue Length [ft/ln]	8.95	42.87	0.05	1.95	72.60	0.75	2.00	7.33	0.33	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.74	4.31	2.64	53.42	5.68	3.22	17.63	18.25	18.25	17.58	0.00	0.00
Movement LOS	B	A	A	D	A	A	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	4.56			5.69			18.10			17.58		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.28											
Intersection LOS	A											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.697

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	225	281	531	554	20	18	38	15	282	44	327
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	173	93	107	65	18	43	30	37	41	8	201
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	398	374	638	619	38	61	68	52	323	52	528
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	9	107	100	171	166	10	16	18	14	86	14	0
Total Analysis Volume [veh/h]	34	426	400	683	663	41	65	73	56	346	56	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	38	48	0	15	21	0	15	21	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	38	53	22	55	55	6	9	11	14	14
g / C, Green / Cycle	0.04	0.40	0.55	0.23	0.58	0.58	0.06	0.09	0.12	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.25	0.19	0.18	0.03	0.04	0.07	0.10	0.03	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1765	3514	1900	1615
c, Capacity [veh/h]	81	1429	893	804	2096	936	111	162	408	279	237
d1, Uniform Delay [s]	44.28	19.74	12.63	35.14	10.32	8.65	43.50	42.34	41.25	35.71	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.46	0.53	1.62	2.63	0.40	0.09	4.83	8.52	4.96	0.35	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

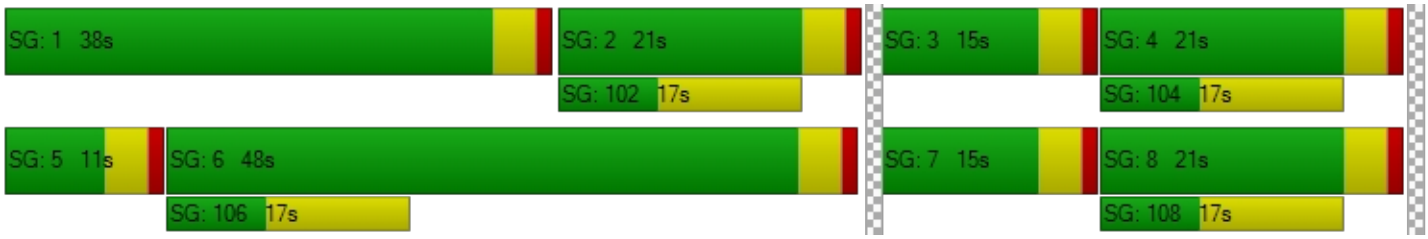
X, volume / capacity	0.42	0.30	0.45	0.85	0.32	0.04	0.59	0.80	0.85	0.20	0.00
d, Delay for Lane Group [s/veh]	47.73	20.28	14.25	37.77	10.71	8.73	48.33	50.86	46.21	36.06	0.00
Lane Group LOS	D	C	B	D	B	A	D	D	D	D	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.85	3.26	5.13	7.71	3.45	0.37	1.63	3.32	4.21	1.16	0.00
50th-Percentile Queue Length [ft/ln]	21.31	81.53	128.29	192.85	86.19	9.21	40.68	83.05	105.22	29.04	0.00
95th-Percentile Queue Length [veh/ln]	1.53	5.87	8.85	12.27	6.21	0.66	2.93	5.98	7.57	2.09	0.00
95th-Percentile Queue Length [ft/ln]	38.36	146.75	221.17	306.73	155.15	16.57	73.22	149.49	189.33	52.26	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.73	20.28	14.25	37.77	10.71	8.73	48.33	50.86	50.86	46.21	36.06	0.00
Movement LOS	D	C	B	D	B	A	D	D	D	D	D	A
d_A, Approach Delay [s/veh]	18.56			23.98			50.01			44.79		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	27.06											
Intersection LOS	C											
Intersection V/C	0.697											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	2	2	10	8	12	2	98	51	1	103	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	0	3	0	0	0	0	47	50	14	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	2	5	10	8	12	2	145	101	15	164	5
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	1	2	3	2	4	1	45	31	5	51	2
Total Analysis Volume [veh/h]	140	2	6	12	10	15	2	179	125	19	203	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	5	5	5	5
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.10	0.00	0.01	0.01	0.00	0.17	0.02	0.11
s, saturation flow rate [veh/h]	1408	1678	1430	1718	1191	1771	1092	1890
c, Capacity [veh/h]	564	362	577	371	574	568	496	606
d1, Uniform Delay [s]	7.69	5.33	6.86	5.39	6.52	4.81	7.55	4.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.02	0.01	0.08	0.00	0.78	0.03	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.02	0.02	0.07	0.00	0.53	0.04	0.34
d, Delay for Lane Group [s/veh]	7.92	5.36	6.88	5.46	6.52	5.59	7.59	4.81
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.25	0.01	0.02	0.03	0.00	0.25	0.03	0.14
50th-Percentile Queue Length [ft/ln]	6.30	0.23	0.47	0.74	0.07	6.30	0.85	3.47
95th-Percentile Queue Length [veh/ln]	0.45	0.02	0.03	0.05	0.01	0.45	0.06	0.25
95th-Percentile Queue Length [ft/ln]	11.33	0.42	0.84	1.33	0.13	11.34	1.53	6.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.92	5.36	5.36	6.88	5.46	5.46	6.52	5.59	5.59	7.59	4.81	4.81
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.78			5.92			5.60			5.04		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.89											
Intersection LOS	A											
Intersection V/C	0.509											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	4	3	130	4	305	330	537	13	3	332	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	56	0	21	73	157	0	0	229	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	4	3	186	4	326	403	694	13	3	561	290
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	48	1	84	104	179	3	1	145	75
Total Analysis Volume [veh/h]	10	4	3	192	4	336	416	716	13	3	579	299
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	40	50	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	24	60	60	1	37	37
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.25	0.63	0.63	0.01	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.13	0.00	0.21	0.23	0.20	0.01	0.00	0.16	0.19
s, saturation flow rate [veh/h]	1486	1615	1435	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	413	378	369	445	378	461	2291	1023	11	1391	621
d1, Uniform Delay [s]	28.10	27.94	34.78	27.94	35.21	34.28	7.98	6.45	47.06	21.45	22.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.01	1.14	0.01	7.12	6.70	0.36	0.02	12.09	0.92	2.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

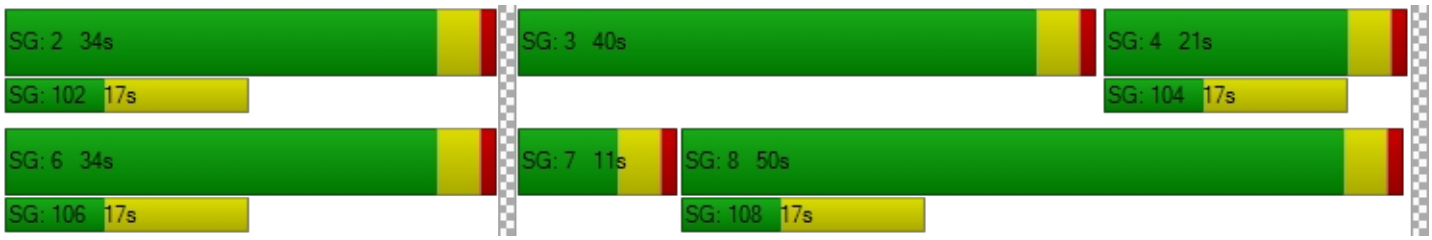
X, volume / capacity	0.03	0.01	0.52	0.01	0.89	0.90	0.31	0.01	0.27	0.42	0.48
d, Delay for Lane Group [s/veh]	28.13	27.94	35.92	27.95	42.33	40.99	8.33	6.47	59.14	22.37	24.78
Lane Group LOS	C	C	D	C	D	D	A	A	E	C	C
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.05	4.14	0.07	8.11	9.93	3.14	0.10	0.11	4.78	5.36
50th-Percentile Queue Length [ft/ln]	6.21	1.33	103.48	1.76	202.72	248.37	78.51	2.38	2.70	119.45	133.92
95th-Percentile Queue Length [veh/ln]	0.45	0.10	7.45	0.13	12.78	15.10	5.65	0.17	0.19	8.36	9.15
95th-Percentile Queue Length [ft/ln]	11.18	2.39	186.26	3.17	319.47	377.59	141.31	4.29	4.86	209.07	228.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.13	28.13	27.94	35.92	27.95	42.33	40.99	8.33	6.47	59.14	22.37	24.78
Movement LOS	C	C	C	D	C	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	28.10			39.91			20.17			23.31		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	25.38											
Intersection LOS	C											
Intersection V/C	0.713											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 11 Opening Year (2020) With Project Evening Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\PMOYW2-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.966	41.3	D
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.635	6.2	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Left	0.983	42.2	D
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.736	8.1	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.909	39.8	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	41.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.966

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	1174	78	312	968	15	21	8	21	63	14	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	155	122	107	164	0	0	1	2	275	2	211
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1329	200	419	1132	15	21	9	23	338	16	367
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	344	52	108	293	4	5	2	6	87	4	95
Total Analysis Volume [veh/h]	16	1374	207	433	1171	16	22	9	24	350	17	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	51	0	34	74	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	47	47	30	74	74	31	31	31	31
g / C, Green / Cycle	0.02	0.39	0.39	0.25	0.62	0.62	0.26	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.01	0.38	0.13	0.24	0.31	0.31	0.02	0.02	0.25	0.24
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1891	1003	1684	1398	1625
c, Capacity [veh/h]	46	1416	632	453	1171	1166	62	435	381	420
d1, Uniform Delay [s]	57.63	35.90	25.54	44.43	12.88	12.89	60.11	33.72	47.47	43.74
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	17.80	1.38	11.76	1.57	1.59	3.43	0.07	9.26	10.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.97	0.33	0.96	0.51	0.51	0.36	0.08	0.92	0.94
d, Delay for Lane Group [s/veh]	62.11	53.70	26.92	56.20	14.45	14.48	63.54	33.79	56.72	54.71
Lane Group LOS	E	D	C	E	B	B	E	C	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	22.79	4.38	14.08	9.07	9.06	0.73	0.74	11.64	12.76
50th-Percentile Queue Length [ft/ln]	13.40	569.86	109.45	352.01	226.77	226.47	18.24	18.62	290.93	319.11
95th-Percentile Queue Length [veh/ln]	0.96	30.62	7.81	20.23	14.01	13.99	1.31	1.34	17.23	18.62
95th-Percentile Queue Length [ft/ln]	24.11	765.61	195.23	505.86	350.26	349.87	32.83	33.51	430.79	465.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.11	53.70	26.92	56.20	14.46	14.48	63.54	33.79	33.79	56.72	54.71	54.71
Movement LOS	E	D	C	E	B	B	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	50.31			25.62			45.69			55.65		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	41.29											
Intersection LOS	D											
Intersection V/C	0.966											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	1236	0	0	1044	15	24	0	36	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	272	0	0	465	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1508	0	0	1509	15	24	0	36	1	0	3
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	384	0	0	384	4	6	0	9	0	0	1
Total Analysis Volume [veh/h]	18	1536	0	0	1537	15	24	0	37	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	33	0	11	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	27	27	0	26	26	4	4	4	4
g / C, Green / Cycle	0.03	0.64	0.64	0.00	0.60	0.60	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.42	0.01	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1393	1615
c, Capacity [veh/h]	58	2302	1028	0	2187	976	223	138	193	138
d1, Uniform Delay [s]	20.40	4.95	0.00	0.00	5.87	3.41	20.26	18.46	20.77	18.08
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.99	0.34	0.00	0.00	0.42	0.01	0.21	1.04	0.01	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

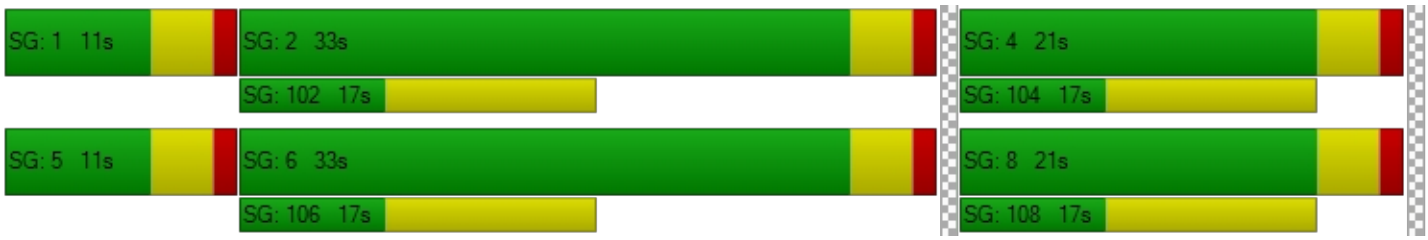
X, volume / capacity	0.31	0.67	0.00	0.00	0.70	0.02	0.11	0.27	0.01	0.02
d, Delay for Lane Group [s/veh]	23.39	5.29	0.00	0.00	6.29	3.41	20.47	19.50	20.78	18.14
Lane Group LOS	C	A	A	A	A	A	C	B	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.21	2.06	0.00	0.00	2.59	0.03	0.22	0.34	0.01	0.03
50th-Percentile Queue Length [ft/ln]	5.15	51.55	0.00	0.00	64.79	0.74	5.57	8.61	0.24	0.66
95th-Percentile Queue Length [veh/ln]	0.37	3.71	0.00	0.00	4.66	0.05	0.40	0.62	0.02	0.05
95th-Percentile Queue Length [ft/ln]	9.27	92.78	0.00	0.00	116.62	1.33	10.03	15.49	0.42	1.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.39	5.29	0.00	0.00	6.29	3.41	20.47	19.50	19.50	20.78	18.14	18.14
Movement LOS	C	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	5.50			6.26			19.88			18.80		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	6.16											
Intersection LOS	A											
Intersection V/C	0.635											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	42.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.983

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	392	475	463	478	28	32	64	3	309	52	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	103	56	220	199	47	26	21	23	117	38	144
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	495	531	683	677	75	58	85	26	426	90	620
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	128	137	177	175	19	15	22	7	110	23	160
Total Analysis Volume [veh/h]	62	512	549	706	700	78	60	88	27	441	93	641
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	22	22	30	41	0	11	21	0	47	57	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	23	56	26	42	42	6	26	29	50	50
g / C, Green / Cycle	0.05	0.19	0.47	0.21	0.35	0.35	0.05	0.22	0.25	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.34	0.20	0.19	0.05	0.03	0.06	0.13	0.05	0.40
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1824	3514	1900	1615
c, Capacity [veh/h]	92	678	754	756	1271	567	92	398	865	786	668
d1, Uniform Delay [s]	55.96	46.18	25.86	46.28	31.32	26.54	55.96	39.15	39.02	21.69	34.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.11	7.67	6.10	6.05	1.72	0.50	7.69	0.40	0.47	0.07	9.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

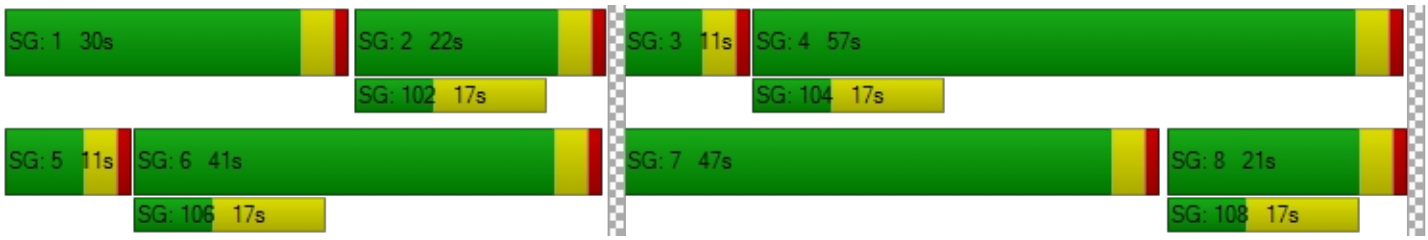
X, volume / capacity	0.67	0.76	0.73	0.93	0.55	0.14	0.66	0.29	0.51	0.12	0.96
d, Delay for Lane Group [s/veh]	64.07	53.85	31.96	52.33	33.04	27.04	63.65	39.55	39.48	21.76	43.37
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	7.94	13.67	10.92	8.43	1.62	1.98	2.89	5.67	1.64	19.41
50th-Percentile Queue Length [ft/ln]	51.36	198.49	341.86	273.06	210.87	40.38	49.53	72.18	141.78	41.10	485.34
95th-Percentile Queue Length [veh/ln]	3.70	12.56	19.74	16.34	13.20	2.91	3.57	5.20	9.58	2.96	26.64
95th-Percentile Queue Length [ft/ln]	92.45	314.01	493.47	408.56	329.94	72.68	89.15	129.93	239.42	73.99	665.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.07	53.85	31.96	52.33	33.04	27.04	63.65	39.55	39.55	39.48	21.76	43.37
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	43.72			41.90			47.81			40.20		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42.17											
Intersection LOS	D											
Intersection V/C	0.983											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	128	1	1	3	4	5	7	326	97	0	168	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	62	0	11	0	0	0	0	82	110	4	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	1	12	3	4	5	7	408	207	4	225	12
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	0	3	1	1	1	2	113	57	1	62	3
Total Analysis Volume [veh/h]	210	1	13	3	4	6	8	451	229	4	249	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	74	0	0	74	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	7	13	13	13	13
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.47	0.47	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.15	0.01	0.00	0.01	0.01	0.38	0.01	0.14
s, saturation flow rate [veh/h]	1427	1632	1422	1718	1135	1793	772	1884
c, Capacity [veh/h]	502	399	498	420	636	844	328	886
d1, Uniform Delay [s]	11.27	8.08	9.69	8.06	6.27	6.34	11.63	4.57
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.04	0.00	0.02	0.01	1.87	0.01	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.04	0.01	0.02	0.01	0.81	0.01	0.30
d, Delay for Lane Group [s/veh]	11.83	8.12	9.69	8.08	6.28	8.20	11.65	4.75
Lane Group LOS	B	A	A	A	A	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.95	0.05	0.01	0.03	0.02	1.83	0.02	0.43
50th-Percentile Queue Length [ft/ln]	23.74	1.15	0.28	0.82	0.50	45.71	0.46	10.79
95th-Percentile Queue Length [veh/ln]	1.71	0.08	0.02	0.06	0.04	3.29	0.03	0.78
95th-Percentile Queue Length [ft/ln]	42.73	2.07	0.51	1.47	0.91	82.28	0.82	19.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.83	8.12	8.12	9.69	8.08	8.08	6.28	8.20	8.20	11.65	4.75	4.75
Movement LOS	B	A	A	A	A	A	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	11.60			8.45			8.18			4.86		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	8.08											
Intersection LOS	A											
Intersection V/C	0.736											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	39.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.909

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	2	2	166	2	344	527	446	4	2	460	181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	148	0	97	34	263	0	0	202	66
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	2	314	2	441	561	709	4	2	662	247
Peak Hour Factor	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370	0.9370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	84	1	118	150	189	1	1	177	66
Total Analysis Volume [veh/h]	3	2	2	335	2	471	599	757	4	2	707	264
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	49	67	0	11	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	37	37	37	37	42	71	71	0	30	30
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.35	0.59	0.59	0.00	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.23	0.00	0.29	0.33	0.21	0.00	0.00	0.20	0.16
s, saturation flow rate [veh/h]	1575	1615	1437	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	531	495	458	583	495	627	2132	952	7	892	398
d1, Uniform Delay [s]	28.92	28.88	40.95	28.87	40.72	38.28	12.80	10.14	59.62	42.35	40.73
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	2.28	0.00	10.33	9.04	0.46	0.01	20.68	7.17	8.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

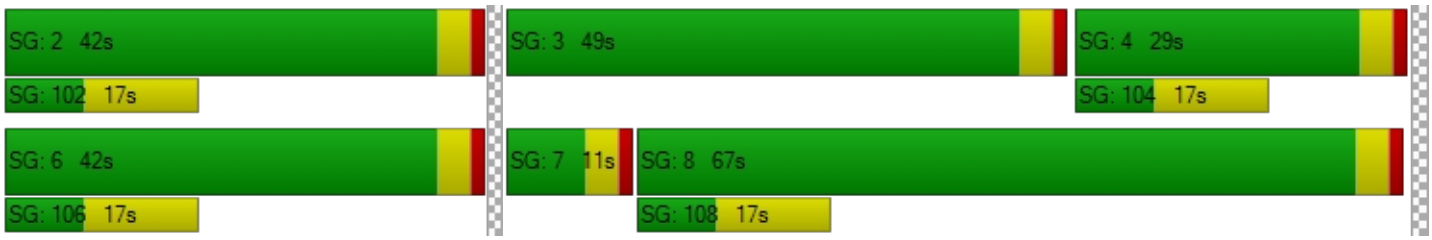
X, volume / capacity	0.01	0.00	0.73	0.00	0.95	0.95	0.36	0.00	0.28	0.79	0.66
d, Delay for Lane Group [s/veh]	28.93	28.88	43.23	28.87	51.05	47.32	13.26	10.15	80.30	49.53	49.17
Lane Group LOS	C	C	D	C	D	D	B	B	F	D	D
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	0.04	9.57	0.04	14.87	18.48	5.31	0.05	0.10	10.66	7.95
50th-Percentile Queue Length [ft/ln]	2.56	1.02	239.15	1.02	371.81	461.99	132.68	1.14	2.53	266.58	198.84
95th-Percentile Queue Length [veh/ln]	0.18	0.07	14.64	0.07	21.20	25.53	9.09	0.08	0.18	16.02	12.58
95th-Percentile Queue Length [ft/ln]	4.61	1.84	365.95	1.84	529.92	638.25	227.14	2.04	4.55	400.46	314.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.93	28.93	28.88	43.23	28.87	51.05	47.32	13.26	10.15	80.30	49.53	49.17
Movement LOS	C	C	C	D	C	D	D	B	B	F	D	D
d_A, Approach Delay [s/veh]	28.91			47.75			28.25			49.49		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	39.82											
Intersection LOS	D											
Intersection V/C	0.909											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



YEAR 2035 WITH PROJECT – ALTERNATIVE 1

Viridian

Vistro File: C:\...\AME.vistro

Scenario 14 Year 2035 With Project Morning Peak Hour - Alternative 1

Report File: C:\...\AM35W1.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.762	18.0	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.004	12.1	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	WB Left	0.702	4.4	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	145.5	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	1.040	147.2	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.007	10.0	A
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.341	5.1	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.476	14.3	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.002	9.3	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.265	15.4	C
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.011	10.7	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.142	16.5	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.589	12.1	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.402	3.8	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	78.252	258.2	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	150	99	32	0	0	0	0	47	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	718	288	268	1172	8	22	10	28	141	5	121
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	180	72	67	293	2	6	3	7	35	1	30
Total Analysis Volume [veh/h]	15	718	288	268	1172	8	22	10	28	141	5	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	27	27	12	37	37	15	15	15
g / C, Green / Cycle	0.03	0.41	0.41	0.18	0.57	0.57	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.15	0.31	0.31	0.13	0.20	0.07
s, saturation flow rate [veh/h]	1810	1900	1717	1810	1900	1895	462	748	1615
c, Capacity [veh/h]	49	781	706	325	1072	1070	179	277	363
d1, Uniform Delay [s]	31.11	15.64	15.64	25.72	8.97	8.98	21.19	24.30	21.17
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.53	4.66	5.14	5.23	2.04	2.05	1.09	1.56	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

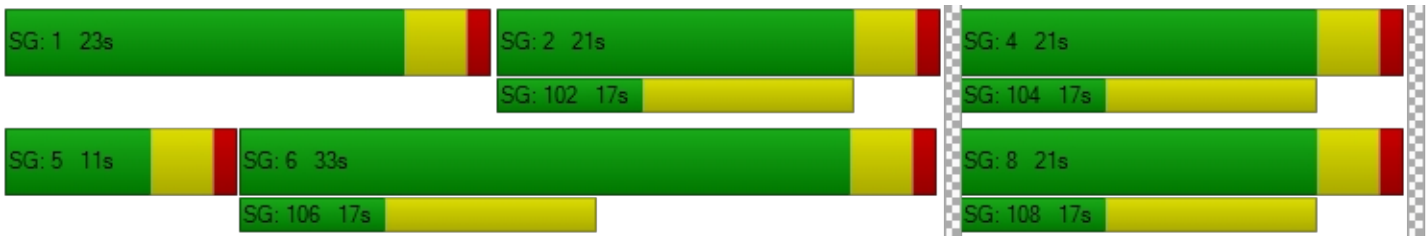
X, volume / capacity	0.31	0.68	0.68	0.82	0.55	0.55	0.33	0.53	0.33
d, Delay for Lane Group [s/veh]	34.64	20.30	20.79	30.95	11.01	11.02	22.28	25.86	21.70
Lane Group LOS	C	C	C	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	6.67	6.13	4.23	4.86	4.86	0.75	2.14	1.51
50th-Percentile Queue Length [ft/ln]	6.76	166.75	153.13	105.84	121.62	121.47	18.66	53.56	37.80
95th-Percentile Queue Length [veh/ln]	0.49	10.91	10.18	7.61	8.48	8.47	1.34	3.86	2.72
95th-Percentile Queue Length [ft/ln]	12.16	272.64	254.60	190.20	212.05	211.84	33.60	96.41	68.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.64	20.43	20.79	30.95	11.02	11.02	22.28	22.28	22.28	25.86	25.86	21.70
Movement LOS	C	C	C	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	20.74			14.71			22.28			23.97		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	17.96											
Intersection LOS	B											
Intersection V/C	0.762											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	865	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	154	18	0	79	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1019	18	0	1341	0	2
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	255	5	0	335	0	1
Total Analysis Volume [veh/h]	1019	18	0	1341	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.12
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.30
d_A, Approach Delay [s/veh]	0.00		0.00		12.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	825	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	168	74	33	46	18	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	993	74	33	1308	18	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	248	19	8	327	5	1
Total Analysis Volume [veh/h]	993	74	33	1308	18	4
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	11	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	1	16	1	1
g / C, Green / Cycle	0.43	0.43	0.06	0.65	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.27	0.05	0.02	0.36	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1560	696	106	2338	74	66
d1, Uniform Delay [s]	5.70	4.33	11.53	2.50	11.88	11.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	0.07	1.64	0.21	1.70	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.11	0.31	0.56	0.24	0.06
d, Delay for Lane Group [s/veh]	6.14	4.40	13.18	2.72	13.58	12.17
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.88	0.10	0.18	0.07	0.11	0.02
50th-Percentile Queue Length [ft/ln]	21.96	2.54	4.39	1.71	2.64	0.57
95th-Percentile Queue Length [veh/ln]	1.58	0.18	0.32	0.12	0.19	0.04
95th-Percentile Queue Length [ft/ln]	39.52	4.58	7.90	3.08	4.76	1.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.14	4.40	13.18	2.72	13.58	12.17
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	6.02		2.97		13.32	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.40					
Intersection LOS	A					
Intersection V/C	0.702					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	145.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	242	1	1	63	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1159	1	1	1317	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	290	0	0	329	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1159	1	1	1317	11	6	0	18	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.16	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	12.11	0.00	0.00	10.92	0.00	0.00	105.41	145.51	21.12	91.18	141.21	14.79
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.07	0.07	0.07
95th-Percentile Queue Length [ft/ln]	2.96	0.00	0.00	0.12	0.06	0.00	17.64	17.64	17.64	1.77	1.77	1.77
d_A, Approach Delay [s/veh]	0.21			0.01			42.19			91.18		
Approach LOS	A			A			E			F		
d_I, Intersection Delay [s/veh]	0.54											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	147.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.040

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	103	21	38	26	0	0	0	0	8	0	140
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	421	420	662	680	38	61	117	52	419	87	562
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	105	105	166	170	10	15	29	13	105	22	0
Total Analysis Volume [veh/h]	32	421	420	662	680	38	61	117	52	419	87	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	22	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	385	385	385	385	385	385	385	385	385	385
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	103	103	120	214	214	38	38	108	108
g / C, Green / Cycle	0.02	0.27	0.27	0.31	0.56	0.56	0.10	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.26	0.37	0.19	0.02	0.03	0.09	0.28	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1802	1824	1615
c, Capacity [veh/h]	40	962	430	565	2012	898	179	178	513	454
d1, Uniform Delay [s]	186.88	117.00	139.72	132.00	46.53	38.69	161.31	172.00	137.23	0.00
k, delay calibration	0.11	0.11	0.36	0.50	0.11	0.11	0.11	0.11	0.40	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.83	0.31	31.58	94.91	0.10	0.02	1.12	21.16	32.36	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

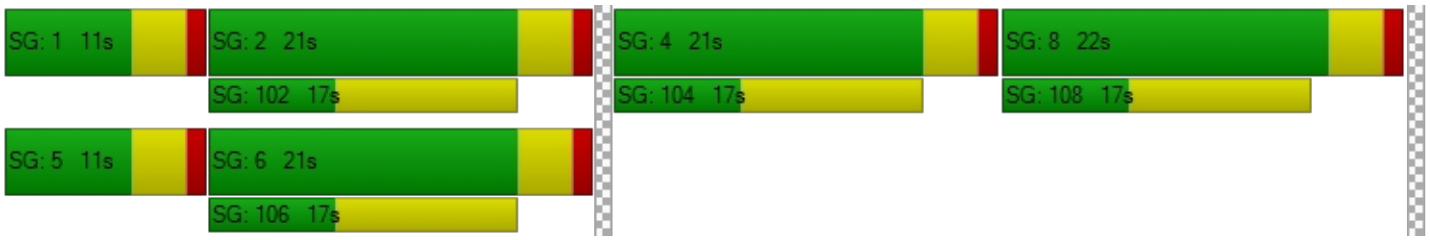
X, volume / capacity	0.80	0.44	0.98	1.17	0.34	0.04	0.34	0.95	0.99	0.00
d, Delay for Lane Group [s/veh]	216.70	117.32	171.30	226.91	46.63	38.71	162.43	193.16	169.59	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.64	18.05	46.68	73.06	18.72	1.74	5.96	18.49	56.41	0.00
50th-Percentile Queue Length [ft/ln]	91.11	451.25	1166.93	1826.38	467.95	43.55	148.97	462.13	1410.19	0.00
95th-Percentile Queue Length [veh/ln]	6.56	25.02	57.88	96.83	25.81	3.14	9.96	25.54	68.72	0.00
95th-Percentile Queue Length [ft/ln]	164.00	625.44	1447.05	2420.73	645.33	78.39	249.06	638.40	1718.12	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	216.70	117.32	171.30	226.91	46.63	38.71	162.43	193.16	193.16	169.59	169.59	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	146.93			132.89			185.01			169.59		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	147.22											
Intersection LOS	F											
Intersection V/C	1.040											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	237	12	35	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	554	12	35	267
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	139	3	9	67
Total Analysis Volume [veh/h]	0	5	554	12	35	267
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	9.99	0.00	0.00	8.67	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.11	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.52	0.00	0.00	2.67	0.00
d_A, Approach Delay [s/veh]	9.99		0.00		1.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.40					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.341

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	10	114	128	14	73
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	10	431	128	14	265
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	3	108	32	4	66
Total Analysis Volume [veh/h]	37	10	431	128	14	265
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	21	0	33	0	11	44
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	7	7	1	11
g / C, Green / Cycle	0.08	0.08	0.32	0.32	0.03	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.12	0.08	0.01	0.07
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	155	138	1161	519	53	1948
d1, Uniform Delay [s]	9.08	8.95	5.56	5.32	10.10	2.45
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	0.22	0.20	0.25	2.63	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

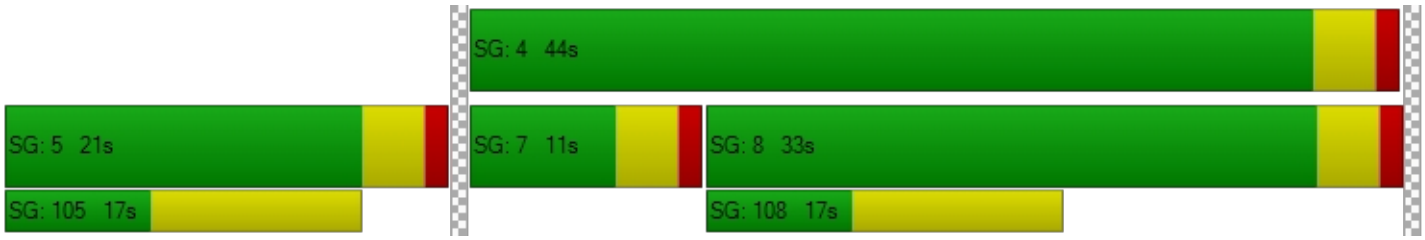
X, volume / capacity	0.24	0.07	0.37	0.25	0.27	0.14
d, Delay for Lane Group [s/veh]	9.87	9.17	5.76	5.57	12.73	2.48
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.03	0.30	0.19	0.08	0.01
50th-Percentile Queue Length [ft/ln]	3.21	0.84	7.53	4.71	1.96	0.21
95th-Percentile Queue Length [veh/ln]	0.23	0.06	0.54	0.34	0.14	0.02
95th-Percentile Queue Length [ft/ln]	5.77	1.51	13.55	8.48	3.53	0.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.87	9.17	5.76	5.57	12.73	2.48
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.72		5.72		2.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.07					
Intersection LOS	A					
Intersection V/C	0.341					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	3	18	0	6	0	1	42	81	49	57	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	18	204	6	92	212	157	81	49	145	117
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	5	51	2	23	53	39	20	12	36	29
Total Analysis Volume [veh/h]	30	3	18	204	6	92	212	157	81	49	145	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	35	0	0	37	64	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	6	6	17	17	7	7
g / C, Green / Cycle	0.08	0.08	0.16	0.17	0.44	0.44	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.11	0.12	0.04	0.05	0.07	0.08
s, saturation flow rate [veh/h]	1810	1650	1810	1810	3618	1615	1900	1641
c, Capacity [veh/h]	143	130	298	301	1605	716	328	284
d1, Uniform Delay [s]	16.54	16.47	15.08	15.08	6.20	6.25	14.08	14.25
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.57	2.79	3.00	0.03	0.07	0.78	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

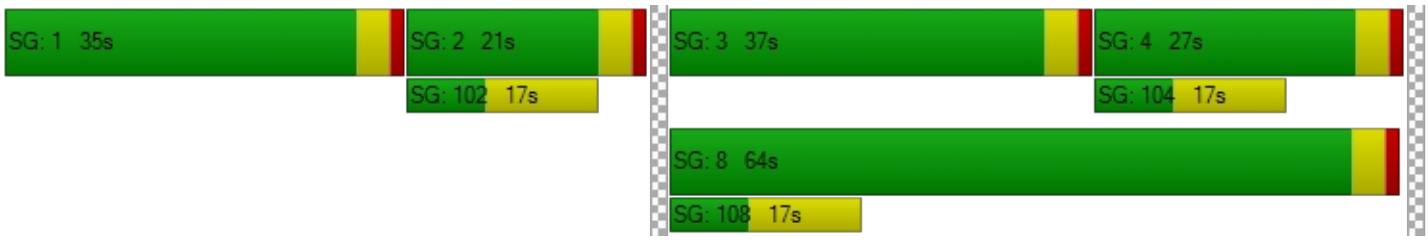
X, volume / capacity	0.21	0.16	0.69	0.70	0.10	0.11	0.40	0.46
d, Delay for Lane Group [s/veh]	17.26	17.05	17.87	18.09	6.23	6.32	14.87	15.42
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.17	1.60	1.68	0.25	0.27	0.90	0.93
50th-Percentile Queue Length [ft/ln]	5.97	4.18	40.12	42.04	6.33	6.77	22.47	23.24
95th-Percentile Queue Length [veh/ln]	0.43	0.30	2.89	3.03	0.46	0.49	1.62	1.67
95th-Percentile Queue Length [ft/ln]	10.75	7.53	72.22	75.67	11.39	12.18	40.45	41.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.26	17.05	17.05	17.87	0.00	0.00	18.09	6.23	6.32	0.00	14.92	15.42
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	17.17			17.87			11.83			15.14		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.28											
Intersection LOS	B											
Intersection V/C	0.476											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	319	0	0	204
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	41	19	4	106
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	360	19	4	310
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	90	5	1	78
Total Analysis Volume [veh/h]	0	2	360	19	4	310
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.31	0.00	0.00	8.03	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.18	0.00	0.00	0.25	0.00
d_A, Approach Delay [s/veh]	9.31		0.00		0.10	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.265

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	0	1	0	0	0	0	15	28	4	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	127	3	5	10	11	12	3	165	175	15	181	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	1	1	3	3	3	1	41	44	4	45	2
Total Analysis Volume [veh/h]	127	3	5	10	11	12	3	165	175	15	181	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.01	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.35	15.28	12.38	12.72	13.73	9.58	7.58	0.00	0.00	7.96	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.13	1.13	1.13	0.19	0.19	0.19	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	28.15	28.15	28.15	4.74	4.74	4.74	0.16	0.16	0.16	0.93	0.93	0.93
d_A, Approach Delay [s/veh]	15.24			11.92			0.07			0.59		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	3.64											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	81	169	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	47	18	14	7	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	128	187	14	7	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	32	47	4	2	2
Total Analysis Volume [veh/h]	18	128	187	14	7	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.64	0.00	0.00	0.00	10.67	9.22
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.99	0.00	0.00	0.00	0.83	0.70
d_A, Approach Delay [s/veh]	0.94		0.00		9.90	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	99	666	804	32	34	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	6	15	52	18	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	672	819	84	52	144
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	168	205	21	13	36
Total Analysis Volume [veh/h]	112	672	819	84	52	144
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.01	0.01	0.00	0.14	0.24
d_M, Delay for Movement [s/veh]	10.54	0.00	0.00	0.00	16.47	12.94
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.51	0.00	0.00	0.00	0.49	0.94
95th-Percentile Queue Length [ft/ln]	12.85	0.00	0.00	0.00	12.28	23.46
d_A, Approach Delay [s/veh]	1.51		0.00		13.88	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.07					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	13	0	0	8	15	6	0	16	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	735	17	116	856	20	6	3	28	33	0	68
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	184	4	29	214	5	2	1	7	8	0	17
Total Analysis Volume [veh/h]	75	735	17	116	856	20	6	3	28	33	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	49	77	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	11	11	5	12	12	0	2	2	2	3	3
g / C, Green / Cycle	0.10	0.30	0.30	0.14	0.34	0.34	0.01	0.05	0.05	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.01	0.06	0.24	0.01	0.00	0.00	0.02	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	190	1104	493	247	1217	543	21	103	87	102	187	159
d1, Uniform Delay [s]	14.91	10.81	8.71	14.23	10.29	7.96	17.49	16.00	16.25	16.19	0.00	15.14
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	0.70	0.03	1.39	0.75	0.03	6.99	0.11	2.09	1.82	0.00	1.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

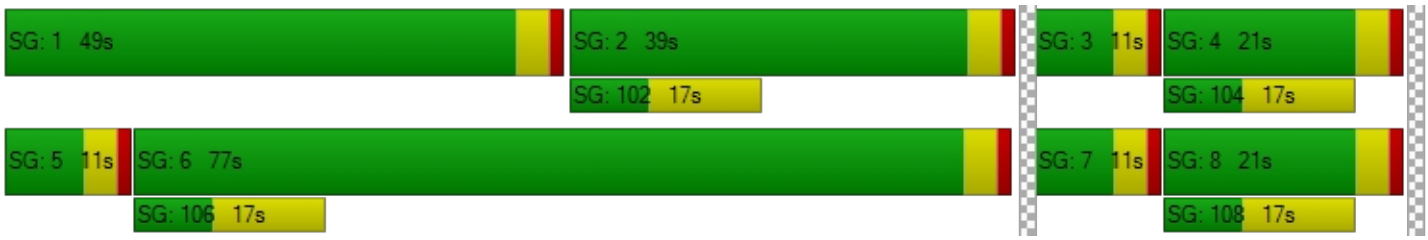
X, volume / capacity	0.39	0.67	0.03	0.47	0.70	0.04	0.28	0.03	0.32	0.32	0.00	0.43
d, Delay for Lane Group [s/veh]	16.24	11.51	8.73	15.62	11.05	7.98	24.47	16.11	18.35	18.01	0.00	16.96
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.54	1.94	0.07	0.79	2.19	0.08	0.08	0.02	0.23	0.27	0.00	0.51
50th-Percentile Queue Length [ft/ln]	13.39	48.56	1.81	19.87	54.64	1.96	2.07	0.57	5.86	6.69	0.00	12.68
95th-Percentile Queue Length [veh/ln]	0.96	3.50	0.13	1.43	3.93	0.14	0.15	0.04	0.42	0.48	0.00	0.91
95th-Percentile Queue Length [ft/ln]	24.10	87.41	3.25	35.76	98.34	3.53	3.72	1.02	10.56	12.04	0.00	22.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.24	11.51	8.73	15.62	11.05	7.98	24.47	16.11	18.35	18.01	0.00	16.96
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.88			11.52			19.16			17.30		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.12											
Intersection LOS	B											
Intersection V/C	0.589											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	757	86	45	882	58	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	24	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	827	86	45	906	58	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	207	22	11	227	15	14
Total Analysis Volume [veh/h]	827	86	45	906	58	54
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	22	0	0	42	38	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	0	0	9	9
g / C, Green / Cycle	0.72	0.72	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.23	0.05	0.07	0.48	0.09	0.03
s, saturation flow rate [veh/h]	3618	1615	673	1900	625	1615
c, Capacity [veh/h]	2617	1168	120	0	187	231
d1, Uniform Delay [s]	2.98	2.43	30.01	0.00	26.34	22.78
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.12	8.73	0.00	0.93	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

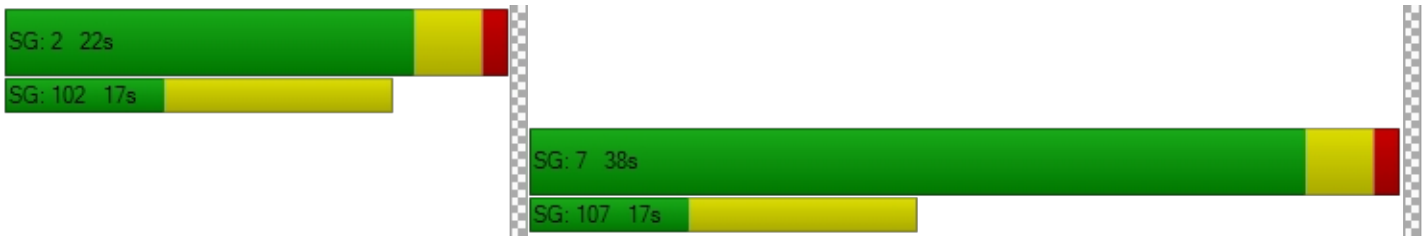
X, volume / capacity	0.32	0.07	0.38	0.00	0.31	0.23
d, Delay for Lane Group [s/veh]	3.29	2.55	38.74	0.00	27.26	23.29
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.05	0.20	0.96	0.00	0.81	0.67
50th-Percentile Queue Length [ft/ln]	26.19	4.94	23.89	0.00	20.35	16.72
95th-Percentile Queue Length [veh/ln]	1.89	0.36	1.72	0.00	1.47	1.20
95th-Percentile Queue Length [ft/ln]	47.15	8.90	43.01	0.00	36.63	30.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.29	2.55	38.74	0.00	27.26	23.29
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	3.22		1.83		25.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	A					
Intersection V/C	0.402					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	258.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	78.252

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	16	0	8	21	38	0	0	140	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	276	6	495	528	696	14	3	595	316
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	69	2	124	132	174	4	1	149	79
Total Analysis Volume [veh/h]	11	6	3	276	6	495	528	696	14	3	595	316
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	38	38	8	25	25	0	17	17
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.11	0.33	0.33	0.01	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.00	65.25	0.31	0.29	0.19	0.01	0.00	0.16	0.20
s, saturation flow rate [veh/h]	55	1615	4	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	107	818	97	818	190	1186	529	11	828	370
d1, Uniform Delay [s]	18.31	9.16	37.11	13.19	33.60	21.01	17.11	37.14	26.71	27.75
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.00	884.63	0.73	805.40	2.13	0.09	12.85	5.32	21.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

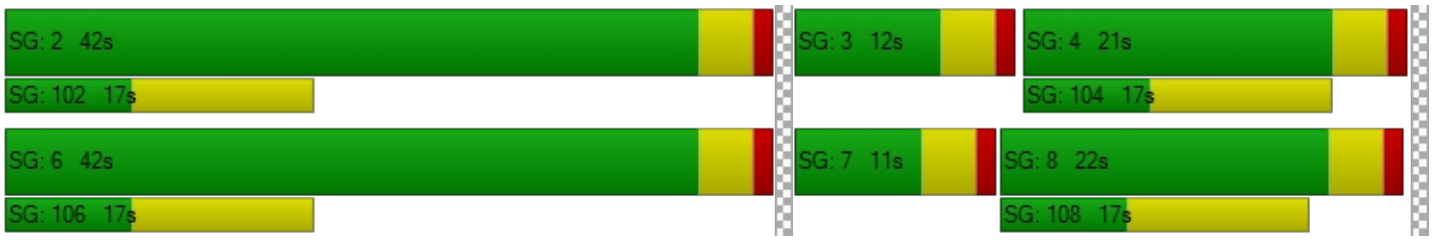
X, volume / capacity	0.16	0.00	2.90	0.61	2.78	0.59	0.03	0.27	0.72	0.85
d, Delay for Lane Group [s/veh]	18.99	9.16	921.74	13.91	839.00	23.14	17.21	50.00	32.04	49.30
Lane Group LOS	B	A	F	B	F	C	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.02	25.60	5.45	45.79	5.15	0.17	0.09	5.32	7.40
50th-Percentile Queue Length [ft/ln]	4.87	0.57	639.95	136.20	1144.75	128.67	4.27	2.32	132.89	185.07
95th-Percentile Queue Length [veh/ln]	0.35	0.04	46.08	9.28	71.21	8.87	0.31	0.17	9.10	11.86
95th-Percentile Queue Length [ft/ln]	8.76	1.02	1151.90	231.90	1780.16	221.69	7.68	4.17	227.42	296.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.99	18.99	9.16	921.74	921.74	13.91	839.00	23.14	17.21	50.00	32.04	49.30
Movement LOS	B	B	A	F	F	B	F	C	B	D	C	D
d_A, Approach Delay [s/veh]	17.52			343.39			371.03			38.06		
Approach LOS	B			F			F			D		
d_I, Intersection Delay [s/veh]	258.15											
Intersection LOS	F											
Intersection V/C	78.252											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 14 Year 2035 With Project Evening Peak Hour - Alternative 1

Report File: C:\...\PM35W1.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	SB Left	1.237	77.9	E
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.048	16.4	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.653	5.5	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	744.4	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	1.273	212.6	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.053	10.9	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.518	6.4	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.769	19.3	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.000	12.1	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	1.175	158.1	F
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.043	13.1	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.453	31.8	D
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.672	15.7	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.860	3.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	695.331	354.0	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	77.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.237

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	44	81	46	3	0	0	0	0	171	0	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1402	200	400	1136	17	21	9	23	339	16	367
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	351	50	100	284	4	5	2	6	85	4	92
Total Analysis Volume [veh/h]	14	1402	200	400	1136	17	21	9	23	339	16	367
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	50	0	27	66	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	46	46	23	66	66	39	39	39
g / C, Green / Cycle	0.02	0.38	0.38	0.19	0.55	0.55	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.43	0.43	0.22	0.30	0.30	0.38	0.46	0.23
s, saturation flow rate [veh/h]	1810	1900	1819	1810	1900	1890	140	776	1615
c, Capacity [veh/h]	42	728	697	348	1049	1044	87	311	525
d1, Uniform Delay [s]	57.84	37.08	37.08	48.58	17.31	17.33	33.64	44.30	35.46
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.68	69.12	77.70	75.59	2.08	2.10	6.63	73.24	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	1.11	1.13	1.15	0.55	0.55	0.61	1.14	0.70
d, Delay for Lane Group [s/veh]	62.52	106.21	114.78	124.17	19.39	19.42	40.28	117.54	37.16
Lane Group LOS	E	F	F	F	B	B	D	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.47	34.87	35.04	17.66	10.59	10.57	1.23	15.78	9.58
50th-Percentile Queue Length [ft/ln]	11.84	871.70	875.98	441.41	264.83	264.26	30.85	394.58	239.39
95th-Percentile Queue Length [veh/ln]	0.85	48.05	48.83	26.35	15.93	15.90	2.22	24.13	14.65
95th-Percentile Queue Length [ft/ln]	21.31	1201.14	1220.69	658.76	398.28	397.56	55.53	603.28	366.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.52	109.82	114.78	124.17	19.41	19.42	40.28	40.28	40.28	117.54	117.54	37.16
Movement LOS	E	F	F	F	B	B	D	D	D	F	F	D
d_A, Approach Delay [s/veh]	110.03			46.39			40.28			76.68		
Approach LOS	F			D			D			E		
d_I, Intersection Delay [s/veh]	77.93											
Intersection LOS	E											
Intersection V/C	1.237											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.048

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	109	3	0	174	0	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1600	3	0	1498	0	16
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	400	1	0	375	0	4
Total Analysis Volume [veh/h]	1600	3	0	1498	0	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.41
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.15
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	3.79
d_A, Approach Delay [s/veh]	0.00		0.00		16.41	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	83	10	3	171	82	29
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1574	10	3	1495	82	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	394	3	1	374	21	7
Total Analysis Volume [veh/h]	1574	10	3	1495	82	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	88	0	11	99	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	0	33	5	5
g / C, Green / Cycle	0.62	0.62	0.01	0.71	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.44	0.01	0.00	0.41	0.05	0.02
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2232	996	11	2568	210	188
d1, Uniform Delay [s]	5.98	3.40	22.76	3.30	18.81	18.29
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.00	13.62	0.21	1.17	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.01	0.28	0.58	0.39	0.15
d, Delay for Lane Group [s/veh]	6.39	3.40	36.38	3.51	19.98	18.66
Lane Group LOS	A	A	D	A	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.92	0.02	0.07	1.12	0.79	0.27
50th-Percentile Queue Length [ft/ln]	72.99	0.53	1.75	27.92	19.71	6.68
95th-Percentile Queue Length [veh/ln]	5.25	0.04	0.13	2.01	1.42	0.48
95th-Percentile Queue Length [ft/ln]	131.37	0.96	3.14	50.26	35.48	12.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.39	3.40	36.38	3.51	19.98	18.66
Movement LOS	A	A	D	A	B	B
d_A, Approach Delay [s/veh]	6.37		3.58		19.64	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.52					
Intersection LOS	A					
Intersection V/C	0.653					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	744.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	0	0	253	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1503	0	0	1562	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	376	0	0	391	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1503	0	0	1562	17	27	0	42	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.00	0.00	0.02	0.00	1.47	0.00	0.12	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	13.95	0.00	0.00	12.97	0.00	0.00	616.24	744.43	430.25	217.44	338.26	19.26
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.00	0.00	6.95	6.95	6.95	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.72	0.00	0.00	0.00	0.00	0.00	173.84	173.84	173.84	5.17	5.17	5.17
d_A, Approach Delay [s/veh]	0.18			0.00			503.03			68.80		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	11.11											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	212.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.273

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	41	10	143	110	0	0	0	0	28	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	548	651	714	723	75	65	136	26	485	134	606
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	137	163	179	181	19	16	34	7	121	34	0
Total Analysis Volume [veh/h]	62	548	651	714	723	75	65	136	26	485	134	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	37	0	11	37	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	414	414	414	414	414	414	414	414	414	414
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	39	39	120	120
g / C, Green / Cycle	0.04	0.29	0.29	0.29	0.54	0.54	0.09	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.40	0.39	0.20	0.05	0.04	0.09	0.34	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1848	1828	1615
c, Capacity [veh/h]	71	1048	468	524	1953	872	168	172	529	467
d1, Uniform Delay [s]	198.05	123.19	147.15	147.20	54.80	45.98	176.78	186.81	147.20	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.39	0.41	189.00	175.57	0.12	0.04	1.45	20.76	95.26	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

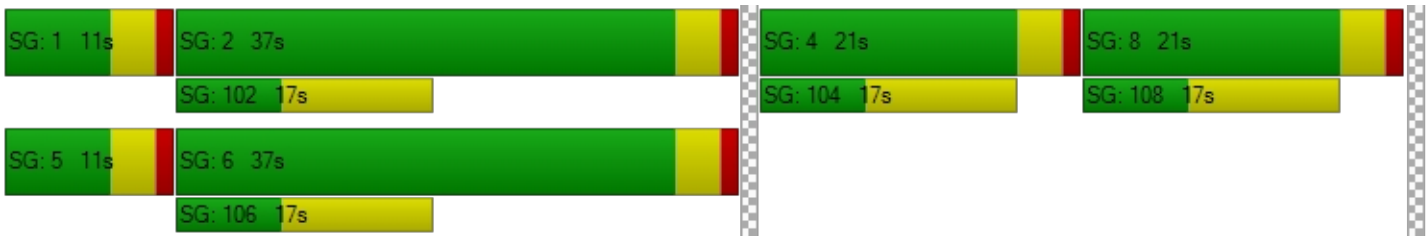
X, volume / capacity	0.88	0.52	1.39	1.36	0.37	0.09	0.39	0.94	1.17	0.00
d, Delay for Lane Group [s/veh]	224.44	123.59	336.15	322.77	54.91	46.02	178.23	207.56	242.46	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.44	25.54	76.52	83.70	22.67	3.95	6.91	19.02	72.77	0.00
50th-Percentile Queue Length [ft/ln]	185.88	638.51	1913.07	2092.53	566.65	98.76	172.83	475.47	1819.14	0.00
95th-Percentile Queue Length [veh/ln]	11.91	33.83	109.52	118.11	30.47	7.11	11.23	26.17	96.16	0.00
95th-Percentile Queue Length [ft/ln]	297.68	845.71	2738.08	2952.74	761.84	177.77	280.63	654.28	2404.08	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	224.44	123.59	336.15	322.77	54.91	46.02	178.23	207.56	207.56	242.46	242.46	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	238.29			180.96			199.16			242.46		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	212.60											
Intersection LOS	F											
Intersection V/C	1.273											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	126	1	4	272
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	34	726	1	4	839
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	182	0	1	210
Total Analysis Volume [veh/h]	0	34	726	1	4	839
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	10.94	0.00	0.00	9.08	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.20	0.00	0.00	0.34	0.00
d_A, Approach Delay [s/veh]	10.94		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	140	27	94	65	7	135
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	27	694	65	7	702
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	7	174	16	2	176
Total Analysis Volume [veh/h]	140	27	694	65	7	702
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	33	0	76	0	11	87
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	8	8	0	12
g / C, Green / Cycle	0.19	0.19	0.32	0.32	0.01	0.49
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.19	0.04	0.00	0.19
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	353	315	1160	518	26	1779
d1, Uniform Delay [s]	8.97	8.42	7.29	6.14	12.46	4.09
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.12	0.50	0.11	5.28	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

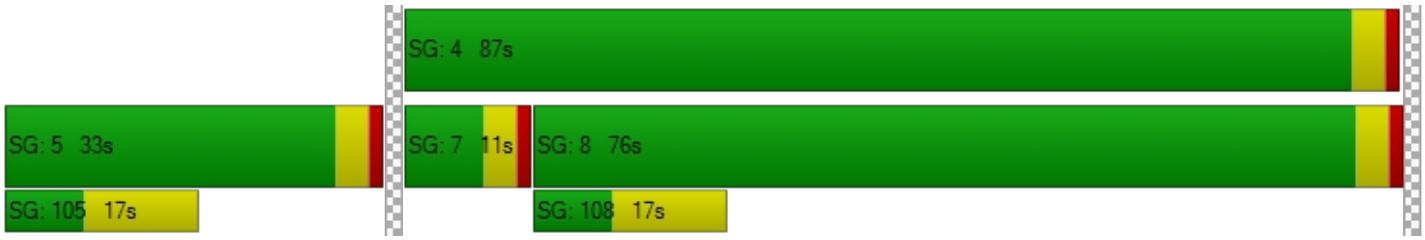
X, volume / capacity	0.40	0.09	0.60	0.13	0.27	0.39
d, Delay for Lane Group [s/veh]	9.69	8.53	7.79	6.25	17.74	4.24
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.50	0.09	0.90	0.15	0.07	0.34
50th-Percentile Queue Length [ft/ln]	12.39	2.17	22.57	3.63	1.68	8.56
95th-Percentile Queue Length [veh/ln]	0.89	0.16	1.62	0.26	0.12	0.62
95th-Percentile Queue Length [ft/ln]	22.30	3.91	40.62	6.54	3.02	15.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.69	8.53	7.79	6.25	17.74	4.24
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.50		7.66		4.37	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.42					
Intersection LOS	A					
Intersection V/C	0.518					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	6	68	0	3	0	4	74	44	24	28	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	6	68	495	3	318	186	492	44	24	277	219
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	2	17	124	1	80	47	123	11	6	69	55
Total Analysis Volume [veh/h]	114	6	68	495	3	318	186	492	44	24	277	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	41	56	0	11	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	59	59	59	59	59	59	59	59	59	59
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	28	28	8	17	17	2	11	11
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.13	0.28	0.28	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.37	0.20	0.10	0.14	0.03	0.01	0.14	0.14
s, saturation flow rate [veh/h]	1075	1635	1347	1617	1810	3618	1615	1810	1900	1630
c, Capacity [veh/h]	451	776	677	767	241	1027	458	70	359	308
d1, Uniform Delay [s]	15.90	8.54	16.14	10.17	24.73	17.53	15.57	27.67	22.55	22.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.05	1.54	0.36	5.18	0.35	0.09	2.91	2.90	3.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.10	0.73	0.42	0.77	0.48	0.10	0.34	0.73	0.76
d, Delay for Lane Group [s/veh]	16.19	8.59	17.68	10.54	29.91	17.88	15.66	30.58	25.44	26.44
Lane Group LOS	B	A	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.12	0.46	5.59	2.38	2.70	2.58	0.41	0.37	3.48	3.16
50th-Percentile Queue Length [ft/ln]	28.04	11.42	139.76	59.50	67.61	64.55	10.34	9.27	87.04	79.08
95th-Percentile Queue Length [veh/ln]	2.02	0.82	9.47	4.28	4.87	4.65	0.74	0.67	6.27	5.69
95th-Percentile Queue Length [ft/ln]	50.48	20.56	236.70	107.10	121.69	116.18	18.62	16.68	156.66	142.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.19	8.59	8.59	17.68	10.54	10.54	29.91	17.88	15.66	30.58	25.49	26.44
Movement LOS	B	A	A	B	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	13.20			14.87			20.85			26.13		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.26											
Intersection LOS	B											
Intersection V/C	0.769											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	913	0	0	466
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	133	9	2	53
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1046	9	2	519
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	262	2	1	130
Total Analysis Volume [veh/h]	0	0	1046	9	2	519
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.14	0.00	0.00	10.41	0.00
Movement LOS		B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.23	0.00
d_A, Approach Delay [s/veh]	12.14		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	158.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.175

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	0	2	0	0	0	0	65	68	2	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	333	2	12	3	4	6	8	451	254	4	218	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	1	3	1	1	2	2	113	64	1	55	3
Total Analysis Volume [veh/h]	333	2	12	3	4	6	8	451	254	4	218	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.18	0.01	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	158.12	157.34	152.35	18.12	19.33	9.71	7.69	0.00	0.00	9.01	0.00	0.00
Movement LOS	F	F	F	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	15.67	15.67	15.67	0.10	0.10	0.10	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	391.87	391.87	391.87	2.60	2.60	2.60	0.45	0.45	0.45	0.33	0.33	0.33
d_A, Approach Delay [s/veh]	157.92			14.61			0.09			0.15		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	42.11											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	308	192	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	19	64	6	20	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	327	256	6	20	27
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	82	64	2	5	7
Total Analysis Volume [veh/h]	9	327	256	6	20	27
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.03
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	0.00	13.12	9.73
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.13	0.11
95th-Percentile Queue Length [ft/ln]	0.52	0.00	0.00	0.00	3.37	2.66
d_A, Approach Delay [s/veh]	0.21		0.00		11.17	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	250	787	717	40	48	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	15	6	20	61	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	257	802	723	60	109	213
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	201	181	15	27	53
Total Analysis Volume [veh/h]	257	802	723	60	109	213
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.01	0.01	0.00	0.45	0.33
d_M, Delay for Movement [s/veh]	11.12	0.00	0.00	0.00	31.78	13.39
Movement LOS	B	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	1.29	0.00	0.00	0.00	2.19	1.45
95th-Percentile Queue Length [ft/ln]	32.27	0.00	0.00	0.00	54.80	36.34
d_A, Approach Delay [s/veh]	2.70		0.00		19.61	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.24					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	7	0	0	30	6	15	0	55	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	807	176	83	847	17	25	7	75	88	6	246
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	202	44	21	212	4	6	2	19	22	2	62
Total Analysis Volume [veh/h]	43	807	176	83	847	17	25	7	75	88	6	246
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	53	0	15	57	0	11	37	0	15	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	14	14	5	16	16	2	6	6	5	9	9
g / C, Green / Cycle	0.07	0.31	0.31	0.10	0.34	0.34	0.04	0.14	0.14	0.10	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.11	0.05	0.23	0.01	0.01	0.00	0.05	0.05	0.00	0.15
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	119	1110	496	183	1239	553	77	258	220	189	376	320
d1, Uniform Delay [s]	20.36	14.07	12.27	19.27	12.84	9.94	21.16	17.05	17.82	19.19	14.69	17.27
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	0.92	0.43	1.75	0.67	0.02	2.43	0.04	0.91	1.78	0.02	3.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

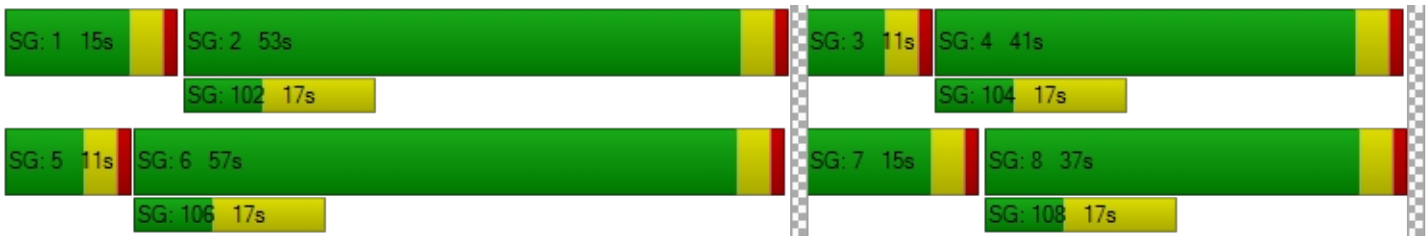
X, volume / capacity	0.36	0.73	0.36	0.45	0.68	0.03	0.33	0.03	0.34	0.47	0.02	0.77
d, Delay for Lane Group [s/veh]	22.21	14.99	12.70	21.03	13.52	9.96	23.59	17.09	18.73	20.97	14.70	21.18
Lane Group LOS	C	B	B	C	B	A	C	B	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.45	3.18	1.21	0.82	3.10	0.10	0.28	0.06	0.69	0.87	0.05	2.44
50th-Percentile Queue Length [ft/ln]	11.31	79.49	30.36	20.57	77.54	2.40	7.11	1.48	17.13	21.75	1.13	61.08
95th-Percentile Queue Length [veh/ln]	0.81	5.72	2.19	1.48	5.58	0.17	0.51	0.11	1.23	1.57	0.08	4.40
95th-Percentile Queue Length [ft/ln]	20.36	143.08	54.65	37.03	139.57	4.33	12.79	2.67	30.84	39.15	2.03	109.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.21	14.99	12.70	21.03	13.52	9.96	23.59	17.09	18.73	20.97	14.70	21.18
Movement LOS	C	B	B	C	B	A	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	14.90			14.11			19.76			21.01		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.67											
Intersection LOS	B											
Intersection V/C	0.672											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1053	77	103	797	63	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	84	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1087	77	103	881	63	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	272	19	26	220	16	10
Total Analysis Volume [veh/h]	1087	77	103	881	63	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	99	0	0	124	21	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	0	0	3	3
g / C, Green / Cycle	0.49	0.49	0.00	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.30	0.05	0.20	0.46	0.10	0.02
s, saturation flow rate [veh/h]	3618	1615	527	1900	640	1615
c, Capacity [veh/h]	1787	798	320	0	363	243
d1, Uniform Delay [s]	4.12	3.02	11.24	0.00	10.72	8.32
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.05	2.64	0.00	0.22	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

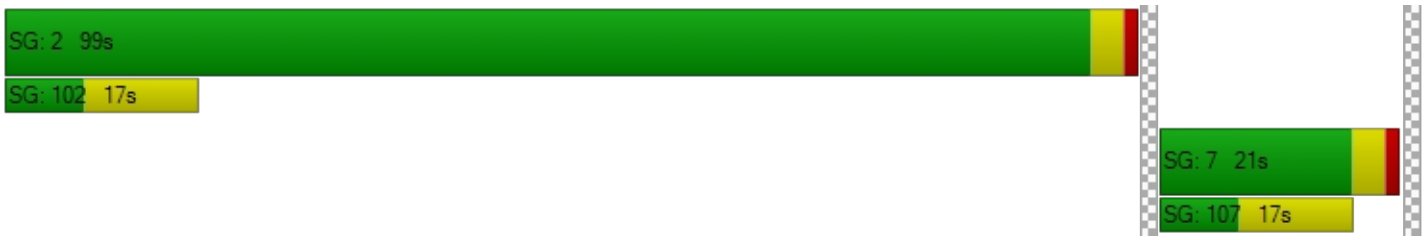
X, volume / capacity	0.61	0.10	0.32	0.00	0.17	0.16
d, Delay for Lane Group [s/veh]	4.45	3.08	13.89	0.00	10.95	8.63
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.29	0.03	0.66	0.00	0.23	0.12
50th-Percentile Queue Length [ft/ln]	7.25	0.83	16.55	0.00	5.67	2.92
95th-Percentile Queue Length [veh/ln]	0.52	0.06	1.19	0.00	0.41	0.21
95th-Percentile Queue Length [ft/ln]	13.06	1.49	29.78	0.00	10.21	5.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.45	3.08	13.89	0.00	10.95	8.63
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	4.36		1.45		10.06	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.35					
Intersection LOS	A					
Intersection V/C	0.860					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	354.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	695.331

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	57	0	28	10	143	0	0	50	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	385	3	587	765	740	5	2	648	386
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	96	1	147	191	185	1	1	162	97
Total Analysis Volume [veh/h]	5	3	2	385	3	587	765	740	5	2	648	386
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	27	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	8	25	25	0	17	17
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.13	0.41	0.41	0.00	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.08	0.00	555.65	0.36	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	100	1615	1	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	136	619	120	619	238	1493	667	7	1032	461
d1, Uniform Delay [s]	15.43	11.43	30.02	17.94	26.07	13.01	10.38	29.81	18.68	20.14
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.00	1029.60	8.45	999.55	1.18	0.02	18.52	2.89	16.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

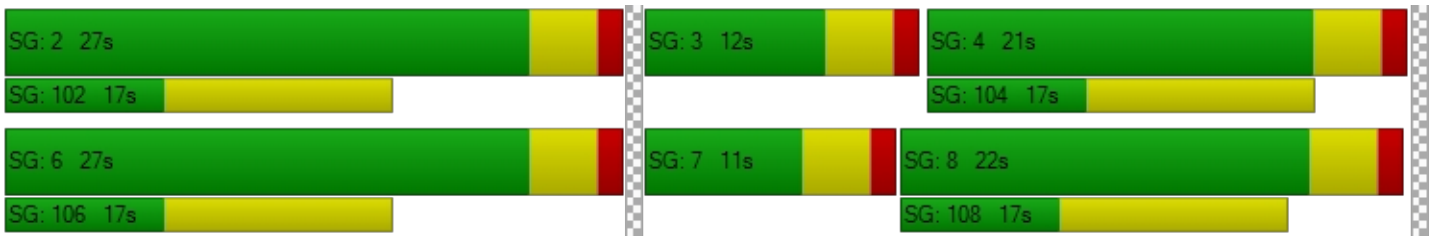
X, volume / capacity	0.06	0.00	3.24	0.95	3.22	0.50	0.01	0.27	0.63	0.84
d, Delay for Lane Group [s/veh]	15.61	11.43	1059.62	26.39	1025.63	14.19	10.40	48.33	21.56	36.58
Lane Group LOS	B	B	F	C	F	B	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	0.02	35.89	8.27	69.22	3.46	0.04	0.07	3.98	6.69
50th-Percentile Queue Length [ft/ln]	1.65	0.38	897.32	206.87	1730.48	86.41	0.96	1.64	99.61	167.31
95th-Percentile Queue Length [veh/ln]	0.12	0.03	63.19	12.99	106.57	6.22	0.07	0.12	7.17	10.93
95th-Percentile Queue Length [ft/ln]	2.98	0.68	1579.77	324.81	2664.23	155.54	1.73	2.95	179.30	273.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.61	15.61	11.43	1059.62	1059.62	26.39	1025.63	14.19	10.40	48.33	21.56	36.58
Movement LOS	B	B	B	F	F	C	F	B	B	D	C	D
d_A, Approach Delay [s/veh]	14.77			437.56			526.59			27.21		
Approach LOS	B			F			F			C		
d_I, Intersection Delay [s/veh]	354.04											
Intersection LOS	F											
Intersection V/C	695.331											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 15 Year 2035 With Project Morning Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\AM35W1-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.549	14.8	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.429	3.6	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.893	38.2	D
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.534	5.9	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.790	32.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	150	99	32	0	0	0	0	47	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	718	288	268	1172	8	22	10	28	141	5	121
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	180	72	67	293	2	6	3	7	35	1	30
Total Analysis Volume [veh/h]	15	718	288	268	1172	8	22	10	28	141	5	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	29	29	12	39	39	12	12	12	12
g / C, Green / Cycle	0.03	0.45	0.45	0.18	0.61	0.61	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.18	0.15	0.31	0.31	0.02	0.02	0.10	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1895	1285	1681	1391	1625
c, Capacity [veh/h]	47	1637	731	323	1150	1147	215	310	293	299
d1, Uniform Delay [s]	31.11	12.16	11.86	25.75	7.35	7.35	27.94	22.14	27.31	23.45
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.86	0.86	1.59	5.45	1.64	1.65	0.21	0.18	1.22	0.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

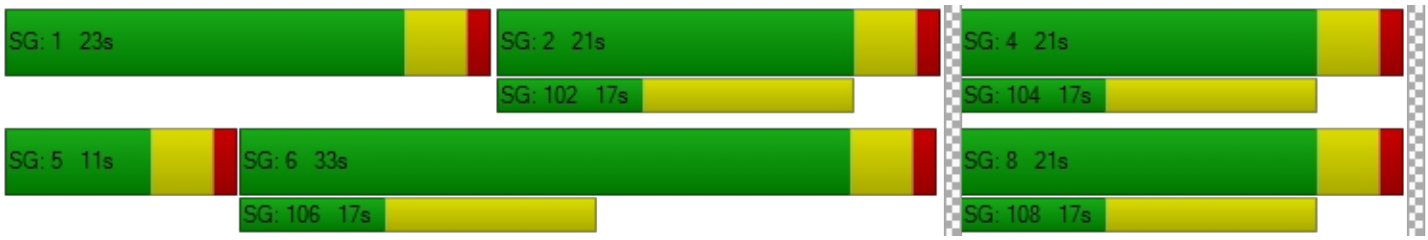
X, volume / capacity	0.32	0.44	0.39	0.83	0.51	0.51	0.10	0.12	0.48	0.42
d, Delay for Lane Group [s/veh]	34.97	13.02	13.45	31.20	8.99	9.00	28.15	22.31	28.53	24.39
Lane Group LOS	C	B	B	C	A	A	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	3.33	2.78	4.25	4.17	4.16	0.32	0.48	2.11	1.70
50th-Percentile Queue Length [ft/ln]	6.82	83.33	69.48	106.25	104.13	104.00	7.98	11.89	52.69	42.39
95th-Percentile Queue Length [veh/ln]	0.49	6.00	5.00	7.63	7.50	7.49	0.57	0.86	3.79	3.05
95th-Percentile Queue Length [ft/ln]	12.27	149.99	125.07	190.78	187.43	187.20	14.36	21.40	94.84	76.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.97	13.02	13.45	31.20	9.00	9.00	28.15	22.31	22.31	28.53	24.39	24.39
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.46			13.11			24.45			26.58		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.77											
Intersection LOS	B											
Intersection V/C	0.549											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	242	1	1	63	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1159	1	1	1317	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	290	0	0	329	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1159	1	1	1317	11	6	0	18	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	104	104	0	101	101	4	4	4	4
g / C, Green / Cycle	0.03	0.86	0.86	0.00	0.84	0.84	0.03	0.03	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.32	0.00	0.00	0.36	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1417	1900
c, Capacity [veh/h]	54	3125	1395	5	3028	1352	90	54	74	64
d1, Uniform Delay [s]	57.25	1.64	1.12	59.81	2.51	1.61	57.91	56.79	58.95	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.34	0.00	16.49	0.46	0.01	0.31	3.53	0.07	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.37	0.00	0.19	0.43	0.01	0.07	0.33	0.01	0.00
d, Delay for Lane Group [s/veh]	61.50	1.98	1.12	76.30	2.97	1.62	58.22	60.32	59.02	0.00
Lane Group LOS	E	A	A	E	A	A	E	E	E	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	1.53	0.00	0.05	2.79	0.03	0.19	0.59	0.03	0.00
50th-Percentile Queue Length [ft/ln]	16.51	38.34	0.05	1.36	69.87	0.80	4.69	14.70	0.79	0.00
95th-Percentile Queue Length [veh/ln]	1.19	2.76	0.00	0.10	5.03	0.06	0.34	1.06	0.06	0.00
95th-Percentile Queue Length [ft/ln]	29.71	69.02	0.09	2.46	125.77	1.44	8.43	26.46	1.42	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	1.98	1.12	76.30	2.97	1.62	58.22	60.32	60.32	59.02	0.00	0.00
Movement LOS	E	A	A	E	A	A	E	E	E	E	A	A
d_A, Approach Delay [s/veh]	2.99			3.01			59.80			59.02		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.56											
Intersection LOS	A											
Intersection V/C	0.429											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	103	21	38	26	0	0	0	0	8	0	140
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	421	420	662	680	38	61	117	52	419	87	562
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	105	105	166	170	10	15	29	13	105	22	141
Total Analysis Volume [veh/h]	32	421	420	662	680	38	61	117	52	419	87	562
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	27	37	0	11	21	0	46	56	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	28	57	23	46	46	6	23	25	42	42
g / C, Green / Cycle	0.04	0.24	0.49	0.20	0.40	0.40	0.05	0.20	0.22	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.26	0.19	0.19	0.02	0.03	0.09	0.12	0.05	0.35
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1802	3514	1900	1615
c, Capacity [veh/h]	71	865	795	703	1447	646	95	367	767	701	596
d1, Uniform Delay [s]	54.06	37.69	20.05	45.37	25.52	21.22	53.46	40.29	39.93	24.00	35.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.38	1.95	2.51	7.05	1.10	0.17	7.03	0.90	0.61	0.08	8.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.49	0.53	0.94	0.47	0.06	0.64	0.46	0.55	0.12	0.94
d, Delay for Lane Group [s/veh]	58.44	39.65	22.56	52.42	26.62	21.40	60.49	41.19	40.54	24.08	43.26
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.99	5.34	8.13	9.94	7.04	0.66	1.92	4.30	5.32	1.59	16.25
50th-Percentile Queue Length [ft/ln]	24.82	133.42	203.23	248.45	175.89	16.62	47.88	107.52	133.12	39.78	406.13
95th-Percentile Queue Length [veh/ln]	1.79	9.13	12.81	15.11	11.39	1.20	3.45	7.70	9.11	2.86	22.86
95th-Percentile Queue Length [ft/ln]	44.68	228.14	320.13	377.70	284.64	29.91	86.18	192.54	227.73	71.60	571.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.44	39.65	22.56	52.42	26.62	21.40	60.49	41.19	41.19	40.54	24.08	43.26
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	32.12			38.85			46.31			40.63		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	38.21											
Intersection LOS	D											
Intersection V/C	0.893											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	0	1	0	0	0	0	15	28	4	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	127	3	5	10	11	12	3	165	175	15	181	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	1	1	3	3	3	1	41	44	4	45	2
Total Analysis Volume [veh/h]	127	3	5	10	11	12	3	165	175	15	181	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	3	3	6	6	6	6
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.00	0.01	0.01	0.00	0.20	0.01	0.10
s, saturation flow rate [veh/h]	1410	1711	1430	1740	1215	1742	1057	1889
c, Capacity [veh/h]	546	347	558	353	610	584	487	634
d1, Uniform Delay [s]	7.84	5.53	7.07	5.58	6.13	4.75	7.65	4.25
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.03	0.01	0.08	0.00	0.92	0.03	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.02	0.02	0.07	0.00	0.58	0.03	0.30
d, Delay for Lane Group [s/veh]	8.06	5.56	7.09	5.66	6.13	5.68	7.67	4.50
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.24	0.01	0.02	0.03	0.00	0.27	0.03	0.11
50th-Percentile Queue Length [ft/ln]	5.92	0.25	0.41	0.73	0.10	6.81	0.69	2.64
95th-Percentile Queue Length [veh/ln]	0.43	0.02	0.03	0.05	0.01	0.49	0.05	0.19
95th-Percentile Queue Length [ft/ln]	10.65	0.45	0.74	1.31	0.18	12.25	1.24	4.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.06	5.56	5.56	7.09	5.66	5.66	6.13	5.68	5.68	7.67	4.50	4.50
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.91			6.09			5.68			4.74		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.85											
Intersection LOS	A											
Intersection V/C	0.534											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	16	0	8	21	38	0	0	140	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	276	6	495	528	696	14	3	595	316
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	69	2	124	132	174	4	1	149	79
Total Analysis Volume [veh/h]	11	6	3	276	6	495	528	696	14	3	595	316
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	28	0	0	28	0	57	76	0	11	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	24	36	78	78	1	43	43
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.31	0.68	0.68	0.01	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.19	0.00	0.17	0.29	0.19	0.01	0.00	0.16	0.20
s, saturation flow rate [veh/h]	1525	1615	1432	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	370	338	323	397	598	567	2461	1099	12	1351	603
d1, Uniform Delay [s]	36.38	36.12	47.75	36.16	43.60	38.37	7.29	5.94	56.97	27.07	28.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.01	6.47	0.02	3.02	7.49	0.29	0.02	10.78	1.04	3.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.01	0.86	0.02	0.83	0.93	0.28	0.01	0.25	0.44	0.52
d, Delay for Lane Group [s/veh]	36.43	36.13	54.22	36.18	46.62	45.86	7.58	5.96	67.74	28.11	31.35
Lane Group LOS	D	D	D	D	D	D	A	A	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.39	0.07	8.54	0.14	6.96	15.41	3.25	0.11	0.12	6.30	7.27
50th-Percentile Queue Length [ft/ln]	9.74	1.71	213.57	3.41	174.01	385.34	81.35	2.75	3.06	157.39	181.81
95th-Percentile Queue Length [veh/ln]	0.70	0.12	13.34	0.25	11.29	21.85	5.86	0.20	0.22	10.41	11.69
95th-Percentile Queue Length [ft/ln]	17.54	3.08	333.41	6.15	282.18	546.31	146.42	4.94	5.50	260.27	292.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.43	36.43	36.13	54.22	36.18	46.62	45.86	7.58	5.96	67.74	28.11	31.35
Movement LOS	D	D	D	D	D	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	36.38			49.24			23.89			29.36		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.35											
Intersection LOS	C											
Intersection V/C	0.790											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 15 Year 2035 With Project Evening Peak Hour - Alternative 1 - With Improvements

Report File: C:\...\PM35W1-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.945	38.2	D
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.521	5.3	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.982	40.8	D
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.790	11.7	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Right	1.080	49.7	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	44	81	46	3	0	0	0	0	171	0	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1402	200	400	1136	17	21	9	23	339	16	367
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	351	50	100	284	4	5	2	6	85	4	92
Total Analysis Volume [veh/h]	14	1402	200	400	1136	17	21	9	23	339	16	367
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	53	0	33	75	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	50	50	28	75	75	30	30	30	30
g / C, Green / Cycle	0.02	0.41	0.41	0.24	0.63	0.63	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.01	0.39	0.12	0.22	0.30	0.30	0.02	0.02	0.24	0.24
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1890	1016	1686	1399	1625
c, Capacity [veh/h]	40	1499	669	426	1192	1186	62	422	368	406
d1, Uniform Delay [s]	57.85	33.62	23.50	45.06	11.97	11.97	60.05	34.43	48.02	44.19
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.99	12.19	1.14	10.19	1.41	1.42	3.17	0.08	9.63	10.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.94	0.30	0.94	0.48	0.49	0.34	0.08	0.92	0.94
d, Delay for Lane Group [s/veh]	62.84	45.81	24.64	55.25	13.37	13.40	63.21	34.50	57.66	55.16
Lane Group LOS	E	D	C	E	B	B	E	C	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.48	21.58	4.01	12.82	8.37	8.35	0.69	0.73	11.31	12.33
50th-Percentile Queue Length [ft/ln]	11.89	539.41	100.22	320.58	209.21	208.75	17.36	18.27	282.84	308.17
95th-Percentile Queue Length [veh/ln]	0.86	29.19	7.22	18.70	13.11	13.09	1.25	1.32	16.83	18.08
95th-Percentile Queue Length [ft/ln]	21.40	729.85	180.40	467.40	327.82	327.22	31.25	32.88	420.75	452.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.84	45.81	24.64	55.25	13.38	13.40	63.21	34.50	34.50	57.66	55.16	55.16
Movement LOS	E	D	C	E	B	B	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	43.34			24.17			45.88			56.33		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	38.20											
Intersection LOS	D											
Intersection V/C	0.945											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	90	0	0	253	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1503	0	0	1562	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	376	0	0	391	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1503	0	0	1562	17	27	0	42	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	102	102	0	98	98	6	6	6	6
g / C, Green / Cycle	0.03	0.85	0.85	0.00	0.82	0.82	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.43	0.01	0.02	0.03	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1386	1615
c, Capacity [veh/h]	54	3059	1366	2	2955	1319	116	87	82	87
d1, Uniform Delay [s]	57.25	2.45	0.00	0.00	3.55	2.04	56.61	55.28	58.28	53.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.57	0.00	0.00	0.68	0.02	1.02	4.14	0.06	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.49	0.00	0.00	0.53	0.01	0.23	0.48	0.01	0.03
d, Delay for Lane Group [s/veh]	61.50	3.02	0.00	0.00	4.23	2.05	57.63	59.42	58.33	54.10
Lane Group LOS	E	A	A	A	A	A	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	3.12	0.00	0.00	4.66	0.06	0.84	1.34	0.03	0.09
50th-Percentile Queue Length [ft/ln]	16.51	77.92	0.00	0.00	116.57	1.53	20.91	33.45	0.78	2.25
95th-Percentile Queue Length [veh/ln]	1.19	5.61	0.00	0.00	8.20	0.11	1.51	2.41	0.06	0.16
95th-Percentile Queue Length [ft/ln]	29.71	140.26	0.00	0.00	205.10	2.76	37.64	60.20	1.41	4.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	3.02	0.00	0.00	4.23	2.05	57.63	59.42	59.42	58.33	54.10	54.10
Movement LOS	E	A	A	A	A	A	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	3.79			4.20			58.72			55.16		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	5.25											
Intersection LOS	A											
Intersection V/C	0.521											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	40.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.982

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	41	10	143	110	0	0	0	0	28	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	548	651	714	723	75	65	136	26	485	134	606
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	137	163	179	181	19	16	34	7	121	34	152
Total Analysis Volume [veh/h]	62	548	651	714	723	75	65	136	26	485	134	606
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	22	22	29	40	0	11	21	0	43	53	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	23	56	25	42	42	6	22	30	45	45
g / C, Green / Cycle	0.05	0.20	0.49	0.22	0.36	0.36	0.05	0.19	0.26	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.40	0.20	0.20	0.05	0.04	0.09	0.14	0.07	0.38
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1848	3514	1900	1615
c, Capacity [veh/h]	96	710	793	764	1306	583	97	346	914	748	636
d1, Uniform Delay [s]	53.46	43.81	24.97	44.24	29.38	24.65	53.47	41.66	36.56	22.76	33.85
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.20	7.95	9.32	6.05	1.70	0.46	7.77	0.98	0.48	0.11	8.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.77	0.82	0.93	0.55	0.13	0.67	0.47	0.53	0.18	0.95
d, Delay for Lane Group [s/veh]	60.66	51.76	34.29	50.28	31.07	25.11	61.23	42.65	37.04	22.87	42.62
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.95	8.14	16.65	10.56	8.23	1.45	2.05	4.19	5.91	2.40	17.55
50th-Percentile Queue Length [ft/ln]	48.74	203.57	416.35	263.90	205.65	36.31	51.35	104.82	147.70	60.04	438.73
95th-Percentile Queue Length [veh/ln]	3.51	12.82	23.35	15.88	12.93	2.61	3.70	7.55	9.89	4.32	24.42
95th-Percentile Queue Length [ft/ln]	87.73	320.56	583.66	397.11	323.24	65.35	92.44	188.68	247.35	108.08	610.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.66	51.76	34.29	50.28	31.07	25.11	61.23	42.65	42.65	37.04	22.87	42.62
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	43.18			39.85			47.97			38.25		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.82											
Intersection LOS	D											
Intersection V/C	0.982											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	0	2	0	0	0	0	65	68	2	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	333	2	12	3	4	6	8	451	254	4	218	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	1	3	1	1	2	2	113	64	1	55	3
Total Analysis Volume [veh/h]	333	2	12	3	4	6	8	451	254	4	218	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	44	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	18	18	18	18
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.23	0.01	0.00	0.01	0.01	0.39	0.01	0.12
s, saturation flow rate [veh/h]	1427	1650	1422	1718	1168	1786	754	1881
c, Capacity [veh/h]	584	556	580	579	574	816	228	860
d1, Uniform Delay [s]	13.15	8.60	10.15	8.58	8.71	9.45	17.35	6.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.88	0.02	0.00	0.01	0.01	2.89	0.03	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

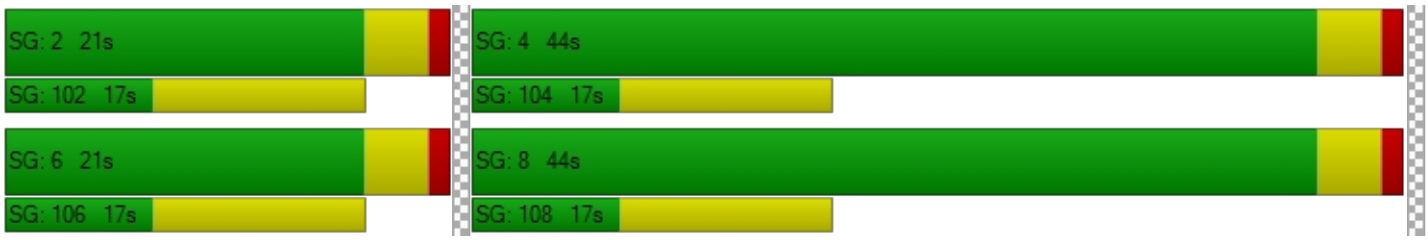
X, volume / capacity	0.57	0.03	0.01	0.02	0.01	0.86	0.02	0.27
d, Delay for Lane Group [s/veh]	14.03	8.62	10.16	8.59	8.72	12.34	17.38	6.69
Lane Group LOS	B	A	B	A	A	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.27	0.06	0.02	0.04	0.04	4.14	0.03	0.83
50th-Percentile Queue Length [ft/ln]	56.79	1.58	0.38	1.12	0.91	103.47	0.78	20.69
95th-Percentile Queue Length [veh/ln]	4.09	0.11	0.03	0.08	0.07	7.45	0.06	1.49
95th-Percentile Queue Length [ft/ln]	102.23	2.84	0.69	2.02	1.64	186.25	1.41	37.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.03	8.62	8.62	10.16	8.59	8.59	8.72	12.34	12.34	17.38	6.69	6.69
Movement LOS	B	A	A	B	A	A	A	B	B	B	A	A
d_A, Approach Delay [s/veh]	13.81			8.95			12.30			6.87		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	11.69											
Intersection LOS	B											
Intersection V/C	0.790											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	49.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.080

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	57	0	28	10	143	0	0	50	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	385	3	587	765	740	5	2	648	386
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	96	1	147	191	185	1	1	162	97
Total Analysis Volume [veh/h]	5	3	2	385	3	587	765	740	5	2	648	386
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	51	71	0	11	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	47	74	74	0	27	27
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.25	0.41	0.64	0.64	0.00	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.27	0.00	0.21	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	1543	1615	1436	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	440	407	373	479	721	737	2314	1033	7	855	382
d1, Uniform Delay [s]	32.30	32.20	47.14	32.21	40.47	34.09	9.38	7.49	57.13	40.85	43.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	29.98	0.01	2.30	26.54	0.37	0.01	22.04	6.24	48.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

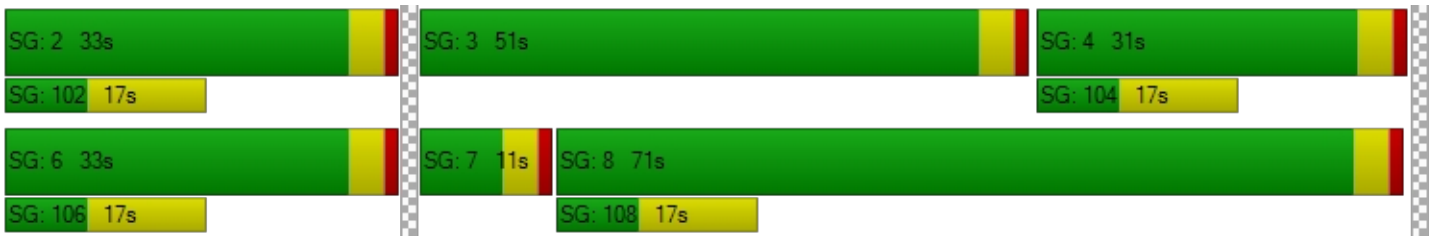
X, volume / capacity	0.02	0.00	1.03	0.01	0.81	1.04	0.32	0.00	0.29	0.76	1.01
d, Delay for Lane Group [s/veh]	32.31	32.20	77.12	32.21	42.77	60.63	9.75	7.50	79.17	47.09	92.87
Lane Group LOS	C	C	F	C	D	F	A	A	E	D	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.17	0.04	13.96	0.06	7.99	25.35	4.13	0.05	0.10	9.24	15.95
50th-Percentile Queue Length [ft/ln]	4.27	1.06	349.11	1.59	199.71	633.81	103.24	1.14	2.49	231.02	398.83
95th-Percentile Queue Length [veh/ln]	0.31	0.08	20.45	0.11	12.62	34.55	7.43	0.08	0.18	14.23	22.65
95th-Percentile Queue Length [ft/ln]	7.68	1.92	511.28	2.87	315.60	863.76	185.82	2.06	4.49	355.65	566.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.31	32.31	32.20	77.12	32.21	42.77	60.63	9.75	7.50	79.17	47.09	92.87
Movement LOS	C	C	C	F	C	D	F	A	A	E	D	F
d_A, Approach Delay [s/veh]	32.29			56.30			35.52			64.21		
Approach LOS	C			E			D			E		
d_I, Intersection Delay [s/veh]	49.67											
Intersection LOS	D											
Intersection V/C	1.080											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



YEAR 2035 WITH PROJECT – ALTERNATIVE 2

Viridian

Vistro File: C:\...\AME.vistro

Scenario 16 Year 2035 With Project Morning Peak Hour - Alternative 2

Report File: C:\...\AM35W2.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.760	17.9	B
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.020	12.2	B
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.740	4.2	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	133.9	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	1.040	147.6	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.017	10.0	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.345	5.1	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.468	14.1	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.002	9.3	A
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	0.238	14.8	B
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.011	10.6	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.139	16.4	C
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.590	12.1	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.402	3.8	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	79.195	261.9	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	150	93	15	0	0	0	0	47	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	725	288	262	1155	8	22	10	28	141	5	121
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	181	72	66	289	2	6	3	7	35	1	30
Total Analysis Volume [veh/h]	15	725	288	262	1155	8	22	10	28	141	5	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	27	27	11	37	37	15	15	15
g / C, Green / Cycle	0.03	0.42	0.42	0.18	0.57	0.57	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.14	0.31	0.31	0.13	0.20	0.07
s, saturation flow rate [veh/h]	1810	1900	1718	1810	1900	1895	462	748	1615
c, Capacity [veh/h]	49	788	713	319	1072	1069	179	277	363
d1, Uniform Delay [s]	31.11	15.50	15.50	25.83	8.92	8.92	21.19	24.30	21.17
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.53	4.60	5.08	5.22	1.98	1.98	1.09	1.56	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

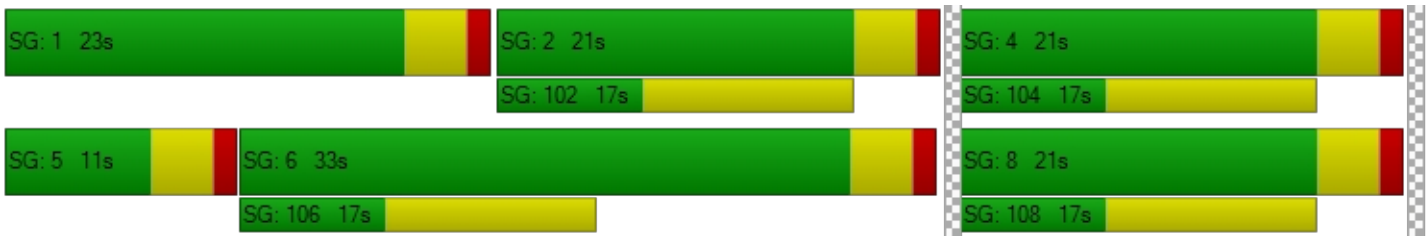
X, volume / capacity	0.31	0.68	0.68	0.82	0.54	0.54	0.33	0.53	0.33
d, Delay for Lane Group [s/veh]	34.64	20.10	20.58	31.06	10.89	10.90	22.28	25.86	21.70
Lane Group LOS	C	C	C	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	6.67	6.13	4.14	4.76	4.75	0.75	2.14	1.51
50th-Percentile Queue Length [ft/ln]	6.76	166.80	153.27	103.62	118.94	118.78	18.66	53.56	37.80
95th-Percentile Queue Length [veh/ln]	0.49	10.91	10.19	7.46	8.33	8.33	1.34	3.86	2.72
95th-Percentile Queue Length [ft/ln]	12.16	272.71	254.79	186.52	208.37	208.16	33.60	96.41	68.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.64	20.23	20.58	31.06	10.90	10.90	22.28	22.28	22.28	25.86	25.86	21.70
Movement LOS	C	C	C	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	20.54			14.60			22.28			23.97		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	17.86											
Intersection LOS	B											
Intersection V/C	0.760											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	865	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	153	15	0	62	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1018	15	0	1324	0	10
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	255	4	0	331	0	3
Total Analysis Volume [veh/h]	1018	15	0	1324	0	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.22
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.06
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.50
d_A, Approach Delay [s/veh]	0.00		0.00		12.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	825	0	0	1262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	165	20	16	46	17	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	990	20	16	1308	17	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	248	5	4	327	4	1
Total Analysis Volume [veh/h]	990	20	16	1308	17	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	22	0	22	44	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	1	15	1	1
g / C, Green / Cycle	0.43	0.43	0.03	0.63	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.27	0.01	0.01	0.36	0.01	0.00
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	1572	702	56	2283	69	61
d1, Uniform Delay [s]	5.32	3.91	11.45	2.58	11.29	11.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.02	2.77	0.23	1.85	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

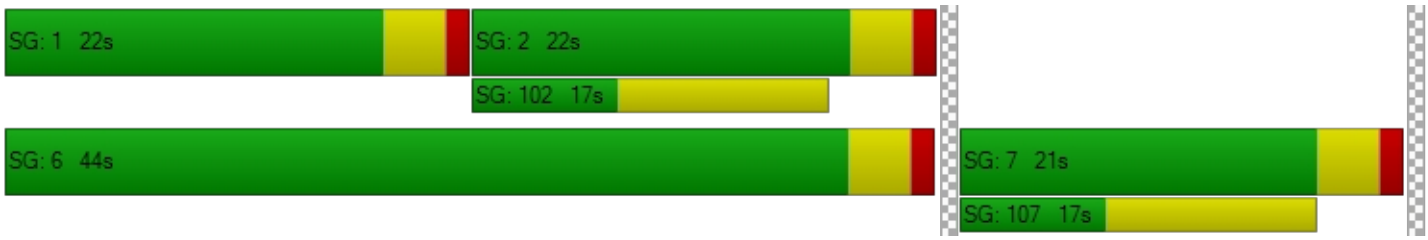
X, volume / capacity	0.63	0.03	0.29	0.57	0.25	0.05
d, Delay for Lane Group [s/veh]	5.74	3.93	14.22	2.81	13.14	11.53
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.71	0.02	0.10	0.07	0.10	0.02
50th-Percentile Queue Length [ft/ln]	17.65	0.54	2.53	1.81	2.40	0.41
95th-Percentile Queue Length [veh/ln]	1.27	0.04	0.18	0.13	0.17	0.03
95th-Percentile Queue Length [ft/ln]	31.77	0.96	4.55	3.26	4.33	0.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.74	3.93	14.22	2.81	13.14	11.53
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.70		2.94		12.89	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.21					
Intersection LOS	A					
Intersection V/C	0.740					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	133.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	185	1	1	62	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1102	1	1	1316	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	276	0	0	329	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1102	1	1	1316	11	6	0	18	1	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.00	0.01	0.00	0.15	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	12.10	0.00	0.00	10.63	0.00	0.00	100.12	133.92	20.50	82.81	129.79	14.09
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	2.95	0.00	0.00	0.12	0.06	0.00	16.87	16.87	16.87	1.60	1.60	1.60
d_A, Approach Delay [s/veh]	0.22			0.01			40.41			82.81		
Approach LOS	A			A			E			F		
d_I, Intersection Delay [s/veh]	0.53											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	147.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.040

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	21	36	27	0	0	0	0	10	0	106
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	398	420	660	681	38	61	117	52	421	87	528
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	8	100	105	165	170	10	15	29	13	105	22	0
Total Analysis Volume [veh/h]	32	398	420	660	681	38	61	117	52	421	87	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	11	21	0	0	22	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	386	386	386	386	386	386	386	386	386	386
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	103	103	120	214	214	38	38	109	109
g / C, Green / Cycle	0.02	0.27	0.27	0.31	0.55	0.55	0.10	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.26	0.36	0.19	0.02	0.03	0.09	0.28	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1802	1824	1615
c, Capacity [veh/h]	40	962	429	564	2009	897	179	178	515	456
d1, Uniform Delay [s]	187.31	116.49	140.11	132.44	46.84	38.94	161.69	172.41	137.36	0.00
k, delay calibration	0.11	0.11	0.36	0.50	0.11	0.11	0.11	0.11	0.40	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.87	0.29	31.80	94.63	0.10	0.02	1.12	21.20	32.56	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

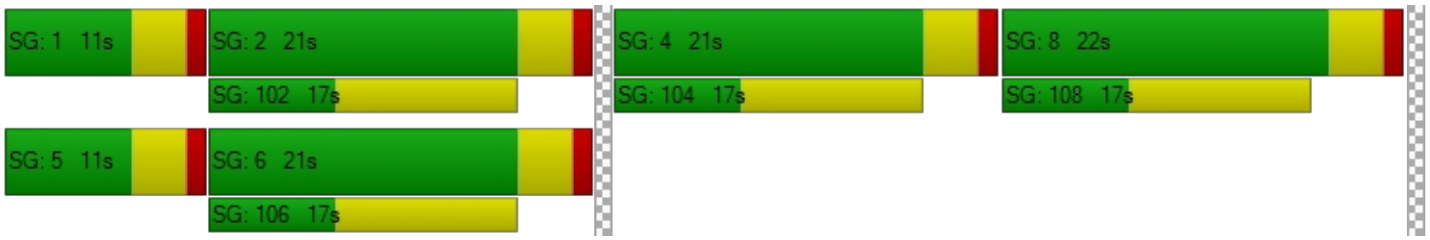
X, volume / capacity	0.80	0.41	0.98	1.17	0.34	0.04	0.34	0.95	0.99	0.00
d, Delay for Lane Group [s/veh]	217.18	116.77	171.91	227.07	46.94	38.96	162.81	193.61	169.92	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.65	16.99	46.82	72.99	18.84	1.75	5.97	18.53	56.79	0.00
50th-Percentile Queue Length [ft/ln]	91.32	424.65	1170.40	1824.63	470.97	43.75	149.33	463.24	1419.66	0.00
95th-Percentile Queue Length [veh/ln]	6.58	23.75	58.04	96.70	25.96	3.15	9.98	25.59	69.15	0.00
95th-Percentile Queue Length [ft/ln]	164.38	593.63	1450.93	2417.43	648.93	78.75	249.54	639.73	1728.63	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	217.18	116.77	171.91	227.07	46.94	38.96	162.81	193.61	193.61	169.92	169.92	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	147.80			132.93			185.44			169.92		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	147.59											
Intersection LOS	F											
Intersection V/C	1.040											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	237	6	12	75
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	554	6	12	267
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	139	2	3	67
Total Analysis Volume [veh/h]	0	12	554	6	12	267
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	10.04	0.00	0.00	8.57	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.26	0.00	0.00	0.89	0.00
d_A, Approach Delay [s/veh]	10.04		0.00		0.37	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	317	0	0	192
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	10	121	128	14	50
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	10	438	128	14	242
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	3	110	32	4	61
Total Analysis Volume [veh/h]	37	10	438	128	14	242
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	21	0	33	0	11	44
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	2	7	7	1	11
g / C, Green / Cycle	0.08	0.08	0.32	0.32	0.03	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.12	0.08	0.01	0.07
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	155	138	1163	519	53	1948
d1, Uniform Delay [s]	9.08	8.95	5.57	5.32	10.11	2.43
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	0.22	0.20	0.25	2.63	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

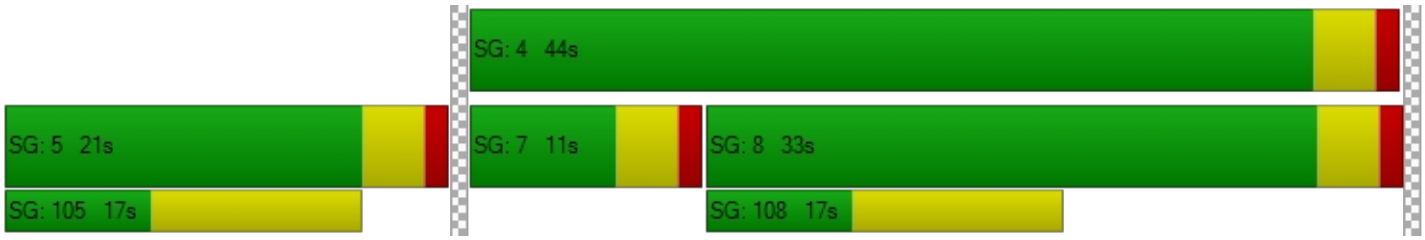
X, volume / capacity	0.24	0.07	0.38	0.25	0.26	0.12
d, Delay for Lane Group [s/veh]	9.87	9.17	5.78	5.57	12.74	2.46
Lane Group LOS	A	A	A	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.03	0.31	0.19	0.08	0.01
50th-Percentile Queue Length [ft/ln]	3.21	0.84	7.67	4.71	1.96	0.19
95th-Percentile Queue Length [veh/ln]	0.23	0.06	0.55	0.34	0.14	0.01
95th-Percentile Queue Length [ft/ln]	5.78	1.51	13.81	8.48	3.53	0.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.87	9.17	5.78	5.57	12.74	2.46
Movement LOS	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	9.72		5.73		3.02	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.15					
Intersection LOS	A					
Intersection V/C	0.345					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	204	0	92	211	115	0	0	88	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	3	18	0	6	3	2	48	81	49	31	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	18	204	6	95	213	163	81	49	119	117
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	5	51	2	24	53	41	20	12	30	29
Total Analysis Volume [veh/h]	30	3	18	204	6	95	213	163	81	49	119	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	1	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	120	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	37	0	0	37	62	0	0	25	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	10	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	L	C	R	C	C
C, Cycle Length [s]	38	38	38	38	38	38	38	38
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	6	6	17	17	6	6
g / C, Green / Cycle	0.08	0.08	0.16	0.17	0.44	0.44	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.11	0.12	0.05	0.05	0.06	0.07
s, saturation flow rate [veh/h]	1810	1650	1810	1810	3618	1615	1900	1617
c, Capacity [veh/h]	143	130	298	302	1598	714	323	275
d1, Uniform Delay [s]	16.46	16.40	15.00	15.00	6.23	6.26	14.02	14.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.57	2.76	3.00	0.03	0.07	0.69	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

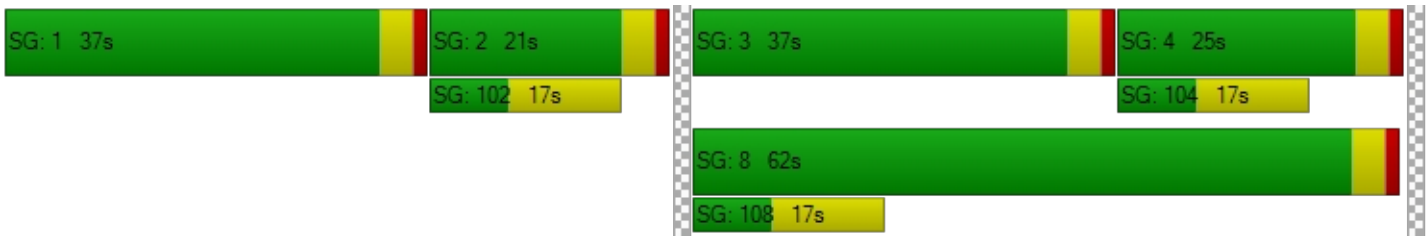
X, volume / capacity	0.21	0.16	0.68	0.70	0.10	0.11	0.37	0.43
d, Delay for Lane Group [s/veh]	17.19	16.97	17.76	18.00	6.25	6.33	14.71	15.24
Lane Group LOS	B	B	B	B	A	A	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.17	1.59	1.68	0.26	0.27	0.80	0.83
50th-Percentile Queue Length [ft/ln]	5.94	4.16	39.84	41.98	6.57	6.76	20.03	20.72
95th-Percentile Queue Length [veh/ln]	0.43	0.30	2.87	3.02	0.47	0.49	1.44	1.49
95th-Percentile Queue Length [ft/ln]	10.69	7.48	71.70	75.56	11.83	12.16	36.06	37.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.19	16.97	16.97	17.76	0.00	0.00	18.00	6.25	6.33	0.00	14.72	15.24
Movement LOS	B	B	B	B			B	A	A		B	B
d_A, Approach Delay [s/veh]	17.10			17.76			11.74			14.98		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.13											
Intersection LOS	B											
Intersection V/C	0.468											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	319	0	0	204
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	47	19	4	80
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	366	19	4	284
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	92	5	1	71
Total Analysis Volume [veh/h]	0	2	366	19	4	284
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.32	0.00	0.00	8.05	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.18	0.00	0.00	0.25	0.00
d_A, Approach Delay [s/veh]	9.32		0.00		0.11	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.238

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	0	1	0	0	0	0	18	31	4	42	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	3	5	10	11	12	3	168	178	15	166	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	1	1	3	3	3	1	42	45	4	42	2
Total Analysis Volume [veh/h]	116	3	5	10	11	12	3	168	178	15	166	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.01	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	14.82	14.78	12.00	12.60	13.62	9.49	7.55	0.00	0.00	7.98	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.98	0.98	0.98	0.19	0.19	0.19	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	24.60	24.60	24.60	4.67	4.67	4.67	0.16	0.16	0.16	0.93	0.93	0.93
d_A, Approach Delay [s/veh]	14.71			11.81			0.06			0.64		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.40											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	81	169	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	36	21	14	7	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	117	190	14	7	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	29	48	4	2	2
Total Analysis Volume [veh/h]	18	117	190	14	7	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.64	0.00	0.00	0.00	10.61	9.24
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.99	0.00	0.00	0.00	0.82	0.71
d_A, Approach Delay [s/veh]	1.02		0.00		9.88	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.81					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.139

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	99	666	804	32	34	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	6	15	41	17	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	672	819	73	51	148
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	168	205	18	13	37
Total Analysis Volume [veh/h]	112	672	819	73	51	148
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.01	0.01	0.00	0.14	0.25
d_M, Delay for Movement [s/veh]	10.48	0.00	0.00	0.00	16.43	13.01
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.51	0.00	0.00	0.00	0.48	0.97
95th-Percentile Queue Length [ft/ln]	12.71	0.00	0.00	0.00	12.01	24.31
d_A, Approach Delay [s/veh]	1.50		0.00		13.89	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.10					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	722	17	116	848	5	0	3	12	33	0	68
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	13	0	0	12	15	6	0	16	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	735	17	116	860	20	6	3	28	33	0	68
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	184	4	29	215	5	2	1	7	8	0	17
Total Analysis Volume [veh/h]	75	735	17	116	860	20	6	3	28	33	0	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	49	77	0	11	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	11	11	5	12	12	0	2	2	2	3	3
g / C, Green / Cycle	0.10	0.31	0.31	0.14	0.34	0.34	0.01	0.05	0.05	0.06	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.01	0.06	0.24	0.01	0.00	0.00	0.02	0.02	0.00	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	190	1109	495	246	1221	545	21	103	87	102	187	159
d1, Uniform Delay [s]	14.95	10.80	8.70	14.27	10.30	7.95	17.53	16.04	16.29	16.23	0.00	15.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	0.69	0.03	1.40	0.75	0.03	6.99	0.11	2.10	1.82	0.00	1.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

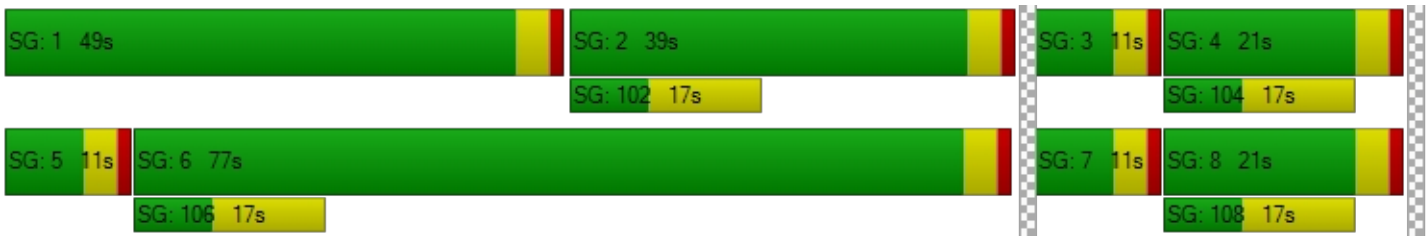
X, volume / capacity	0.39	0.66	0.03	0.47	0.70	0.04	0.28	0.03	0.32	0.32	0.00	0.43
d, Delay for Lane Group [s/veh]	16.28	11.48	8.72	15.66	11.05	7.97	24.51	16.15	18.39	18.05	0.00	17.00
Lane Group LOS	B	B	A	B	B	A	C	B	B	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.54	1.94	0.07	0.80	2.20	0.08	0.08	0.02	0.24	0.27	0.00	0.51
50th-Percentile Queue Length [ft/ln]	13.43	48.57	1.81	19.94	55.01	1.96	2.07	0.57	5.88	6.71	0.00	12.72
95th-Percentile Queue Length [veh/ln]	0.97	3.50	0.13	1.44	3.96	0.14	0.15	0.04	0.42	0.48	0.00	0.92
95th-Percentile Queue Length [ft/ln]	24.18	87.43	3.25	35.89	99.02	3.53	3.73	1.02	10.59	12.08	0.00	22.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.28	11.48	8.72	15.66	11.05	7.97	24.51	16.15	18.39	18.05	0.00	17.00
Movement LOS	B	B	A	B	B	A	C	B	B	B	A	B
d_A, Approach Delay [s/veh]	11.86			11.53			19.20			17.34		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.11											
Intersection LOS	B											
Intersection V/C	0.590											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	757	86	45	882	58	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	28	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	827	86	45	910	58	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	207	22	11	228	15	14
Total Analysis Volume [veh/h]	827	86	45	910	58	54
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	21	0	0	40	39	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	0	0	9	9
g / C, Green / Cycle	0.72	0.72	0.00	0.00	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.23	0.05	0.07	0.48	0.09	0.03
s, saturation flow rate [veh/h]	3618	1615	673	1900	623	1615
c, Capacity [veh/h]	2616	1168	120	0	187	232
d1, Uniform Delay [s]	2.98	2.43	30.01	0.00	26.33	22.77
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.12	8.73	0.00	0.93	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

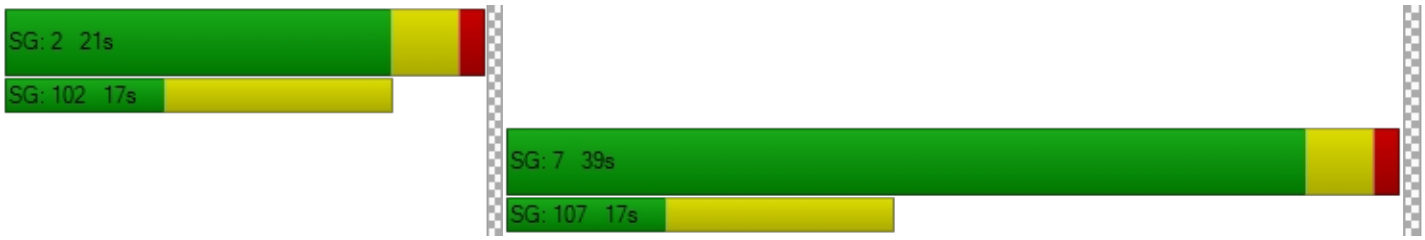
X, volume / capacity	0.32	0.07	0.38	0.00	0.31	0.23
d, Delay for Lane Group [s/veh]	3.30	2.55	38.74	0.00	27.26	23.27
Lane Group LOS	A	A	D	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.05	0.20	0.96	0.00	0.81	0.67
50th-Percentile Queue Length [ft/ln]	26.27	4.96	23.89	0.00	20.35	16.71
95th-Percentile Queue Length [veh/ln]	1.89	0.36	1.72	0.00	1.47	1.20
95th-Percentile Queue Length [ft/ln]	47.28	8.92	43.01	0.00	36.63	30.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.30	2.55	38.74	0.00	27.26	23.27
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	3.23		1.83		25.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.80					
Intersection LOS	A					
Intersection V/C	0.402					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	261.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	79.195

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	18	0	10	21	36	0	0	106	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	278	6	497	528	694	14	3	561	316
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	70	2	124	132	174	4	1	140	79
Total Analysis Volume [veh/h]	11	6	3	278	6	497	528	694	14	3	561	316
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	42	0	0	42	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	38	38	38	8	25	25	0	17	17
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.11	0.33	0.33	0.01	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.00	66.04	0.31	0.29	0.19	0.01	0.00	0.16	0.20
s, saturation flow rate [veh/h]	55	1615	4	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	107	818	97	818	190	1186	529	11	828	370
d1, Uniform Delay [s]	18.31	9.16	37.11	13.21	33.60	20.99	17.11	37.14	26.41	27.75
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.00	893.86	0.73	805.43	2.12	0.09	12.85	4.43	21.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

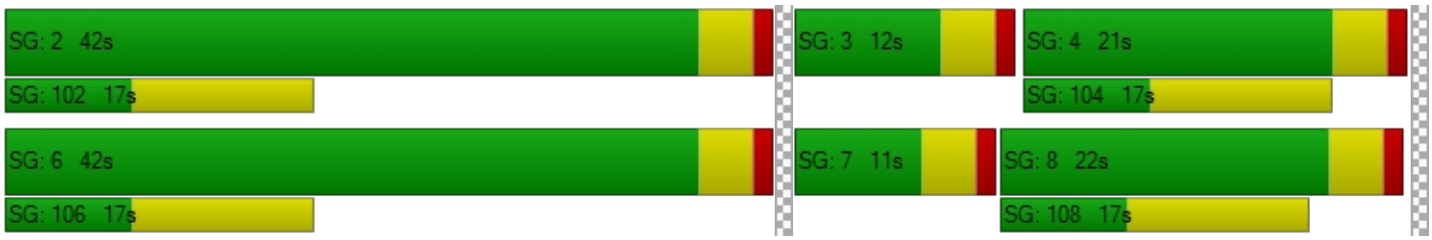
X, volume / capacity	0.16	0.00	2.93	0.61	2.78	0.59	0.03	0.27	0.68	0.85
d, Delay for Lane Group [s/veh]	18.99	9.16	930.97	13.95	839.03	23.11	17.21	50.00	30.84	49.30
Lane Group LOS	B	A	F	B	F	C	B	D	C	D
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.02	25.85	5.48	45.79	5.13	0.17	0.09	4.89	7.40
50th-Percentile Queue Length [ft/ln]	4.87	0.57	646.14	137.01	1144.76	128.19	4.27	2.32	122.37	185.06
95th-Percentile Queue Length [veh/ln]	0.35	0.04	46.52	9.32	71.21	8.84	0.31	0.17	8.52	11.86
95th-Percentile Queue Length [ft/ln]	8.76	1.02	1163.06	232.99	1780.18	221.03	7.68	4.17	213.08	296.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.99	18.99	9.16	930.97	930.97	13.95	839.03	23.11	17.21	50.00	30.84	49.30
Movement LOS	B	B	A	F	F	B	F	C	B	D	C	D
d_A, Approach Delay [s/veh]	17.52			347.41			371.59			37.54		
Approach LOS	B			F			F			D		
d_I, Intersection Delay [s/veh]	261.91											
Intersection LOS	F											
Intersection V/C	79.195											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 16 Year 2035 With Project Evening Peak Hour - Alternative 2

Report File: C:\...\PM35W2.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	SB Left	1.248	82.0	F
7	Rubidoux Blvd (NS) at Bldg 6 Acc (EW)	Two-way stop	HCM 2010	WB Right	0.085	16.9	C
8	Rubidoux Blvd (NS) at Project Acc (EW)	Signalized	HCM 2010	SB Left	0.639	4.2	A
9	Rubidoux Blvd (NS) at Production Cir (EW)	Two-way stop	HCM 2010	EB Thru	0.000	680.2	F
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	NB Right	1.261	208.8	F
18	Bldg 6 Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.063	11.0	B
19	Project Acc (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.305	8.8	A
20	Cactus Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.771	19.5	B
21	Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Right	0.000	12.2	B
22	Hall Ave (NS) at El Rivino Rd (EW)	Two-way stop	HCM 2010	NB Left	1.184	161.8	F
23	Hall Ave (NS) at Bldg 1 Acc (EW)	Two-way stop	HCM 2010	EB Left	0.044	13.2	B
26	Agua Mansa Rd (NS) at Hall Ave (EW)	Two-way stop	HCM 2010	EB Left	0.411	30.0	D
27	Agua Mansa Rd (NS) at Brown Ave (EW)	Signalized	HCM 2010	EB Left	0.672	15.7	B
28	Agua Mansa Rd (NS) at R.A. Nelson (EW)	Signalized	HCM 2010	SB Left	0.864	3.3	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	SB Left	97.378	669.4	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	82.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.248

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	40	81	65	6	0	0	0	0	171	0	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1398	200	419	1139	17	21	9	23	339	16	367
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	350	50	105	285	4	5	2	6	85	4	92
Total Analysis Volume [veh/h]	15	1398	200	419	1139	17	21	9	23	339	16	367
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	49	0	28	66	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	45	45	24	66	66	39	39	39
g / C, Green / Cycle	0.02	0.37	0.37	0.20	0.55	0.55	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.43	0.43	0.23	0.30	0.31	0.38	0.46	0.23
s, saturation flow rate [veh/h]	1810	1900	1819	1810	1900	1890	140	776	1615
c, Capacity [veh/h]	44	712	682	363	1047	1042	87	311	525
d1, Uniform Delay [s]	57.73	37.58	37.58	48.08	17.42	17.44	33.64	44.30	35.46
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.57	77.71	86.61	77.25	2.10	2.12	6.63	73.24	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	1.14	1.16	1.16	0.55	0.55	0.61	1.14	0.70
d, Delay for Lane Group [s/veh]	62.30	115.29	124.19	125.33	19.53	19.56	40.28	117.54	37.16
Lane Group LOS	E	F	F	F	B	B	D	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.50	35.86	36.01	18.57	10.67	10.65	1.23	15.78	9.58
50th-Percentile Queue Length [ft/ln]	12.62	896.38	900.14	464.34	266.73	266.21	30.85	394.58	239.39
95th-Percentile Queue Length [veh/ln]	0.91	49.84	50.59	27.62	16.03	16.00	2.22	24.13	14.65
95th-Percentile Queue Length [ft/ln]	22.71	1246.05	1264.85	690.39	400.65	400.00	55.53	603.28	366.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.30	119.04	124.19	125.33	19.55	19.56	40.28	40.28	40.28	117.54	117.54	37.16
Movement LOS	E	F	F	F	B	B	D	D	D	F	F	D
d_A, Approach Delay [s/veh]	119.15			47.69			40.28			76.68		
Approach LOS	F			D			D			E		
d_I, Intersection Delay [s/veh]	81.96											
Intersection LOS	F											
Intersection V/C	1.248											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Rubidoux Blvd (NS) at Bldg 6 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.085

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	94	26	0	177	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1585	26	0	1501	0	28
Peak Hour Factor	1.0000	1.0000	0.8290	1.0000	0.8290	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	396	7	0	375	0	7
Total Analysis Volume [veh/h]	1585	26	0	1501	0	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.94
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	6.92
d_A, Approach Delay [s/veh]	0.00		0.00		16.94	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Rubidoux Blvd (NS) at Project Acc (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1491	0	0	1324	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	106	11	6	171	30	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1597	11	6	1495	30	14
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	399	3	2	374	8	4
Total Analysis Volume [veh/h]	1597	11	6	1495	30	14
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	120	0	120	120	120	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	88	0	11	99	21	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	0	32	3	3
g / C, Green / Cycle	0.64	0.64	0.01	0.75	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.44	0.01	0.00	0.41	0.02	0.01
s, saturation flow rate [veh/h]	3618	1615	1810	3618	1810	1615
c, Capacity [veh/h]	2331	1041	21	2707	122	108
d1, Uniform Delay [s]	4.90	2.76	21.24	2.34	19.17	19.02
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.00	7.47	0.18	1.05	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.01	0.29	0.55	0.25	0.13
d, Delay for Lane Group [s/veh]	5.27	2.76	28.71	2.52	20.22	19.55
Lane Group LOS	A	A	C	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.10	0.02	0.10	0.25	0.29	0.13
50th-Percentile Queue Length [ft/ln]	52.60	0.41	2.43	6.19	7.23	3.34
95th-Percentile Queue Length [veh/ln]	3.79	0.03	0.17	0.45	0.52	0.24
95th-Percentile Queue Length [ft/ln]	94.68	0.74	4.37	11.14	13.02	6.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.27	2.76	28.71	2.52	20.22	19.55
Movement LOS	A	A	C	A	C	B
d_A, Approach Delay [s/veh]	5.25		2.62		20.01	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.20					
Intersection LOS	A					
Intersection V/C	0.639					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Two-way stop	Delay (sec / veh):	680.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	114	0	0	201	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1527	0	0	1510	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	382	0	0	378	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1527	0	0	1510	17	27	0	42	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.00	0.00	0.02	0.00	1.37	0.00	0.12	0.06	0.00	0.01
d_M, Delay for Movement [s/veh]	13.53	0.00	0.00	13.14	0.00	0.00	552.57	680.24	379.87	215.17	323.78	19.38
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	C
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.00	0.00	6.70	6.70	6.70	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	3.54	0.00	0.00	0.00	0.00	0.00	167.58	167.58	167.58	5.13	5.13	5.13
d_A, Approach Delay [s/veh]	0.17			0.00			447.45			68.33		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	9.98											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	208.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.261

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	10	112	89	0	0	0	0	38	0	64
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	558	651	683	702	75	65	136	26	495	134	620
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	16	140	163	171	176	19	16	34	7	124	34	0
Total Analysis Volume [veh/h]	62	558	651	683	702	75	65	136	26	495	134	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	38	0	15	42	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	414	414	414	414	414	414	414	414	414	414
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	120	120	120	224	224	39	39	120	120
g / C, Green / Cycle	0.04	0.29	0.29	0.29	0.54	0.54	0.09	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.40	0.38	0.19	0.05	0.04	0.09	0.34	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1848	1828	1615
c, Capacity [veh/h]	71	1048	468	524	1954	872	168	172	529	467
d1, Uniform Delay [s]	197.96	123.47	147.03	147.13	54.33	45.92	176.72	186.75	147.13	0.00
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.55	0.42	188.67	150.41	0.11	0.04	1.45	20.96	102.81	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

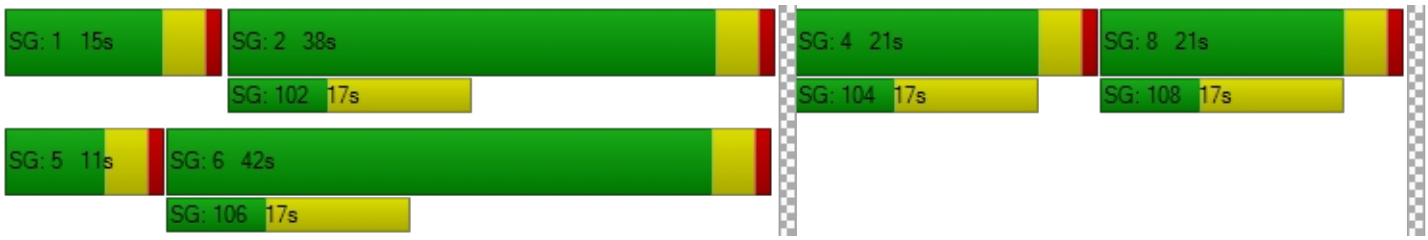
X, volume / capacity	0.88	0.53	1.39	1.30	0.36	0.09	0.39	0.94	1.19	0.00
d, Delay for Lane Group [s/veh]	224.51	123.89	335.70	297.54	54.44	45.96	178.18	207.71	249.94	0.00
Lane Group LOS	F	F	F	F	D	D	F	F	F	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.44	26.08	76.51	80.01	21.84	3.95	6.91	19.02	73.84	0.00
50th-Percentile Queue Length [ft/ln]	185.90	652.03	1912.77	2000.28	545.92	98.71	172.79	475.58	1845.93	0.00
95th-Percentile Queue Length [veh/ln]	11.91	34.46	109.48	111.06	29.50	7.11	11.22	26.18	98.36	0.00
95th-Percentile Queue Length [ft/ln]	297.71	861.42	2737.12	2776.38	737.51	177.68	280.58	654.41	2459.12	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	224.51	123.89	335.70	297.54	54.44	45.96	178.18	207.71	207.71	249.94	249.94	0.00
Movement LOS	F	F	F	F	D	D	F	F	F	F	F	A
d_A, Approach Delay [s/veh]	237.29			167.73			199.25			249.94		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	208.79											
Intersection LOS	F											
Intersection V/C	1.261											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Bldg 6 Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	126	20	16	272
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	40	726	20	16	839
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	10	182	5	4	210
Total Analysis Volume [veh/h]	0	40	726	20	16	839
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	11.00	0.00	0.00	9.21	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.20	0.00	0.00	0.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.99	0.00	0.00	1.40	0.00
d_A, Approach Delay [s/veh]	11.00		0.00		0.17	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 19: Project Acc (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.305

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	600	0	0	567
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	140	27	100	65	7	147
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	27	700	65	7	714
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	7	175	16	2	179
Total Analysis Volume [veh/h]	140	27	700	65	7	714
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	88	0	21	0	11	32
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	7	0	7	0	0	7
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	95	95	1	101
g / C, Green / Cycle	0.10	0.10	0.79	0.79	0.01	0.84
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.19	0.04	0.00	0.20
s, saturation flow rate [veh/h]	1810	1615	3618	1615	1810	3618
c, Capacity [veh/h]	173	155	2865	1279	22	3030
d1, Uniform Delay [s]	53.20	49.92	3.22	2.71	58.77	1.97
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.59	0.53	0.20	0.08	7.62	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.17	0.24	0.05	0.31	0.24
d, Delay for Lane Group [s/veh]	61.79	50.45	3.43	2.79	66.40	2.01
Lane Group LOS	E	D	A	A	E	A
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.55	0.77	1.84	0.30	0.26	1.14
50th-Percentile Queue Length [ft/ln]	113.78	19.29	45.92	7.52	6.47	28.50
95th-Percentile Queue Length [veh/ln]	8.05	1.39	3.31	0.54	0.47	2.05
95th-Percentile Queue Length [ft/ln]	201.25	34.72	82.65	13.54	11.65	51.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.79	50.45	3.43	2.79	66.40	2.01
Movement LOS	E	D	A	A	E	A
d_A, Approach Delay [s/veh]	59.95		3.37		2.64	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	8.77					
Intersection LOS	A					
Intersection V/C	0.305					

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Cactus Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.771

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	495	0	318	182	418	0	0	249	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	6	68	0	3	5	7	77	44	24	35	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	6	68	495	3	323	189	495	44	24	284	219
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	2	17	124	1	81	47	124	11	6	71	55
Total Analysis Volume [veh/h]	114	6	68	495	3	323	189	495	44	24	284	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	41	56	0	11	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	28	28	8	17	17	2	11	11
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.13	0.29	0.29	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.05	0.37	0.20	0.10	0.14	0.03	0.01	0.14	0.14
s, saturation flow rate [veh/h]	1071	1635	1347	1617	1810	3618	1615	1810	1900	1633
c, Capacity [veh/h]	445	775	675	766	244	1039	464	70	362	311
d1, Uniform Delay [s]	16.24	8.67	16.35	10.37	24.97	17.60	15.61	28.00	22.78	22.90
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.05	1.56	0.38	5.18	0.34	0.09	2.92	2.94	3.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.10	0.73	0.43	0.77	0.48	0.09	0.35	0.74	0.76
d, Delay for Lane Group [s/veh]	16.54	8.72	17.91	10.74	30.15	17.94	15.70	30.93	25.72	26.71
Lane Group LOS	B	A	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	0.47	5.69	2.47	2.78	2.62	0.42	0.38	3.58	3.25
50th-Percentile Queue Length [ft/ln]	28.67	11.65	142.17	61.85	69.51	65.59	10.44	9.39	89.52	81.33
95th-Percentile Queue Length [veh/ln]	2.06	0.84	9.60	4.45	5.00	4.72	0.75	0.68	6.45	5.86
95th-Percentile Queue Length [ft/ln]	51.60	20.97	239.94	111.34	125.11	118.06	18.78	16.89	161.13	146.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.54	8.72	8.72	17.91	10.74	10.74	30.15	17.94	15.70	30.93	25.78	26.71
Movement LOS	B	A	A	B	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	13.46			15.06			20.97			26.40		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.47											
Intersection LOS	B											
Intersection V/C	0.771											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Bldg 1 Auto Acc (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	913	0	0	466
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	136	9	2	60
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1049	9	2	526
Peak Hour Factor	0.9500	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	262	2	1	132
Total Analysis Volume [veh/h]	0	0	1049	9	2	526
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.16	0.00	0.00	10.42	0.00
Movement LOS		B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.23	0.00
d_A, Approach Delay [s/veh]	12.16		0.00		0.04	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	161.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.184

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	2	0	0	0	0	59	77	2	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	332	2	12	3	4	6	8	445	263	4	226	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	1	3	1	1	2	2	111	66	1	57	3
Total Analysis Volume [veh/h]	332	2	12	3	4	6	8	445	263	4	226	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.18	0.01	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	161.84	161.03	155.92	18.26	19.55	9.77	7.70	0.00	0.00	9.02	0.00	0.00
Movement LOS	F	F	F	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	15.82	15.82	15.82	0.11	0.11	0.11	0.02	0.02	0.02	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	395.40	395.40	395.40	2.63	2.63	2.63	0.45	0.45	0.45	0.33	0.33	0.33
d_A, Approach Delay [s/veh]	161.63			14.74			0.09			0.15		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	42.65											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 23: Hall Ave (NS) at Bldg 1 Acc (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.044

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	308	192	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	18	73	6	20	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	326	265	6	20	27
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	82	66	2	5	7
Total Analysis Volume [veh/h]	9	326	265	6	20	27
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.03
d_M, Delay for Movement [s/veh]	7.78	0.00	0.00	0.00	13.21	9.79
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.14	0.11
95th-Percentile Queue Length [ft/ln]	0.52	0.00	0.00	0.00	3.41	2.69
d_A, Approach Delay [s/veh]	0.21		0.00		11.25	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Agua Mansa Rd (NS) at Hall Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.411

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	250	787	717	40	48	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	15	6	19	51	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	257	802	723	59	99	232
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	201	181	15	25	58
Total Analysis Volume [veh/h]	257	802	723	59	99	232
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	5

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.01	0.01	0.00	0.41	0.36
d_M, Delay for Movement [s/veh]	11.11	0.00	0.00	0.00	30.02	13.77
Movement LOS	B	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	1.29	0.00	0.00	0.00	1.89	1.65
95th-Percentile Queue Length [ft/ln]	32.23	0.00	0.00	0.00	47.33	41.22
d_A, Approach Delay [s/veh]	2.70		0.00		18.63	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.15					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 27: Agua Mansa Rd (NS) at Brown Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	800	176	83	817	11	10	7	20	88	6	246
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	7	0	0	49	6	15	0	55	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	807	176	83	866	17	25	7	75	88	6	246
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	202	44	21	217	4	6	2	19	22	2	62
Total Analysis Volume [veh/h]	43	807	176	83	866	17	25	7	75	88	6	246
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	54	0	15	58	0	11	36	0	15	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	14	14	5	16	16	2	6	6	5	9	9
g / C, Green / Cycle	0.07	0.31	0.31	0.10	0.34	0.34	0.04	0.14	0.14	0.10	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.11	0.05	0.24	0.01	0.01	0.00	0.05	0.05	0.00	0.15
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1900	1615	1810	1900	1615
c, Capacity [veh/h]	119	1110	496	183	1239	553	77	258	220	189	376	320
d1, Uniform Delay [s]	20.36	14.07	12.27	19.27	12.93	9.94	21.16	17.05	17.82	19.19	14.69	17.27
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	0.92	0.43	1.75	0.72	0.02	2.43	0.04	0.91	1.78	0.02	3.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

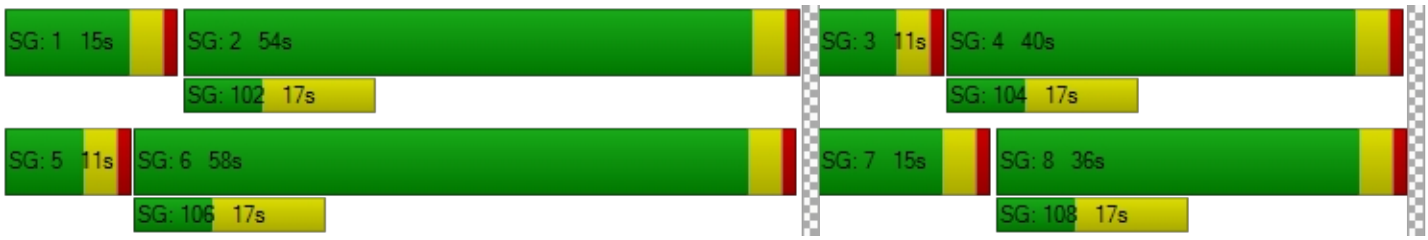
X, volume / capacity	0.36	0.73	0.36	0.45	0.70	0.03	0.33	0.03	0.34	0.47	0.02	0.77
d, Delay for Lane Group [s/veh]	22.21	14.99	12.70	21.03	13.66	9.96	23.59	17.09	18.73	20.97	14.70	21.18
Lane Group LOS	C	B	B	C	B	A	C	B	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.45	3.18	1.21	0.82	3.20	0.10	0.28	0.06	0.69	0.87	0.05	2.44
50th-Percentile Queue Length [ft/ln]	11.31	79.49	30.36	20.57	79.95	2.40	7.11	1.48	17.13	21.75	1.13	61.08
95th-Percentile Queue Length [veh/ln]	0.81	5.72	2.19	1.48	5.76	0.17	0.51	0.11	1.23	1.57	0.08	4.40
95th-Percentile Queue Length [ft/ln]	20.36	143.08	54.65	37.03	143.91	4.33	12.79	2.67	30.84	39.15	2.03	109.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.21	14.99	12.70	21.03	13.66	9.96	23.59	17.09	18.73	20.97	14.70	21.18
Movement LOS	C	B	B	C	B	A	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	14.90			14.23			19.76			21.01		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.70											
Intersection LOS	B											
Intersection V/C	0.672											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 28: Agua Mansa Rd (NS) at R.A. Nelson (EW)

Control Type:	Signalized	Delay (sec / veh):	3.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1053	77	103	797	63	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	103	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1087	77	103	900	63	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	272	19	26	225	16	10
Total Analysis Volume [veh/h]	1087	77	103	900	63	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	1	6	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	120	0	0	30	120	0
Amber [s]	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	99	0	0	124	21	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	0.00	0.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	0	0	3	3
g / C, Green / Cycle	0.49	0.49	0.00	0.00	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.30	0.05	0.20	0.47	0.10	0.02
s, saturation flow rate [veh/h]	3618	1615	527	1900	629	1615
c, Capacity [veh/h]	1787	798	320	0	363	243
d1, Uniform Delay [s]	4.12	3.02	11.25	0.00	10.73	8.32
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.05	2.64	0.00	0.23	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

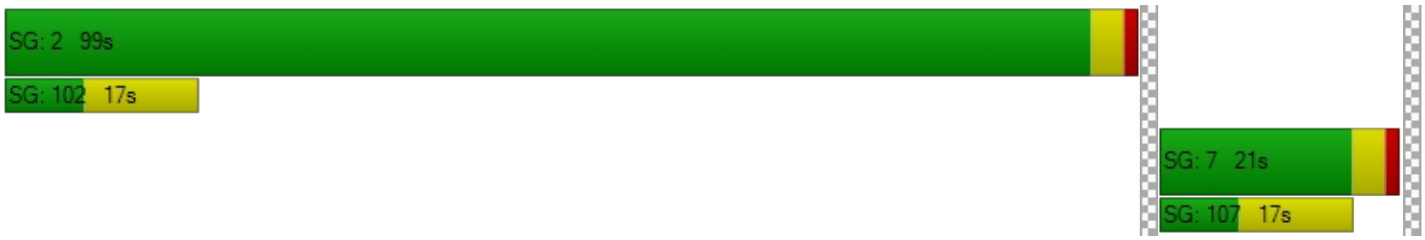
X, volume / capacity	0.61	0.10	0.32	0.00	0.17	0.16
d, Delay for Lane Group [s/veh]	4.45	3.08	13.89	0.00	10.96	8.63
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.29	0.03	0.66	0.00	0.23	0.12
50th-Percentile Queue Length [ft/ln]	7.26	0.83	16.55	0.00	5.68	2.92
95th-Percentile Queue Length [veh/ln]	0.52	0.06	1.19	0.00	0.41	0.21
95th-Percentile Queue Length [ft/ln]	13.06	1.49	29.78	0.00	10.23	5.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.45	3.08	13.89	0.00	10.96	8.63
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	4.36		1.43		10.07	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.32					
Intersection LOS	A					
Intersection V/C	0.864					

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	669.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	97.378

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	66	0	38	10	112	0	0	64	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	394	3	597	765	709	5	2	662	386
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	99	1	149	191	177	1	1	166	97
Total Analysis Volume [veh/h]	5	3	2	394	3	597	765	709	5	2	662	386
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	62	0	0	62	0	12	22	0	11	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	58	58	58	58	8	25	25	0	17	17
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.08	0.26	0.26	0.00	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.20	0.00	84.42	0.37	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	41	1615	5	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	86	985	78	985	150	939	419	8	655	292
d1, Uniform Delay [s]	24.24	7.25	47.56	11.49	43.61	32.43	26.16	47.20	38.96	38.96
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.00	1860.89	0.61	1841.93	5.62	0.05	15.46	38.05	166.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.00	5.07	0.61	5.09	0.75	0.01	0.25	1.01	1.32
d, Delay for Lane Group [s/veh]	24.70	7.25	1908.45	12.09	1885.54	38.05	26.21	62.66	77.01	205.43
Lane Group LOS	C	A	F	B	F	D	C	E	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	0.02	42.30	7.18	80.45	8.08	0.09	0.08	10.96	20.21
50th-Percentile Queue Length [ft/ln]	3.43	0.38	1057.41	179.60	2011.36	202.08	2.24	2.03	273.95	505.18
95th-Percentile Queue Length [veh/ln]	0.25	0.03	76.13	11.58	119.12	12.75	0.16	0.15	16.48	31.25
95th-Percentile Queue Length [ft/ln]	6.18	0.68	1903.34	289.49	2978.07	318.64	4.03	3.66	412.05	781.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.70	24.70	7.25	1908.45	1908.45	12.09	1885.54	38.05	26.21	62.66	77.01	205.43
Movement LOS	C	C	A	F	F	B	F	D	C	E	F	F
d_A, Approach Delay [s/veh]	21.21			769.49			993.61			124.19		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	669.41											
Intersection LOS	F											
Intersection V/C	97.378											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\AME.vistro

Scenario 17 Year 2035 With Project Morning Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\AM35W2-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.548	14.7	B
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	SB Left	0.429	3.6	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.875	36.1	D
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	NB Left	0.532	5.7	A
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Left	0.797	31.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	712	138	169	1140	8	22	10	28	94	5	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	150	93	15	0	0	0	0	47	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	725	288	262	1155	8	22	10	28	141	5	121
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	181	72	66	289	2	6	3	7	35	1	30
Total Analysis Volume [veh/h]	15	725	288	262	1155	8	22	10	28	141	5	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	21	0	23	33	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	30	30	11	39	39	12	12	12	12
g / C, Green / Cycle	0.03	0.46	0.46	0.18	0.61	0.61	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.18	0.14	0.31	0.31	0.02	0.02	0.10	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1895	1285	1681	1391	1625
c, Capacity [veh/h]	47	1649	736	317	1150	1147	215	310	293	299
d1, Uniform Delay [s]	31.11	12.04	11.72	25.86	7.31	7.31	27.94	22.14	27.31	23.45
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.86	0.85	1.56	5.45	1.59	1.60	0.21	0.18	1.22	0.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

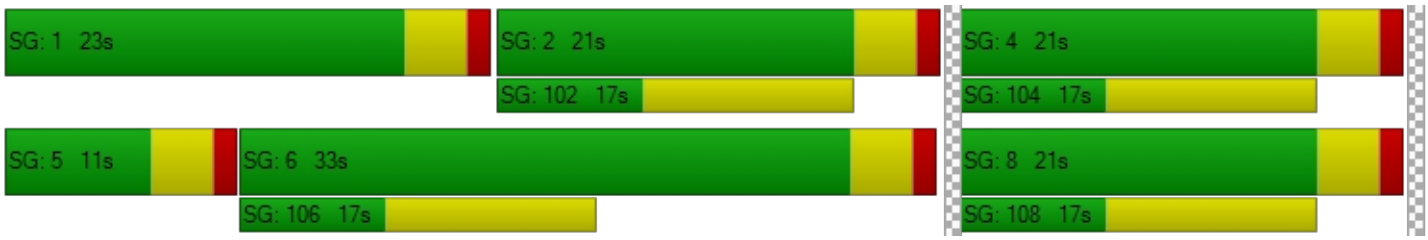
X, volume / capacity	0.32	0.44	0.39	0.83	0.51	0.51	0.10	0.12	0.48	0.42
d, Delay for Lane Group [s/veh]	34.97	12.89	13.28	31.32	8.90	8.91	28.15	22.31	28.53	24.39
Lane Group LOS	C	B	B	C	A	A	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.27	3.34	2.75	4.16	4.07	4.07	0.32	0.48	2.11	1.70
50th-Percentile Queue Length [ft/ln]	6.82	83.61	68.85	104.03	101.87	101.73	7.98	11.89	52.69	42.39
95th-Percentile Queue Length [veh/ln]	0.49	6.02	4.96	7.49	7.33	7.32	0.57	0.86	3.79	3.05
95th-Percentile Queue Length [ft/ln]	12.27	150.50	123.93	187.25	183.36	183.11	14.36	21.40	94.84	76.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.97	12.89	13.28	31.32	8.90	8.91	28.15	22.31	22.31	28.53	24.39	24.39
Movement LOS	C	B	B	C	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.32			13.02			24.45			26.58		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.68											
Intersection LOS	B											
Intersection V/C	0.548											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	917	0	0	1254	11	6	0	18	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	185	1	1	62	0	0	0	0	1	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1102	1	1	1316	11	6	0	18	1	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	276	0	0	329	3	2	0	5	0	0	0
Total Analysis Volume [veh/h]	20	1102	1	1	1316	11	6	0	18	1	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	104	104	0	101	101	4	4	4	4
g / C, Green / Cycle	0.03	0.86	0.86	0.00	0.84	0.84	0.03	0.03	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.30	0.00	0.00	0.36	0.01	0.00	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1440	1615	1417	1900
c, Capacity [veh/h]	54	3125	1395	5	3028	1352	90	54	74	64
d1, Uniform Delay [s]	57.25	1.61	1.12	59.81	2.51	1.61	57.91	56.79	58.95	0.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.31	0.00	16.49	0.46	0.01	0.31	3.53	0.07	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.35	0.00	0.19	0.43	0.01	0.07	0.33	0.01	0.00
d, Delay for Lane Group [s/veh]	61.50	1.92	1.12	76.30	2.97	1.62	58.22	60.32	59.02	0.00
Lane Group LOS	E	A	A	E	A	A	E	E	E	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	1.42	0.00	0.05	2.79	0.03	0.19	0.59	0.03	0.00
50th-Percentile Queue Length [ft/ln]	16.51	35.61	0.05	1.36	69.79	0.80	4.69	14.70	0.79	0.00
95th-Percentile Queue Length [veh/ln]	1.19	2.56	0.00	0.10	5.02	0.06	0.34	1.06	0.06	0.00
95th-Percentile Queue Length [ft/ln]	29.71	64.10	0.09	2.46	125.62	1.44	8.43	26.46	1.42	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	1.92	1.12	76.30	2.97	1.62	58.22	60.32	60.32	59.02	0.00	0.00
Movement LOS	E	A	A	E	A	A	E	E	E	E	A	A
d_A, Approach Delay [s/veh]	2.98			3.01			59.80			59.02		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.57											
Intersection LOS	A											
Intersection V/C	0.429											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.875

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	318	399	624	654	38	61	117	52	411	87	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	80	21	36	27	0	0	0	0	10	0	106
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	398	420	660	681	38	61	117	52	421	87	528
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	100	105	165	170	10	15	29	13	105	22	132
Total Analysis Volume [veh/h]	32	398	420	660	681	38	61	117	52	421	87	528
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	21	21	27	37	0	11	21	0	41	51	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	27	55	22	45	45	6	21	24	38	38
g / C, Green / Cycle	0.04	0.25	0.50	0.20	0.41	0.41	0.05	0.19	0.22	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.26	0.19	0.19	0.02	0.03	0.09	0.12	0.05	0.33
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1802	3514	1900	1615
c, Capacity [veh/h]	73	894	807	719	1489	665	98	336	761	663	563
d1, Uniform Delay [s]	51.63	35.06	18.60	42.87	23.48	19.52	50.97	40.21	38.39	24.46	34.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.15	1.61	2.39	5.28	1.01	0.16	6.32	1.17	0.63	0.09	8.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.45	0.52	0.92	0.46	0.06	0.62	0.50	0.55	0.13	0.94
d, Delay for Lane Group [s/veh]	55.79	36.67	20.99	48.15	24.49	19.68	57.29	41.38	39.02	24.55	42.72
Lane Group LOS	E	D	C	D	C	B	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.95	4.70	7.57	9.24	6.54	0.62	1.82	4.21	5.11	1.57	14.62
50th-Percentile Queue Length [ft/ln]	23.65	117.42	189.37	230.92	163.43	15.43	45.39	105.21	127.71	39.22	365.41
95th-Percentile Queue Length [veh/ln]	1.70	8.25	12.09	14.22	10.73	1.11	3.27	7.57	8.82	2.82	20.89
95th-Percentile Queue Length [ft/ln]	42.56	206.27	302.21	355.52	268.26	27.78	81.70	189.32	220.38	70.60	522.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.79	36.67	20.99	48.15	24.49	19.68	57.29	41.38	41.38	39.02	24.55	42.72
Movement LOS	E	D	C	D	C	B	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	29.64			35.68			45.60			39.69		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	36.05											
Intersection LOS	D											
Intersection V/C	0.875											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	3	4	10	11	12	3	150	147	11	124	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	0	1	0	0	0	0	18	31	4	42	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	3	5	10	11	12	3	168	178	15	166	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	1	1	3	3	3	1	42	45	4	42	2
Total Analysis Volume [veh/h]	116	3	5	10	11	12	3	168	178	15	166	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	17	17	17	17	17	17	17	17
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	3	3	6	6	6	6
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.00	0.01	0.01	0.00	0.20	0.01	0.09
s, saturation flow rate [veh/h]	1410	1711	1430	1740	1232	1742	1051	1888
c, Capacity [veh/h]	534	328	545	334	631	593	493	643
d1, Uniform Delay [s]	7.89	5.61	7.18	5.66	5.90	4.64	7.53	4.09
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	0.03	0.01	0.09	0.00	0.91	0.02	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.02	0.02	0.07	0.00	0.58	0.03	0.27
d, Delay for Lane Group [s/veh]	8.09	5.64	7.19	5.75	5.90	5.56	7.55	4.31
Lane Group LOS	A	A	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	0.01	0.02	0.03	0.00	0.25	0.03	0.08
50th-Percentile Queue Length [ft/ln]	5.38	0.26	0.41	0.74	0.09	6.21	0.66	2.06
95th-Percentile Queue Length [veh/ln]	0.39	0.02	0.03	0.05	0.01	0.45	0.05	0.15
95th-Percentile Queue Length [ft/ln]	9.68	0.46	0.74	1.34	0.16	11.18	1.19	3.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.09	5.64	5.64	7.19	5.75	5.75	5.90	5.56	5.56	7.55	4.31	4.31
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	7.93			6.18			5.56			4.57		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.75											
Intersection LOS	A											
Intersection V/C	0.532											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	31.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.797

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	6	3	260	6	487	507	658	14	3	455	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	18	0	10	21	36	0	0	106	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	6	3	278	6	497	528	694	14	3	561	316
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	1	70	2	124	132	174	4	1	140	79
Total Analysis Volume [veh/h]	11	6	3	278	6	497	528	694	14	3	561	316
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	27	0	55	72	0	11	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	23	35	74	74	1	41	41
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.31	0.68	0.68	0.01	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.19	0.00	0.17	0.29	0.19	0.01	0.00	0.16	0.20
s, saturation flow rate [veh/h]	1524	1615	1432	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	373	338	325	398	599	569	2442	1090	12	1329	593
d1, Uniform Delay [s]	34.77	34.52	45.81	34.56	41.70	36.61	7.20	5.87	54.49	26.10	27.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.01	6.48	0.01	3.05	7.26	0.29	0.02	10.55	0.98	3.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

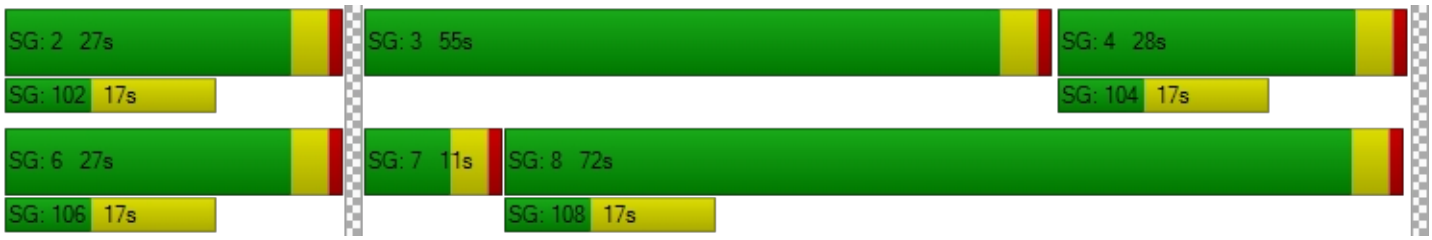
X, volume / capacity	0.05	0.01	0.86	0.02	0.83	0.93	0.28	0.01	0.25	0.42	0.53
d, Delay for Lane Group [s/veh]	34.82	34.53	52.29	34.58	44.75	43.86	7.49	5.89	65.04	27.09	30.82
Lane Group LOS	C	C	D	C	D	D	A	A	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.37	0.07	8.23	0.13	6.66	14.65	3.12	0.11	0.12	5.64	7.02
50th-Percentile Queue Length [ft/ln]	9.27	1.63	205.83	3.25	166.55	366.21	78.02	2.65	2.94	141.05	175.55
95th-Percentile Queue Length [veh/ln]	0.67	0.12	12.94	0.23	10.90	20.93	5.62	0.19	0.21	9.54	11.37
95th-Percentile Queue Length [ft/ln]	16.68	2.93	323.48	5.84	272.38	523.13	140.44	4.77	5.30	238.44	284.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.82	34.82	34.53	52.29	34.58	44.75	43.86	7.49	5.89	65.04	27.09	30.82
Movement LOS	C	C	C	D	C	D	D	A	A	E	C	C
d_A, Approach Delay [s/veh]	34.77			47.36			23.01			28.56		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.28											
Intersection LOS	C											
Intersection V/C	0.797											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Viridian

Vistro File: C:\...\PME.vistro

Scenario 17 Year 2035 With Project Evening Peak Hour - Alternative 2 - With Improvements

Report File: C:\...\PM35W2-I.pdf

10/4/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Cedar Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	EB Left	0.956	39.7	D
9	Rubidoux Blvd (NS) at Production Cir (EW)	Signalized	HCM 2010	NB Left	0.505	5.2	A
10	Rubidoux Blvd (NS) at Market St (EW)	Signalized	HCM 2010	EB Left	0.984	41.6	D
22	Hall Ave (NS) at El Rivino Rd (EW)	Signalized	HCM 2010	WB Left	0.792	11.7	B
29	Agua Mansa Rd (NS) at Market St (EW)	Signalized	HCM 2010	WB Right	1.080	51.9	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Cedar Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.956

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1358	119	354	1133	17	21	9	23	168	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	40	81	65	6	0	0	0	0	171	0	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1398	200	419	1139	17	21	9	23	339	16	367
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	350	50	105	285	4	5	2	6	85	4	92
Total Analysis Volume [veh/h]	15	1398	200	419	1139	17	21	9	23	339	16	367
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	52	0	34	75	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	49	49	29	75	75	30	30	30	30
g / C, Green / Cycle	0.02	0.40	0.40	0.25	0.63	0.63	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.01	0.39	0.12	0.23	0.30	0.31	0.02	0.02	0.24	0.24
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1890	1016	1686	1399	1625
c, Capacity [veh/h]	43	1463	653	445	1190	1184	62	422	368	406
d1, Uniform Delay [s]	57.74	34.73	24.32	44.47	12.06	12.07	60.05	34.43	48.02	44.19
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.86	15.11	1.21	10.27	1.42	1.44	3.17	0.08	9.63	10.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.96	0.31	0.94	0.49	0.49	0.34	0.08	0.92	0.94
d, Delay for Lane Group [s/veh]	62.60	49.85	25.54	54.75	13.48	13.50	63.21	34.50	57.66	55.16
Lane Group LOS	E	D	C	D	B	B	E	C	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.51	22.40	4.09	13.42	8.43	8.42	0.69	0.73	11.31	12.33
50th-Percentile Queue Length [ft/ln]	12.67	560.11	102.35	335.48	210.86	210.44	17.36	18.27	282.84	308.17
95th-Percentile Queue Length [veh/ln]	0.91	30.17	7.37	19.43	13.20	13.18	1.25	1.32	16.83	18.08
95th-Percentile Queue Length [ft/ln]	22.80	754.18	184.22	485.67	329.94	329.40	31.25	32.88	420.75	452.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.60	49.85	25.54	54.75	13.49	13.50	63.21	34.50	34.50	57.66	55.16	55.16
Movement LOS	E	D	C	D	B	B	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	46.95			24.47			45.88			56.33		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	39.71											
Intersection LOS	D											
Intersection V/C	0.956											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Rubidoux Blvd (NS) at Production Cir (EW)

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1413	0	0	1309	17	27	0	42	0	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	114	0	0	201	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1527	0	0	1510	17	27	0	42	1	0	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	382	0	0	378	4	7	0	11	0	0	1
Total Analysis Volume [veh/h]	20	1527	0	0	1510	17	27	0	42	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	120	120	0	120	120	0	0	120	0	0	120	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	88	0	11	88	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	102	102	0	98	98	6	6	6	6
g / C, Green / Cycle	0.03	0.85	0.85	0.00	0.82	0.82	0.05	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.01	0.42	0.00	0.00	0.42	0.01	0.02	0.03	0.00	0.00
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1436	1615	1386	1615
c, Capacity [veh/h]	54	3059	1366	2	2955	1319	116	87	82	87
d1, Uniform Delay [s]	57.25	2.48	0.00	0.00	3.46	2.04	56.61	55.28	58.28	53.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.26	0.59	0.00	0.00	0.63	0.02	1.02	4.14	0.06	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.50	0.00	0.00	0.51	0.01	0.23	0.48	0.01	0.03
d, Delay for Lane Group [s/veh]	61.50	3.07	0.00	0.00	4.09	2.05	57.63	59.42	58.33	54.10
Lane Group LOS	E	A	A	A	A	A	E	E	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.66	3.20	0.00	0.00	4.39	0.06	0.84	1.34	0.03	0.09
50th-Percentile Queue Length [ft/ln]	16.51	80.10	0.00	0.00	109.83	1.53	20.91	33.45	0.78	2.25
95th-Percentile Queue Length [veh/ln]	1.19	5.77	0.00	0.00	7.83	0.11	1.51	2.41	0.06	0.16
95th-Percentile Queue Length [ft/ln]	29.71	144.18	0.00	0.00	195.77	2.76	37.64	60.20	1.41	4.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.50	3.07	0.00	0.00	4.09	2.05	57.63	59.42	59.42	58.33	54.10	54.10
Movement LOS	E	A	A	A	A	A	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	3.82			4.07			58.72			55.16		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	5.21											
Intersection LOS	A											
Intersection V/C	0.505											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Rubidoux Blvd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	41.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	507	641	571	613	75	65	136	26	457	134	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	10	112	89	0	0	0	0	38	0	64
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	558	651	683	702	75	65	136	26	495	134	620
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	140	163	171	176	19	16	34	7	124	34	155
Total Analysis Volume [veh/h]	62	558	651	683	702	75	65	136	26	495	134	620
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	120	120	120	0	120	120	0	120	120	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	24	24	29	42	0	11	21	0	46	56	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	25	61	25	44	44	6	22	32	48	48
g / C, Green / Cycle	0.05	0.21	0.51	0.21	0.36	0.36	0.05	0.19	0.27	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.40	0.19	0.19	0.05	0.04	0.09	0.14	0.07	0.38
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1848	3514	1900	1615
c, Capacity [veh/h]	93	742	816	732	1309	585	94	344	939	763	649
d1, Uniform Delay [s]	55.97	44.87	24.59	46.73	30.33	25.63	55.98	43.58	37.53	23.13	34.90
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.03	6.94	7.98	6.18	1.58	0.45	8.72	1.00	0.46	0.11	8.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.75	0.80	0.93	0.54	0.13	0.69	0.47	0.53	0.18	0.96
d, Delay for Lane Group [s/veh]	63.99	51.81	32.57	52.91	31.91	26.09	64.70	44.58	37.99	23.24	43.86
Lane Group LOS	E	D	C	D	C	C	E	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	8.50	16.66	10.60	8.29	1.52	2.17	4.40	6.27	2.48	18.80
50th-Percentile Queue Length [ft/ln]	51.32	212.62	416.39	264.98	207.26	37.97	54.13	109.99	156.87	62.12	469.95
95th-Percentile Queue Length [veh/ln]	3.70	13.29	23.35	15.94	13.01	2.73	3.90	7.84	10.38	4.47	25.91
95th-Percentile Queue Length [ft/ln]	92.38	332.18	583.71	398.46	325.32	68.35	97.43	195.98	259.57	111.82	647.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.99	51.81	32.57	52.91	31.91	26.09	64.70	44.58	44.58	37.99	23.24	43.86
Movement LOS	E	D	C	D	C	C	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	42.55			41.43			50.34			39.32		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.62											
Intersection LOS	D											
Intersection V/C	0.984											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Hall Ave (NS) at El Rivino Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	296	2	10	3	4	6	8	386	186	2	200	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	2	0	0	0	0	59	77	2	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	332	2	12	3	4	6	8	445	263	4	226	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	1	3	1	1	2	2	111	66	1	57	3
Total Analysis Volume [veh/h]	332	2	12	3	4	6	8	445	263	4	226	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	120	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	49	0	0	49	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	18	18	18	18
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.23	0.01	0.00	0.01	0.01	0.40	0.01	0.13
s, saturation flow rate [veh/h]	1427	1650	1422	1718	1159	1783	752	1882
c, Capacity [veh/h]	582	554	578	577	570	819	228	864
d1, Uniform Delay [s]	13.24	8.68	10.23	8.65	8.75	9.46	17.42	6.53
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	0.02	0.00	0.01	0.01	2.90	0.03	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

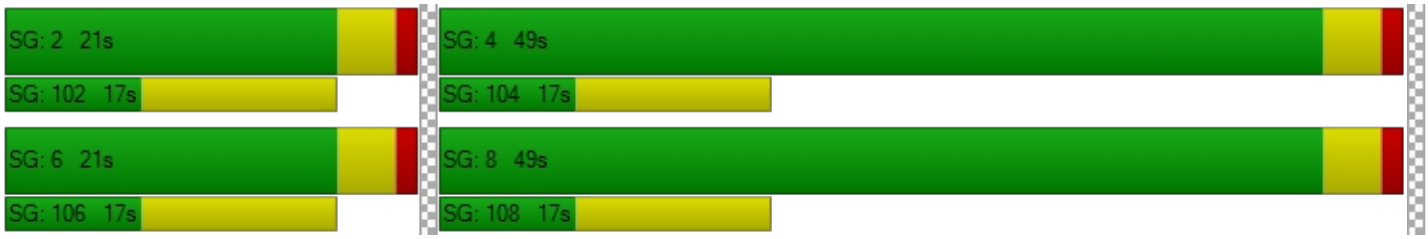
X, volume / capacity	0.57	0.03	0.01	0.02	0.01	0.86	0.02	0.28
d, Delay for Lane Group [s/veh]	14.12	8.69	10.23	8.66	8.76	12.36	17.45	6.70
Lane Group LOS	B	A	B	A	A	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.28	0.06	0.02	0.05	0.04	4.18	0.03	0.86
50th-Percentile Queue Length [ft/ln]	57.10	1.60	0.39	1.14	0.92	104.48	0.79	21.54
95th-Percentile Queue Length [veh/ln]	4.11	0.11	0.03	0.08	0.07	7.52	0.06	1.55
95th-Percentile Queue Length [ft/ln]	102.78	2.87	0.70	2.04	1.65	188.06	1.42	38.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.12	8.69	8.69	10.23	8.66	8.66	8.76	12.36	12.36	17.45	6.70	6.70
Movement LOS	B	A	A	B	A	A	A	B	B	B	A	A
d_A, Approach Delay [s/veh]	13.90			9.03			12.32			6.88		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	11.70											
Intersection LOS	B											
Intersection V/C	0.792											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Agua Mansa Rd (NS) at Market St (EW)

Control Type:	Signalized	Delay (sec / veh):	51.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.080

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	3	2	328	3	559	755	597	5	2	598	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	66	0	38	10	112	0	0	64	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	2	394	3	597	765	709	5	2	662	386
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	99	1	149	191	177	1	1	166	97
Total Analysis Volume [veh/h]	5	3	2	394	3	597	765	709	5	2	662	386
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	53	74	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	31	31	31	49	77	77	0	28	28
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.26	0.41	0.64	0.64	0.00	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.27	0.00	0.21	0.42	0.20	0.00	0.00	0.18	0.24
s, saturation flow rate [veh/h]	1545	1615	1436	1900	2859	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	448	417	382	491	738	736	2308	1030	7	849	379
d1, Uniform Delay [s]	33.15	33.05	48.67	33.06	41.72	35.59	9.78	7.89	59.62	43.00	45.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.00	30.10	0.00	2.17	26.79	0.35	0.01	22.11	6.99	50.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

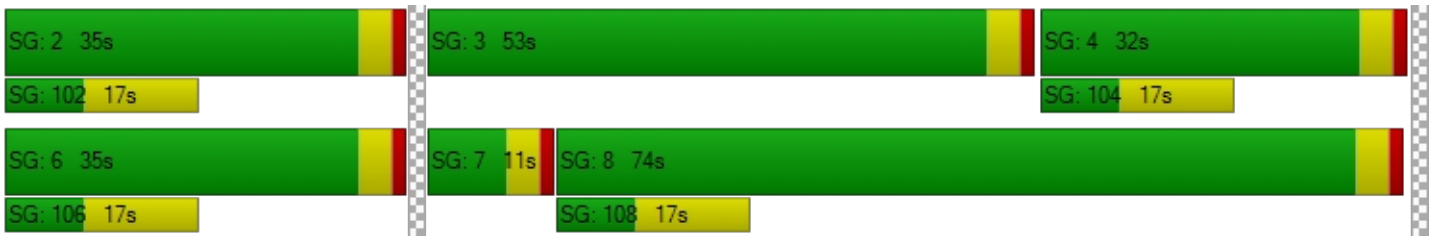
X, volume / capacity	0.02	0.00	1.03	0.01	0.81	1.04	0.31	0.00	0.29	0.78	1.02
d, Delay for Lane Group [s/veh]	33.16	33.05	78.77	33.06	43.89	62.38	10.13	7.90	81.72	50.00	96.76
Lane Group LOS	C	C	F	C	D	F	B	A	F	D	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.18	0.04	14.82	0.07	8.46	26.41	4.16	0.05	0.10	10.00	16.58
50th-Percentile Queue Length [ft/ln]	4.44	1.11	370.45	1.66	211.55	660.27	104.02	1.21	2.57	250.01	414.46
95th-Percentile Queue Length [veh/ln]	0.32	0.08	21.53	0.12	13.23	35.84	7.49	0.09	0.18	15.19	23.50
95th-Percentile Queue Length [ft/ln]	7.98	1.99	538.19	2.98	330.81	895.91	187.24	2.18	4.62	379.66	587.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.16	33.16	33.05	78.77	33.06	43.89	62.38	10.13	7.90	81.72	50.00	96.76
Movement LOS	C	C	C	F	C	D	F	B	A	F	D	F
d_A, Approach Delay [s/veh]	33.14			57.68			37.15			67.25		
Approach LOS	C			E			D			E		
d_I, Intersection Delay [s/veh]	51.86											
Intersection LOS	D											
Intersection V/C	1.080											

Sequence

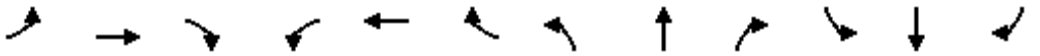
Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



APPENDIX M

SYNCHRO WORKSHEETS – ALTERNATIVE ANALYSIS

OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 1

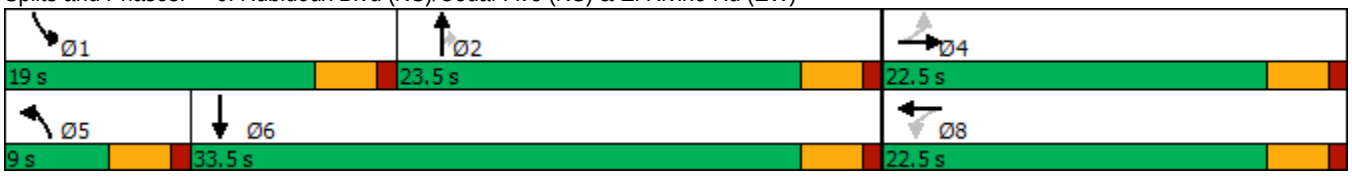


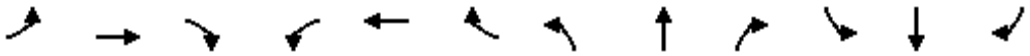
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	10	24	128	4	108	15	632	281	261	951	7
Future Volume (vph)	19	10	24	128	4	108	15	632	281	261	951	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.895			0.856				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1560	0	1456	1312	0	1597	3195	1429	1671	3339	0
Flt Permitted	0.673			0.731			0.950			0.950		
Satd. Flow (perm)	1173	1560	0	1120	1312	0	1597	3195	1429	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			127				331		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	22	12	28	151	5	127	18	744	331	307	1119	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	40	0	151	132	0	18	744	331	307	1127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		9.0	23.5	23.5	19.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%		13.8%	36.2%	36.2%	29.2%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		5.0	19.5	19.5	15.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	12.7	12.7		12.7	12.7		5.1	19.7	19.7	13.8	36.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.09	0.34	0.34	0.24	0.62	
v/c Ratio	0.09	0.11		0.62	0.34		0.13	0.69	0.47	0.78	0.55	
Control Delay	18.5	10.4		32.5	7.3		29.6	22.3	5.0	37.8	9.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	18.5	10.4		32.5	7.3		29.6	22.3	5.0	37.8	9.4	
LOS	B	B		C	A		C	C	A	D	A	
Approach Delay		13.3			20.8			17.2			15.5	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	10	24	128	4	108	15	632	281	261	951	7
Future Volume (veh/h)	19	10	24	128	4	108	15	632	281	261	951	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	22	12	28	151	5	127	18	744	331	307	1119	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	248	112	261	325	12	313	37	1119	589	413	1915	14
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.02	0.34	0.34	0.23	0.56	0.56
Sat Flow, veh/h	1188	530	1237	1129	58	1486	1707	3244	1707	1781	3449	25
Grp Volume(v), veh/h	22	0	40	151	0	132	18	744	331	307	549	578
Grp Sat Flow(s),veh/h/ln	1188	0	1767	1129	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	1.0	0.0	1.0	7.2	0.0	4.2	0.6	11.0	8.9	9.0	12.1	12.1
Cycle Q Clear(g_c), s	7.1	0.0	1.0	9.2	0.0	4.2	0.6	11.0	8.9	9.0	12.1	12.1
Prop In Lane	1.00		0.70	1.00		0.96	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	248	0	372	325	0	325	37	1119	589	413	940	989
V/C Ratio(X)	0.09	0.00	0.11	0.46	0.00	0.41	0.48	0.66	0.56	0.74	0.58	0.58
Avail Cap(c_a), veh/h	387	0	578	457	0	505	151	1119	589	473	940	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	0.0	18.0	22.2	0.0	19.3	27.3	15.7	15.0	20.1	8.3	8.3
Incr Delay (d2), s/veh	0.2	0.0	0.1	1.0	0.0	0.8	9.4	3.1	3.8	5.4	2.7	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	1.9	0.0	1.4	0.3	3.6	3.3	3.7	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	18.1	23.2	0.0	20.1	36.8	18.9	18.9	25.6	10.9	10.8
LnGrp LOS	C	A	B	C	A	C	D	B	B	C	B	B
Approach Vol, veh/h		62			283			1093			1434	
Approach Delay, s/veh		20.0			21.7			19.2			14.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.1	23.5		15.9	5.2	35.4		15.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	15.0	19.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	13.0	15.0		9.1	4.6	16.1		11.2				
Green Ext Time (p_c), s	0.2	2.2		0.1	0.0	5.5		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		16.9	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	926	20	0	1103
Future Volume (vph)	0	2	926	20	0	1103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	2	975	21	0	1161
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	996	0	0	1161
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	926	20	0	1103
Future Vol, veh/h	0	2	926	20	0	1103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	2	975	21	0	1161

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	498	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	523	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	523	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	523	-
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	11.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

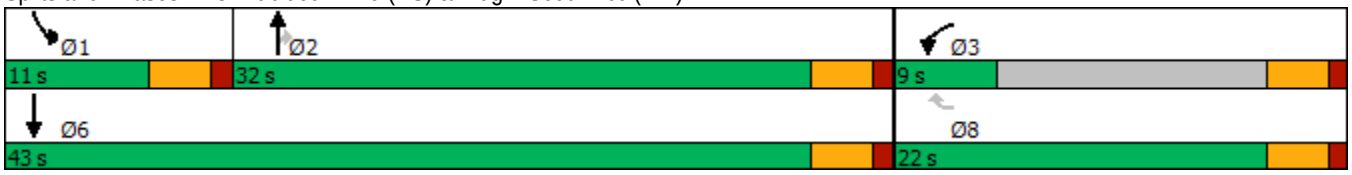


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	4	942	72	33	1070
Future Volume (vph)	18	4	942	72	33	1070
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		4		76		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	19	4	992	76	35	1126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	4	992	76	35	1126
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	9.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	13.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	5.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)		7.0	7.0	7.0		7.0
Flash Dont Walk (s)		11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)		0	0	0		0
Act Effct Green (s)	5.2	5.7	47.3	47.3	6.4	52.9
Actuated g/C Ratio	0.09	0.10	0.85	0.85	0.11	0.95
v/c Ratio	0.11	0.02	0.37	0.06	0.18	0.36
Control Delay	23.4	15.2	3.8	1.8	23.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	15.2	3.8	1.8	23.5	1.2
LOS	C	B	A	A	C	A
Approach Delay	22.0		3.7			1.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 55.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 2.9		Intersection LOS: A	
Intersection Capacity Utilization 40.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

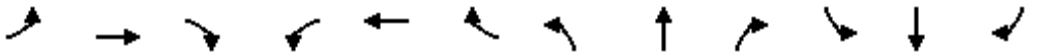




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	18	4	942	72	33	1070
Future Volume (veh/h)	18	4	942	72	33	1070
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	19	4	992	76	35	1126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	52	52	2223	1170	69	2709
Arrive On Green	0.03	0.03	0.69	0.69	0.04	0.81
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	19	4	992	76	35	1126
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	0.5	0.1	6.7	0.7	0.9	4.7
Cycle Q Clear(g_c), s	0.5	0.1	6.7	0.7	0.9	4.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	52	52	2223	1170	69	2709
V/C Ratio(X)	0.36	0.08	0.45	0.06	0.51	0.42
Avail Cap(c_a), veh/h	197	197	2223	1170	256	2709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	22.9	3.4	2.5	22.8	1.4
Incr Delay (d2), s/veh	4.2	0.6	0.7	0.1	5.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.5	0.2	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.3	23.5	4.1	2.6	28.6	1.8
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	23		1068			1161
Approach Delay, s/veh	26.6		4.0			2.6
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.9	37.1			43.0	5.3
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	5.0
Max Q Clear Time (g_c+I1), s	2.9	8.7			6.7	2.5
Green Ext Time (p_c), s	0.0	6.4			8.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A

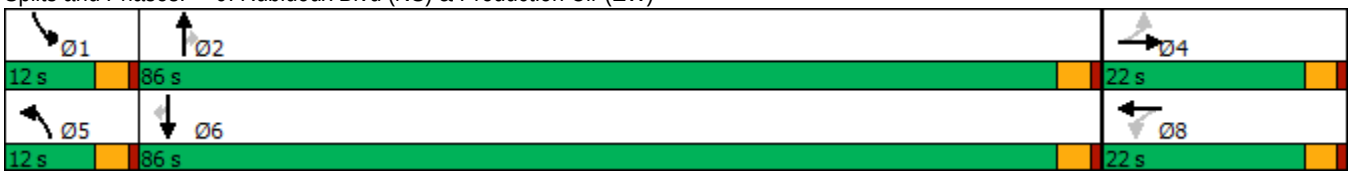


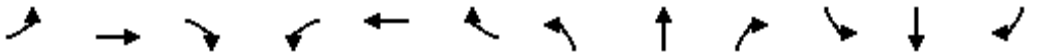
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1068	1	1	1125	11
Future Volume (vph)	5	0	15	1	0	0	19	1068	1	1	1125	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		175							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	6	0	17	1	0	0	22	1242	1	1	1308	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	17	0	1	0	0	22	1242	1	1	1308	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	22.0	22.0		22.0	22.0		12.0	86.0	86.0	12.0	86.0	86.0
Total Split (%)	18.3%	18.3%		18.3%	18.3%		10.0%	71.7%	71.7%	10.0%	71.7%	71.7%
Maximum Green (s)	18.0	18.0		18.0	18.0		8.0	82.0	82.0	8.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.3	6.3		6.2			6.8	98.7	98.7	5.7	96.2	96.2
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.07	0.07		0.01			0.21	0.42	0.00	0.01	0.44	0.01
Control Delay	51.0	0.6		49.0			53.7	2.1	0.0	51.0	3.2	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	0.6		49.0			53.7	2.1	0.0	51.0	3.2	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.7			49.0			3.0			3.2	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 106.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 3.2		Intersection LOS: A	
Intersection Capacity Utilization 41.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

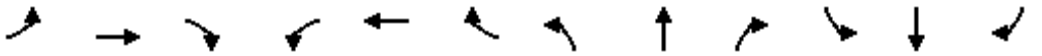




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1068	1	1	1125	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1068	1	1	1125	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	6	0	17	1	0	0	22	1242	1	1	1308	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1418	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	6	0	17	1	0	0	22	1242	1	1	1308	13
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1418	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.6	0.0	1.2	0.1	0.0	0.0	1.2	8.9	0.0	0.1	10.6	0.1
Cycle Q Clear(g_c), s	0.6	0.0	1.2	1.3	0.0	0.0	1.2	8.9	0.0	0.1	10.6	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
V/C Ratio(X)	0.06	0.00	0.52	0.01	0.00	0.00	0.56	0.45	0.00	0.41	0.47	0.01
Avail Cap(c_a), veh/h	258	0	244	314	347	0	140	2790	1410	143	2789	1409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	47.6	48.2	0.0	0.0	47.7	1.7	1.1	49.2	2.3	1.4
Incr Delay (d2), s/veh	0.3	0.0	12.2	0.0	0.0	0.0	11.7	0.5	0.0	85.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.0	0.0	0.0	0.6	0.5	0.0	0.1	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	59.8	48.3	0.0	0.0	59.4	2.2	1.1	134.7	2.9	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		23			1			1265			1322	
Approach Delay, s/veh		56.6			48.3			3.2			3.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	88.1		6.4	6.3	86.0		6.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	82.0		18.0	8.0	82.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	10.9		3.2	3.2	12.6		3.3				
Green Ext Time (p_c), s	0.0	11.2		0.0	0.0	12.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		3.6	
HCM 6th LOS		A	

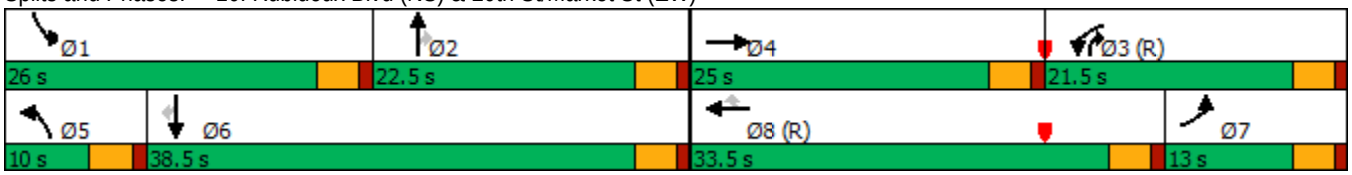


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	59	47	249	39	546	23	399	311	612	584	30
Future Volume (vph)	54	59	47	249	39	546	23	399	311	612	584	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.933				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				553			334			149
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	58	63	51	268	42	587	25	429	334	658	628	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	114	0	268	42	587	25	429	334	658	628	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	13.0	25.0		21.5	33.5	33.5	10.0	22.5	21.5	26.0	38.5	38.5
Total Split (%)	13.7%	26.3%		22.6%	35.3%	35.3%	10.5%	23.7%	22.6%	27.4%	40.5%	40.5%
Maximum Green (s)	9.0	21.0		17.5	29.5	29.5	6.0	18.5	17.5	22.0	34.5	34.5
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	8.4	12.5		26.0	32.1	32.1	5.9	19.2	45.2	21.3	40.5	40.5
Actuated g/C Ratio	0.09	0.13		0.27	0.34	0.34	0.06	0.20	0.48	0.22	0.43	0.43
v/c Ratio	0.62	0.67		0.32	0.07	0.69	0.26	0.68	0.40	0.87	0.42	0.04
Control Delay	69.9	43.6		41.5	24.1	22.1	49.4	41.6	2.6	49.4	21.1	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	43.6		41.5	24.1	22.7	49.4	41.6	2.6	49.4	21.1	0.1
LOS	E	D		D	C	C	D	D	A	D	C	A
Approach Delay		52.5			28.4			25.3			34.8	
Approach LOS		D			C			C			C	

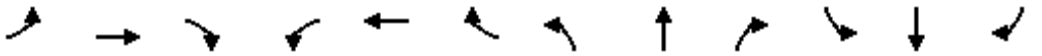
Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 31.6		Intersection LOS: C	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	59	47	249	39	546	23	399	311	612	584	30
Future Volume (veh/h)	54	59	47	249	39	546	23	399	311	612	584	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	58	63	51	268	42	587	25	429	334	658	628	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	92	82	67	806	526	526	46	615	732	792	1361	716
Arrive On Green	0.10	0.17	0.17	0.25	0.31	0.31	0.03	0.19	0.19	0.22	0.39	0.39
Sat Flow, veh/h	877	485	393	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	58	0	114	268	42	587	25	429	334	658	628	32
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	6.0	0.0	11.8	6.4	1.7	16.4	1.4	12.0	6.3	16.7	12.7	0.7
Cycle Q Clear(g_c), s	6.0	0.0	11.8	6.4	1.7	16.4	1.4	12.0	6.3	16.7	12.7	0.7
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	0	149	806	526	526	46	615	732	792	1361	716
V/C Ratio(X)	0.63	0.00	0.77	0.33	0.08	1.12	0.55	0.70	0.46	0.83	0.46	0.04
Avail Cap(c_a), veh/h	92	0	194	806	526	526	105	615	732	827	1361	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.74	0.74	0.74	0.93	0.93	0.93	0.90	0.90	0.90
Uniform Delay (d), s/veh	40.8	0.0	37.7	29.4	23.2	10.1	45.6	35.6	6.8	35.3	21.6	8.6
Incr Delay (d2), s/veh	13.3	0.0	12.6	0.2	0.2	70.6	9.1	6.0	1.9	6.3	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.9	2.4	0.7	15.3	0.7	4.8	2.5	7.5	4.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	50.2	29.6	23.4	80.8	54.7	41.6	8.7	41.6	22.6	8.7
LnGrp LOS	D	A	D	C	C	F	D	D	A	D	C	A
Approach Vol, veh/h		172			897			788			1318	
Approach Delay, s/veh		51.5			62.8			28.1			31.7	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.1	22.5	27.3	20.1	6.6	41.0	13.9	33.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	18.5	17.5	21.0	6.0	34.5	9.0	29.5
Max Q Clear Time (g_c+I1), s	20.7	16.0	8.4	13.8	5.4	16.7	10.0	20.4
Green Ext Time (p_c), s	0.4	0.9	0.6	0.2	0.0	3.6	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	540	12	35	240	0	5
Future Volume (vph)	540	12	35	240	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	568	13	37	253	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	568	13	37	253	0	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	540	12	35	240	0	5
Future Vol, veh/h	540	12	35	240	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	568	13	37	253	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	581	0	-	284
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	852	-	0	719
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	852	-	-	719
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	719	-	-	852	-
HCM Lane V/C Ratio	0.007	-	-	0.043	-
HCM Control Delay (s)	10	-	-	9.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-

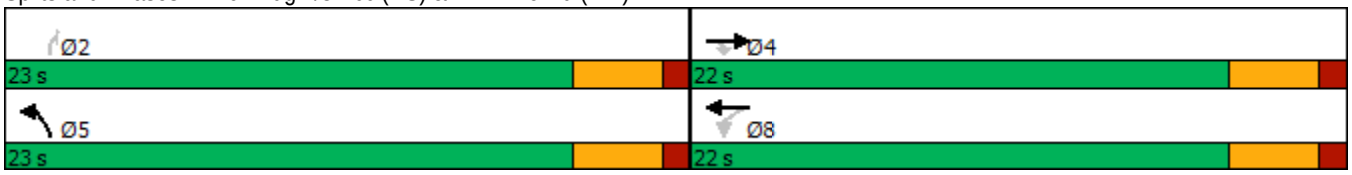


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	417	128	14	238	37	10
Future Volume (vph)	417	128	14	238	37	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.497		0.950	
Satd. Flow (perm)	3282	1468	762	2911	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		135				11
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	439	135	15	251	39	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	439	135	15	251	39	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	9.0	9.0	9.0	9.0	6.1	5.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.27	0.26
v/c Ratio	0.34	0.21	0.05	0.22	0.08	0.03
Control Delay	5.6	2.0	4.6	5.1	7.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	2.0	4.6	5.1	7.6	5.0
LOS	A	A	A	A	A	A
Approach Delay	4.8			5.1	7.1	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 23			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 5.0		Intersection LOS: A	
Intersection Capacity Utilization 22.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

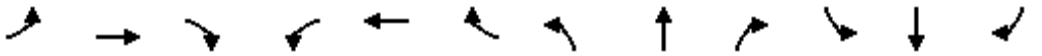




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	417	128	14	238	37	10
Future Volume (veh/h)	417	128	14	238	37	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1544	1544	1900	1900
Adj Flow Rate, veh/h	439	135	15	251	39	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	24	24	0	0
Cap, veh/h	1303	686	698	1149	119	119
Arrive On Green	0.39	0.39	0.39	0.39	0.06	0.06
Sat Flow, veh/h	3416	1752	693	3011	1900	1900
Grp Volume(v), veh/h	439	135	15	251	39	11
Grp Sat Flow(s),veh/h/ln	1664	1752	693	1467	1900	1900
Q Serve(g_s), s	1.4	0.7	0.2	0.8	0.3	0.1
Cycle Q Clear(g_c), s	1.4	0.7	1.6	0.8	0.3	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1303	686	698	1149	119	119
V/C Ratio(X)	0.34	0.20	0.02	0.22	0.33	0.09
Avail Cap(c_a), veh/h	4086	2150	1277	3602	2462	2462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.1	2.9	3.7	3.0	6.6	6.5
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.1	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.3	3.1	3.7	3.1	8.1	6.8
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	574			266	50	
Approach Delay, s/veh	3.2			3.1	7.9	
Approach LOS	A			A	A	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	4.9	9.7	9.7
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	19.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.3	3.4	3.6
Green Ext Time (p_c), s	0.1	2.6	1.3

Intersection Summary	
HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A

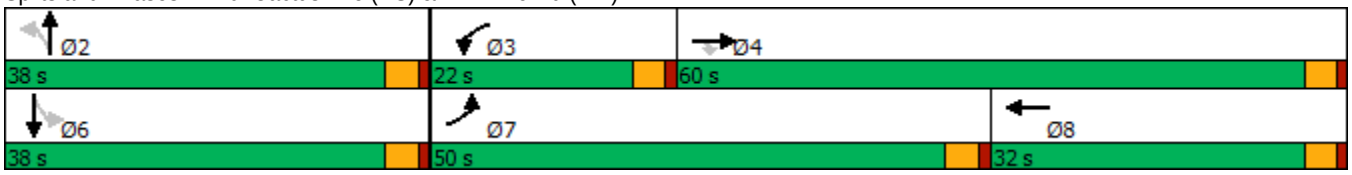


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	147	80	49	129	100	30	3	18	84	6	81
Future Volume (vph)	204	147	80	49	129	100	30	3	18	84	6	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.935			0.870			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2813	0	1805	1653	0	1626	1474	0
Flt Permitted	0.950			0.950			0.694			0.742		
Satd. Flow (perm)	1583	3167	1417	1504	2813	0	1319	1653	0	1270	1474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		112			20			91	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	229	165	90	55	145	112	34	3	20	94	7	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	229	165	90	55	257	0	34	23	0	94	98	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.0	60.0	60.0	22.0	32.0		38.0	38.0		38.0	38.0	
Total Split (%)	41.7%	50.0%	50.0%	18.3%	26.7%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	46.0	56.0	56.0	18.0	28.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	15.6	21.4	21.4	8.1	9.3		34.3	34.3		34.3	34.3	
Actuated g/C Ratio	0.22	0.30	0.30	0.11	0.13		0.48	0.48		0.48	0.48	
v/c Ratio	0.66	0.17	0.18	0.32	0.55		0.05	0.03		0.15	0.13	
Control Delay	35.5	20.7	6.4	35.8	21.6		12.7	6.8		13.5	4.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.5	20.7	6.4	35.8	21.6		12.7	6.8		13.5	4.4	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		25.0			24.1			10.3			8.9	
Approach LOS		C			C			B			A	

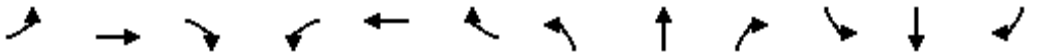
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 71.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	147	80	49	129	100	30	3	18	84	6	81
Future Volume (veh/h)	204	147	80	49	129	100	30	3	18	84	6	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	229	165	90	55	145	112	34	3	20	94	7	91
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	285	803	423	77	229	177	756	129	857	771	64	837
Arrive On Green	0.17	0.25	0.25	0.05	0.13	0.13	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1693	3216	1693	1604	1764	1363	1318	248	1652	1289	124	1613
Grp Volume(v), veh/h	229	165	90	55	125	132	34	0	23	94	0	98
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1318	0	1900	1289	0	1737
Q Serve(g_s), s	8.5	2.7	2.8	2.2	5.1	5.1	0.9	0.0	0.4	2.5	0.0	1.9
Cycle Q Clear(g_c), s	8.5	2.7	2.8	2.2	5.1	5.1	2.8	0.0	0.4	2.9	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.85	1.00		0.87	1.00		0.93
Lane Grp Cap(c), veh/h	285	803	423	77	198	208	756	0	986	771	0	901
V/C Ratio(X)	0.80	0.21	0.21	0.71	0.63	0.63	0.04	0.00	0.02	0.12	0.00	0.11
Avail Cap(c_a), veh/h	1188	2749	1447	441	651	685	756	0	986	771	0	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	19.4	19.5	30.7	27.0	27.0	8.7	0.0	7.7	8.4	0.0	8.0
Incr Delay (d2), s/veh	5.3	0.1	0.2	11.3	3.3	3.2	0.1	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.9	1.1	1.1	1.9	2.0	0.2	0.0	0.1	0.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	19.6	19.7	42.1	30.4	30.2	8.9	0.0	7.7	8.7	0.0	8.3
LnGrp LOS	C	B	B	D	C	C	A	A	A	A	A	A
Approach Vol, veh/h		484			312			57			192	
Approach Delay, s/veh		25.3			32.4			8.4			8.5	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.0	7.2	20.4		38.0	15.0	12.5				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		34.0	18.0	56.0		34.0	46.0	28.0				
Max Q Clear Time (g_c+I1), s		4.8	4.2	4.8		4.9	10.5	7.1				
Green Ext Time (p_c), s		0.2	0.1	1.4		0.8	0.7	1.4				

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	240	20	4	312	0	2
Future Volume (vph)	240	20	4	312	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	253	21	4	328	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	253	21	4	328	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.6%		ICU Level of Service A	
Analysis Period (min) 15			

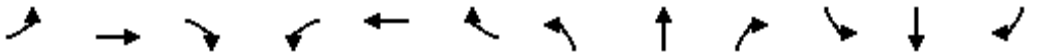
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	240	20	4	312	0	2
Future Vol, veh/h	240	20	4	312	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	253	21	4	328	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	274	0	-	127
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1165	-	0	906
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1165	-	-	906
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	906	-	-	1165	-
HCM Lane V/C Ratio	0.002	-	-	0.004	-
HCM Control Delay (s)	9	-	-	8.1	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

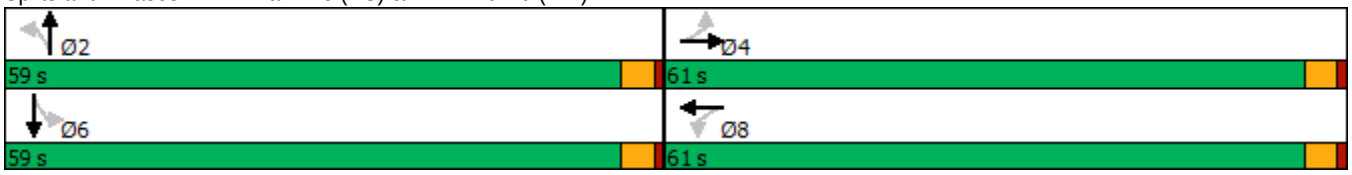


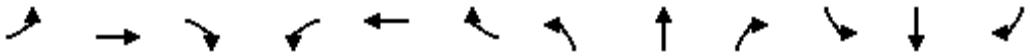
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	132	87	15	162	5	115	3	4	9	8	11
Future Volume (vph)	2	132	87	15	162	5	115	3	4	9	8	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.996			0.917			0.912	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1640	0	1583	1660	0	1410	1361	0	1736	1666	0
Flt Permitted	0.471			0.338			0.742			0.752		
Satd. Flow (perm)	821	1640	0	563	1660	0	1101	1361	0	1374	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			2			5			14	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	2	163	107	19	200	6	142	4	5	11	10	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	270	0	19	206	0	142	9	0	11	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	16.6	16.6		16.6	16.6		55.2	55.2		55.2	55.2	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.69	0.69		0.69	0.69	
v/c Ratio	0.01	0.73		0.16	0.60		0.19	0.01		0.01	0.02	
Control Delay	24.0	37.0		28.5	35.5		6.0	4.0		5.2	3.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.0	37.0		28.5	35.5		6.0	4.0		5.2	3.4	
LOS	C	D		C	D		A	A		A	A	
Approach Delay		36.9			34.9			5.9			4.0	
Approach LOS		D			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 79.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 27.7		Intersection LOS: C	
Intersection Capacity Utilization 32.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

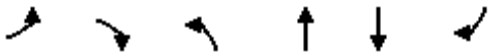




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	132	87	15	162	5	115	3	4	9	8	11
Future Volume (veh/h)	2	132	87	15	162	5	115	3	4	9	8	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	2	163	107	19	200	6	142	4	5	11	10	14
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	194	216	142	150	333	10	853	459	574	1052	534	747
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1111	1067	700	1004	1643	49	1101	660	825	1384	767	1074
Grp Volume(v), veh/h	2	0	270	19	0	206	142	0	9	11	0	24
Grp Sat Flow(s),veh/h/ln	1111	0	1767	1004	0	1693	1101	0	1485	1384	0	1841
Q Serve(g_s), s	0.1	0.0	11.4	1.4	0.0	8.7	3.6	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	8.9	0.0	11.4	12.8	0.0	8.7	3.9	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.40	1.00		0.03	1.00		0.56	1.00		0.58
Lane Grp Cap(c), veh/h	194	0	358	150	0	343	853	0	1034	1052	0	1281
V/C Ratio(X)	0.01	0.00	0.75	0.13	0.00	0.60	0.17	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	770	0	1274	671	0	1221	853	0	1034	1052	0	1281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	0.0	29.6	35.7	0.0	28.6	4.3	0.0	3.7	3.7	0.0	3.7
Incr Delay (d2), s/veh	0.0	0.0	3.2	0.4	0.0	1.7	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.8	0.3	0.0	3.4	0.7	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	0.0	32.9	36.0	0.0	30.3	4.7	0.0	3.7	3.7	0.0	3.7
LnGrp LOS	C	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		272			225			151			35	
Approach Delay, s/veh		32.9			30.8			4.7			3.7	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		20.0		59.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		55.0		57.0		55.0		57.0				
Max Q Clear Time (g_c+I1), s		5.9		13.4		2.3		14.8				
Green Ext Time (p_c), s		0.7		1.5		0.1		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			24.5									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	8	18	115	96	14
Future Volume (vph)	7	8	18	115	96	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1410	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1410	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	28%	28%	11%	11%
Adj. Flow (vph)	7	8	19	121	101	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	8	19	121	101	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.7%		ICU Level of Service A	
Analysis Period (min) 15			

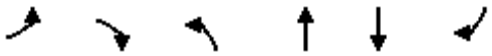
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	18	115	96	14
Future Vol, veh/h	7	8	18	115	96	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	28	28	11	11
Mvmt Flow	7	8	19	121	101	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	260	101	116	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.452	-	-	-
Pot Cap-1 Maneuver	733	960	1326	-	-	-
Stage 1	928	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	723	960	1326	-	-	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1326	-	723	960	-	-
HCM Lane V/C Ratio	0.014	-	0.01	0.009	-	-
HCM Control Delay (s)	7.8	-	10	8.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-



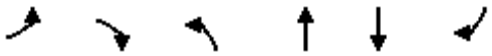
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	33	68	102	384	473	80
Future Volume (vph)	33	68	102	384	473	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		72				84
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	35	72	107	404	498	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	72	107	404	498	84
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	6.8	6.8	7.0	27.2	21.5	21.5
Actuated g/C Ratio	0.19	0.19	0.20	0.77	0.61	0.61
v/c Ratio	0.13	0.24	0.39	0.19	0.28	0.12
Control Delay	15.7	7.4	20.7	3.0	8.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	7.4	20.7	3.0	8.6	3.5
LOS	B	A	C	A	A	A
Approach Delay	10.1			6.7	7.9	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 35.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 7.6		Intersection LOS: A	
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

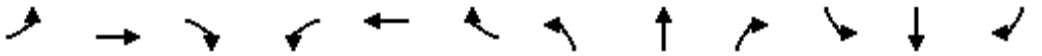




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	68	102	384	473	80
Future Volume (veh/h)	33	68	102	384	473	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	35	72	107	404	498	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	156	156	150	1595	935	472
Arrive On Green	0.10	0.10	0.10	0.58	0.32	0.32
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	35	72	107	404	498	84
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.5	1.2	1.8	1.8	3.6	1.1
Cycle Q Clear(g_c), s	0.5	1.2	1.8	1.8	3.6	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	156	156	150	1595	935	472
V/C Ratio(X)	0.22	0.46	0.71	0.25	0.53	0.18
Avail Cap(c_a), veh/h	1057	1057	395	3108	2048	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	10.8	11.1	2.6	7.1	6.2
Incr Delay (d2), s/veh	0.7	2.1	6.2	0.1	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.6	0.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	12.9	17.2	2.7	7.6	6.4
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	107			511	582	
Approach Delay, s/veh	12.3			5.7	7.4	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		18.9		6.7	6.7	12.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		3.8		3.2	3.8	5.6
Green Ext Time (p_c), s		2.5		0.2	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

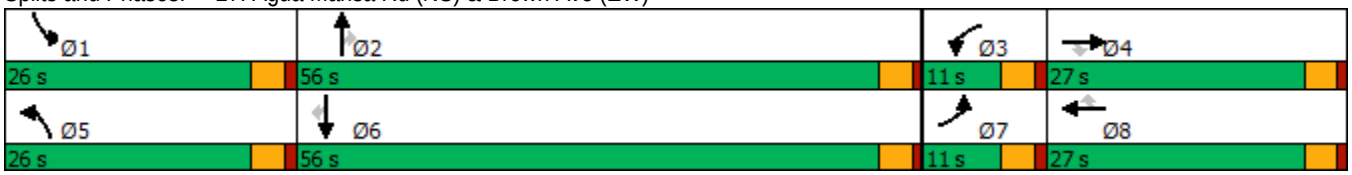


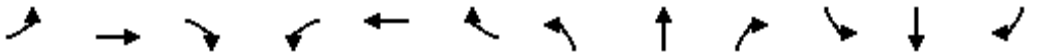
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	25	12	0	38	68	450	13	85	446	19
Future Volume (vph)	6	2	25	12	0	38	68	450	13	85	446	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			500			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	6	2	27	13	0	40	72	479	14	90	474	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	2	27	13	0	40	72	479	14	90	474	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	27.0	27.0	11.0	27.0	27.0	26.0	56.0	56.0	26.0	56.0	56.0
Total Split (%)	9.2%	22.5%	22.5%	9.2%	22.5%	22.5%	21.7%	46.7%	46.7%	21.7%	46.7%	46.7%
Maximum Green (s)	7.0	23.0	23.0	7.0	23.0	23.0	22.0	52.0	52.0	22.0	52.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.1	5.9	5.9	6.3		5.9	9.8	57.7	57.7	10.6	58.4	58.4
Actuated g/C Ratio	0.08	0.07	0.07	0.08		0.07	0.12	0.72	0.72	0.13	0.73	0.73
v/c Ratio	0.08	0.03	0.20	0.14		0.08	0.43	0.24	0.02	0.48	0.23	0.02
Control Delay	41.5	40.5	3.4	42.4		0.3	42.9	7.4	0.1	42.8	6.8	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	40.5	3.4	42.4		0.3	42.9	7.4	0.1	42.8	6.8	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		12.1			10.6			11.7			12.1	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 80.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 34.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2	25	12	0	38	68	450	13	85	446	19
Future Volume (veh/h)	6	2	25	12	0	38	68	450	13	85	446	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	6	2	27	13	0	40	72	479	14	90	474	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	6	54	52	18	88	85	114	1703	861	142	1850	935
Arrive On Green	0.01	0.07	0.07	0.02	0.00	0.08	0.08	0.63	0.63	0.09	0.64	0.64
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	6	2	27	13	0	40	72	479	14	90	474	20
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.6	0.2	2.8	0.9	0.0	2.8	4.0	6.6	0.3	4.7	5.8	0.4
Cycle Q Clear(g_c), s	0.6	0.2	2.8	0.9	0.0	2.8	4.0	6.6	0.3	4.7	5.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	6	54	52	18	88	85	114	1703	861	142	1850	935
V/C Ratio(X)	0.98	0.04	0.52	0.72	0.00	0.47	0.63	0.28	0.02	0.63	0.26	0.02
Avail Cap(c_a), veh/h	67	219	211	98	322	309	379	1703	861	403	1850	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	36.0	37.2	40.5	0.0	36.6	36.9	6.9	5.8	36.1	6.3	5.4
Incr Delay (d2), s/veh	162.0	0.3	7.9	41.4	0.0	4.0	5.7	0.4	0.0	4.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.5	0.0	0.9	1.5	1.5	0.1	1.8	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.0	36.3	45.1	81.9	0.0	40.6	42.6	7.3	5.8	40.7	6.7	5.4
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		35			53			565			584	
Approach Delay, s/veh		71.7			50.8			11.8			11.9	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	56.0	5.3	9.7	10.6	57.2	4.6	10.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	52.0	7.0	23.0	22.0	52.0	7.0	23.0
Max Q Clear Time (g_c+I1), s	8.7	10.6	4.9	6.8	8.0	9.8	4.6	6.8
Green Ext Time (p_c), s	0.1	3.3	0.0	0.0	0.1	3.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

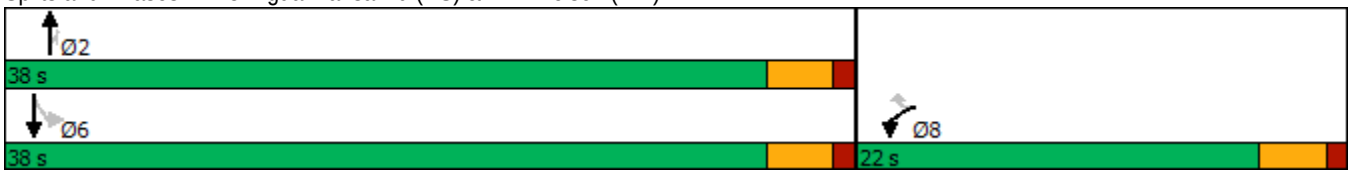


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	24	524	45	25	467
Future Volume (vph)	29	24	524	45	25	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.427	
Satd. Flow (perm)	1031	923	2654	1188	601	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		27		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	251		1750			2429
Travel Time (s)	6.8		26.5			36.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	33	27	595	51	28	531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	27	595	51	28	531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	7.5	7.5	48.1	48.1	48.1	48.1
Actuated g/C Ratio	0.13	0.13	0.83	0.83	0.83	0.83
v/c Ratio	0.25	0.19	0.27	0.05	0.06	0.45
Control Delay	27.0	12.6	2.7	1.2	3.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	12.6	2.7	1.2	3.0	4.7
LOS	C	B	A	A	A	A
Approach Delay	20.5		2.6			4.6
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 57.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 35.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R.A. Nelson (EW)

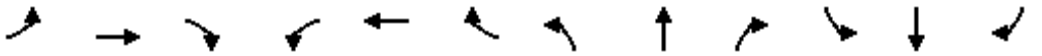




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	29	24	524	45	25	467
Future Volume (veh/h)	29	24	524	45	25	467
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	33	27	595	51	28	531
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	46	46	1978	1041	562	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	579	1381
Grp Volume(v), veh/h	33	27	595	51	28	531
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	579	1381
Q Serve(g_s), s	1.8	1.5	3.2	0.4	0.7	6.6
Cycle Q Clear(g_c), s	1.8	1.5	3.2	0.4	3.9	6.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	1978	1041	562	1052
V/C Ratio(X)	0.71	0.58	0.30	0.05	0.05	0.50
Avail Cap(c_a), veh/h	318	318	1978	1041	562	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.6	1.3	2.2	2.1
Incr Delay (d2), s/veh	18.2	11.1	0.4	0.1	0.2	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.8	31.5	2.0	1.4	2.4	3.8
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	60		646			559
Approach Delay, s/veh	35.5		2.0			3.7
Approach LOS	D		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.6
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.2			8.6	3.8
Green Ext Time (p_c), s		4.2			3.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.3
HCM 6th LOS	A

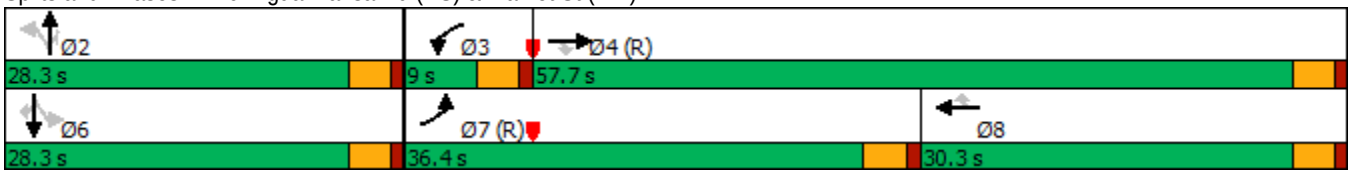


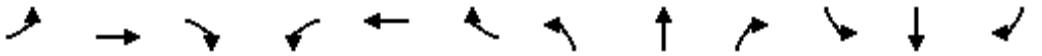
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	671	10	3	575	252	8	2	1	151	4	250
Future Volume (vph)	324	671	10	3	575	252	8	2	1	151	4	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	1641	3282	1272	1626	3252	1261	0	1261	965	1433	1508	1111
Flt Permitted	0.950			0.950				0.897		0.751		
Satd. Flow (perm)	1641	3282	1272	1626	3252	1261	0	1175	965	1132	1508	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			57			148			103			258
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			6.7			26.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	334	692	10	3	593	260	8	2	1	156	4	258
Shared Lane Traffic (%)												
Lane Group Flow (vph)	334	692	10	3	593	260	0	10	1	156	4	258
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	36.4	57.7	57.7	9.0	30.3	30.3	28.3	28.3	28.3	28.3	28.3	28.3
Total Split (%)	38.3%	60.7%	60.7%	9.5%	31.9%	31.9%	29.8%	29.8%	29.8%	29.8%	29.8%	29.8%
Maximum Green (s)	32.4	53.7	53.7	5.0	26.3	26.3	24.3	24.3	24.3	24.3	24.3	24.3
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	32.4	60.9	60.9	5.0	26.3	26.3		24.3	24.3	24.3	24.3	24.3
Actuated g/C Ratio	0.34	0.64	0.64	0.05	0.28	0.28		0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.60	0.33	0.01	0.04	0.66	0.57		0.03	0.00	0.54	0.01	0.54
Control Delay	48.0	3.3	0.0	43.7	34.5	18.2		27.1	0.0	38.6	26.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	3.3	0.0	43.7	34.5	18.2		27.1	0.0	38.6	26.5	8.6
LOS	D	A	A	D	C	B		C	A	D	C	A
Approach Delay		17.7			29.6			24.6			20.0	
Approach LOS		B			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 22.5		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

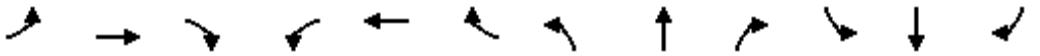




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	671	10	3	575	252	8	2	1	151	4	250
Future Volume (veh/h)	324	671	10	3	575	252	8	2	1	151	4	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	334	692	10	3	593	260	8	2	1	156	4	258
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	495	2043	1032	7	1107	559	217	44	303	341	387	372
Arrive On Green	0.09	0.20	0.20	0.00	0.34	0.34	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1752	3328	1682	1737	3300	1668	583	171	1184	1145	1515	1454
Grp Volume(v), veh/h	334	692	10	3	593	260	10	0	1	156	4	258
Grp Sat Flow(s),veh/h/ln	1752	1664	1682	1737	1650	1668	754	0	1184	1145	1515	1454
Q Serve(g_s), s	17.5	16.9	0.5	0.2	13.8	11.7	0.1	0.0	0.1	11.5	0.2	15.3
Cycle Q Clear(g_c), s	17.5	16.9	0.5	0.2	13.8	11.7	2.3	0.0	0.1	13.9	0.2	15.3
Prop In Lane	1.00		1.00	1.00		1.00	0.80		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	495	2043	1032	7	1107	559	261	0	303	341	387	372
V/C Ratio(X)	0.67	0.34	0.01	0.43	0.54	0.47	0.04	0.00	0.00	0.46	0.01	0.69
Avail Cap(c_a), veh/h	597	2043	1032	91	1107	559	261	0	303	341	387	372
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	38.8	21.4	14.8	47.2	25.6	24.9	26.7	0.0	26.3	32.5	26.4	32.0
Incr Delay (d2), s/veh	1.5	0.3	0.0	37.0	0.5	0.6	0.3	0.0	0.0	4.0	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	7.5	0.1	0.1	5.1	4.4	0.2	0.0	0.0	3.4	0.1	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	21.7	14.8	84.2	26.1	25.5	27.0	0.0	26.3	36.5	26.4	41.2
LnGrp LOS	D	C	B	F	C	C	C	A	C	D	C	D
Approach Vol, veh/h		1036			856			11			418	
Approach Delay, s/veh		27.6			26.1			26.9			39.3	
Approach LOS		C			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.3	4.4	62.3		28.3	30.8	35.9				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		24.3	5.0	53.7		24.3	32.4	26.3				
Max Q Clear Time (g_c+I1), s		4.3	4.2	20.9		19.3	21.5	17.8				
Green Ext Time (p_c), s		0.0	0.0	4.8		0.7	0.7	2.9				

Intersection Summary												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									

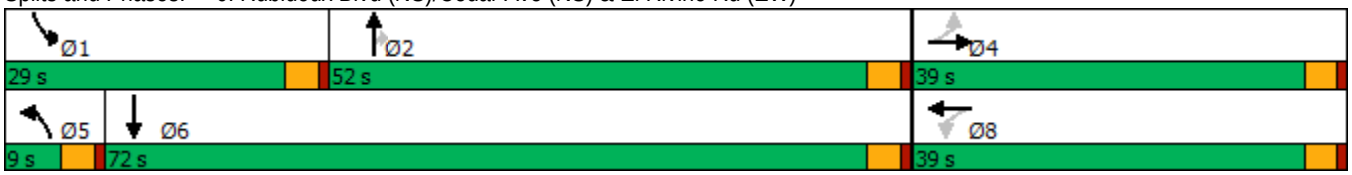


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	16	326	13	341	14	1181	198	323	1047	16
Future Volume (vph)	19	8	16	326	13	341	14	1181	198	323	1047	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.900			0.855				0.850		0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	1513	0	1504	1354	0	1597	3195	1429	1612	3217	0
Flt Permitted	0.260			0.742			0.950			0.950		
Satd. Flow (perm)	437	1513	0	1175	1354	0	1597	3195	1429	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			344				175		2	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	20	8	16	336	13	352	14	1218	204	333	1079	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	24	0	336	365	0	14	1218	204	333	1095	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	39.0	39.0		39.0	39.0		9.0	52.0	52.0	29.0	72.0	
Total Split (%)	32.5%	32.5%		32.5%	32.5%		7.5%	43.3%	43.3%	24.2%	60.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		5.0	48.0	48.0	25.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	35.0	35.0		35.0	35.0		5.0	48.0	48.0	25.0	73.4	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.04	0.40	0.40	0.21	0.61	
v/c Ratio	0.16	0.05		0.98	0.57		0.21	0.95	0.30	0.99	0.56	
Control Delay	35.6	17.3		87.4	8.4		63.4	51.5	6.4	95.6	15.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	35.6	17.3		87.4	8.4		63.4	51.5	6.4	95.6	15.7	
LOS	D	B		F	A		E	D	A	F	B	
Approach Delay		25.6			46.3			45.2			34.3	
Approach LOS		C			D			D			C	

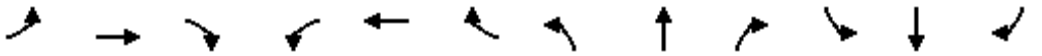
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 40.9		Intersection LOS: D	
Intersection Capacity Utilization 85.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	8	16	326	13	341	14	1181	198	323	1047	16
Future Volume (veh/h)	19	8	16	326	13	341	14	1181	198	323	1047	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	20	8	16	336	13	352	14	1218	204	333	1079	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	122	166	332	387	17	451	27	1298	683	359	1962	29
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.02	0.40	0.40	0.21	0.59	0.59
Sat Flow, veh/h	928	569	1138	1189	57	1546	1707	3244	1707	1722	3309	49
Grp Volume(v), veh/h	20	0	24	336	0	365	14	1218	204	333	533	562
Grp Sat Flow(s),veh/h/ln	928	0	1707	1189	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	2.5	0.0	1.2	33.0	0.0	25.0	1.0	43.3	9.8	22.8	23.6	23.6
Cycle Q Clear(g_c), s	29.5	0.0	1.2	35.0	0.0	25.0	1.0	43.3	9.8	22.8	23.6	23.6
Prop In Lane	1.00		0.67	1.00		0.96	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	122	0	498	387	0	468	27	1298	683	359	970	1021
V/C Ratio(X)	0.16	0.00	0.05	0.87	0.00	0.78	0.53	0.94	0.30	0.93	0.55	0.55
Avail Cap(c_a), veh/h	122	0	498	387	0	468	71	1298	683	359	970	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	0.0	30.5	43.9	0.0	39.0	58.6	34.6	24.5	46.6	14.8	14.8
Incr Delay (d2), s/veh	0.6	0.0	0.0	18.5	0.0	8.3	15.3	14.1	1.1	29.9	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.5	11.9	0.0	10.9	0.5	18.3	4.0	12.3	8.3	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	30.6	62.4	0.0	47.2	73.9	48.7	25.6	76.5	17.0	16.9
LnGrp LOS	D	A	C	E	A	D	E	D	C	E	B	B
Approach Vol, veh/h		44			701			1436			1428	
Approach Delay, s/veh		41.3			54.5			45.6			30.8	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	52.0		39.0	5.9	75.1		39.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	25.0	48.0		35.0	5.0	68.0		35.0				
Max Q Clear Time (g_c+I1), s	26.8	47.3		31.5	5.0	27.6		37.0				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	7.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		41.5	
HCM 6th LOS		D	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	16	1377	3	0	1389
Future Volume (vph)	0	16	1377	3	0	1389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	3195	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3195	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	17	1449	3	0	1462
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	17	1452	0	0	1462
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	1377	3	0	1389
Future Vol, veh/h	0	16	1377	3	0	1389
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	17	1449	3	0	1462

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	726	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	372	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	372	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	372	-
HCM Lane V/C Ratio	-	-	0.045	-
HCM Control Delay (s)	-	-	15.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

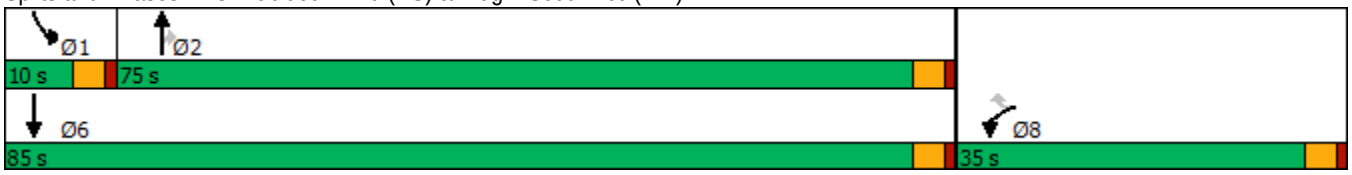


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	29	1351	10	3	1386
Future Volume (vph)	82	29	1351	10	3	1386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		31		11		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	86	31	1422	11	3	1459
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	31	1422	11	3	1459
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	35.0	35.0	75.0	75.0	10.0	85.0
Total Split (%)	29.2%	29.2%	62.5%	62.5%	8.3%	70.8%
Maximum Green (s)	31.0	31.0	71.0	71.0	6.0	81.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	10.4	10.4	88.5	88.5	5.7	90.5
Actuated g/C Ratio	0.10	0.10	0.84	0.84	0.05	0.86
v/c Ratio	0.49	0.17	0.53	0.01	0.03	0.52
Control Delay	53.9	16.1	5.1	2.1	47.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	53.9	16.1	5.1	2.1	47.3	3.8
LOS	D	B	A	A	D	A
Approach Delay	43.9		5.0			3.9
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

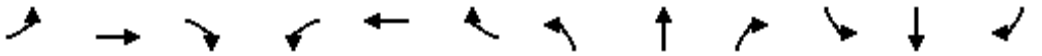




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	29	1351	10	3	1386
Future Volume (veh/h)	82	29	1351	10	3	1386
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	86	31	1422	11	3	1459
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	124	124	2611	1374	7	2856
Arrive On Green	0.07	0.07	0.80	0.80	0.00	0.85
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	86	31	1422	11	3	1459
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	4.2	1.5	14.5	0.1	0.2	10.9
Cycle Q Clear(g_c), s	4.2	1.5	14.5	0.1	0.2	10.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	124	124	2611	1374	7	2856
V/C Ratio(X)	0.69	0.25	0.54	0.01	0.42	0.51
Avail Cap(c_a), veh/h	619	619	2611	1374	111	2856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	42.3	3.2	1.8	47.3	1.9
Incr Delay (d2), s/veh	6.8	1.0	0.8	0.0	35.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.7	2.0	0.0	0.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.4	43.3	4.1	1.8	82.9	2.5
LnGrp LOS	D	D	A	A	F	A
Approach Vol, veh/h	117		1433			1462
Approach Delay, s/veh	48.5		4.0			2.7
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	4.4	80.6			85.0	10.2
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	6.0	71.0			81.0	31.0
Max Q Clear Time (g_c+I1), s	2.2	16.5			12.9	6.2
Green Ext Time (p_c), s	0.0	14.0			14.9	0.3

Intersection Summary	
HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A

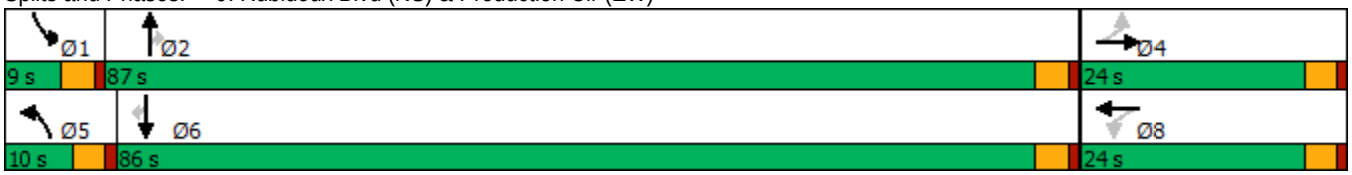


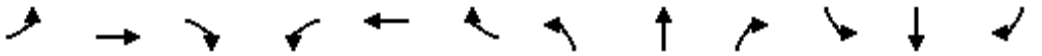
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	33	1	0	3	16	1299	0	0	1466	15
Future Volume (vph)	21	0	33	1	0	3	16	1299	0	0	1466	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.735			0.950					
Satd. Flow (perm)	1355	1524	0	1396	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		118			143							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	21	0	34	1	0	3	16	1326	0	0	1496	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	1	3	0	16	1326	0	0	1496	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		10.0	87.0	87.0	9.0	86.0	86.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		8.3%	72.5%	72.5%	7.5%	71.7%	71.7%
Maximum Green (s)	20.0	20.0		20.0	20.0		6.0	83.0	83.0	5.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.3	7.3		7.3	7.3		5.8	96.6			92.6	92.6
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.05	0.89			0.85	0.85
v/c Ratio	0.23	0.16		0.01	0.01		0.19	0.48			0.54	0.01
Control Delay	54.1	1.6		47.0	0.0		55.2	2.4			4.5	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.1	1.6		47.0	0.0		55.2	2.4			4.5	0.0
LOS	D	A		D	A		E	A			A	A
Approach Delay		21.7			11.8			3.0			4.5	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 4.1		Intersection LOS: A	
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

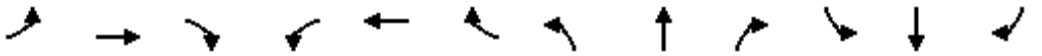




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	0	33	1	0	3	16	1299	0	0	1466	15
Future Volume (veh/h)	21	0	33	1	0	3	16	1299	0	0	1466	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	21	0	34	1	0	3	16	1326	0	0	1496	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	125	0	73	103	0	77	30	2804	1417	2	2734	1382
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1396	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	21	0	34	1	0	3	16	1326	0	0	1496	15
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1396	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.5	0.0	1.8	0.1	0.0	0.2	0.9	8.6	0.0	0.0	14.5	0.2
Cycle Q Clear(g_c), s	1.6	0.0	1.8	1.9	0.0	0.2	0.9	8.6	0.0	0.0	14.5	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	0	73	103	0	77	30	2804	1417	2	2734	1382
V/C Ratio(X)	0.17	0.00	0.47	0.01	0.00	0.04	0.53	0.47	0.00	0.00	0.55	0.01
Avail Cap(c_a), veh/h	344	0	363	326	0	381	101	2804	1417	88	2734	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	0.0	46.8	47.8	0.0	46.0	48.6	1.2	0.0	0.0	2.9	1.6
Incr Delay (d2), s/veh	0.6	0.0	4.5	0.0	0.0	0.2	13.7	0.6	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.9	0.0	0.0	0.1	0.5	0.2	0.0	0.0	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	51.4	47.8	0.0	46.2	62.3	1.8	0.0	0.0	3.7	1.6
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		55			4			1342			1511	
Approach Delay, s/veh		49.9			46.6			2.5			3.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.8		8.0	5.8	86.0		8.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	6.0	82.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	10.6		3.8	2.9	16.5		3.9				
Green Ext Time (p_c), s	0.0	12.7		0.1	0.0	15.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	4.1
HCM 6th LOS	A



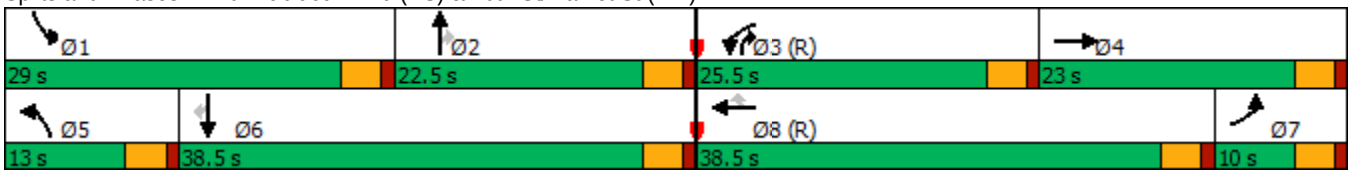
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	80	26	368	77	580	54	445	451	696	667	74
Future Volume (vph)	55	80	26	368	77	580	54	445	451	696	667	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.963				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				561			274			142
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	57	82	27	379	79	598	56	459	465	718	688	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	109	0	379	79	598	56	459	465	718	688	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

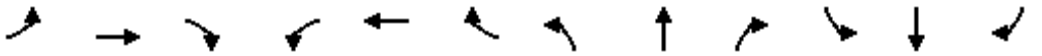
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	10.0	23.0		25.5	38.5	38.5	13.0	22.5	25.5	29.0	38.5	38.5
Total Split (%)	10.0%	23.0%		25.5%	38.5%	38.5%	13.0%	22.5%	25.5%	29.0%	38.5%	38.5%
Maximum Green (s)	6.0	19.0		21.5	34.5	34.5	9.0	18.5	21.5	25.0	34.5	34.5
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	6.0	17.0		21.5	34.5	34.5	8.0	21.3	46.8	24.2	39.4	39.4
Actuated g/C Ratio	0.06	0.17		0.22	0.34	0.34	0.08	0.21	0.47	0.24	0.39	0.39
v/c Ratio	0.63	0.39		0.54	0.13	0.67	0.44	0.64	0.57	0.89	0.48	0.11
Control Delay	75.5	35.2		43.5	35.5	24.5	54.7	41.7	11.2	51.3	25.7	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	35.2		43.5	35.5	24.7	54.7	41.7	11.2	51.3	25.7	0.4
LOS	E	D		D	D	C	D	D	B	D	C	A
Approach Delay		49.0			32.3			28.0			36.8	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 63.6%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	80	26	368	77	580	54	445	451	696	667	74
Future Volume (veh/h)	55	80	26	368	77	580	54	445	451	696	667	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	57	82	27	379	79	598	56	459	465	718	688	76
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	117	335	110	509	620	620	97	632	565	846	1340	670
Arrive On Green	0.07	0.27	0.27	0.15	0.34	0.34	0.06	0.19	0.19	0.24	0.37	0.37
Sat Flow, veh/h	1648	1240	408	3485	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	57	0	109	379	79	598	56	459	465	718	688	76
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1742	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.3	0.0	5.2	10.4	3.0	16.8	3.2	12.7	18.5	19.4	14.7	2.1
Cycle Q Clear(g_c), s	3.3	0.0	5.2	10.4	3.0	16.8	3.2	12.7	18.5	19.4	14.7	2.1
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	0	446	509	620	620	97	632	565	846	1340	670
V/C Ratio(X)	0.49	0.00	0.24	0.75	0.13	0.96	0.58	0.73	0.82	0.85	0.51	0.11
Avail Cap(c_a), veh/h	117	0	446	749	620	620	154	632	565	886	1340	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.55	0.55	0.55	0.84	0.84	0.84	0.83	0.83	0.83
Uniform Delay (d), s/veh	44.7	0.0	28.5	40.9	22.4	8.5	46.0	38.4	30.8	36.3	24.7	12.1
Incr Delay (d2), s/veh	3.1	0.0	0.3	1.3	0.2	19.6	4.5	6.1	10.9	6.4	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.0	4.4	1.2	8.5	1.4	5.5	11.3	8.6	6.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	0.0	28.8	42.2	22.7	28.1	50.5	44.4	41.7	42.7	25.9	12.4
LnGrp LOS	D	A	C	D	C	C	D	D	D	D	C	B
Approach Vol, veh/h		166			1056			980			1482	
Approach Delay, s/veh		35.3			32.7			43.5			33.4	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.9	22.5	18.6	31.0	9.7	40.7	11.1	38.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	18.5	21.5	19.0	9.0	34.5	6.0	34.5
Max Q Clear Time (g_c+I1), s	23.4	22.5	12.4	7.2	7.2	18.7	7.3	20.8
Green Ext Time (p_c), s	0.5	0.0	0.9	0.3	0.0	3.9	0.0	2.0

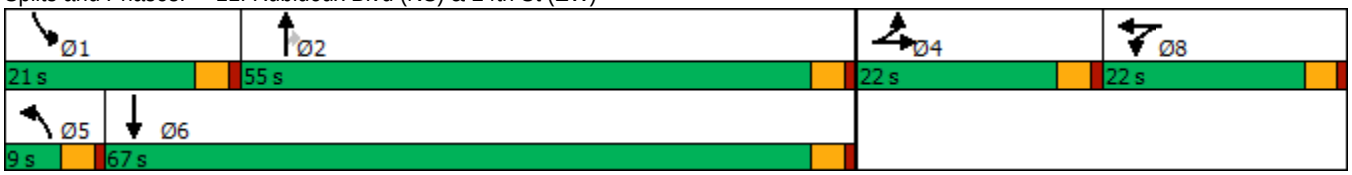
Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

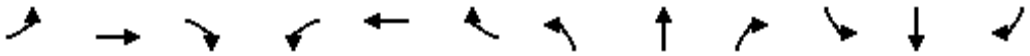
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	13	14	25	16	39	9	907	60	116	963	5
Future Volume (vph)	4	13	14	25	16	39	9	907	60	116	963	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.939			0.934				0.850		0.999	
Flt Protected		0.994			0.984		0.950			0.950		
Satd. Flow (prot)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Flt Permitted		0.994			0.984		0.950			0.950		
Satd. Flow (perm)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			34				118		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	4	13	14	26	16	40	9	935	62	120	993	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	82	0	9	935	62	120	998	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	55.0	55.0	21.0	67.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		7.5%	45.8%	45.8%	17.5%	55.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	51.0	51.0	17.0	63.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)		6.7			8.4		5.1	55.1	55.1	12.0	70.5	
Actuated g/C Ratio		0.07			0.09		0.06	0.60	0.60	0.13	0.77	
v/c Ratio		0.23			0.45		0.11	0.52	0.08	0.57	0.41	
Control Delay		34.0			35.2		49.3	15.2	0.3	50.1	6.9	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		34.0			35.2		49.3	15.2	0.3	50.1	6.9	
LOS		C			D		D	B	A	D	A	
Approach Delay		34.0			35.2			14.6			11.5	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 91.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)

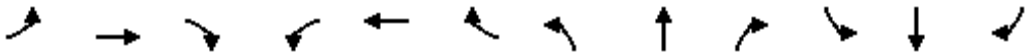




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	13	14	25	16	39	9	907	60	116	963	5
Future Volume (veh/h)	4	13	14	25	16	39	9	907	60	116	963	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	4	13	14	26	16	40	9	935	62	120	993	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	7	23	25	35	21	53	18	1947	984	151	2372	12
Arrive On Green	0.03	0.03	0.03	0.06	0.06	0.06	0.01	0.64	0.64	0.09	0.72	0.72
Sat Flow, veh/h	234	759	818	574	353	883	1604	3047	1539	1707	3313	17
Grp Volume(v), veh/h	31	0	0	82	0	0	9	935	62	120	486	512
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1539	1707	1622	1707
Q Serve(g_s), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.1	1.3	6.1	10.7	10.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.1	1.3	6.1	10.7	10.7
Prop In Lane	0.13		0.45	0.32		0.49	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	55	0	0	110	0	0	18	1947	984	151	1162	1223
V/C Ratio(X)	0.57	0.00	0.00	0.75	0.00	0.00	0.50	0.48	0.06	0.79	0.42	0.42
Avail Cap(c_a), veh/h	371	0	0	371	0	0	91	1947	984	330	1162	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	40.7	0.0	0.0	43.2	8.3	6.0	39.3	5.1	5.1
Incr Delay (d2), s/veh	8.9	0.0	0.0	9.7	0.0	0.0	19.9	0.9	0.1	9.1	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.0	0.0	0.0	0.3	3.6	0.4	2.8	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	50.4	0.0	0.0	63.1	9.1	6.1	48.4	6.2	6.1
LnGrp LOS	D	A	A	D	A	A	E	A	A	D	A	A
Approach Vol, veh/h		31			82			1006			1118	
Approach Delay, s/veh		51.0			50.4			9.4			10.7	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	60.2		6.7	5.0	67.0		9.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	17.0	51.0		18.0	5.0	63.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	16.1		3.5	2.5	12.7		5.9				
Green Ext Time (p_c), s	0.2	7.1		0.1	0.0	6.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	

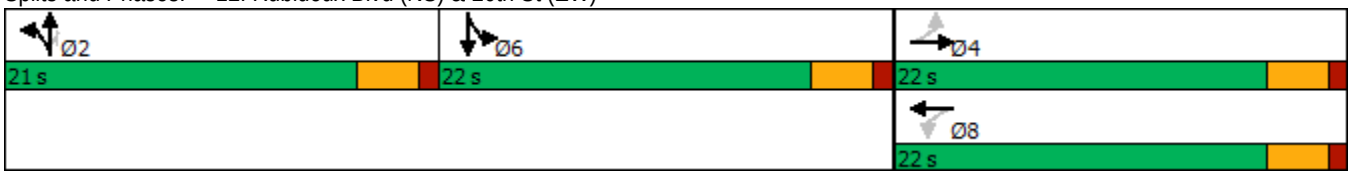


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	11	0	19	7	980	24	16	1009	3
Future Volume (vph)	0	0	10	11	0	19	7	980	24	16	1009	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Frt		0.865			0.916				0.850			
Flt Protected					0.982						0.999	
Satd. Flow (prot)	0	1644	0	0	1378	0	0	3034	1176	0	3220	0
Flt Permitted											0.999	
Satd. Flow (perm)	0	1644	0	0	1404	0	0	3034	1176	0	3220	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		533			84				84			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	11	12	0	20	7	1032	25	17	1062	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	32	0	0	1039	25	0	1082	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Split	NA	Perm	Split	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		21.0	21.0	21.0	22.0	22.0	
Total Split (%)	33.8%	33.8%		33.8%	33.8%		32.3%	32.3%	32.3%	33.8%	33.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		17.0	17.0	17.0	18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		5.6			5.6			18.2	18.2		18.2	
Actuated g/C Ratio		0.12			0.12			0.38	0.38		0.38	
v/c Ratio		0.02			0.14			0.90	0.05		0.88	
Control Delay		0.0			2.0			29.9	0.2		27.6	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		0.0			2.0			29.9	0.2		27.6	
LOS		A			A			C	A		C	
Approach Delay					2.0			29.2			27.6	
Approach LOS					A			C			C	

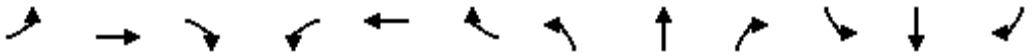
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 47.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)

10/08/2018



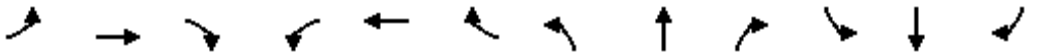
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	11	0	19	7	980	24	16	1009	3
Future Volume (veh/h)	0	0	10	11	0	19	7	980	24	16	1009	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	11	12	0	20	7	1032	25	17	1062	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	86	121	0	34	7	1083	537	19	1237	4
Arrive On Green	0.00	0.00	0.05	0.05	0.00	0.05	0.35	0.35	0.35	0.37	0.37	0.37
Sat Flow, veh/h	0	0	1900	451	0	752	20	3136	1554	52	3383	10
Grp Volume(v), veh/h	0	0	11	32	0	0	557	482	25	566	0	516
Grp Sat Flow(s),veh/h/ln	0	0	1900	1204	0	0	1618	1537	1554	1722	0	1722
Q Serve(g_s), s	0.0	0.0	0.3	1.1	0.0	0.0	16.9	14.7	0.5	15.3	0.0	13.3
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.4	0.0	0.0	16.9	14.7	0.5	15.3	0.0	13.3
Prop In Lane	0.00		1.00	0.37		0.62	0.01		1.00	0.03		0.01
Lane Grp Cap(c), veh/h	0	0	86	155	0	0	559	531	537	630	0	630
V/C Ratio(X)	0.00	0.00	0.13	0.21	0.00	0.00	1.00	0.91	0.05	0.90	0.00	0.82
Avail Cap(c_a), veh/h	0	0	695	595	0	0	559	531	537	630	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	23.2	0.0	0.0	16.1	15.4	10.7	14.8	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.7	0.0	0.0	37.3	21.8	0.2	18.2	0.0	11.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.4	0.0	0.0	10.2	6.8	0.2	7.3	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	23.2	23.9	0.0	0.0	53.4	37.1	10.9	33.0	0.0	25.5
LnGrp LOS	A	A	C	C	A	A	D	D	B	C	A	C
Approach Vol, veh/h		11			32			1064			1082	
Approach Delay, s/veh		23.2			23.9			45.0			29.4	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		6.2		22.0		6.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		17.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		18.9		2.3		17.3		3.4				
Green Ext Time (p_c), s		0.0		0.0		0.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		36.9
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	35	49	81	44	12	83	879	57	16	953	62
Future Volume (vph)	68	35	49	81	44	12	83	879	57	16	953	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.991			0.991	
Flt Protected		0.968			0.969		0.950			0.950		
Satd. Flow (prot)	0	1803	1372	0	1770	1346	1583	3138	0	1703	3375	0
Flt Permitted		0.720			0.738		0.950			0.950		
Satd. Flow (perm)	0	1341	1372	0	1348	1346	1583	3138	0	1703	3375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		13			13	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	74	38	53	88	48	13	90	955	62	17	1036	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	53	0	136	13	90	1017	0	17	1103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	10.0	28.4		9.0	27.4	
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	37.7%	16.7%	47.3%		15.0%	45.7%	
Maximum Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	6.0	24.4		5.0	23.4	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		10.0	10.0		10.1	10.1	6.0	34.4		5.0	28.3	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.12	0.68		0.10	0.56	
v/c Ratio		0.42	0.15		0.51	0.04	0.49	0.48		0.10	0.59	
Control Delay		23.1	3.0		25.3	0.2	33.5	7.9		24.4	12.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.1	3.0		25.3	0.2	33.5	7.9		24.4	12.9	
LOS		C	A		C	A	C	A		C	B	
Approach Delay		16.6			23.1			10.0			13.1	
Approach LOS		B			C			A			B	

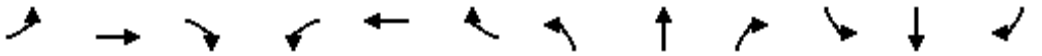
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 50.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)

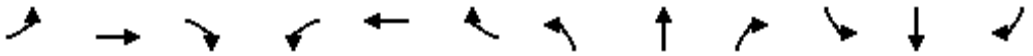
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	35	49	81	44	12	83	879	57	16	953	62
Future Volume (veh/h)	68	35	49	81	44	12	83	879	57	16	953	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	74	38	53	88	48	13	90	955	62	17	1036	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	101	32	562	100	34	553	155	1440	93	37	1306	84
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.46	0.46	0.02	0.39	0.39
Sat Flow, veh/h	0	103	1796	0	108	1767	1693	3099	201	1811	3317	215
Grp Volume(v), veh/h	112	0	53	136	0	13	90	495	522	17	537	566
Grp Sat Flow(s),veh/h/ln	103	0	1796	108	0	1767	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	0.0	0.0	1.2	0.0	0.0	0.3	3.0	14.2	14.2	0.6	16.4	16.4
Cycle Q Clear(g_c), s	18.6	0.0	1.2	18.6	0.0	0.3	3.0	14.2	14.2	0.6	16.4	16.4
Prop In Lane	0.66		1.00	0.65		1.00	1.00		0.12	1.00		0.12
Lane Grp Cap(c), veh/h	133	0	562	134	0	553	155	747	786	37	677	713
V/C Ratio(X)	0.84	0.00	0.09	1.02	0.00	0.02	0.58	0.66	0.66	0.46	0.79	0.79
Avail Cap(c_a), veh/h	133	0	562	134	0	553	171	747	786	152	677	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	14.5	25.2	0.0	14.1	25.9	12.3	12.3	28.8	15.9	15.9
Incr Delay (d2), s/veh	36.2	0.0	0.1	82.9	0.0	0.0	4.1	4.6	4.4	8.5	9.3	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.5	4.9	0.0	0.1	1.2	4.6	4.8	0.3	6.6	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	0.0	14.5	108.0	0.0	14.2	30.0	16.9	16.7	37.2	25.2	24.7
LnGrp LOS	E	A	B	F	A	B	C	B	B	D	C	C
Approach Vol, veh/h		165			149			1107			1120	
Approach Delay, s/veh		45.9			99.8			17.9			25.1	
Approach LOS		D			F			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	31.6		22.6	9.4	27.4		22.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.4		18.6	6.0	23.4		18.6				
Max Q Clear Time (g_c+I1), s	4.6	18.2		20.6	7.0	20.4		20.6				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	1.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.7	
HCM 6th LOS		C	

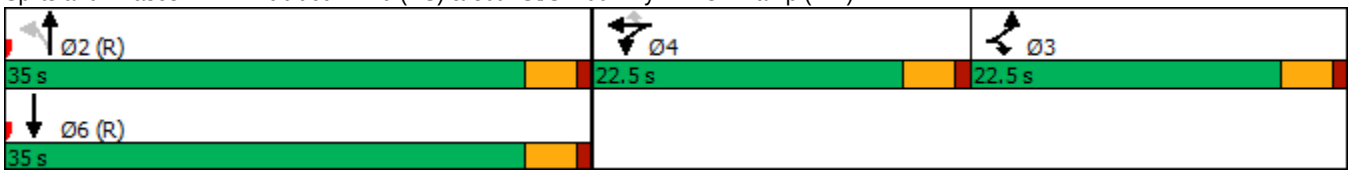


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	164	502	136	94	86	921	0	0	1106	26
Future Volume (vph)	34	0	164	502	136	94	86	921	0	0	1106	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	77		0	0		0
Storage Lanes	1		1	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850					0.997	
Flt Protected	0.950			0.950	0.972		0.950					
Satd. Flow (prot)	1736	0	1346	1681	1720	1372	1597	3195	0	0	3272	0
Flt Permitted	0.950			0.950	0.972		0.119					
Satd. Flow (perm)	1736	0	1346	1681	1720	1372	200	3195	0	0	3272	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			68					3	
Link Speed (mph)		30			30			40			50	
Link Distance (ft)		785			262			178			1593	
Travel Time (s)		17.8			6.0			3.0			21.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	13%	13%	13%	10%	10%	10%
Adj. Flow (vph)	36	0	174	534	145	100	91	980	0	0	1177	28
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	36	0	174	336	343	100	91	980	0	0	1205	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2			2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)	20		20	20	100	20	20	100			100	
Trailing Detector (ft)	0		0	0	0	0	0	0			0	
Detector 1 Position(ft)	0		0	0	0	0	0	0			0	
Detector 1 Size(ft)	20		20	20	6	20	20	6			6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		Prot	Split	NA	Perm	Perm	NA			NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3		3	4	4			2			6	
Permitted Phases						4	2					
Detector Phase	3		3	4	4	4	2	2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0	5.0			5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5	22.5	22.5			22.5	
Total Split (s)	22.5		22.5	22.5	22.5	22.5	35.0	35.0			35.0	
Total Split (%)	28.1%		28.1%	28.1%	28.1%	28.1%	43.8%	43.8%			43.8%	
Maximum Green (s)	18.5		18.5	18.5	18.5	18.5	31.0	31.0			31.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	4.0	4.0			4.0	
Lead/Lag	Lag		Lag	Lead	Lead	Lead						
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
Recall Mode	None		None	None	None	None	C-Max	C-Max			C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0		0	0	0	0	0	0			0	
Act Effct Green (s)	11.9		11.9	17.9	17.9	17.9	38.2	38.2			38.2	
Actuated g/C Ratio	0.15		0.15	0.22	0.22	0.22	0.48	0.48			0.48	
v/c Ratio	0.14		0.67	0.90	0.89	0.28	0.96	0.64			0.77	
Control Delay	28.1		31.8	58.2	57.4	12.9	111.4	20.0			23.5	
Queue Delay	0.0		0.0	1.1	1.0	0.0	0.0	3.6			0.9	
Total Delay	28.1		31.8	59.3	58.4	12.9	111.4	23.6			24.4	
LOS	C		C	E	E	B	F	C			C	
Approach Delay		31.2			53.0			31.1			24.4	
Approach LOS		C			D			C			C	

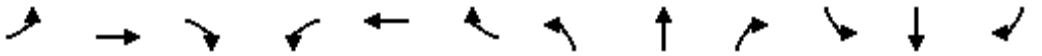
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 33.8		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)



HCM 6th Signalized Intersection Summary
14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)

10/08/2018



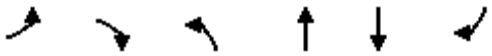
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	164	502	136	94	86	921	0	0	1106	26
Future Volume (veh/h)	34	0	164	502	136	94	86	921	0	0	1106	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	0	1767	1870	1870	1796	1707	1707	0	0	1752	1752
Adj Flow Rate, veh/h	36	0	174	340	417	100	91	980	0	0	1177	28
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	0	4	2	2	2	13	13	0	0	10	10
Cap, veh/h	0	0	0	433	433	415	297	2169	0	0	2231	53
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	1.00	1.00	0.00	0.00	0.67	0.67
Sat Flow, veh/h		0		1870	1870	1796	424	3329	0	0	3424	79
Grp Volume(v), veh/h		0.0		340	417	100	91	980	0	0	587	618
Grp Sat Flow(s),veh/h/ln				1870	1870	1796	424	1622	0	0	1664	1752
Q Serve(g_s), s				13.7	17.6	3.6	6.8	0.0	0.0	0.0	14.4	14.4
Cycle Q Clear(g_c), s				13.7	17.6	3.6	21.3	0.0	0.0	0.0	14.4	14.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h				433	433	415	297	2169	0	0	1113	1172
V/C Ratio(X)				0.79	0.96	0.24	0.31	0.45	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h				433	433	415	297	2169	0	0	1113	1172
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.95	0.95	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				28.9	30.4	25.0	2.9	0.0	0.0	0.0	6.8	6.8
Incr Delay (d2), s/veh				9.3	34.0	0.3	2.5	0.6	0.0	0.0	1.4	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.0	11.7	1.5	0.3	0.2	0.0	0.0	3.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.2	64.4	25.3	5.4	0.6	0.0	0.0	8.2	8.1
LnGrp LOS				D	E	C	A	A	A	A	A	A
Approach Vol, veh/h					857			1071			1205	
Approach Delay, s/veh					49.4			1.1			8.2	
Approach LOS					D			A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	57.5	22.5	57.5
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	18.5	31.0
Max Q Clear Time (g_c+I1), s	23.3	19.6	16.4
Green Ext Time (p_c), s	4.4	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

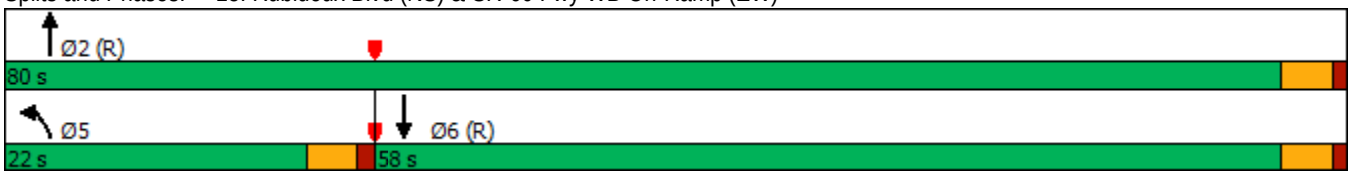


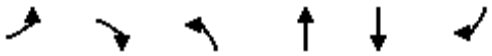
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	252	1025	1140	614
Future Volume (vph)	0	0	252	1025	1140	614
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	105			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.948	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1612	3223	3229	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1612	3223	3229	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					234	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1099			374	178	
Travel Time (s)	25.0			6.4	3.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	12%	12%	6%	6%
Adj. Flow (vph)	0	0	265	1079	1200	646
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	265	1079	1846	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors			1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)			20	100	100	
Trailing Detector (ft)			0	0	0	
Detector 1 Position(ft)			0	0	0	
Detector 1 Size(ft)			20	6	6	
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)			0.0	0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases						
Detector Phase			5	2	6	
Switch Phase						
Minimum Initial (s)			5.0	5.0	5.0	
Minimum Split (s)			9.0	22.0	22.0	
Total Split (s)			22.0	80.0	58.0	
Total Split (%)			27.5%	100.0%	72.5%	
Maximum Green (s)			18.0	76.0	54.0	
Yellow Time (s)			3.0	3.0	3.0	
All-Red Time (s)			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)			3.0	3.0	3.0	
Recall Mode			None	C-Max	C-Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)			16.4	80.0	55.6	
Actuated g/C Ratio			0.20	1.00	0.70	
v/c Ratio			0.80	0.33	0.80	
Control Delay			47.5	0.3	5.5	
Queue Delay			0.0	0.2	2.6	
Total Delay			47.5	0.5	8.2	
LOS			D	A	A	
Approach Delay				9.7	8.2	
Approach LOS				A	A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

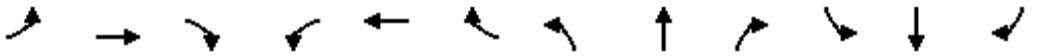




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	252	1025	1140	614
Future Volume (veh/h)	0	0	252	1025	1140	614
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Work Zone On Approach				No	No	
Adj Sat Flow, veh/h/ln			1722	1722	1811	1811
Adj Flow Rate, veh/h			265	1079	1200	646
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			12	12	6	6
Cap, veh/h			299	3108	1668	898
Arrive On Green			0.35	1.00	1.00	1.00
Sat Flow, veh/h			1722	3358	2386	1236
Grp Volume(v), veh/h			265	1079	899	947
Grp Sat Flow(s),veh/h/ln			1722	1636	1721	1811
Q Serve(g_s), s			11.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s			11.6	0.0	0.0	0.0
Prop In Lane			1.00			0.68
Lane Grp Cap(c), veh/h			299	3108	1250	1316
V/C Ratio(X)			0.89	0.35	0.72	0.72
Avail Cap(c_a), veh/h			387	3108	1250	1316
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.86	0.86	0.52	0.52
Uniform Delay (d), s/veh			25.4	0.0	0.0	0.0
Incr Delay (d2), s/veh			15.7	0.3	1.9	1.8
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			4.9	0.1	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			41.1	0.3	1.9	1.8
LnGrp LOS			D	A	A	A
Approach Vol, veh/h				1344	1846	
Approach Delay, s/veh				8.3	1.8	
Approach LOS				A	A	

Timer - Assigned Phs	2			5	6
Phs Duration (G+Y+Rc), s	80.0			17.9	62.1
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	76.0			18.0	54.0
Max Q Clear Time (g_c+I1), s	2.0			13.6	2.0
Green Ext Time (p_c), s	9.8			0.3	22.8

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

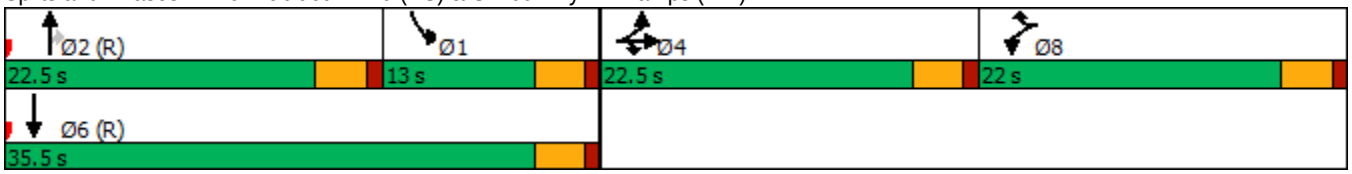


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	478	36	383	15	0	4	0	587	300	85	825	0
Future Volume (vph)	478	36	383	15	0	4	0	587	300	85	825	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			298			123			319			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	509	38	407	16	0	4	0	624	319	90	878	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	275	272	407	16	0	4	0	624	319	90	878	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	13.0	35.5	
Total Split (%)	28.1%	28.1%	28.1%	27.5%		27.5%		28.1%	28.1%	16.3%	44.4%	
Maximum Green (s)	18.5	18.5	18.5	18.0		18.0		18.5	18.5	9.0	31.5	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	17.6	17.6	17.6	6.3		6.3		39.5	39.5	8.4	49.9	
Actuated g/C Ratio	0.22	0.22	0.22	0.08		0.08		0.49	0.49	0.10	0.62	
v/c Ratio	0.83	0.81	0.81	0.11		0.02		0.36	0.34	0.49	0.40	
Control Delay	52.2	50.0	22.9	35.5		0.2		15.6	3.4	37.0	10.0	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.4	
Total Delay	52.2	50.0	22.9	35.5		0.2		15.6	3.4	37.0	10.4	
LOS	D	D	C	D		A		B	A	D	B	
Approach Delay		39.0			28.5			11.5			12.9	
Approach LOS		D			C			B			B	

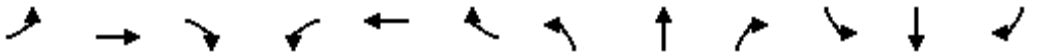
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 59.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	478	36	383	15	0	4	0	587	300	85	825	0
Future Volume (veh/h)	478	36	383	15	0	4	0	587	300	85	825	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	536	0	407	16	0	4	0	624	319	90	878	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	783	0	376	0	0	0	0	822	433	725	2377	0
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.23	0.13	0.22	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	536	0	407		0.0		0	624	319	90	878	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	11.6	0.0	18.5				0.0	13.1	12.6	3.4	16.8	0.0
Cycle Q Clear(g_c), s	11.6	0.0	18.5				0.0	13.1	12.6	3.4	16.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	783	0	376				0	822	433	725	2377	0
V/C Ratio(X)	0.68	0.00	1.08				0.00	0.76	0.74	0.12	0.37	0.00
Avail Cap(c_a), veh/h	783	0	376				0	822	433	725	2377	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.50	0.50	0.00
Uniform Delay (d), s/veh	28.1	0.0	30.7				0.0	28.7	28.5	22.9	16.9	0.0
Incr Delay (d2), s/veh	2.5	0.0	70.5				0.0	6.1	10.1	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	14.3				0.0	5.9	6.5	1.4	7.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	0.0	101.3				0.0	34.8	38.6	22.9	17.1	0.0
LnGrp LOS	C	A	F				A	C	D	C	B	A
Approach Vol, veh/h		943						943			968	
Approach Delay, s/veh		61.1						36.1			17.6	
Approach LOS		E						D			B	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	35.0	22.5		22.5		57.5						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	9.0	18.5		18.5		31.5						
Max Q Clear Time (g_c+I1), s	7.4	17.1		22.5		20.8						
Green Ext Time (p_c), s	0.0	0.7		0.0		4.2						

Intersection Summary			
HCM 6th Ctrl Delay		38.1	
HCM 6th LOS		D	

Notes

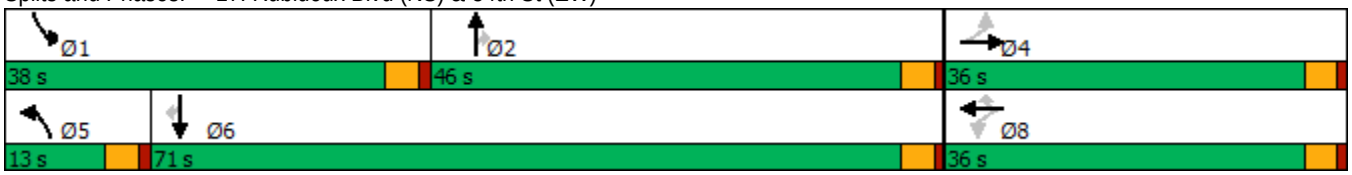
User approved volume balancing among the lanes for turning movement.

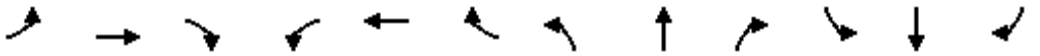
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	58	13	15	38	119	32	627	67	227	1023	159
Future Volume (vph)	105	58	13	15	38	119	32	627	67	227	1023	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.990				0.850			0.850			0.850
Flt Protected		0.971			0.986		0.950			0.950		
Satd. Flow (prot)	0	1773	0	0	1873	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.785			0.913		0.950			0.950		
Satd. Flow (perm)	0	1434	0	0	1735	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				124			82			68
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	109	60	14	16	40	124	33	653	70	236	1066	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	56	124	33	653	70	236	1066	166
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0		36.0	36.0	36.0	13.0	46.0	46.0	38.0	71.0	71.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	10.8%	38.3%	38.3%	31.7%	59.2%	59.2%
Maximum Green (s)	32.0	32.0		32.0	32.0	32.0	9.0	42.0	42.0	34.0	67.0	67.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		17.8			17.8	17.8	7.3	51.9	51.9	18.7	67.9	67.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.52	0.52	0.19	0.67	0.67
v/c Ratio		0.72			0.18	0.36	0.26	0.36	0.10	0.72	0.45	0.18
Control Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
LOS		E			D	A	D	B	A	D	B	A
Approach Delay		55.1			18.2			17.5			16.5	
Approach LOS		E			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 100.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	58	13	15	38	119	32	627	67	227	1023	159
Future Volume (veh/h)	105	58	13	15	38	119	32	627	67	227	1023	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	109	60	14	16	40	124	33	653	70	236	1066	166
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	178	83	17	104	234	306	64	1902	961	310	2384	1205
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.54	0.54	0.17	0.68	0.68
Sat Flow, veh/h	713	495	100	343	1393	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	183	0	0	56	0	124	33	653	70	236	1066	166
Grp Sat Flow(s),veh/h/ln	1308	0	0	1736	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	11.2	0.0	0.0	0.0	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Cycle Q Clear(g_c), s	13.7	0.0	0.0	2.5	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Prop In Lane	0.60		0.08	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	0	0	338	0	306	64	1902	961	310	2384	1205
V/C Ratio(X)	0.66	0.00	0.00	0.17	0.00	0.40	0.52	0.34	0.07	0.76	0.45	0.14
Avail Cap(c_a), veh/h	496	0	0	602	0	589	167	1902	961	637	2384	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	0.0	35.3	0.0	36.8	47.0	12.7	10.7	39.4	7.4	5.7
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.0	0.9	6.3	0.5	0.1	3.9	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	1.2	0.0	2.8	0.9	3.8	0.7	5.6	4.5	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	0.0	35.6	0.0	37.7	53.3	13.2	10.9	43.2	8.0	6.0
LnGrp LOS	D	A	A	D	A	D	D	B	B	D	A	A
Approach Vol, veh/h		183			180			756			1468	
Approach Delay, s/veh		43.1			37.0			14.7			13.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	57.9		20.6	7.4	71.0		20.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	34.0	42.0		32.0	9.0	67.0		32.0				
Max Q Clear Time (g_c+I1), s	16.0	14.4		15.7	5.7	17.9		10.0				
Green Ext Time (p_c), s	0.6	4.7		1.0	0.0	9.9		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	580	1	4	801	0	34
Future Volume (vph)	580	1	4	801	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	611	1	4	843	0	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	611	1	4	843	0	36
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	580	1	4	801	0	34
Future Vol, veh/h	580	1	4	801	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	611	1	4	843	0	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	612	0	-	306
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	850	-	0	696
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	850	-	-	696
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	696	-	-	850	-
HCM Lane V/C Ratio	0.051	-	-	0.005	-
HCM Control Delay (s)	10.5	-	-	9.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

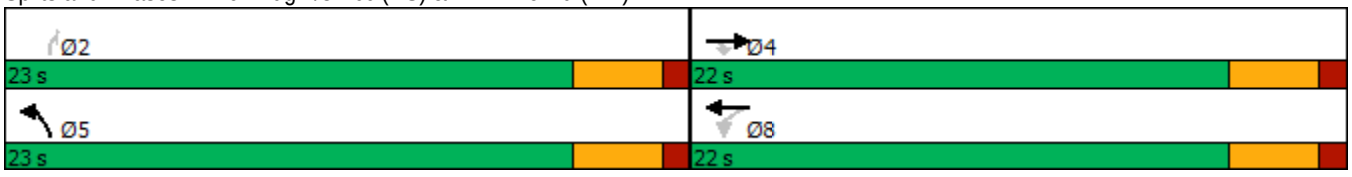


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	548	65	7	665	140	27
Future Volume (vph)	548	65	7	665	140	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.435		0.950	
Satd. Flow (perm)	2983	1335	689	3008	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68				28
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	577	68	7	700	147	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	577	68	7	700	147	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	12.4	12.4	12.4	12.4	7.9	7.6
Actuated g/C Ratio	0.44	0.44	0.44	0.44	0.28	0.27
v/c Ratio	0.44	0.11	0.02	0.53	0.29	0.06
Control Delay	6.8	2.3	5.0	7.6	10.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	2.3	5.0	7.6	10.8	5.0
LOS	A	A	A	A	B	A
Approach Delay	6.4			7.6	9.9	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 28.3			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 32.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

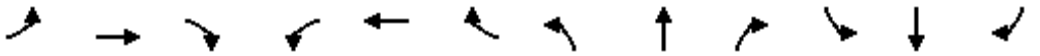




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	548	65	7	665	140	27
Future Volume (veh/h)	548	65	7	665	140	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1589	1589	1604	1604	1900	1900
Adj Flow Rate, veh/h	577	68	7	700	147	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	21	20	20	0	0
Cap, veh/h	1346	708	571	1358	295	295
Arrive On Green	0.45	0.45	0.45	0.45	0.16	0.16
Sat Flow, veh/h	3098	1589	673	3127	1900	1900
Grp Volume(v), veh/h	577	68	7	700	147	28
Grp Sat Flow(s),veh/h/ln	1509	1589	673	1523	1900	1900
Q Serve(g_s), s	2.6	0.5	0.1	3.3	1.4	0.3
Cycle Q Clear(g_c), s	2.6	0.5	2.8	3.3	1.4	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1346	708	571	1358	295	295
V/C Ratio(X)	0.43	0.10	0.01	0.52	0.50	0.09
Avail Cap(c_a), veh/h	2710	1426	875	2735	1800	1800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.8	3.2	4.8	4.0	7.8	7.3
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.0	3.3	4.8	4.3	9.1	7.4
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	645			707	175	
Approach Delay, s/veh	3.9			4.3	8.8	
Approach LOS	A			A	A	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	7.1	12.9	12.9
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	19.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	3.4	4.6	5.3
Green Ext Time (p_c), s	0.4	3.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	4.7
HCM 6th LOS	A

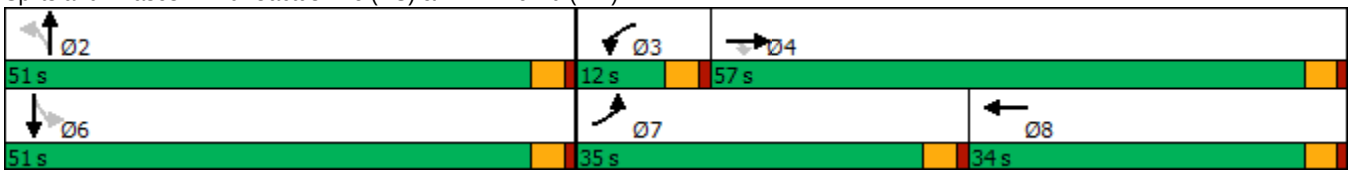


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	383	43	24	248	122	114	6	68	178	3	303
Future Volume (vph)	150	383	43	24	248	122	114	6	68	178	3	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.951			0.862			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2985	0	1805	1638	0	1556	1394	0
Flt Permitted	0.950			0.950			0.491			0.706		
Satd. Flow (perm)	1399	2798	1252	1570	2985	0	933	1638	0	1156	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			46		68			72			322	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	160	407	46	26	264	130	121	6	72	189	3	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	407	46	26	394	0	121	78	0	189	325	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	35.0	57.0	57.0	12.0	34.0		51.0	51.0		51.0	51.0	
Total Split (%)	29.2%	47.5%	47.5%	10.0%	28.3%		42.5%	42.5%		42.5%	42.5%	
Maximum Green (s)	31.0	53.0	53.0	8.0	30.0		47.0	47.0		47.0	47.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	15.8	31.1	31.1	6.8	15.7		47.5	47.5		47.5	47.5	
Actuated g/C Ratio	0.17	0.34	0.34	0.07	0.17		0.52	0.52		0.52	0.52	
v/c Ratio	0.66	0.43	0.10	0.22	0.69		0.25	0.09		0.31	0.37	
Control Delay	49.4	25.2	7.5	47.5	36.3		16.4	4.8		16.7	3.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	49.4	25.2	7.5	47.5	36.3		16.4	4.8		16.7	3.3	
LOS	D	C	A	D	D		B	A		B	A	
Approach Delay		30.2			37.0			11.8			8.2	
Approach LOS		C			D			B			A	

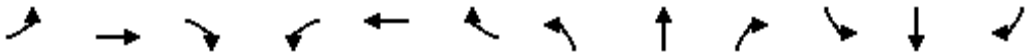
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 91			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 23.3		Intersection LOS: C	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	383	43	24	248	122	114	6	68	178	3	303
Future Volume (veh/h)	150	383	43	24	248	122	114	6	68	178	3	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	160	407	46	26	264	130	121	6	72	189	3	322
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	193	751	395	45	360	177	573	82	984	723	9	924
Arrive On Green	0.13	0.27	0.27	0.03	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1470	2793	1470	1678	2192	1079	1072	146	1754	1174	15	1648
Grp Volume(v), veh/h	160	407	46	26	192	202	121	0	78	189	0	325
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1072	0	1900	1174	0	1663
Q Serve(g_s), s	8.9	10.4	2.0	1.3	9.6	9.6	5.8	0.0	1.6	7.4	0.0	8.9
Cycle Q Clear(g_c), s	8.9	10.4	2.0	1.3	9.6	9.6	14.8	0.0	1.6	8.9	0.0	8.9
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.92	1.00		0.99
Lane Grp Cap(c), veh/h	193	751	395	45	262	276	573	0	1066	723	0	933
V/C Ratio(X)	0.83	0.54	0.12	0.57	0.73	0.73	0.21	0.00	0.07	0.26	0.00	0.35
Avail Cap(c_a), veh/h	544	1767	930	160	571	601	573	0	1066	723	0	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.5	26.2	23.1	40.3	33.3	33.3	14.1	0.0	8.4	10.5	0.0	10.0
Incr Delay (d2), s/veh	8.7	0.6	0.1	10.8	3.9	3.8	0.8	0.0	0.1	0.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.4	0.7	0.7	3.9	4.1	1.5	0.0	0.6	1.9	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	26.8	23.3	51.1	37.2	37.0	14.9	0.0	8.6	11.3	0.0	11.1
LnGrp LOS	D	C	C	D	D	D	B	A	A	B	A	B
Approach Vol, veh/h		613			420			199			514	
Approach Delay, s/veh		31.1			38.0			12.4			11.2	
Approach LOS		C			D			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		51.0	6.3	26.5		51.0	15.0	17.8				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		47.0	8.0	53.0		47.0	31.0	30.0				
Max Q Clear Time (g_c+I1), s		16.8	3.3	12.4		10.9	10.9	11.6				
Green Ext Time (p_c), s		0.9	0.0	3.2		3.0	0.4	2.2				

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	619	10	2	393	0	0
Future Volume (vph)	619	10	2	393	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1900
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1900
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	652	11	2	414	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	652	11	2	414	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.4%		ICU Level of Service A	
Analysis Period (min) 15			

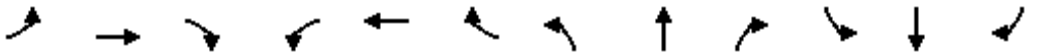
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	619	10	2	393	0	0
Future Vol, veh/h	619	10	2	393	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	652	11	2	414	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	663	0	-	326
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	839	-	0	676
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	839	-	-	676
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	839	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	9.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

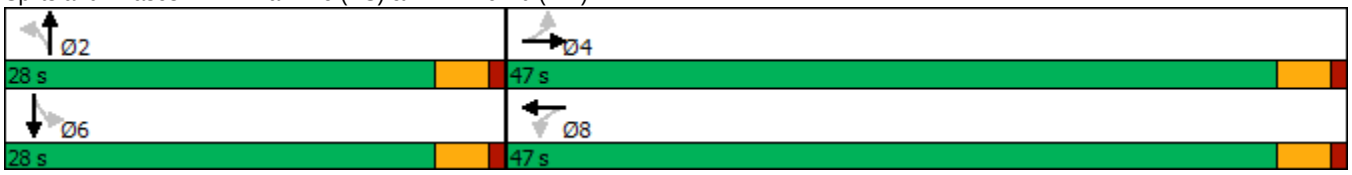


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	354	167	4	198	9	170	1	12	3	4	5
Future Volume (vph)	8	354	167	4	198	9	170	1	12	3	4	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.993			0.861			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1459	0	1583	1655	0	1517	1375	0	1805	1729	0
Flt Permitted	0.598			0.258			0.751			0.748		
Satd. Flow (perm)	916	1459	0	430	1655	0	1199	1375	0	1421	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			5			13			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	393	186	4	220	10	189	1	13	3	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	579	0	4	230	0	189	14	0	3	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	47.0	47.0		47.0	47.0		28.0	28.0		28.0	28.0	
Total Split (%)	62.7%	62.7%		62.7%	62.7%		37.3%	37.3%		37.3%	37.3%	
Maximum Green (s)	43.0	43.0		43.0	43.0		24.0	24.0		24.0	24.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	27.1	27.1		27.1	27.1		24.6	24.6		24.6	24.6	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.41	0.41		0.41	0.41	
v/c Ratio	0.02	0.84		0.02	0.31		0.38	0.02		0.01	0.01	
Control Delay	7.8	24.5		7.8	10.4		18.7	9.2		15.3	11.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.8	24.5		7.8	10.4		18.7	9.2		15.3	11.7	
LOS	A	C		A	B		B	A		B	B	
Approach Delay		24.3			10.4			18.1			12.5	
Approach LOS		C			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 59.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 19.8		Intersection LOS: B	
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



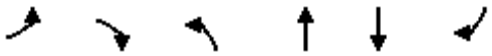
HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)

10/08/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	354	167	4	198	9	170	1	12	3	4	5
Future Volume (veh/h)	8	354	167	4	198	9	170	1	12	3	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	393	186	4	220	10	189	1	13	3	4	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	457	457	216	201	706	32	637	49	635	721	321	482
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	950	1048	496	755	1619	74	1216	116	1503	1422	760	1140
Grp Volume(v), veh/h	9	0	579	4	0	230	189	0	14	3	0	10
Grp Sat Flow(s),veh/h/ln	950	0	1544	755	0	1693	1216	0	1618	1422	0	1900
Q Serve(g_s), s	0.4	0.0	19.2	0.3	0.0	5.0	6.1	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	5.4	0.0	19.2	19.5	0.0	5.0	6.2	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.32	1.00		0.04	1.00		0.93	1.00		0.60
Lane Grp Cap(c), veh/h	457	0	674	201	0	739	637	0	684	721	0	803
V/C Ratio(X)	0.02	0.00	0.86	0.02	0.00	0.31	0.30	0.00	0.02	0.00	0.00	0.01
Avail Cap(c_a), veh/h	762	0	1170	444	0	1282	637	0	684	721	0	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	14.4	23.2	0.0	10.4	11.3	0.0	9.5	9.6	0.0	9.5
Incr Delay (d2), s/veh	0.0	0.0	3.3	0.0	0.0	0.2	1.2	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.6	0.0	0.0	1.5	1.6	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	17.8	23.2	0.0	10.7	12.5	0.0	9.6	9.7	0.0	9.5
LnGrp LOS	B	A	B	C	A	B	B	A	A	A	A	A
Approach Vol, veh/h		588			234			203			13	
Approach Delay, s/veh		17.7			10.9			12.3			9.6	
Approach LOS		B			B			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		28.8		28.0		28.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		43.0		24.0		43.0				
Max Q Clear Time (g_c+I1), s		8.2		21.2		2.4		21.5				
Green Ext Time (p_c), s		0.6		3.6		0.0		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	27	9	163	169	6
Future Volume (vph)	20	27	9	163	169	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	21	28	9	172	178	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	28	9	172	178	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.9%		ICU Level of Service A	
Analysis Period (min) 15			

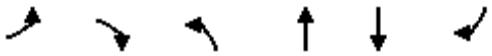
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	27	9	163	169	6
Future Vol, veh/h	20	27	9	163	169	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	21	28	9	172	178	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	368	178	184	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	636	870	1295	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	632	870	1295	-	-	-
Mov Cap-2 Maneuver	632	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	847	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1295	-	632	870	-	-
HCM Lane V/C Ratio	0.007	-	0.033	0.033	-	-
HCM Control Delay (s)	7.8	-	10.9	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

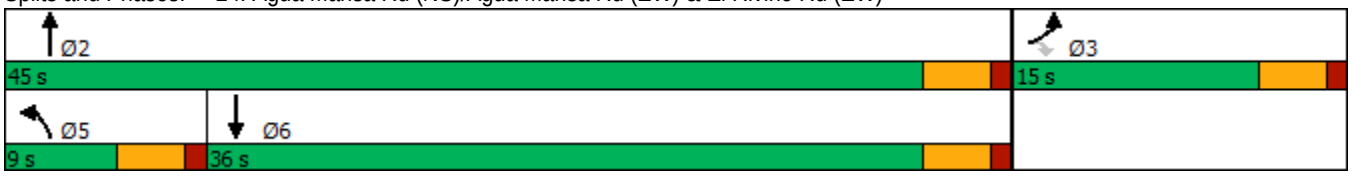


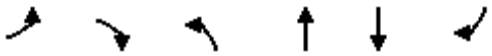
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	180	44	44	802	453	104
Future Volume (vph)	180	44	44	802	453	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.975	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1494	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1494	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45			29	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	186	45	45	827	467	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	186	45	45	827	574	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	15.0	15.0	9.0	45.0	36.0	
Total Split (%)	25.0%	25.0%	15.0%	75.0%	60.0%	
Maximum Green (s)	11.0	11.0	5.0	41.0	32.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	10.2	10.2	5.0	44.6	39.0	
Actuated g/C Ratio	0.16	0.16	0.08	0.71	0.62	
v/c Ratio	0.66	0.16	0.37	0.73	0.61	
Control Delay	35.6	9.0	35.3	11.0	12.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.6	9.0	35.3	11.0	12.2	
LOS	D	A	D	B	B	
Approach Delay	30.4			12.3	12.2	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 62.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	180	44	44	802	453	104
Future Volume (veh/h)	180	44	44	802	453	104
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	186	45	45	827	467	107
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	244	244	73	1174	767	176
Arrive On Green	0.13	0.13	0.04	0.73	0.61	0.61
Sat Flow, veh/h	1841	1841	1618	1618	1256	288
Grp Volume(v), veh/h	186	45	45	827	0	574
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	5.5	1.2	1.5	16.2	0.0	13.0
Cycle Q Clear(g_c), s	5.5	1.2	1.5	16.2	0.0	13.0
Prop In Lane	1.00	1.00	1.00			0.19
Lane Grp Cap(c), veh/h	244	244	73	1174	0	942
V/C Ratio(X)	0.76	0.18	0.62	0.70	0.00	0.61
Avail Cap(c_a), veh/h	358	358	143	1174	0	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	21.8	26.5	4.3	0.0	6.8
Incr Delay (d2), s/veh	5.5	0.4	8.4	3.6	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.5	0.7	2.4	0.0	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.1	22.1	34.9	7.9	0.0	9.8
LnGrp LOS	C	C	C	A	A	A
Approach Vol, veh/h	231			872	574	
Approach Delay, s/veh	27.8			9.3	9.8	
Approach LOS	C			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		45.0			6.5	38.5	11.5
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		41.0			5.0	32.0	11.0
Max Q Clear Time (g_c+I1), s		18.2			3.5	15.0	7.5
Green Ext Time (p_c), s		5.9			0.0	3.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	133	740	12	29	408
Future Volume (vph)	49	133	740	12	29	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3028	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3028	0	1421	1496
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	51	139	771	13	30	425
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	139	784	0	30	425
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			

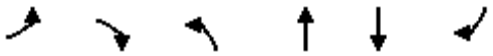
Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	133	740	12	29	408
Future Vol, veh/h	49	133	740	12	29	408
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	16	16	19	19	27	27
Mvmt Flow	51	139	771	13	30	425

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1263	392	0	0	784	0
Stage 1	778	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.84	7.14	-	-	4.505	-
Critical Hdwy Stg 1	6.04	-	-	-	-	-
Critical Hdwy Stg 2	5.64	-	-	-	-	-
Follow-up Hdwy	3.652	3.452	-	-	2.4565	-
Pot Cap-1 Maneuver	159	575	-	-	709	-
Stage 1	386	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	575	-	-	709	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	370	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.5	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	152	575	709	-
HCM Lane V/C Ratio	-	-	0.336	0.241	0.043	-
HCM Control Delay (s)	-	-	40.2	13.2	10.3	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	1.4	0.9	0.1	-



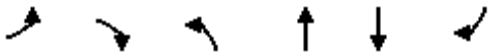
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	94	158	110	490	406	36
Future Volume (vph)	94	158	110	490	406	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		195				44
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	116	195	136	605	501	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	116	195	136	605	501	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	9.1	9.1	7.2	26.3	18.1	18.1
Actuated g/C Ratio	0.23	0.23	0.18	0.66	0.46	0.46
v/c Ratio	0.38	0.46	0.49	0.30	0.40	0.09
Control Delay	18.5	7.1	27.6	5.0	12.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	7.1	27.6	5.0	12.5	4.9
LOS	B	A	C	A	B	A
Approach Delay	11.4			9.2	11.8	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 39.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 10.5		Intersection LOS: B	
Intersection Capacity Utilization 32.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

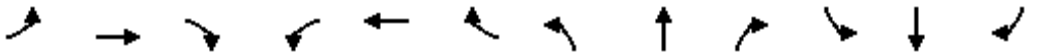




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	94	158	110	490	406	36
Future Volume (veh/h)	94	158	110	490	406	36
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	116	195	136	605	501	44
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	280	280	180	1653	823	416
Arrive On Green	0.21	0.21	0.11	0.54	0.30	0.30
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	116	195	136	605	501	44
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.3	4.1	2.5	3.5	4.8	0.7
Cycle Q Clear(g_c), s	2.3	4.1	2.5	3.5	4.8	0.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	280	280	180	1653	823	416
V/C Ratio(X)	0.41	0.70	0.76	0.37	0.61	0.11
Avail Cap(c_a), veh/h	791	791	364	2869	1601	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.7	11.5	13.4	4.1	9.4	7.9
Incr Delay (d2), s/veh	1.0	3.1	6.3	0.1	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.3	0.9	0.2	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	14.6	19.7	4.3	10.1	8.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	311			741	545	
Approach Delay, s/veh	13.5			7.1	9.9	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		20.7		10.4	7.5	13.3
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		5.5		6.1	4.5	6.8
Green Ext Time (p_c), s		3.9		0.7	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

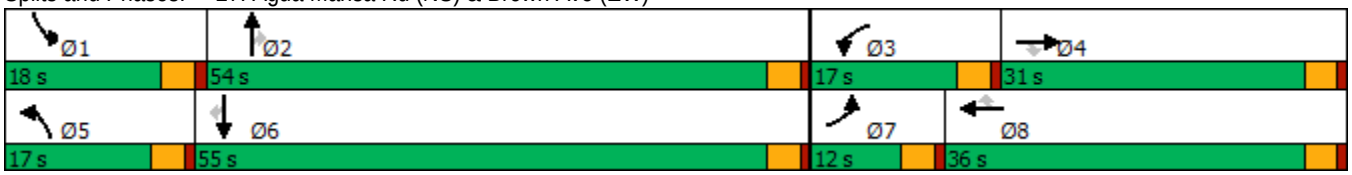


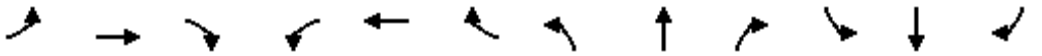
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3	72	50	4	195	39	391	117	52	497	13
Future Volume (vph)	22	3	72	50	4	195	39	391	117	52	497	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			244			118			118
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	28	4	90	63	5	244	49	489	146	65	621	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	4	90	63	5	244	49	489	146	65	621	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	31.0	31.0	17.0	36.0	36.0	17.0	54.0	54.0	18.0	55.0	55.0
Total Split (%)	10.0%	25.8%	25.8%	14.2%	30.0%	30.0%	14.2%	45.0%	45.0%	15.0%	45.8%	45.8%
Maximum Green (s)	8.0	27.0	27.0	13.0	32.0	32.0	13.0	50.0	50.0	14.0	51.0	51.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	7.0	7.2	7.2	9.1	13.6	13.6	8.5	52.1	52.1	9.6	55.4	55.4
Actuated g/C Ratio	0.08	0.08	0.08	0.10	0.15	0.15	0.10	0.58	0.58	0.11	0.62	0.62
v/c Ratio	0.26	0.03	0.47	0.41	0.02	0.64	0.36	0.29	0.21	0.44	0.36	0.02
Control Delay	49.4	41.7	12.5	48.9	36.5	13.7	48.4	12.8	4.9	49.9	12.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	41.7	12.5	48.9	36.5	13.7	48.4	12.8	4.9	49.9	12.1	0.1
LOS	D	D	B	D	D	B	D	B	A	D	B	A
Approach Delay		21.9			21.1			13.6			15.3	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 89.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	72	50	4	195	39	391	117	52	497	13
Future Volume (veh/h)	22	3	72	50	4	195	39	391	117	52	497	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	28	4	90	62	5	244	49	489	146	65	621	16
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	46	236	226	104	320	307	81	1521	768	102	1493	754
Arrive On Green	0.03	0.17	0.17	0.06	0.20	0.20	0.05	0.53	0.53	0.07	0.55	0.55
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	28	4	90	62	5	244	49	489	146	65	621	16
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.9	0.2	5.6	3.6	0.2	14.3	3.0	9.1	5.0	4.2	12.6	0.5
Cycle Q Clear(g_c), s	1.9	0.2	5.6	3.6	0.2	14.3	3.0	9.1	5.0	4.2	12.6	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	236	226	104	320	307	81	1521	768	102	1493	754
V/C Ratio(X)	0.62	0.02	0.40	0.60	0.02	0.80	0.60	0.32	0.19	0.64	0.42	0.02
Avail Cap(c_a), veh/h	119	403	386	220	542	521	208	1521	768	213	1493	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	32.9	35.2	43.1	30.4	36.0	43.8	12.7	11.7	42.8	12.6	9.9
Incr Delay (d2), s/veh	12.7	0.0	1.1	5.4	0.0	4.7	7.0	0.6	0.5	6.4	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	1.9	1.6	0.1	5.7	1.2	2.7	1.7	1.6	3.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	33.0	36.3	48.5	30.4	40.7	50.7	13.2	12.2	49.2	13.5	9.9
LnGrp LOS	E	C	D	D	C	D	D	B	B	D	B	A
Approach Vol, veh/h		122			311			684			702	
Approach Delay, s/veh		41.2			42.1			15.7			16.7	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	54.0	10.1	19.8	9.1	55.6	7.1	22.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	50.0	13.0	27.0	13.0	51.0	8.0	32.0
Max Q Clear Time (g_c+I1), s	8.2	13.1	7.6	9.6	7.0	16.6	5.9	18.3
Green Ext Time (p_c), s	0.0	3.7	0.0	0.2	0.0	4.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	23	647	39	76	559
Future Volume (vph)	37	23	647	39	76	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.387	
Satd. Flow (perm)	1107	991	2983	1335	584	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		25		42		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	40	25	696	42	82	601
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	25	696	42	82	601
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	9.0	25.0	73.0	73.0	95.0	95.0
Total Split (%)	7.5%	20.8%	60.8%	60.8%	79.2%	79.2%
Maximum Green (s)	5.0	21.0	69.0	69.0	91.0	91.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	6.5	6.7	104.8	104.8	104.8	104.8
Actuated g/C Ratio	0.06	0.06	0.90	0.90	0.90	0.90
v/c Ratio	0.65	0.31	0.26	0.03	0.16	0.44
Control Delay	96.9	28.7	1.4	0.4	1.9	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.9	28.7	1.4	0.4	1.9	2.6
LOS	F	C	A	A	A	A
Approach Delay	70.7		1.3			2.5
Approach LOS	E		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 40.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

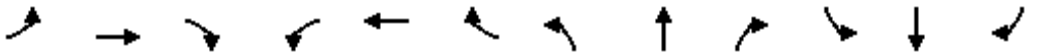




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	23	647	39	76	559
Future Volume (veh/h)	37	23	647	39	76	559
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	40	25	696	42	82	601
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	46	46	2641	1390	558	1325
Arrive On Green	0.05	0.05	0.88	0.88	0.88	0.88
Sat Flow, veh/h	966	966	3098	1589	583	1515
Grp Volume(v), veh/h	40	25	696	42	82	601
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	583	1515
Q Serve(g_s), s	4.3	2.6	3.9	0.4	2.8	8.6
Cycle Q Clear(g_c), s	4.3	2.6	3.9	0.4	6.7	8.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	2641	1390	558	1325
V/C Ratio(X)	0.86	0.54	0.26	0.03	0.15	0.45
Avail Cap(c_a), veh/h	46	46	2641	1390	558	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	48.4	1.1	0.8	1.6	1.3
Incr Delay (d2), s/veh	81.5	11.8	0.2	0.0	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.8	0.1	0.1	0.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	130.6	60.2	1.3	0.9	2.2	2.5
LnGrp LOS	F	E	A	A	A	A
Approach Vol, veh/h	65		738			683
Approach Delay, s/veh	103.5		1.3			2.4
Approach LOS	F		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	95.0			95.0	9.0
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	69.0			91.0	5.0
Max Q Clear Time (g_c+I1), s	5.9			10.6	6.3
Green Ext Time (p_c), s	5.2			5.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

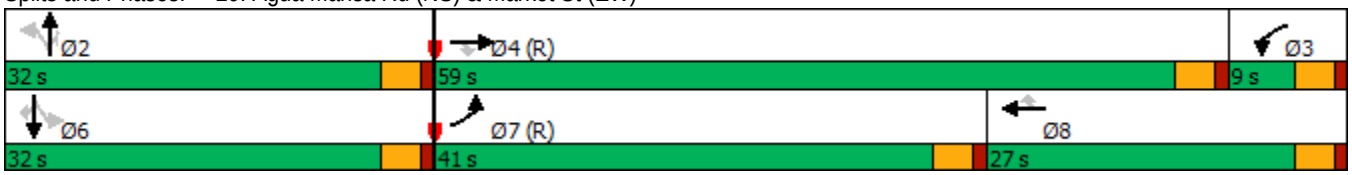


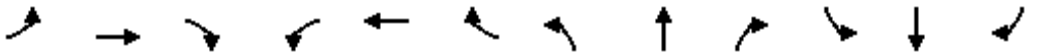
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	473	728	3	2	625	207	2	1	1	293	2	380
Future Volume (vph)	473	728	3	2	625	207	2	1	1	293	2	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.968		0.950		
Satd. Flow (prot)	1641	3282	1468	1656	3312	1482	0	1471	1292	1626	1712	1455
Flt Permitted	0.950			0.950				0.945		0.756		
Satd. Flow (perm)	1641	3282	1468	1656	3312	1482	0	1436	1292	1294	1712	1455
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55			100			98			404
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	503	774	3	2	665	220	2	1	1	312	2	404
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	774	3	2	665	220	0	3	1	312	2	404
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	41.0	59.0	59.0	9.0	27.0	27.0	32.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	41.0%	59.0%	59.0%	9.0%	27.0%	27.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%
Maximum Green (s)	37.0	55.0	55.0	5.0	23.0	23.0	28.0	28.0	28.0	28.0	28.0	28.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	37.0	61.8	61.8	5.0	22.6	22.6		28.4	28.4	28.4	28.4	28.4
Actuated g/C Ratio	0.37	0.62	0.62	0.05	0.23	0.23		0.28	0.28	0.28	0.28	0.28
v/c Ratio	0.83	0.38	0.00	0.02	0.89	0.54		0.01	0.00	0.85	0.00	0.58
Control Delay	47.9	19.1	0.0	46.0	53.0	23.4		26.3	0.0	56.6	26.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	19.1	0.0	46.0	53.0	23.4		26.3	0.0	56.6	26.0	6.6
LOS	D	B	A	D	D	C		C	A	E	C	A
Approach Delay		30.4			45.7			19.8			28.4	
Approach LOS		C			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 34.5		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

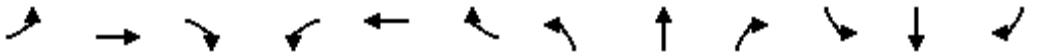




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	473	728	3	2	625	207	2	1	1	293	2	380
Future Volume (veh/h)	473	728	3	2	625	207	2	1	1	293	2	380
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	503	774	3	2	665	220	2	1	1	312	2	404
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	577	1831	963	88	909	478	224	98	428	413	486	486
Arrive On Green	0.66	1.00	1.00	0.05	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1752	3328	1752	1767	3357	1767	587	348	1530	1314	1737	1737
Grp Volume(v), veh/h	503	774	3	2	665	220	3	0	1	312	2	404
Grp Sat Flow(s),veh/h/ln	1752	1664	1752	1767	1678	1767	936	0	1530	1314	1737	1737
Q Serve(g_s), s	23.0	0.0	0.0	0.1	18.0	10.4	0.0	0.0	0.0	23.1	0.1	21.8
Cycle Q Clear(g_c), s	23.0	0.0	0.0	0.1	18.0	10.4	2.1	0.0	0.0	25.2	0.1	21.8
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	577	1831	963	88	909	478	322	0	428	413	486	486
V/C Ratio(X)	0.87	0.42	0.00	0.02	0.73	0.46	0.01	0.00	0.00	0.76	0.00	0.83
Avail Cap(c_a), veh/h	648	1831	963	88	909	478	322	0	428	413	486	486
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	15.4	0.0	0.0	45.2	33.2	30.4	26.0	0.0	25.9	36.0	25.9	33.8
Incr Delay (d2), s/veh	7.4	0.4	0.0	0.1	3.0	0.7	0.1	0.0	0.0	11.0	0.0	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.1	0.0	0.0	7.3	4.3	0.1	0.0	0.0	8.2	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	0.4	0.0	45.3	36.2	31.1	26.0	0.0	25.9	46.9	26.0	47.5
LnGrp LOS	C	A	A	D	D	C	C	A	C	D	C	D
Approach Vol, veh/h		1280			887			4			718	
Approach Delay, s/veh		9.2			34.9			26.0			47.2	
Approach LOS		A			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	9.0	59.0		32.0	36.9	31.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		28.0	5.0	55.0		28.0	37.0	23.0				
Max Q Clear Time (g_c+I1), s		4.1	4.1	4.0		27.2	27.0	22.0				
Green Ext Time (p_c), s		0.0	0.0	5.7		0.3	1.1	0.5				

Intersection Summary												
HCM 6th Ctrl Delay			26.6									
HCM 6th LOS			C									



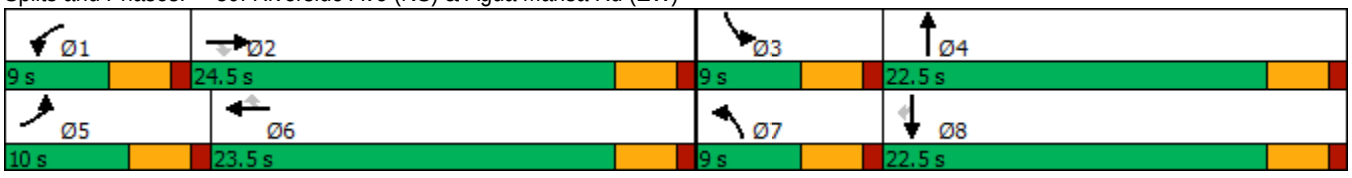
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	508	136	35	211	64	116	880	91	56	944	215
Future Volume (vph)	335	508	136	35	211	64	116	880	91	56	944	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151			151		17				151
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	345	524	140	36	218	66	120	907	94	58	973	222
Shared Lane Traffic (%)												
Lane Group Flow (vph)	345	524	140	36	218	66	120	1001	0	58	973	222
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

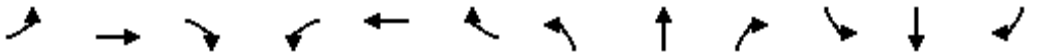
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	10.0	24.5	24.5	9.0	23.5	23.5	9.0	22.5		9.0	22.5	22.5
Total Split (%)	15.4%	37.7%	37.7%	13.8%	36.2%	36.2%	13.8%	34.6%		13.8%	34.6%	34.6%
Maximum Green (s)	6.0	20.5	20.5	5.0	19.5	19.5	5.0	18.5		5.0	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	6.0	25.9	25.9	5.0	19.5	19.5	5.0	22.1		5.0	18.5	18.5
Actuated g/C Ratio	0.09	0.40	0.40	0.08	0.30	0.30	0.08	0.34		0.08	0.28	0.28
v/c Ratio	2.27	0.76	0.21	0.32	0.46	0.13	0.96	0.91		0.46	1.03	0.42
Control Delay	612.3	29.0	3.9	36.1	22.4	0.5	107.1	37.5		41.1	63.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	612.3	29.0	3.9	36.1	22.4	0.5	107.1	37.5		41.1	63.9	9.7
LOS	F	C	A	D	C	A	F	D		D	E	A
Approach Delay		224.9			19.4			44.9			53.2	
Approach LOS		F			B			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.27
Intersection Signal Delay: 94.6 Intersection LOS: F
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



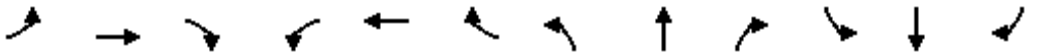


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	508	136	35	211	64	116	880	91	56	944	215
Future Volume (veh/h)	335	508	136	35	211	64	116	880	91	56	944	215
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	345	524	140	36	218	66	120	907	94	58	973	222
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	163	622	622	64	477	477	134	923	96	107	955	503
Arrive On Green	0.09	0.35	0.35	0.04	0.30	0.30	0.08	0.30	0.30	0.06	0.28	0.28
Sat Flow, veh/h	1767	1767	1767	1589	1589	1589	1737	3069	318	1767	3357	1767
Grp Volume(v), veh/h	345	524	140	36	218	66	120	488	513	58	973	222
Grp Sat Flow(s),veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	6.0	17.8	3.6	1.4	7.2	2.0	4.5	19.1	19.1	2.1	18.5	6.7
Cycle Q Clear(g_c), s	6.0	17.8	3.6	1.4	7.2	2.0	4.5	19.1	19.1	2.1	18.5	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	163	622	622	64	477	477	134	497	523	107	955	503
V/C Ratio(X)	2.12	0.84	0.22	0.57	0.46	0.14	0.90	0.98	0.98	0.54	1.02	0.44
Avail Cap(c_a), veh/h	163	622	622	122	477	477	134	497	523	136	955	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	19.4	14.8	30.6	18.5	16.6	29.7	22.5	22.5	29.7	23.3	19.0
Incr Delay (d2), s/veh	522.2	13.0	0.8	7.7	3.1	0.6	48.5	35.7	34.7	4.2	33.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.9	8.3	1.3	0.6	2.7	0.7	3.4	10.9	11.3	0.9	10.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	551.7	32.4	15.6	38.3	21.6	17.2	78.2	58.2	57.2	33.9	57.1	19.6
LnGrp LOS	F	C	B	D	C	B	E	E	E	C	F	B
Approach Vol, veh/h		1009			320			1121			1253	
Approach Delay, s/veh		207.6			22.6			59.9			49.4	
Approach LOS		F			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	26.9	7.9	23.6	10.0	23.5	9.0	22.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	20.5	5.0	18.5	6.0	19.5	5.0	18.5
Max Q Clear Time (g_c+I1), s	5.4	21.8	6.1	23.1	10.0	11.2	8.5	22.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	93.4
HCM 6th LOS	F

OPENING YEAR (2020) WITH PROJECT - ALTERNATIVE 2

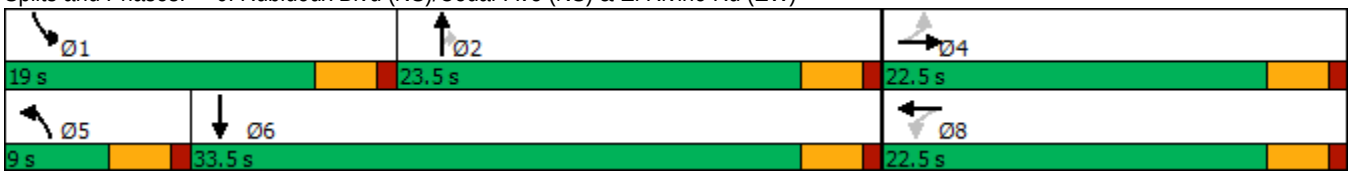


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	10	24	128	4	108	15	639	281	255	934	7
Future Volume (vph)	19	10	24	128	4	108	15	639	281	255	934	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.895			0.856				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1560	0	1456	1312	0	1597	3195	1429	1671	3339	0
Flt Permitted	0.673			0.731			0.950			0.950		
Satd. Flow (perm)	1173	1560	0	1120	1312	0	1597	3195	1429	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			127				331		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	22	12	28	151	5	127	18	752	331	300	1099	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	40	0	151	132	0	18	752	331	300	1107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		9.0	23.5	23.5	19.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%		13.8%	36.2%	36.2%	29.2%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		5.0	19.5	19.5	15.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	12.7	12.7		12.7	12.7		5.1	19.7	19.7	13.6	35.8	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.09	0.34	0.34	0.23	0.62	
v/c Ratio	0.09	0.11		0.62	0.34		0.13	0.70	0.47	0.77	0.54	
Control Delay	18.5	10.4		32.4	7.3		29.5	22.4	5.0	37.2	9.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	18.5	10.4		32.4	7.3		29.5	22.4	5.0	37.2	9.3	
LOS	B	B		C	A		C	C	A	D	A	
Approach Delay		13.3			20.7			17.3			15.3	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 55.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	10	24	128	4	108	15	639	281	255	934	7
Future Volume (veh/h)	19	10	24	128	4	108	15	639	281	255	934	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	22	12	28	151	5	127	18	752	331	300	1099	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	249	112	261	326	12	314	37	1125	592	407	1909	14
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.02	0.35	0.35	0.23	0.55	0.55
Sat Flow, veh/h	1188	530	1237	1129	58	1486	1707	3244	1707	1781	3449	25
Grp Volume(v), veh/h	22	0	40	151	0	132	18	752	331	300	539	568
Grp Sat Flow(s),veh/h/ln	1188	0	1767	1129	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	1.0	0.0	1.0	7.2	0.0	4.1	0.6	11.1	8.8	8.8	11.7	11.7
Cycle Q Clear(g_c), s	7.1	0.0	1.0	9.2	0.0	4.1	0.6	11.1	8.8	8.8	11.7	11.7
Prop In Lane	1.00		0.70	1.00		0.96	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	249	0	373	326	0	326	37	1125	592	407	937	986
V/C Ratio(X)	0.09	0.00	0.11	0.46	0.00	0.40	0.48	0.67	0.56	0.74	0.58	0.58
Avail Cap(c_a), veh/h	389	0	581	459	0	508	152	1125	592	475	937	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	17.9	22.1	0.0	19.1	27.2	15.6	14.9	20.1	8.2	8.2
Incr Delay (d2), s/veh	0.2	0.0	0.1	1.0	0.0	0.8	9.4	3.2	3.8	5.0	2.6	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	1.8	0.0	1.4	0.3	3.6	3.3	3.5	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	18.0	23.1	0.0	19.9	36.6	18.8	18.7	25.1	10.8	10.7
LnGrp LOS	C	A	B	C	A	B	D	B	B	C	B	B
Approach Vol, veh/h		62			283			1101			1407	
Approach Delay, s/veh		19.9			21.6			19.0			13.8	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.9	23.5		15.9	5.2	35.1		15.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	15.0	19.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	12.8	15.1		9.1	4.6	15.7		11.2				
Green Ext Time (p_c), s	0.2	2.2		0.1	0.0	5.4		0.8				

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	925	15	0	1086
Future Volume (vph)	0	10	925	15	0	1086
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1644	3188	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3188	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	11	974	16	0	1143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	11	990	0	0	1143
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	925	15	0	1086
Future Vol, veh/h	0	10	925	15	0	1086
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	11	974	16	0	1143

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	495	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	525	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	525	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	525	-
HCM Lane V/C Ratio	-	-	0.02	-
HCM Control Delay (s)	-	-	12	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-



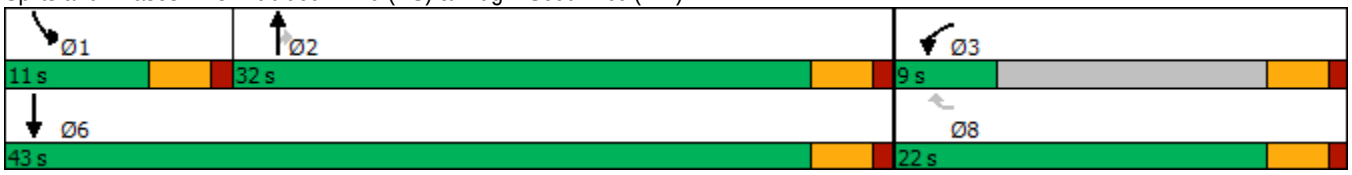
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	3	937	20	16	1070
Future Volume (vph)	17	3	937	20	16	1070
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		3		21		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	18	3	986	21	17	1126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	3	986	21	17	1126
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	9.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	13.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	5.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)		7.0	7.0	7.0		7.0
Flash Dont Walk (s)		11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)		0	0	0		0
Act Effct Green (s)	5.2	5.6	51.8	51.8	6.1	54.1
Actuated g/C Ratio	0.09	0.10	0.91	0.91	0.11	0.95
v/c Ratio	0.11	0.02	0.34	0.02	0.10	0.36
Control Delay	24.5	16.3	3.0	2.2	23.2	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	16.3	3.0	2.2	23.2	1.2
LOS	C	B	A	A	C	A
Approach Delay	23.4		2.9			1.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 57.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.36			
Intersection Signal Delay: 2.4		Intersection LOS: A	
Intersection Capacity Utilization 40.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

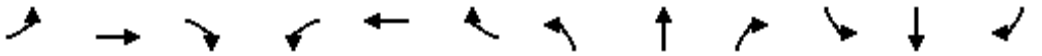




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	3	937	20	16	1070
Future Volume (veh/h)	17	3	937	20	16	1070
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	18	3	986	21	17	1126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	48	48	2286	1203	37	2714
Arrive On Green	0.03	0.03	0.70	0.70	0.02	0.81
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	18	3	986	21	17	1126
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	0.4	0.1	6.2	0.2	0.5	4.7
Cycle Q Clear(g_c), s	0.4	0.1	6.2	0.2	0.5	4.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	48	48	2286	1203	37	2714
V/C Ratio(X)	0.37	0.06	0.43	0.02	0.46	0.41
Avail Cap(c_a), veh/h	197	197	2286	1203	256	2714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	22.9	3.0	2.1	23.3	1.3
Incr Delay (d2), s/veh	4.7	0.5	0.6	0.0	8.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	0.0	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.8	23.5	3.6	2.2	31.8	1.8
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	21		1007			1143
Approach Delay, s/veh	27.2		3.6			2.2
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.0	38.0			43.0	5.2
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	5.0
Max Q Clear Time (g_c+I1), s	2.5	8.2			6.7	2.4
Green Ext Time (p_c), s	0.0	6.3			8.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.1
HCM 6th LOS	A

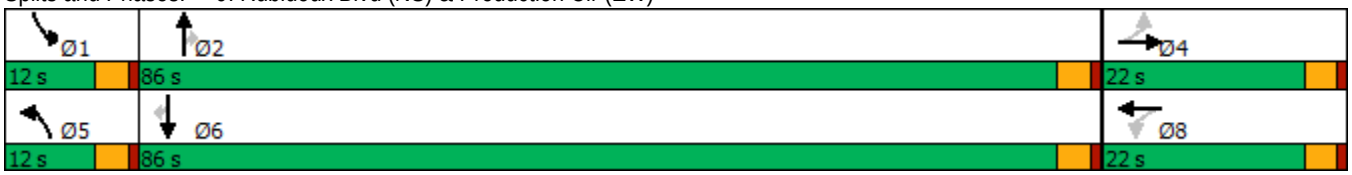


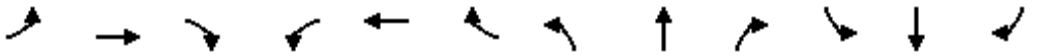
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1011	1	1	1124	11
Future Volume (vph)	5	0	15	1	0	0	19	1011	1	1	1124	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		175							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	6	0	17	1	0	0	22	1176	1	1	1307	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	17	0	1	0	0	22	1176	1	1	1307	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	22.0	22.0		22.0	22.0		12.0	86.0	86.0	12.0	86.0	86.0
Total Split (%)	18.3%	18.3%		18.3%	18.3%		10.0%	71.7%	71.7%	10.0%	71.7%	71.7%
Maximum Green (s)	18.0	18.0		18.0	18.0		8.0	82.0	82.0	8.0	82.0	82.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.3	6.3		6.2			6.8	98.7	98.7	5.7	96.2	96.2
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.07	0.07		0.01			0.21	0.39	0.00	0.01	0.44	0.01
Control Delay	51.0	0.6		49.0			53.7	2.0	0.0	51.0	3.2	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	0.6		49.0			53.7	2.0	0.0	51.0	3.2	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.7			49.0			3.0			3.2	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 106.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 3.2		Intersection LOS: A	
Intersection Capacity Utilization 41.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

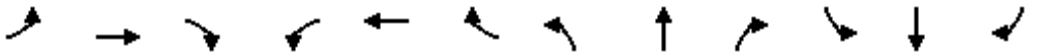




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1011	1	1	1124	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1011	1	1	1124	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	6	0	17	1	0	0	22	1176	1	1	1307	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1418	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	6	0	17	1	0	0	22	1176	1	1	1307	13
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1418	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.6	0.0	1.2	0.1	0.0	0.0	1.2	8.2	0.0	0.1	10.6	0.1
Cycle Q Clear(g_c), s	0.6	0.0	1.2	1.3	0.0	0.0	1.2	8.2	0.0	0.1	10.6	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	33	90	46	0	40	2790	1410	2	2789	1409
V/C Ratio(X)	0.06	0.00	0.52	0.01	0.00	0.00	0.56	0.42	0.00	0.41	0.47	0.01
Avail Cap(c_a), veh/h	258	0	244	314	347	0	140	2790	1410	143	2789	1409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	47.6	48.2	0.0	0.0	47.7	1.7	1.1	49.2	2.3	1.4
Incr Delay (d2), s/veh	0.3	0.0	12.2	0.0	0.0	0.0	11.7	0.5	0.0	85.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.0	0.0	0.0	0.6	0.4	0.0	0.1	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	0.0	59.8	48.3	0.0	0.0	59.4	2.1	1.1	134.7	2.9	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		23			1			1199			1321	
Approach Delay, s/veh		56.6			48.3			3.2			3.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	88.1		6.4	6.3	86.0		6.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	82.0		18.0	8.0	82.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	10.2		3.2	3.2	12.6		3.3				
Green Ext Time (p_c), s	0.0	10.3		0.0	0.0	12.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		3.6	
HCM 6th LOS		A	

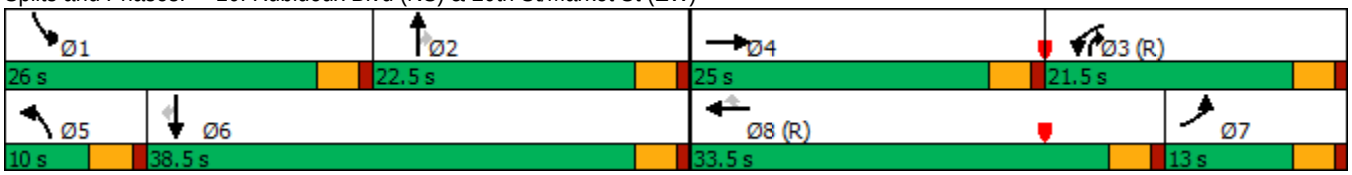


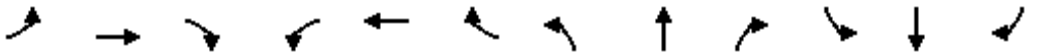
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	59	47	251	39	512	23	376	311	610	585	30
Future Volume (vph)	54	59	47	251	39	512	23	376	311	610	585	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.933				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1049	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				551			334			149
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	58	63	51	270	42	551	25	404	334	656	629	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	114	0	270	42	551	25	404	334	656	629	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	13.0	25.0		21.5	33.5	33.5	10.0	22.5	21.5	26.0	38.5	38.5
Total Split (%)	13.7%	26.3%		22.6%	35.3%	35.3%	10.5%	23.7%	22.6%	27.4%	40.5%	40.5%
Maximum Green (s)	9.0	21.0		17.5	29.5	29.5	6.0	18.5	17.5	22.0	34.5	34.5
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	8.4	12.5		26.0	32.1	32.1	5.9	19.3	45.3	21.2	40.5	40.5
Actuated g/C Ratio	0.09	0.13		0.27	0.34	0.34	0.06	0.20	0.48	0.22	0.43	0.43
v/c Ratio	0.62	0.67		0.32	0.07	0.65	0.26	0.64	0.40	0.87	0.43	0.04
Control Delay	69.9	43.6		41.6	24.2	20.2	49.4	40.3	2.6	49.3	21.2	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	43.6		41.6	24.2	20.6	49.4	40.3	2.6	49.3	21.2	0.1
LOS	E	D		D	C	C	D	D	A	D	C	A
Approach Delay		52.5			27.4			24.1			34.7	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 31.0		Intersection LOS: C	
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	59	47	251	39	512	23	376	311	610	585	30
Future Volume (veh/h)	54	59	47	251	39	512	23	376	311	610	585	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	58	63	51	270	42	551	25	404	334	656	629	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	92	82	67	806	526	526	46	615	732	791	1359	715
Arrive On Green	0.10	0.17	0.17	0.25	0.31	0.31	0.03	0.19	0.19	0.22	0.39	0.39
Sat Flow, veh/h	877	485	393	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	58	0	114	270	42	551	25	404	334	656	629	32
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	6.0	0.0	11.8	6.4	1.7	16.4	1.4	11.2	6.3	16.6	12.7	0.7
Cycle Q Clear(g_c), s	6.0	0.0	11.8	6.4	1.7	16.4	1.4	11.2	6.3	16.6	12.7	0.7
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	0	149	806	526	526	46	615	732	791	1359	715
V/C Ratio(X)	0.63	0.00	0.76	0.33	0.08	1.05	0.55	0.66	0.46	0.83	0.46	0.04
Avail Cap(c_a), veh/h	92	0	194	806	526	526	105	615	732	827	1359	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.77	0.77	0.77	0.94	0.94	0.94	0.90	0.90	0.90
Uniform Delay (d), s/veh	40.8	0.0	37.6	29.5	23.2	10.2	45.6	35.3	6.8	35.3	21.6	8.6
Incr Delay (d2), s/veh	13.0	0.0	12.4	0.2	0.2	47.8	9.2	5.1	1.9	6.2	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.9	2.4	0.7	12.0	0.7	4.5	2.5	7.4	4.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.7	0.0	50.1	29.6	23.4	57.9	54.8	40.4	8.7	41.5	22.7	8.7
LnGrp LOS	D	A	D	C	C	F	D	D	A	D	C	A
Approach Vol, veh/h		172			863			763			1317	
Approach Delay, s/veh		51.3			47.4			27.0			31.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	22.5	27.3	20.1	6.6	40.9	14.0	33.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	18.5	17.5	21.0	6.0	34.5	9.0	29.5
Max Q Clear Time (g_c+I1), s	20.6	15.2	8.4	13.8	5.4	16.7	10.0	20.4
Green Ext Time (p_c), s	0.4	1.1	0.6	0.2	0.0	3.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	540	6	12	240	0	12
Future Volume (vph)	540	6	12	240	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	568	6	13	253	0	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	568	6	13	253	0	13
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	540	6	12	240	0	12
Future Vol, veh/h	540	6	12	240	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	568	6	13	253	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	574	0	-	284
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	858	-	0	719
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	858	-	-	719
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	719	-	-	858	-
HCM Lane V/C Ratio	0.018	-	-	0.015	-
HCM Control Delay (s)	10.1	-	-	9.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

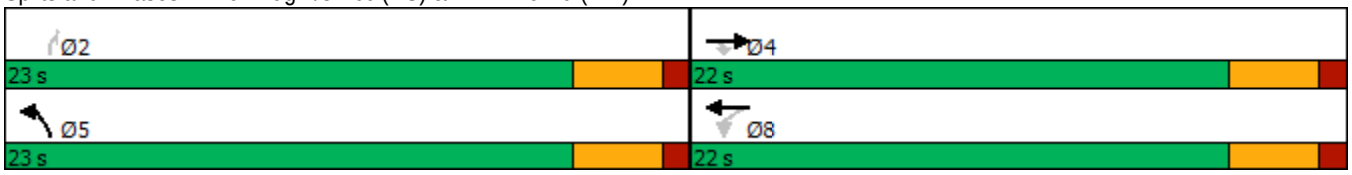


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	424	128	14	215	37	10
Future Volume (vph)	424	128	14	215	37	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.494		0.950	
Satd. Flow (perm)	3282	1468	757	2911	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		135				11
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	446	135	15	226	39	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	446	135	15	226	39	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	9.0	9.0	9.0	9.0	6.1	5.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.27	0.26
v/c Ratio	0.35	0.21	0.05	0.20	0.08	0.03
Control Delay	5.6	2.0	4.6	4.9	7.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	2.0	4.6	4.9	7.7	5.0
LOS	A	A	A	A	A	A
Approach Delay	4.8			4.9	7.1	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 23			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay: 5.0		Intersection LOS: A	
Intersection Capacity Utilization 22.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

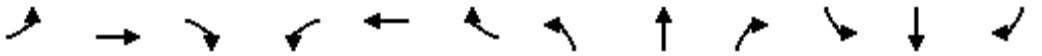




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	424	128	14	215	37	10
Future Volume (veh/h)	424	128	14	215	37	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1544	1544	1900	1900
Adj Flow Rate, veh/h	446	135	15	226	39	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	24	24	0	0
Cap, veh/h	1310	689	695	1155	119	119
Arrive On Green	0.39	0.39	0.39	0.39	0.06	0.06
Sat Flow, veh/h	3416	1752	688	3011	1900	1900
Grp Volume(v), veh/h	446	135	15	226	39	11
Grp Sat Flow(s),veh/h/ln	1664	1752	688	1467	1900	1900
Q Serve(g_s), s	1.4	0.7	0.2	0.7	0.3	0.1
Cycle Q Clear(g_c), s	1.4	0.7	1.6	0.7	0.3	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1310	689	695	1155	119	119
V/C Ratio(X)	0.34	0.20	0.02	0.20	0.33	0.09
Avail Cap(c_a), veh/h	4071	2143	1266	3589	2453	2453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.1	2.9	3.7	2.9	6.6	6.5
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.1	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.3	3.1	3.7	3.0	8.2	6.8
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	581			241	50	
Approach Delay, s/veh	3.2			3.1	7.9	
Approach LOS	A			A	A	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	4.9	9.8	9.8
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	19.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.3	3.4	3.6
Green Ext Time (p_c), s	0.1	2.6	1.1

Intersection Summary	
HCM 6th Ctrl Delay	3.4
HCM 6th LOS	A

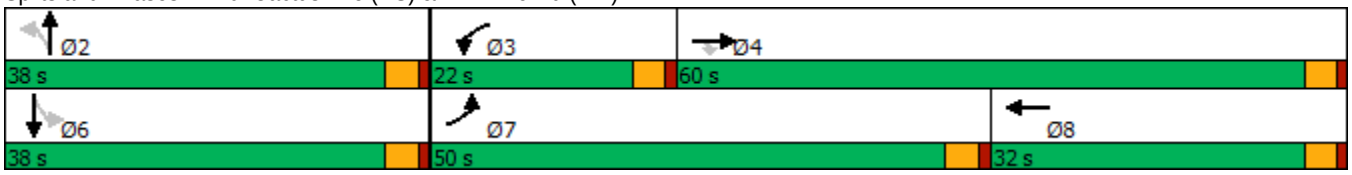


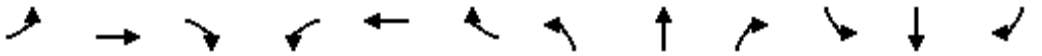
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	153	80	49	103	100	30	3	18	84	6	84
Future Volume (vph)	205	153	80	49	103	100	30	3	18	84	6	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.926			0.870			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2786	0	1805	1653	0	1626	1472	0
Flt Permitted	0.950			0.950			0.692			0.742		
Satd. Flow (perm)	1583	3167	1417	1504	2786	0	1315	1653	0	1270	1472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		112			20			94	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	230	172	90	55	116	112	34	3	20	94	7	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	230	172	90	55	228	0	34	23	0	94	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.0	60.0	60.0	22.0	32.0		38.0	38.0		38.0	38.0	
Total Split (%)	41.7%	50.0%	50.0%	18.3%	26.7%		31.7%	31.7%		31.7%	31.7%	
Maximum Green (s)	46.0	56.0	56.0	18.0	28.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	15.5	20.5	20.5	8.1	8.6		34.3	34.3		34.3	34.3	
Actuated g/C Ratio	0.22	0.29	0.29	0.12	0.12		0.49	0.49		0.49	0.49	
v/c Ratio	0.66	0.19	0.19	0.32	0.52		0.05	0.03		0.15	0.13	
Control Delay	35.1	21.0	6.6	35.2	20.2		12.3	6.6		13.0	4.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.1	21.0	6.6	35.2	20.2		12.3	6.6		13.0	4.2	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		25.0			23.1			10.0			8.5	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 70.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	153	80	49	103	100	30	3	18	84	6	84
Future Volume (veh/h)	205	153	80	49	103	100	30	3	18	84	6	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	230	172	90	55	116	112	34	3	20	94	7	94
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	286	771	406	78	190	183	764	130	869	782	63	850
Arrive On Green	0.17	0.24	0.24	0.05	0.12	0.12	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1693	3216	1693	1604	1591	1536	1314	248	1652	1289	120	1617
Grp Volume(v), veh/h	230	172	90	55	111	117	34	0	23	94	0	101
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1314	0	1900	1289	0	1737
Q Serve(g_s), s	8.4	2.8	2.8	2.2	4.5	4.5	0.9	0.0	0.4	2.4	0.0	1.9
Cycle Q Clear(g_c), s	8.4	2.8	2.8	2.2	4.5	4.5	2.8	0.0	0.4	2.8	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.96	1.00		0.87	1.00		0.93
Lane Grp Cap(c), veh/h	286	771	406	78	182	191	764	0	999	782	0	914
V/C Ratio(X)	0.80	0.22	0.22	0.71	0.61	0.61	0.04	0.00	0.02	0.12	0.00	0.11
Avail Cap(c_a), veh/h	1205	2786	1466	447	660	695	764	0	999	782	0	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	19.7	19.7	30.3	27.0	27.0	8.4	0.0	7.4	8.0	0.0	7.7
Incr Delay (d2), s/veh	5.2	0.1	0.3	11.1	3.3	3.1	0.1	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.0	1.1	1.0	1.7	1.8	0.2	0.0	0.1	0.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	19.9	20.0	41.4	30.4	30.2	8.5	0.0	7.4	8.3	0.0	8.0
LnGrp LOS	C	B	B	D	C	C	A	A	A	A	A	A
Approach Vol, veh/h		492			283			57			195	
Approach Delay, s/veh		25.1			32.4			8.1			8.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.0	7.1	19.5		38.0	14.9	11.7				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		34.0	18.0	56.0		34.0	46.0	28.0				
Max Q Clear Time (g_c+I1), s		4.8	4.2	4.8		4.8	10.4	6.5				
Green Ext Time (p_c), s		0.2	0.1	1.4		0.9	0.7	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			23.0									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	235	20	4	252	0	2
Future Volume (vph)	235	20	4	252	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	247	21	4	265	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	21	4	265	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

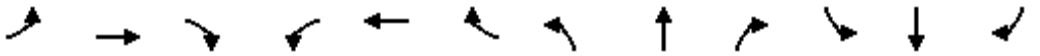
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	235	20	4	252	0	2
Future Vol, veh/h	235	20	4	252	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	247	21	4	265	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	268	0	-	124
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1172	-	0	910
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1172	-	-	910
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	910	-	-	1172	-
HCM Lane V/C Ratio	0.002	-	-	0.004	-
HCM Control Delay (s)	9	-	-	8.1	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

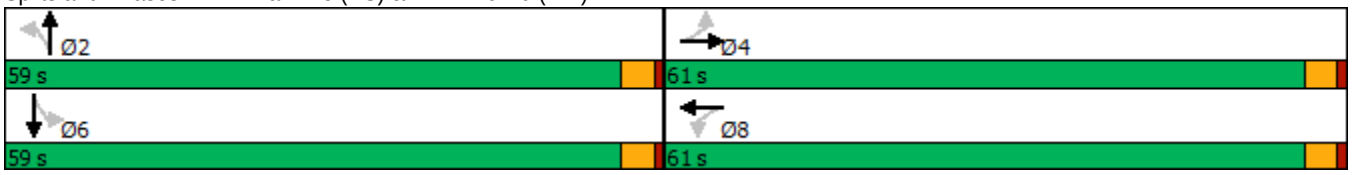


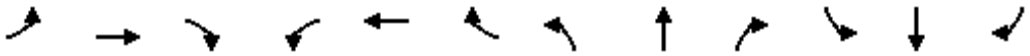
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	135	90	15	147	5	104	3	4	9	8	11
Future Volume (vph)	2	135	90	15	147	5	104	3	4	9	8	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940			0.995			0.917			0.912	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1639	0	1583	1658	0	1410	1361	0	1736	1666	0
Flt Permitted	0.515			0.329			0.742			0.752		
Satd. Flow (perm)	898	1639	0	548	1658	0	1101	1361	0	1374	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			2			5			14	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	2	167	111	19	181	6	128	4	5	11	10	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	278	0	19	187	0	128	9	0	11	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	17.1	17.1		17.1	17.1		55.2	55.2		55.2	55.2	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.69	0.69		0.69	0.69	
v/c Ratio	0.01	0.74		0.16	0.53		0.17	0.01		0.01	0.02	
Control Delay	23.5	37.3		28.5	33.1		6.0	4.1		5.3	3.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.5	37.3		28.5	33.1		6.0	4.1		5.3	3.5	
LOS	C	D		C	C		A	A		A	A	
Approach Delay		37.2			32.7			5.9			4.1	
Approach LOS		D			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 80.3			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 27.5		Intersection LOS: C	
Intersection Capacity Utilization 31.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

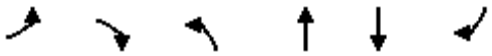




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	135	90	15	147	5	104	3	4	9	8	11
Future Volume (veh/h)	2	135	90	15	147	5	104	3	4	9	8	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	2	167	111	19	181	6	128	4	5	11	10	14
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	212	218	145	148	337	11	850	458	572	1048	532	745
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1130	1061	705	996	1638	54	1101	660	825	1384	767	1074
Grp Volume(v), veh/h	2	0	278	19	0	187	128	0	9	11	0	24
Grp Sat Flow(s),veh/h/ln	1130	0	1767	996	0	1693	1101	0	1485	1384	0	1841
Q Serve(g_s), s	0.1	0.0	11.8	1.5	0.0	7.8	3.2	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	8.0	0.0	11.8	13.2	0.0	7.8	3.6	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.40	1.00		0.03	1.00		0.56	1.00		0.58
Lane Grp Cap(c), veh/h	212	0	363	148	0	348	850	0	1030	1048	0	1276
V/C Ratio(X)	0.01	0.00	0.76	0.13	0.00	0.54	0.15	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	791	0	1270	659	0	1216	850	0	1030	1048	0	1276
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	29.7	35.9	0.0	28.1	4.3	0.0	3.8	3.8	0.0	3.8
Incr Delay (d2), s/veh	0.0	0.0	3.4	0.4	0.0	1.3	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.9	0.3	0.0	3.1	0.7	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	0.0	33.1	36.3	0.0	29.4	4.7	0.0	3.8	3.8	0.0	3.8
LnGrp LOS	C	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		280			206			137			35	
Approach Delay, s/veh		33.1			30.1			4.6			3.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		20.3		59.0		20.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		55.0		57.0		55.0		57.0				
Max Q Clear Time (g_c+I1), s		5.6		13.8		2.3		15.2				
Green Ext Time (p_c), s		0.6		1.6		0.1		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			24.6									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	8	18	104	99	14
Future Volume (vph)	7	8	18	104	99	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1410	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1410	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	28%	28%	11%	11%
Adj. Flow (vph)	7	8	19	109	104	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	8	19	109	104	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.7%		ICU Level of Service A	
Analysis Period (min) 15			

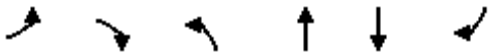
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	18	104	99	14
Future Vol, veh/h	7	8	18	104	99	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	28	28	11	11
Mvmt Flow	7	8	19	109	104	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	251	104	119	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.452	-	-	-
Pot Cap-1 Maneuver	742	956	1322	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	732	956	1322	-	-	-
Mov Cap-2 Maneuver	732	-	-	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1322	-	732	956	-	-
HCM Lane V/C Ratio	0.014	-	0.01	0.009	-	-
HCM Control Delay (s)	7.8	-	10	8.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-



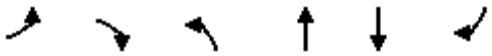
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	72	102	384	473	69
Future Volume (vph)	32	72	102	384	473	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		76				73
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	34	76	107	404	498	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	76	107	404	498	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	6.8	6.8	7.0	27.2	21.5	21.5
Actuated g/C Ratio	0.19	0.19	0.20	0.77	0.61	0.61
v/c Ratio	0.12	0.25	0.39	0.19	0.28	0.10
Control Delay	15.7	7.4	20.8	3.0	8.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	7.4	20.8	3.0	8.6	3.6
LOS	B	A	C	A	A	A
Approach Delay	10.0			6.7	8.0	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 35.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 7.6		Intersection LOS: A	
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

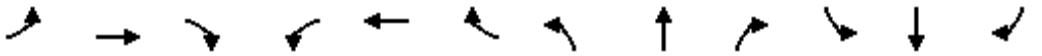




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	72	102	384	473	69
Future Volume (veh/h)	32	72	102	384	473	69
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	34	76	107	404	498	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	159	159	150	1591	932	471
Arrive On Green	0.11	0.11	0.10	0.58	0.32	0.32
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	34	76	107	404	498	73
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.5	1.2	1.8	1.9	3.6	0.9
Cycle Q Clear(g_c), s	0.5	1.2	1.8	1.9	3.6	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	159	159	150	1591	932	471
V/C Ratio(X)	0.21	0.48	0.71	0.25	0.53	0.16
Avail Cap(c_a), veh/h	1056	1056	394	3104	2046	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	10.8	11.1	2.6	7.1	6.2
Incr Delay (d2), s/veh	0.7	2.2	6.2	0.1	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.1	0.6	0.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	13.0	17.3	2.7	7.6	6.4
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	110			511	571	
Approach Delay, s/veh	12.4			5.8	7.4	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		18.9		6.7	6.7	12.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		3.9		3.2	3.8	5.6
Green Ext Time (p_c), s		2.5		0.2	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

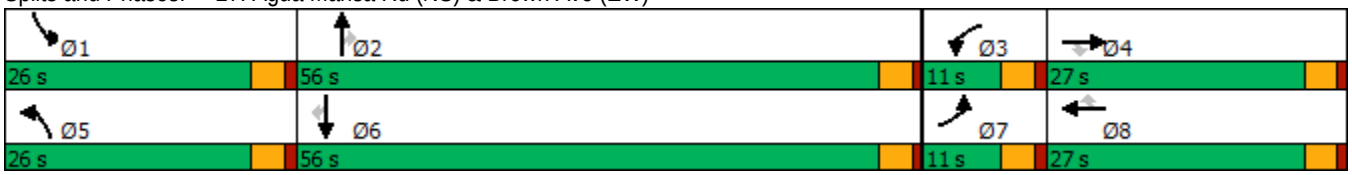


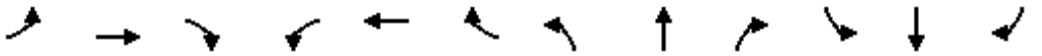
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	25	12	0	38	68	450	13	85	450	19
Future Volume (vph)	6	2	25	12	0	38	68	450	13	85	450	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			500			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	6	2	27	13	0	40	72	479	14	90	479	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	2	27	13	0	40	72	479	14	90	479	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	27.0	27.0	11.0	27.0	27.0	26.0	56.0	56.0	26.0	56.0	56.0
Total Split (%)	9.2%	22.5%	22.5%	9.2%	22.5%	22.5%	21.7%	46.7%	46.7%	21.7%	46.7%	46.7%
Maximum Green (s)	7.0	23.0	23.0	7.0	23.0	23.0	22.0	52.0	52.0	22.0	52.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.1	5.9	5.9	6.3		5.9	9.8	57.7	57.7	10.6	58.4	58.4
Actuated g/C Ratio	0.08	0.07	0.07	0.08		0.07	0.12	0.72	0.72	0.13	0.73	0.73
v/c Ratio	0.08	0.03	0.20	0.14		0.08	0.43	0.24	0.02	0.48	0.23	0.02
Control Delay	41.5	40.5	3.4	42.4		0.3	42.9	7.4	0.1	42.8	6.8	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	40.5	3.4	42.4		0.3	42.9	7.4	0.1	42.8	6.8	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		12.1			10.6			11.7			12.1	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 80.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 34.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2	25	12	0	38	68	450	13	85	450	19
Future Volume (veh/h)	6	2	25	12	0	38	68	450	13	85	450	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	6	2	27	13	0	40	72	479	14	90	479	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	6	54	52	18	88	85	114	1703	861	142	1850	935
Arrive On Green	0.01	0.07	0.07	0.02	0.00	0.08	0.08	0.63	0.63	0.09	0.64	0.64
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	6	2	27	13	0	40	72	479	14	90	479	20
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.6	0.2	2.8	0.9	0.0	2.8	4.0	6.6	0.3	4.7	5.9	0.4
Cycle Q Clear(g_c), s	0.6	0.2	2.8	0.9	0.0	2.8	4.0	6.6	0.3	4.7	5.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	6	54	52	18	88	85	114	1703	861	142	1850	935
V/C Ratio(X)	0.98	0.04	0.52	0.72	0.00	0.47	0.63	0.28	0.02	0.63	0.26	0.02
Avail Cap(c_a), veh/h	67	219	211	98	322	309	379	1703	861	403	1850	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	36.0	37.2	40.5	0.0	36.6	36.9	6.9	5.8	36.1	6.3	5.4
Incr Delay (d2), s/veh	162.0	0.3	7.9	41.4	0.0	4.0	5.7	0.4	0.0	4.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.5	0.0	0.9	1.5	1.5	0.1	1.8	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.0	36.3	45.1	81.9	0.0	40.6	42.6	7.3	5.8	40.7	6.7	5.4
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		35			53			565			589	
Approach Delay, s/veh		71.7			50.8			11.8			11.8	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	56.0	5.3	9.7	10.6	57.2	4.6	10.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	52.0	7.0	23.0	22.0	52.0	7.0	23.0
Max Q Clear Time (g_c+I1), s	8.7	10.6	4.9	6.8	8.0	9.9	4.6	6.8
Green Ext Time (p_c), s	0.1	3.3	0.0	0.0	0.1	3.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B



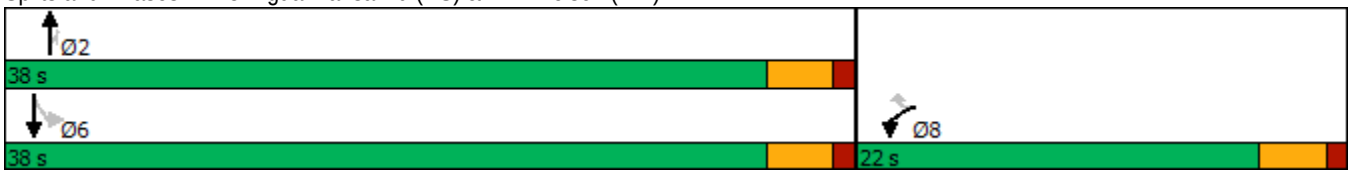
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	24	524	45	25	471
Future Volume (vph)	29	24	524	45	25	471
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.427	
Satd. Flow (perm)	1031	923	2654	1188	601	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		27		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	251		1750			2429
Travel Time (s)	6.8		26.5			36.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	33	27	595	51	28	535
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	27	595	51	28	535
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	7.5	7.5	48.1	48.1	48.1	48.1
Actuated g/C Ratio	0.13	0.13	0.83	0.83	0.83	0.83
v/c Ratio	0.25	0.19	0.27	0.05	0.06	0.46
Control Delay	27.0	12.6	2.7	1.2	3.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	12.6	2.7	1.2	3.0	4.7
LOS	C	B	A	A	A	A
Approach Delay	20.5		2.6			4.6
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 57.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R.A. Nelson (EW)

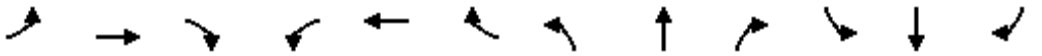




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	29	24	524	45	25	471
Future Volume (veh/h)	29	24	524	45	25	471
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	33	27	595	51	28	535
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	46	46	1978	1041	562	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	579	1381
Grp Volume(v), veh/h	33	27	595	51	28	535
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	579	1381
Q Serve(g_s), s	1.8	1.5	3.2	0.4	0.7	6.7
Cycle Q Clear(g_c), s	1.8	1.5	3.2	0.4	3.9	6.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	1978	1041	562	1052
V/C Ratio(X)	0.71	0.58	0.30	0.05	0.05	0.51
Avail Cap(c_a), veh/h	318	318	1978	1041	562	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.6	1.3	2.2	2.1
Incr Delay (d2), s/veh	18.2	11.1	0.4	0.1	0.2	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.8	31.5	2.0	1.4	2.4	3.8
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	60		646			563
Approach Delay, s/veh	35.5		2.0			3.7
Approach LOS	D		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.6
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.2			8.7	3.8
Green Ext Time (p_c), s		4.2			3.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

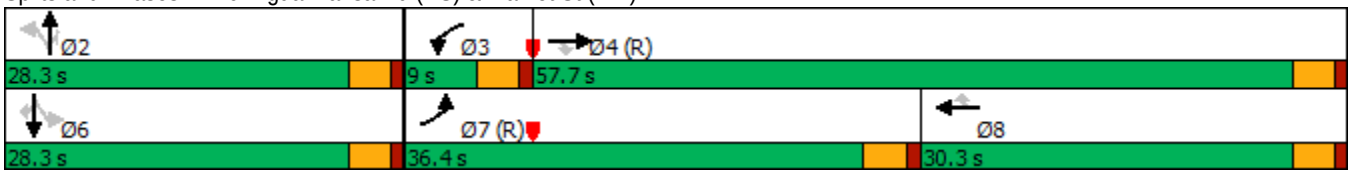


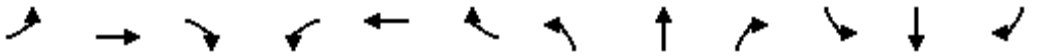
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	669	10	3	541	252	8	2	1	153	4	252
Future Volume (vph)	324	669	10	3	541	252	8	2	1	153	4	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	1641	3282	1272	1626	3252	1261	0	1261	965	1433	1508	1111
Flt Permitted	0.950			0.950				0.897		0.751		
Satd. Flow (perm)	1641	3282	1272	1626	3252	1261	0	1175	965	1132	1508	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			57			158			103			260
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			6.7			26.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	334	690	10	3	558	260	8	2	1	158	4	260
Shared Lane Traffic (%)												
Lane Group Flow (vph)	334	690	10	3	558	260	0	10	1	158	4	260
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	36.4	57.7	57.7	9.0	30.3	30.3	28.3	28.3	28.3	28.3	28.3	28.3
Total Split (%)	38.3%	60.7%	60.7%	9.5%	31.9%	31.9%	29.8%	29.8%	29.8%	29.8%	29.8%	29.8%
Maximum Green (s)	32.4	53.7	53.7	5.0	26.3	26.3	24.3	24.3	24.3	24.3	24.3	24.3
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	32.4	60.9	60.9	5.0	26.3	26.3		24.3	24.3	24.3	24.3	24.3
Actuated g/C Ratio	0.34	0.64	0.64	0.05	0.28	0.28		0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.60	0.33	0.01	0.04	0.62	0.56		0.03	0.00	0.55	0.01	0.55
Control Delay	48.0	3.3	0.0	43.7	33.6	16.9		27.1	0.0	38.9	26.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	3.3	0.0	43.7	33.6	16.9		27.1	0.0	38.9	26.5	8.6
LOS	D	A	A	D	C	B		C	A	D	C	A
Approach Delay		17.7			28.3			24.6			20.1	
Approach LOS		B			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 95			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

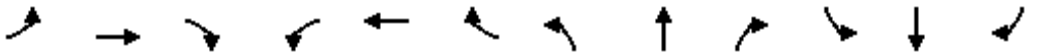




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	669	10	3	541	252	8	2	1	153	4	252
Future Volume (veh/h)	324	669	10	3	541	252	8	2	1	153	4	252
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	334	690	10	3	558	260	8	2	1	158	4	260
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	495	2043	1032	7	1107	559	217	44	303	341	387	372
Arrive On Green	0.09	0.20	0.20	0.00	0.34	0.34	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1752	3328	1682	1737	3300	1668	582	171	1184	1145	1515	1454
Grp Volume(v), veh/h	334	690	10	3	558	260	10	0	1	158	4	260
Grp Sat Flow(s),veh/h/ln	1752	1664	1682	1737	1650	1668	753	0	1184	1145	1515	1454
Q Serve(g_s), s	17.5	16.9	0.5	0.2	12.8	11.7	0.1	0.0	0.1	11.7	0.2	15.4
Cycle Q Clear(g_c), s	17.5	16.9	0.5	0.2	12.8	11.7	2.3	0.0	0.1	14.0	0.2	15.4
Prop In Lane	1.00		1.00	1.00		1.00	0.80		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	495	2043	1032	7	1107	559	261	0	303	341	387	372
V/C Ratio(X)	0.67	0.34	0.01	0.43	0.50	0.47	0.04	0.00	0.00	0.46	0.01	0.70
Avail Cap(c_a), veh/h	597	2043	1032	91	1107	559	261	0	303	341	387	372
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	38.8	21.3	14.8	47.2	25.3	24.9	26.7	0.0	26.3	32.6	26.4	32.0
Incr Delay (d2), s/veh	1.5	0.3	0.0	37.0	0.4	0.6	0.3	0.0	0.0	4.0	0.0	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	7.4	0.1	0.1	4.8	4.4	0.2	0.0	0.0	3.4	0.1	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	21.6	14.8	84.2	25.6	25.5	27.0	0.0	26.3	36.6	26.4	41.5
LnGrp LOS	D	C	B	F	C	C	C	A	C	D	C	D
Approach Vol, veh/h		1034			821			11			422	
Approach Delay, s/veh		27.6			25.8			26.9			39.5	
Approach LOS		C			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.3	4.4	62.3		28.3	30.8	35.9				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		24.3	5.0	53.7		24.3	32.4	26.3				
Max Q Clear Time (g_c+I1), s		4.3	4.2	20.9		19.4	21.5	16.8				
Green Ext Time (p_c), s		0.0	0.0	4.8		0.7	0.7	2.9				

Intersection Summary												
HCM 6th Ctrl Delay			29.1									
HCM 6th LOS			C									

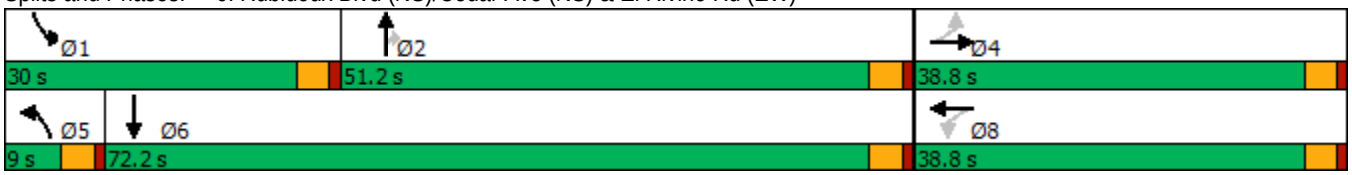


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	16	326	13	341	15	1177	198	342	1050	16
Future Volume (vph)	19	8	16	326	13	341	15	1177	198	342	1050	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.900			0.855				0.850		0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	1513	0	1504	1354	0	1597	3195	1429	1612	3217	0
Flt Permitted	0.258			0.742			0.950			0.950		
Satd. Flow (perm)	434	1513	0	1175	1354	0	1597	3195	1429	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			352				174		2	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	20	8	16	336	13	352	15	1213	204	353	1082	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	24	0	336	365	0	15	1213	204	353	1098	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	38.8	38.8		38.8	38.8		9.0	51.2	51.2	30.0	72.2	
Total Split (%)	32.3%	32.3%		32.3%	32.3%		7.5%	42.7%	42.7%	25.0%	60.2%	
Maximum Green (s)	34.8	34.8		34.8	34.8		5.0	47.2	47.2	26.0	68.2	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	34.8	34.8		34.8	34.8		5.0	47.2	47.2	26.0	73.6	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.04	0.39	0.39	0.22	0.61	
v/c Ratio	0.16	0.05		0.99	0.57		0.23	0.97	0.31	1.01	0.56	
Control Delay	35.8	17.3		89.1	7.9		64.0	54.4	6.6	98.1	15.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	35.8	17.3		89.1	7.9		64.0	54.4	6.6	98.1	15.6	
LOS	D	B		F	A		E	D	A	F	B	
Approach Delay		25.8			46.8			47.7			35.7	
Approach LOS		C			D			D			D	

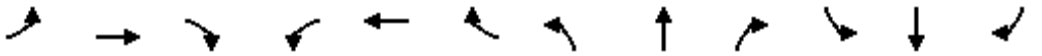
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 42.5		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	8	16	326	13	341	15	1177	198	342	1050	16
Future Volume (veh/h)	19	8	16	326	13	341	15	1177	198	342	1050	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	20	8	16	336	13	352	15	1213	204	353	1082	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	120	165	330	385	17	448	28	1276	672	373	1964	29
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.02	0.39	0.39	0.22	0.59	0.59
Sat Flow, veh/h	928	569	1138	1189	57	1546	1707	3244	1707	1722	3309	49
Grp Volume(v), veh/h	20	0	24	336	0	365	15	1213	204	353	535	563
Grp Sat Flow(s),veh/h/ln	928	0	1707	1189	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	2.5	0.0	1.2	32.8	0.0	25.1	1.0	43.5	9.9	24.2	23.7	23.7
Cycle Q Clear(g_c), s	29.6	0.0	1.2	34.8	0.0	25.1	1.0	43.5	9.9	24.2	23.7	23.7
Prop In Lane	1.00		0.67	1.00		0.96	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	120	0	495	385	0	465	28	1276	672	373	971	1022
V/C Ratio(X)	0.17	0.00	0.05	0.87	0.00	0.78	0.53	0.95	0.30	0.95	0.55	0.55
Avail Cap(c_a), veh/h	120	0	495	385	0	465	71	1276	672	373	971	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	0.0	30.7	44.1	0.0	39.2	58.5	35.3	25.1	46.3	14.7	14.7
Incr Delay (d2), s/veh	0.7	0.0	0.0	19.2	0.0	8.6	14.6	15.9	1.2	32.9	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.5	12.0	0.0	10.9	0.6	18.7	4.0	13.3	8.4	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	30.7	63.3	0.0	47.8	73.1	51.1	26.2	79.2	17.0	16.9
LnGrp LOS	D	A	C	E	A	D	E	D	C	E	B	B
Approach Vol, veh/h		44			701			1432			1451	
Approach Delay, s/veh		41.5			55.2			47.8			32.1	
Approach LOS		D			E			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	51.2		38.8	6.0	75.2		38.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	26.0	47.2		34.8	5.0	68.2		34.8				
Max Q Clear Time (g_c+I1), s	28.2	47.5		31.6	5.0	27.7		36.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		42.9	
HCM 6th LOS		D	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	28	1362	26	0	1392
Future Volume (vph)	0	28	1362	26	0	1392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	29	1434	27	0	1465
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	1461	0	0	1465
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	1362	26	0	1392
Future Vol, veh/h	0	28	1362	26	0	1392
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	29	1434	27	0	1465

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	731	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	369	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	369	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	369	-
HCM Lane V/C Ratio	-	-	0.08	-
HCM Control Delay (s)	-	-	15.6	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.3	-

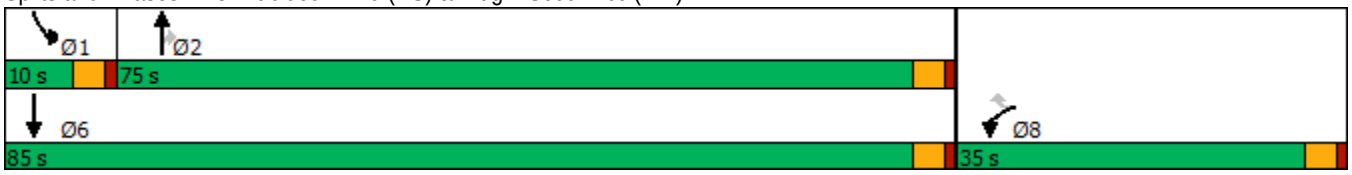


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	14	1374	11	6	1386
Future Volume (vph)	30	14	1374	11	6	1386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		15		12		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	32	15	1446	12	6	1459
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	15	1446	12	6	1459
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	35.0	35.0	75.0	75.0	10.0	85.0
Total Split (%)	29.2%	29.2%	62.5%	62.5%	8.3%	70.8%
Maximum Green (s)	31.0	31.0	71.0	71.0	6.0	81.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	7.4	7.4	92.7	92.7	5.8	94.8
Actuated g/C Ratio	0.07	0.07	0.89	0.89	0.06	0.91
v/c Ratio	0.25	0.12	0.51	0.01	0.07	0.49
Control Delay	50.4	22.0	3.6	1.5	48.2	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	50.4	22.0	3.6	1.5	48.2	2.4
LOS	D	C	A	A	D	A
Approach Delay	41.4		3.5			2.6
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 104.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 3.7		Intersection LOS: A	
Intersection Capacity Utilization 49.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

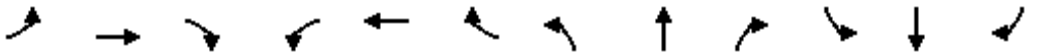




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	14	1374	11	6	1386
Future Volume (veh/h)	30	14	1374	11	6	1386
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	32	15	1446	12	6	1459
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	72	72	2675	1408	14	2939
Arrive On Green	0.04	0.04	0.82	0.82	0.01	0.88
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	32	15	1446	12	6	1459
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	1.5	0.7	13.0	0.1	0.3	8.8
Cycle Q Clear(g_c), s	1.5	0.7	13.0	0.1	0.3	8.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	72	72	2675	1408	14	2939
V/C Ratio(X)	0.44	0.21	0.54	0.01	0.44	0.50
Avail Cap(c_a), veh/h	637	637	2675	1408	115	2939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	43.2	2.6	1.4	45.7	1.3
Incr Delay (d2), s/veh	4.2	1.4	0.8	0.0	20.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	1.2	0.0	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.8	44.6	3.4	1.4	66.4	1.9
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	47		1458			1465
Approach Delay, s/veh	46.8		3.3			2.1
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	4.7	80.3			85.0	7.5
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	6.0	71.0			81.0	31.0
Max Q Clear Time (g_c+I1), s	2.3	15.0			10.8	3.5
Green Ext Time (p_c), s	0.0	14.5			15.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	3.4
HCM 6th LOS	A

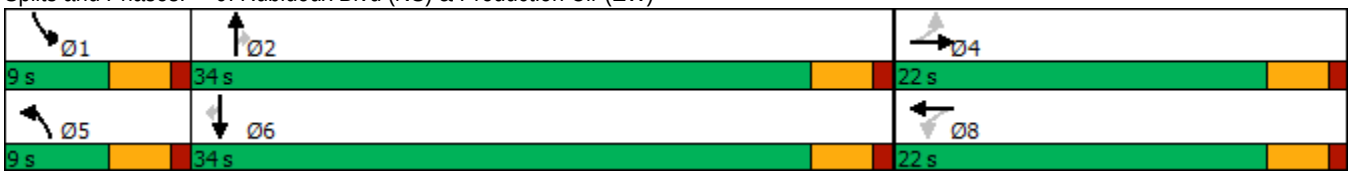


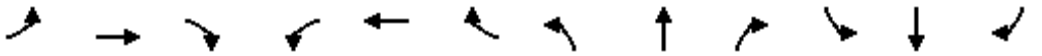
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	33	1	0	3	16	1323	0	0	1414	15
Future Volume (vph)	21	0	33	1	0	3	16	1323	0	0	1414	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted							0.950					
Satd. Flow (perm)	1792	1524	0	1900	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		169			173							84
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	21	0	34	1	0	3	16	1350	0	0	1443	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	1	3	0	16	1350	0	0	1443	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	22.0	22.0		22.0	22.0		9.0	34.0	34.0	9.0	34.0	34.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		13.8%	52.3%	52.3%	13.8%	52.3%	52.3%
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	30.0	30.0	5.0	30.0	30.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.4	6.4		6.4	6.4		5.0	43.8			42.1	42.1
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.10	0.83			0.80	0.80
v/c Ratio	0.10	0.10		0.00	0.01		0.11	0.51			0.55	0.01
Control Delay	21.8	0.6		20.0	0.0		24.4	3.6			5.9	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	21.8	0.6		20.0	0.0		24.4	3.6			5.9	0.0
LOS	C	A		B	A		C	A			A	A
Approach Delay		8.7			5.0			3.8			5.8	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 52.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 53.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

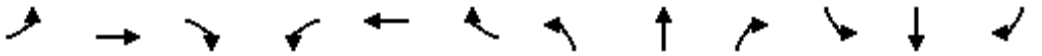




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	0	33	1	0	3	16	1323	0	0	1414	15
Future Volume (veh/h)	21	0	33	1	0	3	16	1323	0	0	1414	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	21	0	34	1	0	3	16	1350	0	0	1443	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	235	0	105	214	0	110	34	2444	1235	4	2192	1108
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.02	0.77	0.00	0.00	0.66	0.66
Sat Flow, veh/h	1369	0	1811	1396	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	21	0	34	1	0	3	16	1350	0	0	1443	15
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1396	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	0.7	0.0	0.8	0.0	0.0	0.1	0.4	7.8	0.0	0.0	11.9	0.1
Cycle Q Clear(g_c), s	0.7	0.0	0.8	0.9	0.0	0.1	0.4	7.8	0.0	0.0	11.9	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	0	105	214	0	110	34	2444	1235	4	2192	1108
V/C Ratio(X)	0.09	0.00	0.33	0.00	0.00	0.03	0.47	0.55	0.00	0.00	0.66	0.01
Avail Cap(c_a), veh/h	697	0	716	685	0	751	184	2444	1235	192	2192	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	20.6	21.0	0.0	20.3	22.1	2.2	0.0	0.0	4.7	2.7
Incr Delay (d2), s/veh	0.2	0.0	1.8	0.0	0.0	0.1	10.0	0.9	0.0	0.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.3	0.0	0.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	0.0	22.4	21.0	0.0	20.4	32.0	3.1	0.0	0.0	6.2	2.7
LnGrp LOS	C	A	C	C	A	C	C	A	A	A	A	A
Approach Vol, veh/h		55			4			1366			1458	
Approach Delay, s/veh		21.8			20.5			3.4			6.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	38.9		6.6	4.9	34.0		6.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	30.0		18.0	5.0	30.0		18.0				
Max Q Clear Time (g_c+I1), s	0.0	9.8		2.8	2.4	13.9		2.9				
Green Ext Time (p_c), s	0.0	9.3		0.1	0.0	8.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A



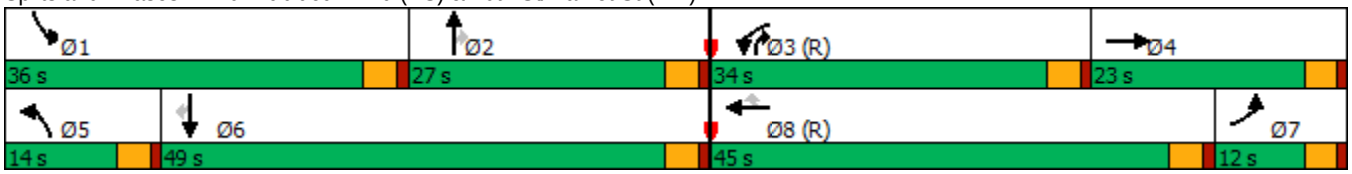
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	80	26	378	77	594	54	455	451	665	646	74
Future Volume (vph)	55	80	26	378	77	594	54	455	451	665	646	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.963				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1564	0	3273	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				582			218			118
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	57	82	27	390	79	612	56	469	465	686	666	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	109	0	390	79	612	56	469	465	686	666	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

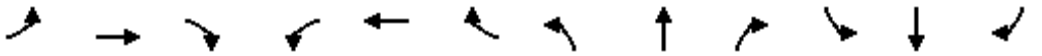
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	12.0	23.0		34.0	45.0	45.0	14.0	27.0	34.0	36.0	49.0	49.0
Total Split (%)	10.0%	19.2%		28.3%	37.5%	37.5%	11.7%	22.5%	28.3%	30.0%	40.8%	40.8%
Maximum Green (s)	8.0	19.0		30.0	41.0	41.0	10.0	23.0	30.0	32.0	45.0	45.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	7.6	16.7		30.0	41.1	41.1	8.6	28.5	62.5	28.8	50.6	50.6
Actuated g/C Ratio	0.06	0.14		0.25	0.34	0.34	0.07	0.24	0.52	0.24	0.42	0.42
v/c Ratio	0.59	0.48		0.48	0.13	0.68	0.49	0.59	0.55	0.86	0.44	0.11
Control Delay	78.9	48.7		52.4	44.7	29.2	67.6	45.7	13.4	54.8	27.3	1.5
Queue Delay	0.0	0.0		0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	78.9	48.7		52.4	44.7	29.5	67.6	45.7	13.6	54.8	27.3	1.5
LOS	E	D		D	D	C	E	D	B	D	C	A
Approach Delay		59.1			38.9			31.9			39.2	
Approach LOS		E			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 38.0		Intersection LOS: D	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

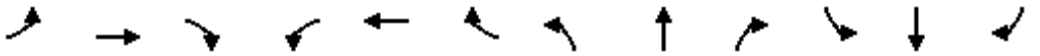




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	80	26	378	77	594	54	455	451	665	646	74
Future Volume (veh/h)	55	80	26	378	77	594	54	455	451	665	646	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	57	82	27	390	79	612	56	469	465	686	666	76
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	156	331	109	590	614	614	95	686	632	813	1369	685
Arrive On Green	0.09	0.27	0.27	0.17	0.34	0.34	0.06	0.20	0.20	0.23	0.38	0.38
Sat Flow, veh/h	1648	1240	408	3485	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	57	0	109	390	79	612	56	469	465	686	666	76
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1742	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.9	0.0	6.2	12.6	3.6	22.5	3.8	15.3	24.1	22.2	16.7	2.4
Cycle Q Clear(g_c), s	3.9	0.0	6.2	12.6	3.6	22.5	3.8	15.3	24.1	22.2	16.7	2.4
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	0	440	590	614	614	95	686	632	813	1369	685
V/C Ratio(X)	0.37	0.00	0.25	0.66	0.13	1.00	0.59	0.68	0.74	0.84	0.49	0.11
Avail Cap(c_a), veh/h	156	0	440	871	614	614	142	686	632	945	1369	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.56	0.56	0.56	0.84	0.84	0.84	0.82	0.82	0.82
Uniform Delay (d), s/veh	50.9	0.0	34.5	46.6	27.2	11.9	55.4	44.4	32.7	44.2	28.7	13.5
Incr Delay (d2), s/veh	1.4	0.0	0.3	0.7	0.2	26.5	4.9	4.6	6.3	5.2	1.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.5	5.4	1.6	12.4	1.7	6.7	12.2	9.9	7.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	0.0	34.8	47.3	27.4	38.5	60.3	49.0	39.0	49.4	29.7	13.7
LnGrp LOS	D	A	C	D	C	D	E	D	D	D	C	B
Approach Vol, veh/h		166			1081			990			1428	
Approach Delay, s/veh		40.8			40.9			45.0			38.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.5	28.1	24.3	36.0	10.6	49.0	15.4	45.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	32.0	23.0	30.0	19.0	10.0	45.0	8.0	41.0
Max Q Clear Time (g_c+I1), s	26.2	28.1	14.6	8.2	7.8	20.7	7.9	26.5
Green Ext Time (p_c), s	1.3	0.0	1.1	0.3	0.0	4.3	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

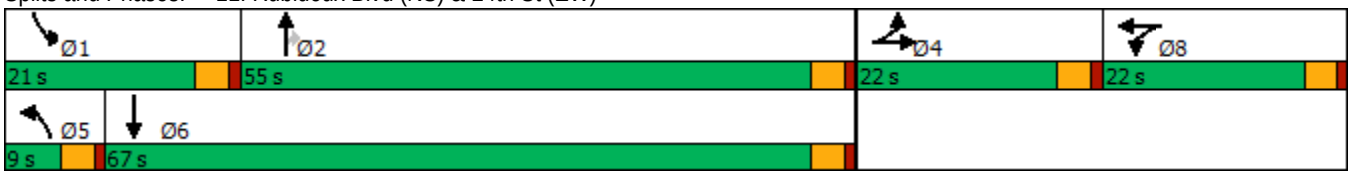


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	13	14	25	16	39	9	917	60	116	952	5
Future Volume (vph)	4	13	14	25	16	39	9	917	60	116	952	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.939			0.934				0.850		0.999	
Flt Protected		0.994			0.984		0.950			0.950		
Satd. Flow (prot)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Flt Permitted		0.994			0.984		0.950			0.950		
Satd. Flow (perm)	0	1673	0	0	1647	0	1504	3008	1166	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			34				118		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	4	13	14	26	16	40	9	945	62	120	981	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	82	0	9	945	62	120	986	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	55.0	55.0	21.0	67.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		7.5%	45.8%	45.8%	17.5%	55.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	51.0	51.0	17.0	63.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)		6.7			8.4		5.1	55.1	55.1	12.0	70.5	
Actuated g/C Ratio		0.07			0.09		0.06	0.60	0.60	0.13	0.77	
v/c Ratio		0.23			0.45		0.11	0.52	0.08	0.57	0.40	
Control Delay		34.0			35.2		49.3	15.3	0.3	50.1	6.8	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		34.0			35.2		49.3	15.3	0.3	50.1	6.8	
LOS		C			D		D	B	A	D	A	
Approach Delay		34.0			35.2			14.6			11.5	
Approach LOS		C			D			B			B	

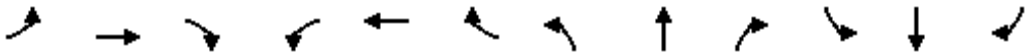
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 91.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	13	14	25	16	39	9	917	60	116	952	5
Future Volume (veh/h)	4	13	14	25	16	39	9	917	60	116	952	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	4	13	14	26	16	40	9	945	62	120	981	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	7	23	25	35	21	53	18	1947	984	151	2372	12
Arrive On Green	0.03	0.03	0.03	0.06	0.06	0.06	0.01	0.64	0.64	0.09	0.72	0.72
Sat Flow, veh/h	234	759	818	574	353	883	1604	3047	1539	1707	3312	17
Grp Volume(v), veh/h	31	0	0	82	0	0	9	945	62	120	480	506
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1539	1707	1622	1707
Q Serve(g_s), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.3	1.3	6.1	10.5	10.5
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.9	0.0	0.0	0.5	14.3	1.3	6.1	10.5	10.5
Prop In Lane	0.13		0.45	0.32		0.49	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	55	0	0	110	0	0	18	1947	984	151	1162	1223
V/C Ratio(X)	0.57	0.00	0.00	0.75	0.00	0.00	0.50	0.49	0.06	0.79	0.41	0.41
Avail Cap(c_a), veh/h	371	0	0	371	0	0	91	1947	984	330	1162	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	40.7	0.0	0.0	43.2	8.3	6.0	39.3	5.0	5.0
Incr Delay (d2), s/veh	8.9	0.0	0.0	9.7	0.0	0.0	19.9	0.9	0.1	9.1	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.0	0.0	0.0	0.3	3.7	0.4	2.8	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	50.4	0.0	0.0	63.1	9.2	6.1	48.4	6.1	6.1
LnGrp LOS	D	A	A	D	A	A	E	A	A	D	A	A
Approach Vol, veh/h		31			82			1016			1106	
Approach Delay, s/veh		51.0			50.4			9.5			10.7	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	60.2		6.7	5.0	67.0		9.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	17.0	51.0		18.0	5.0	63.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	16.3		3.5	2.5	12.5		5.9				
Green Ext Time (p_c), s	0.2	7.2		0.1	0.0	6.6		0.2				

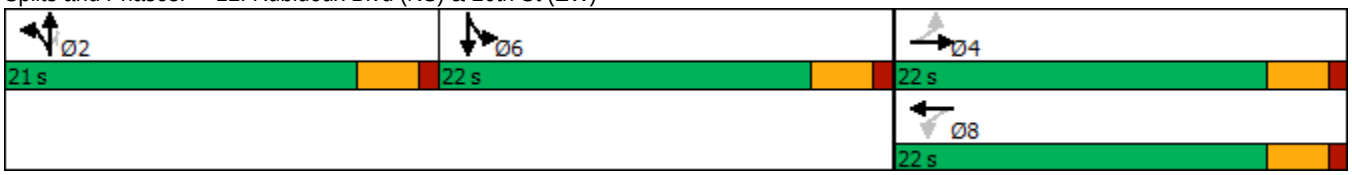
Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	11	0	19	7	990	24	16	998	3
Future Volume (vph)	0	0	10	11	0	19	7	990	24	16	998	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95
Frt		0.865			0.916				0.850			
Flt Protected					0.982						0.999	
Satd. Flow (prot)	0	1644	0	0	1378	0	0	3034	1176	0	3220	0
Flt Permitted											0.999	
Satd. Flow (perm)	0	1644	0	0	1404	0	0	3034	1176	0	3220	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		533			84				84			
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	11	12	0	20	7	1042	25	17	1051	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	32	0	0	1049	25	0	1071	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Split	NA	Perm	Split	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		21.0	21.0	21.0	22.0	22.0	
Total Split (%)	33.8%	33.8%		33.8%	33.8%		32.3%	32.3%	32.3%	33.8%	33.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		17.0	17.0	17.0	18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		5.6			5.6			18.2	18.2		18.2	
Actuated g/C Ratio		0.12			0.12			0.38	0.38		0.38	
v/c Ratio		0.02			0.14			0.91	0.05		0.88	
Control Delay		0.0			2.0			30.8	0.2		26.8	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		0.0			2.0			30.8	0.2		26.8	
LOS		A			A			C	A		C	
Approach Delay					2.0			30.1			26.8	
Approach LOS					A			C			C	

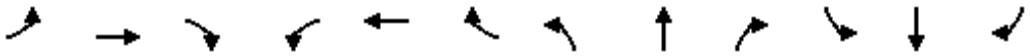
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 47.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)

10/08/2018



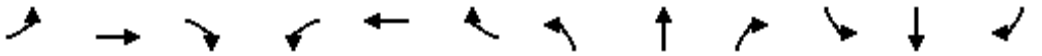
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	11	0	19	7	990	24	16	998	3
Future Volume (veh/h)	0	0	10	11	0	19	7	990	24	16	998	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	11	12	0	20	7	1042	25	17	1051	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	86	121	0	34	7	1083	537	19	1237	4
Arrive On Green	0.00	0.00	0.05	0.05	0.00	0.05	0.35	0.35	0.35	0.37	0.37	0.37
Sat Flow, veh/h	0	0	1900	451	0	752	20	3136	1554	52	3382	10
Grp Volume(v), veh/h	0	0	11	32	0	0	563	486	25	561	0	510
Grp Sat Flow(s),veh/h/ln	0	0	1900	1204	0	0	1618	1537	1554	1722	0	1722
Q Serve(g_s), s	0.0	0.0	0.3	1.1	0.0	0.0	17.0	14.9	0.5	15.1	0.0	13.1
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.4	0.0	0.0	17.0	14.9	0.5	15.1	0.0	13.1
Prop In Lane	0.00		1.00	0.37		0.62	0.01		1.00	0.03		0.01
Lane Grp Cap(c), veh/h	0	0	86	155	0	0	559	531	537	630	0	630
V/C Ratio(X)	0.00	0.00	0.13	0.21	0.00	0.00	1.01	0.92	0.05	0.89	0.00	0.81
Avail Cap(c_a), veh/h	0	0	695	595	0	0	559	531	537	630	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	23.2	0.0	0.0	16.1	15.4	10.7	14.7	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.7	0.0	0.0	39.7	23.0	0.2	17.2	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.4	0.0	0.0	10.6	7.1	0.2	7.1	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	23.2	23.9	0.0	0.0	55.8	38.4	10.9	31.9	0.0	24.9
LnGrp LOS	A	A	C	C	A	A	F	D	B	C	A	C
Approach Vol, veh/h		11			32			1074			1071	
Approach Delay, s/veh		23.2			23.9			46.9			28.6	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		6.2		22.0		6.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		17.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		19.0		2.3		17.1		3.4				
Green Ext Time (p_c), s		0.0		0.0		0.6		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			37.5									
HCM 6th LOS			D									

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	35	49	81	44	12	83	886	57	16	939	65
Future Volume (vph)	71	35	49	81	44	12	83	886	57	16	939	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.991			0.990	
Flt Protected		0.968			0.969		0.950			0.950		
Satd. Flow (prot)	0	1803	1372	0	1770	1346	1583	3138	0	1703	3372	0
Flt Permitted		0.717			0.736		0.950			0.950		
Satd. Flow (perm)	0	1336	1372	0	1345	1346	1583	3138	0	1703	3372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		13			14	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	77	38	53	88	48	13	90	963	62	17	1021	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	53	0	136	13	90	1025	0	17	1092	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.0	22.5		9.0	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	10.0	28.4		9.0	27.4	
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	37.7%	16.7%	47.3%		15.0%	45.7%	
Maximum Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	6.0	24.4		5.0	23.4	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		10.1	10.1		10.1	10.1	6.0	34.4		5.0	28.3	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.12	0.68		0.10	0.56	
v/c Ratio		0.44	0.15		0.51	0.04	0.49	0.48		0.10	0.58	
Control Delay		23.3	2.9		25.3	0.2	33.5	7.9		24.4	12.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.3	2.9		25.3	0.2	33.5	7.9		24.4	12.8	
LOS		C	A		C	A	C	A		C	B	
Approach Delay		16.9			23.1			10.0			12.9	
Approach LOS		B			C			A			B	

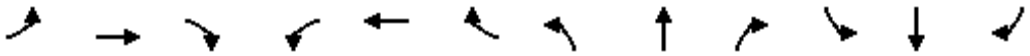
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 50.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)



HCM 6th Signalized Intersection Summary
13: Rubidoux Blvd (NS) & 28th St (EW)

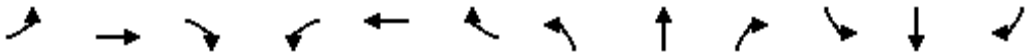
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	35	49	81	44	12	83	886	57	16	939	65
Future Volume (veh/h)	71	35	49	81	44	12	83	886	57	16	939	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	77	38	53	88	48	13	90	963	62	17	1021	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	101	31	562	100	34	553	155	1441	93	37	1300	90
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.46	0.46	0.02	0.39	0.39
Sat Flow, veh/h	0	99	1796	0	108	1767	1693	3101	200	1811	3302	230
Grp Volume(v), veh/h	115	0	53	136	0	13	90	499	526	17	532	560
Grp Sat Flow(s),veh/h/ln	99	0	1796	108	0	1767	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	0.0	0.0	1.2	0.0	0.0	0.3	3.0	14.3	14.3	0.6	16.1	16.1
Cycle Q Clear(g_c), s	18.6	0.0	1.2	18.6	0.0	0.3	3.0	14.3	14.3	0.6	16.1	16.1
Prop In Lane	0.67		1.00	0.65		1.00	1.00		0.12	1.00		0.13
Lane Grp Cap(c), veh/h	132	0	562	134	0	553	155	747	786	37	677	713
V/C Ratio(X)	0.87	0.00	0.09	1.02	0.00	0.02	0.58	0.67	0.67	0.46	0.79	0.79
Avail Cap(c_a), veh/h	132	0	562	134	0	553	171	747	786	152	677	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	14.5	25.2	0.0	14.1	25.9	12.4	12.4	28.8	15.8	15.8
Incr Delay (d2), s/veh	42.2	0.0	0.1	82.9	0.0	0.0	4.1	4.7	4.5	8.5	8.9	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.5	4.9	0.0	0.1	1.2	4.6	4.8	0.3	6.5	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.0	0.0	14.5	108.0	0.0	14.2	30.0	17.1	16.8	37.2	24.7	24.3
LnGrp LOS	E	A	B	F	A	B	C	B	B	D	C	C
Approach Vol, veh/h		168			149			1115			1109	
Approach Delay, s/veh		50.5			99.8			18.0			24.7	
Approach LOS		D			F			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	31.6		22.6	9.4	27.4		22.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.4		18.6	6.0	23.4		18.6				
Max Q Clear Time (g_c+I1), s	4.6	18.3		20.6	7.0	20.1		20.6				
Green Ext Time (p_c), s	0.0	2.9		0.0	0.0	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.9	
HCM 6th LOS		C	

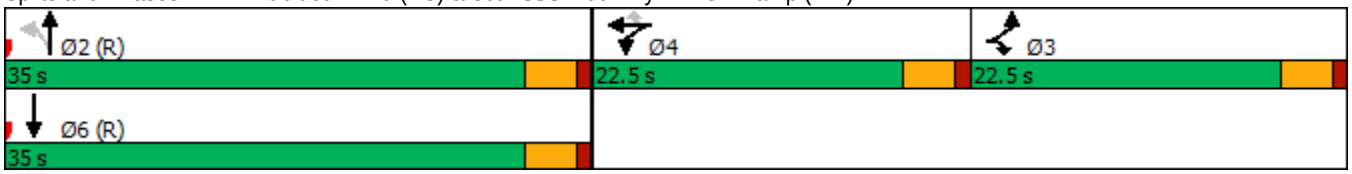


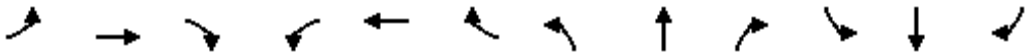
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	164	502	136	95	86	927	0	0	1092	26
Future Volume (vph)	34	0	164	502	136	95	86	927	0	0	1092	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	77		0	0		0
Storage Lanes	1		1	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850					0.996	
Flt Protected	0.950			0.950	0.972		0.950					
Satd. Flow (prot)	1736	0	1346	1681	1720	1372	1597	3195	0	0	3269	0
Flt Permitted	0.950			0.950	0.972		0.123					
Satd. Flow (perm)	1736	0	1346	1681	1720	1372	207	3195	0	0	3269	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			68					3	
Link Speed (mph)		30			30			40			50	
Link Distance (ft)		785			262			178			1593	
Travel Time (s)		17.8			6.0			3.0			21.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	13%	13%	13%	10%	10%	10%
Adj. Flow (vph)	36	0	174	534	145	101	91	986	0	0	1162	28
Shared Lane Traffic (%)				37%								
Lane Group Flow (vph)	36	0	174	336	343	101	91	986	0	0	1190	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2			2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)	20		20	20	100	20	20	100			100	
Trailing Detector (ft)	0		0	0	0	0	0	0			0	
Detector 1 Position(ft)	0		0	0	0	0	0	0			0	
Detector 1 Size(ft)	20		20	20	6	20	20	6			6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		Prot	Split	NA	Perm	Perm	NA			NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3		3	4	4			2			6	
Permitted Phases						4	2					
Detector Phase	3		3	4	4	4	2	2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0	5.0			5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5	22.5	22.5			22.5	
Total Split (s)	22.5		22.5	22.5	22.5	22.5	35.0	35.0			35.0	
Total Split (%)	28.1%		28.1%	28.1%	28.1%	28.1%	43.8%	43.8%			43.8%	
Maximum Green (s)	18.5		18.5	18.5	18.5	18.5	31.0	31.0			31.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	4.0	4.0			4.0	
Lead/Lag	Lag		Lag	Lead	Lead	Lead						
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	
Recall Mode	None		None	None	None	None	C-Max	C-Max			C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0		0	0	0	0	0	0			0	
Act Effct Green (s)	11.9		11.9	17.9	17.9	17.9	38.2	38.2			38.2	
Actuated g/C Ratio	0.15		0.15	0.22	0.22	0.22	0.48	0.48			0.48	
v/c Ratio	0.14		0.67	0.90	0.89	0.28	0.93	0.65			0.76	
Control Delay	28.1		31.8	58.2	57.4	13.0	101.8	19.5			23.2	
Queue Delay	0.0		0.0	0.6	0.7	0.0	0.0	3.7			0.8	
Total Delay	28.1		31.8	58.8	58.1	13.0	101.8	23.2			24.0	
LOS	C		C	E	E	B	F	C			C	
Approach Delay		31.2			52.6			29.8			24.0	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 33.2		Intersection LOS: C	
Intersection Capacity Utilization 69.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: Rubidoux Blvd (NS) & 30th St/SR-60 Fwy WB Off-Ramp (EW)





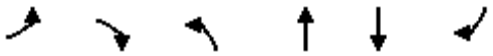
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	164	502	136	95	86	927	0	0	1092	26
Future Volume (veh/h)	34	0	164	502	136	95	86	927	0	0	1092	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	0	1767	1870	1870	1796	1707	1707	0	0	1752	1752
Adj Flow Rate, veh/h	36	0	174	340	417	101	91	986	0	0	1162	28
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	0	4	2	2	2	13	13	0	0	10	10
Cap, veh/h	0	0	0	433	433	415	301	2169	0	0	2231	54
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	1.00	1.00	0.00	0.00	0.67	0.67
Sat Flow, veh/h		0		1870	1870	1796	430	3329	0	0	3423	80
Grp Volume(v), veh/h		0.0		340	417	101	91	986	0	0	580	610
Grp Sat Flow(s),veh/h/ln				1870	1870	1796	430	1622	0	0	1664	1752
Q Serve(g_s), s				13.7	17.6	3.7	6.6	0.0	0.0	0.0	14.2	14.2
Cycle Q Clear(g_c), s				13.7	17.6	3.7	20.7	0.0	0.0	0.0	14.2	14.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h				433	433	415	301	2169	0	0	1113	1172
V/C Ratio(X)				0.79	0.96	0.24	0.30	0.45	0.00	0.00	0.52	0.52
Avail Cap(c_a), veh/h				433	433	415	301	2169	0	0	1113	1172
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.95	0.95	0.00	0.00	0.81	0.81
Uniform Delay (d), s/veh				28.9	30.4	25.0	2.7	0.0	0.0	0.0	6.7	6.7
Incr Delay (d2), s/veh				9.3	34.0	0.3	2.4	0.7	0.0	0.0	1.4	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.0	11.7	1.6	0.3	0.2	0.0	0.0	3.6	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.2	64.4	25.3	5.2	0.7	0.0	0.0	8.2	8.1
LnGrp LOS				D	E	C	A	A	A	A	A	A
Approach Vol, veh/h					858			1077			1190	
Approach Delay, s/veh					49.4			1.0			8.1	
Approach LOS					D			A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	57.5	22.5	57.5
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	18.5	31.0
Max Q Clear Time (g_c+I1), s	22.7	19.6	16.2
Green Ext Time (p_c), s	4.6	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

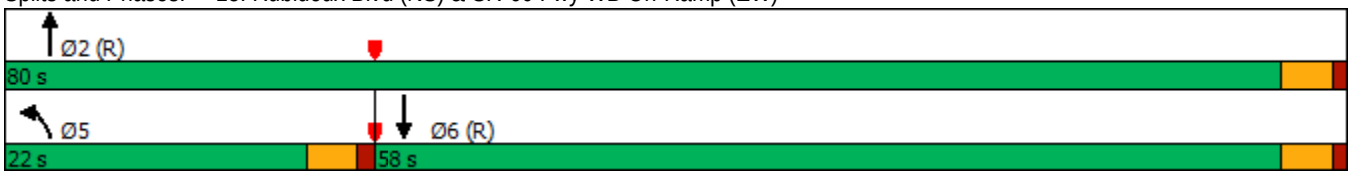


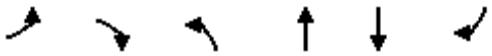
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	252	1031	1137	603
Future Volume (vph)	0	0	252	1031	1137	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	105			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.948	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1612	3223	3229	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1612	3223	3229	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					234	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1099			374	178	
Travel Time (s)	25.0			6.4	3.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	12%	12%	6%	6%
Adj. Flow (vph)	0	0	265	1085	1197	635
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	265	1085	1832	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors			1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)			20	100	100	
Trailing Detector (ft)			0	0	0	
Detector 1 Position(ft)			0	0	0	
Detector 1 Size(ft)			20	6	6	
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)			0.0	0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases						
Detector Phase			5	2	6	
Switch Phase						
Minimum Initial (s)			5.0	5.0	5.0	
Minimum Split (s)			9.0	22.0	22.0	
Total Split (s)			22.0	80.0	58.0	
Total Split (%)			27.5%	100.0%	72.5%	
Maximum Green (s)			18.0	76.0	54.0	
Yellow Time (s)			3.0	3.0	3.0	
All-Red Time (s)			1.0	1.0	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)			3.0	3.0	3.0	
Recall Mode			None	C-Max	C-Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)			16.4	80.0	55.6	
Actuated g/C Ratio			0.20	1.00	0.70	
v/c Ratio			0.80	0.34	0.79	
Control Delay			43.4	0.2	5.4	
Queue Delay			0.0	0.2	2.4	
Total Delay			43.4	0.4	7.8	
LOS			D	A	A	
Approach Delay				8.8	7.8	
Approach LOS				A	A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

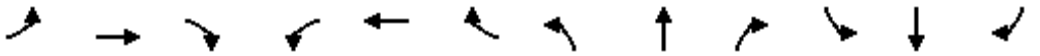




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	252	1031	1137	603
Future Volume (veh/h)	0	0	252	1031	1137	603
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Work Zone On Approach				No	No	
Adj Sat Flow, veh/h/ln			1722	1722	1811	1811
Adj Flow Rate, veh/h			265	1085	1197	635
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			12	12	6	6
Cap, veh/h			299	3108	1677	889
Arrive On Green			0.35	1.00	1.00	1.00
Sat Flow, veh/h			1722	3358	2398	1224
Grp Volume(v), veh/h			265	1085	893	939
Grp Sat Flow(s),veh/h/ln			1722	1636	1721	1811
Q Serve(g_s), s			11.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s			11.6	0.0	0.0	0.0
Prop In Lane			1.00			0.68
Lane Grp Cap(c), veh/h			299	3108	1250	1316
V/C Ratio(X)			0.89	0.35	0.71	0.71
Avail Cap(c_a), veh/h			387	3108	1250	1316
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.76	0.76	0.53	0.53
Uniform Delay (d), s/veh			25.4	0.0	0.0	0.0
Incr Delay (d2), s/veh			14.2	0.2	1.9	1.8
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			4.8	0.1	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh			39.6	0.2	1.9	1.8
LnGrp LOS			D	A	A	A
Approach Vol, veh/h				1350	1832	
Approach Delay, s/veh				8.0	1.8	
Approach LOS				A	A	

Timer - Assigned Phs	2			5	6
Phs Duration (G+Y+Rc), s	80.0			17.9	62.1
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	76.0			18.0	54.0
Max Q Clear Time (g_c+I1), s	2.0			13.6	2.0
Green Ext Time (p_c), s	9.9			0.3	22.4

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

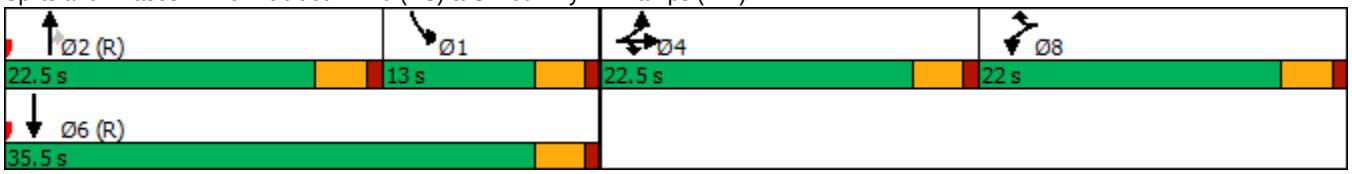


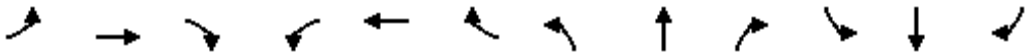
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	587	36	405	15	0	4	0	680	337	171	961	0
Future Volume (vph)	587	36	405	15	0	4	0	680	337	171	961	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.958		0.950						0.950		
Satd. Flow (prot)	1504	1517	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.958		0.950						0.950		
Satd. Flow (perm)	1504	1517	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			259			123			359			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	624	38	431	16	0	4	0	723	359	182	1022	0
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	331	331	431	16	0	4	0	723	359	182	1022	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	13.0	35.5	
Total Split (%)	28.1%	28.1%	28.1%	27.5%		27.5%		28.1%	28.1%	16.3%	44.4%	
Maximum Green (s)	18.5	18.5	18.5	18.0		18.0		18.5	18.5	9.0	31.5	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	18.5	18.5	18.5	6.3		6.3		36.0	36.0	9.0	49.0	
Actuated g/C Ratio	0.23	0.23	0.23	0.08		0.08		0.45	0.45	0.11	0.61	
v/c Ratio	0.95	0.95	0.89	0.11		0.02		0.45	0.39	0.91	0.47	
Control Delay	71.1	69.2	35.4	35.5		0.2		17.5	3.6	67.5	10.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.5	
Total Delay	71.1	69.2	35.4	35.5		0.2		17.5	3.6	67.5	11.1	
LOS	E	E	D	D		A		B	A	E	B	
Approach Delay		56.5			28.5			12.9			19.6	
Approach LOS		E			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	36	405	15	0	4	0	680	337	171	961	0
Future Volume (veh/h)	587	36	405	15	0	4	0	680	337	171	961	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	651	0	431	16	0	4	0	723	359	182	1022	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	783	0	376	0	0	0	0	822	433	725	2377	0
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.23	0.13	0.22	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	651	0	431		0.0		0	723	359	182	1022	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	14.6	0.0	18.5				0.0	15.7	14.6	7.0	19.8	0.0
Cycle Q Clear(g_c), s	14.6	0.0	18.5				0.0	15.7	14.6	7.0	19.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	783	0	376				0	822	433	725	2377	0
V/C Ratio(X)	0.83	0.00	1.15				0.00	0.88	0.83	0.25	0.43	0.00
Avail Cap(c_a), veh/h	783	0	376				0	822	433	725	2377	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.51	0.51	0.00
Uniform Delay (d), s/veh	29.3	0.0	30.7				0.0	29.7	29.3	24.4	18.0	0.0
Incr Delay (d2), s/veh	7.6	0.0	92.8				0.0	12.3	15.8	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	16.6				0.0	7.6	8.0	3.1	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.0	123.6				0.0	42.0	45.1	24.5	18.3	0.0
LnGrp LOS	D	A	F				A	D	D	C	B	A
Approach Vol, veh/h		1082						1082			1204	
Approach Delay, s/veh		71.4						43.0			19.3	
Approach LOS		E						D			B	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	35.0	22.5		22.5		57.5						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	9.0	18.5		18.5		31.5						
Max Q Clear Time (g_c+I1), s	11.0	19.7		22.5		23.8						
Green Ext Time (p_c), s	0.0	0.0		0.0		3.9						

Intersection Summary												
HCM 6th Ctrl Delay			43.6									
HCM 6th LOS			D									

Notes

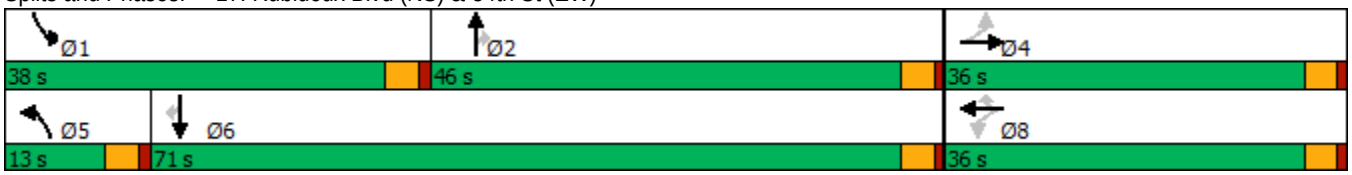
User approved volume balancing among the lanes for turning movement.

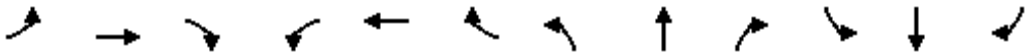
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	58	13	15	38	119	32	630	67	227	1021	159
Future Volume (vph)	105	58	13	15	38	119	32	630	67	227	1021	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.990				0.850			0.850			0.850
Flt Protected		0.971			0.986		0.950			0.950		
Satd. Flow (prot)	0	1773	0	0	1873	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.785			0.913		0.950			0.950		
Satd. Flow (perm)	0	1434	0	0	1735	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				124			82			68
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	109	60	14	16	40	124	33	656	70	236	1064	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	56	124	33	656	70	236	1064	166
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0		36.0	36.0	36.0	13.0	46.0	46.0	38.0	71.0	71.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	10.8%	38.3%	38.3%	31.7%	59.2%	59.2%
Maximum Green (s)	32.0	32.0		32.0	32.0	32.0	9.0	42.0	42.0	34.0	67.0	67.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		17.8			17.8	17.8	7.3	51.9	51.9	18.7	67.9	67.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.52	0.52	0.19	0.67	0.67
v/c Ratio		0.72			0.18	0.36	0.26	0.37	0.10	0.72	0.45	0.18
Control Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.1			37.3	9.6	53.1	17.2	3.7	52.4	10.2	5.8
LOS		E			D	A	D	B	A	D	B	A
Approach Delay		55.1			18.2			17.5			16.5	
Approach LOS		E			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 100.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	58	13	15	38	119	32	630	67	227	1021	159
Future Volume (veh/h)	105	58	13	15	38	119	32	630	67	227	1021	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	109	60	14	16	40	124	33	656	70	236	1064	166
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	178	83	17	104	234	306	64	1902	961	310	2384	1205
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.54	0.54	0.17	0.68	0.68
Sat Flow, veh/h	713	495	100	343	1393	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	183	0	0	56	0	124	33	656	70	236	1064	166
Grp Sat Flow(s),veh/h/ln	1308	0	0	1736	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	11.2	0.0	0.0	0.0	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Cycle Q Clear(g_c), s	13.7	0.0	0.0	2.5	0.0	6.0	1.7	10.4	1.9	12.0	13.9	3.3
Prop In Lane	0.60		0.08	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	0	0	338	0	306	64	1902	961	310	2384	1205
V/C Ratio(X)	0.66	0.00	0.00	0.17	0.00	0.40	0.52	0.34	0.07	0.76	0.45	0.14
Avail Cap(c_a), veh/h	496	0	0	602	0	589	167	1902	961	637	2384	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	0.0	35.3	0.0	36.8	47.0	12.7	10.7	39.4	7.4	5.7
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.0	0.9	6.3	0.5	0.1	3.9	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	1.2	0.0	2.8	0.9	3.8	0.7	5.6	4.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	0.0	35.6	0.0	37.7	53.3	13.2	10.9	43.2	8.0	6.0
LnGrp LOS	D	A	A	D	A	D	D	B	B	D	A	A
Approach Vol, veh/h		183			180			759			1466	
Approach Delay, s/veh		43.1			37.0			14.7			13.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	57.9		20.6	7.4	71.0		20.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	34.0	42.0		32.0	9.0	67.0		32.0				
Max Q Clear Time (g_c+I1), s	16.0	14.4		15.7	5.7	17.9		10.0				
Green Ext Time (p_c), s	0.6	4.7		1.0	0.0	9.9		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	580	20	16	801	0	40
Future Volume (vph)	580	20	16	801	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	611	21	17	843	0	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	611	21	17	843	0	42
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	580	20	16	801	0	40
Future Vol, veh/h	580	20	16	801	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	611	21	17	843	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	632	0	-	306
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	834	-	0	696
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	834	-	-	696
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	696	-	-	834	-
HCM Lane V/C Ratio	0.06	-	-	0.02	-
HCM Control Delay (s)	10.5	-	-	9.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

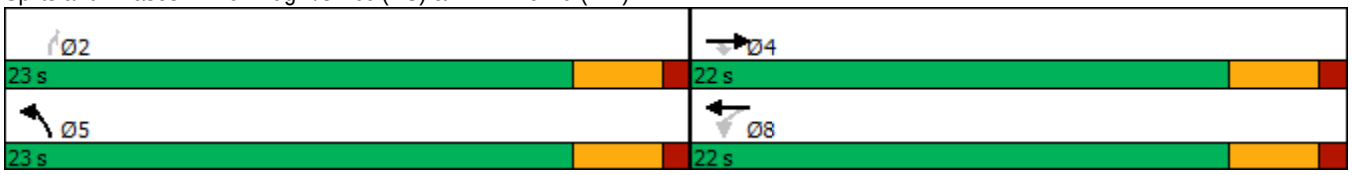


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	554	65	7	677	140	27
Future Volume (vph)	554	65	7	677	140	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.432		0.950	
Satd. Flow (perm)	2983	1335	684	3008	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68				28
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	583	68	7	713	147	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	583	68	7	713	147	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	12.5	12.5	12.5	12.5	7.9	7.6
Actuated g/C Ratio	0.44	0.44	0.44	0.44	0.28	0.27
v/c Ratio	0.45	0.11	0.02	0.54	0.29	0.06
Control Delay	6.9	2.3	5.0	7.7	10.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.3	5.0	7.7	10.8	5.0
LOS	A	A	A	A	B	A
Approach Delay	6.4			7.7	9.9	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 28.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 33.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

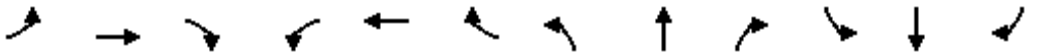




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	554	65	7	677	140	27
Future Volume (veh/h)	554	65	7	677	140	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1589	1589	1604	1604	1900	1900
Adj Flow Rate, veh/h	583	68	7	713	147	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	21	20	20	0	0
Cap, veh/h	1357	714	569	1369	294	294
Arrive On Green	0.45	0.45	0.45	0.45	0.15	0.15
Sat Flow, veh/h	3098	1589	670	3127	1900	1900
Grp Volume(v), veh/h	583	68	7	713	147	28
Grp Sat Flow(s),veh/h/ln	1509	1589	670	1523	1900	1900
Q Serve(g_s), s	2.7	0.5	0.1	3.4	1.4	0.3
Cycle Q Clear(g_c), s	2.7	0.5	2.8	3.4	1.4	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1357	714	569	1369	294	294
V/C Ratio(X)	0.43	0.10	0.01	0.52	0.50	0.10
Avail Cap(c_a), veh/h	2688	1415	864	2713	1786	1786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.8	3.2	4.8	4.0	7.8	7.3
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.0	3.3	4.8	4.3	9.1	7.5
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	651			720	175	
Approach Delay, s/veh	3.9			4.3	8.9	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		7.1		13.1		13.1
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		3.4		4.7		5.4
Green Ext Time (p_c), s		0.4		3.2		3.7

Intersection Summary		
HCM 6th Ctrl Delay		4.7
HCM 6th LOS		A

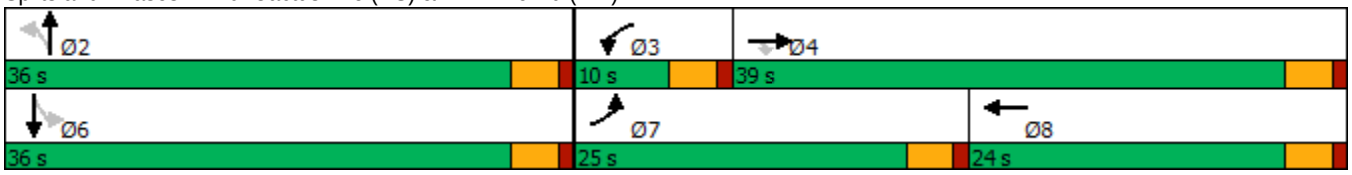


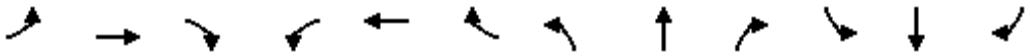
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	386	43	24	255	122	114	6	68	178	3	308
Future Volume (vph)	153	386	43	24	255	122	114	6	68	178	3	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.951			0.862			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2985	0	1805	1638	0	1556	1394	0
Flt Permitted	0.950			0.950			0.469			0.706		
Satd. Flow (perm)	1399	2798	1252	1570	2985	0	891	1638	0	1156	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			64		89			72			328	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	163	411	46	26	271	130	121	6	72	189	3	328
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	411	46	26	401	0	121	78	0	189	331	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	25.0	39.0	39.0	10.0	24.0		36.0	36.0		36.0	36.0	
Total Split (%)	29.4%	45.9%	45.9%	11.8%	28.2%		42.4%	42.4%		42.4%	42.4%	
Maximum Green (s)	21.0	35.0	35.0	6.0	20.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	13.5	27.3	27.3	5.9	13.2		32.4	32.4		32.4	32.4	
Actuated g/C Ratio	0.19	0.38	0.38	0.08	0.18		0.45	0.45		0.45	0.45	
v/c Ratio	0.62	0.38	0.09	0.20	0.64		0.30	0.10		0.36	0.41	
Control Delay	37.6	17.6	3.2	38.2	26.1		18.0	5.3		17.9	4.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.6	17.6	3.2	38.2	26.1		18.0	5.3		17.9	4.0	
LOS	D	B	A	D	C		B	A		B	A	
Approach Delay		21.8			26.8			13.0			9.0	
Approach LOS		C			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 71.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	386	43	24	255	122	114	6	68	178	3	308
Future Volume (veh/h)	153	386	43	24	255	122	114	6	68	178	3	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	163	411	46	26	271	130	121	6	72	189	3	328
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	200	785	413	49	384	184	516	73	880	677	8	827
Arrive On Green	0.14	0.28	0.28	0.03	0.17	0.17	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1470	2793	1470	1678	2211	1061	1066	146	1754	1174	15	1648
Grp Volume(v), veh/h	163	411	46	26	195	206	121	0	78	189	0	331
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1066	0	1900	1174	0	1663
Q Serve(g_s), s	6.9	7.9	1.5	1.0	7.4	7.4	5.1	0.0	1.4	6.4	0.0	7.9
Cycle Q Clear(g_c), s	6.9	7.9	1.5	1.0	7.4	7.4	13.0	0.0	1.4	7.7	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.63	1.00		0.92	1.00		0.99
Lane Grp Cap(c), veh/h	200	785	413	49	277	292	516	0	954	677	0	835
V/C Ratio(X)	0.81	0.52	0.11	0.54	0.71	0.71	0.23	0.00	0.08	0.28	0.00	0.40
Avail Cap(c_a), veh/h	484	1533	807	158	500	526	516	0	954	677	0	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	19.3	17.0	30.5	24.8	24.8	13.9	0.0	8.2	10.3	0.0	9.9
Incr Delay (d2), s/veh	7.8	0.5	0.1	8.9	3.3	3.1	1.1	0.0	0.2	1.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	2.4	0.5	0.5	2.9	3.0	1.3	0.0	0.5	1.6	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	19.9	17.1	39.4	28.1	27.9	15.0	0.0	8.4	11.3	0.0	11.3
LnGrp LOS	C	B	B	D	C	C	B	A	A	B	A	B
Approach Vol, veh/h		620			427			199			520	
Approach Delay, s/veh		23.5			28.7			12.4			11.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		36.0	5.8	21.9		36.0	12.7	15.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		32.0	6.0	35.0		32.0	21.0	20.0				
Max Q Clear Time (g_c+I1), s		15.0	3.0	9.9		9.9	8.9	9.4				
Green Ext Time (p_c), s		0.8	0.0	3.0		2.8	0.3	1.7				

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	622	10	2	400	0	0
Future Volume (vph)	622	10	2	400	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1900
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1900
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	655	11	2	421	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	655	11	2	421	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.5%		ICU Level of Service A	
Analysis Period (min) 15			

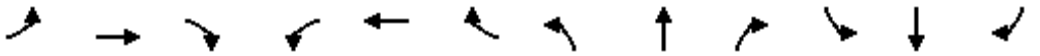
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	622	10	2	400	0	0
Future Vol, veh/h	622	10	2	400	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	655	11	2	421	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	666	0	-	328
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	837	-	0	674
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	837	-	-	674
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	837	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	9.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



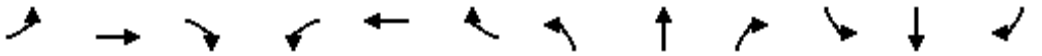
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	348	176	4	206	9	169	1	12	3	4	5
Future Volume (vph)	8	348	176	4	206	9	169	1	12	3	4	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.994			0.861			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1456	0	1583	1657	0	1517	1375	0	1805	1729	0
Flt Permitted	0.573			0.241			0.751			0.748		
Satd. Flow (perm)	878	1456	0	402	1657	0	1199	1375	0	1421	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			4			13			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	387	196	4	229	10	188	1	13	3	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	583	0	4	239	0	188	14	0	3	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	61.0	61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)	64.2%	64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Maximum Green (s)	57.0	57.0		57.0	57.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	31.7	31.7		31.7	31.7		30.7	30.7		30.7	30.7	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.43	0.43		0.43	0.43	
v/c Ratio	0.02	0.86		0.02	0.32		0.36	0.02		0.00	0.01	
Control Delay	9.2	28.6		9.5	12.6		19.5	9.9		17.0	12.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.2	28.6		9.5	12.6		19.5	9.9		17.0	12.7	
LOS	A	C		A	B		B	A		B	B	
Approach Delay		28.3			12.5			18.8			13.7	
Approach LOS		C			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 70.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

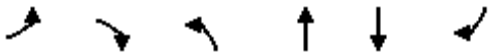




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	348	176	4	206	9	169	1	12	3	4	5
Future Volume (veh/h)	8	348	176	4	206	9	169	1	12	3	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	387	196	4	229	10	188	1	13	3	4	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	427	443	225	174	701	31	649	52	673	738	340	511
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	942	1025	519	753	1622	71	1216	116	1503	1422	760	1140
Grp Volume(v), veh/h	9	0	583	4	0	239	188	0	14	3	0	10
Grp Sat Flow(s),veh/h/ln	942	0	1544	753	0	1693	1216	0	1618	1422	0	1900
Q Serve(g_s), s	0.4	0.0	23.0	0.3	0.0	6.2	6.8	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	6.7	0.0	23.0	23.4	0.0	6.2	7.0	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.34	1.00		0.04	1.00		0.93	1.00		0.60
Lane Grp Cap(c), veh/h	427	0	668	174	0	732	649	0	725	738	0	851
V/C Ratio(X)	0.02	0.00	0.87	0.02	0.00	0.33	0.29	0.00	0.02	0.00	0.00	0.01
Avail Cap(c_a), veh/h	822	0	1315	489	0	1441	649	0	725	738	0	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	17.3	28.0	0.0	12.6	12.2	0.0	10.3	10.4	0.0	10.3
Incr Delay (d2), s/veh	0.0	0.0	3.8	0.1	0.0	0.3	1.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	7.2	0.1	0.0	2.0	1.9	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	0.0	21.1	28.0	0.0	12.8	13.3	0.0	10.3	10.4	0.0	10.3
LnGrp LOS	B	A	C	C	A	B	B	A	B	B	A	B
Approach Vol, veh/h		592			243			202			13	
Approach Delay, s/veh		21.0			13.1			13.1			10.3	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		33.0		34.0		33.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		30.0		57.0		30.0		57.0				
Max Q Clear Time (g_c+I1), s		9.0		25.0		2.4		25.4				
Green Ext Time (p_c), s		0.7		3.9		0.0		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			17.5									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	27	9	162	178	6
Future Volume (vph)	20	27	9	162	178	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	21	28	9	171	187	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	28	9	171	187	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

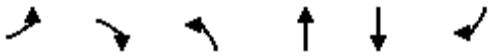
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	27	9	162	178	6
Future Vol, veh/h	20	27	9	162	178	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	21	28	9	171	187	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	376	187	193	0	-	0
Stage 1	187	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	629	860	1285	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	625	860	1285	-	-	-
Mov Cap-2 Maneuver	625	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1285	-	625	860	-	-
HCM Lane V/C Ratio	0.007	-	0.034	0.033	-	-
HCM Control Delay (s)	7.8	-	11	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

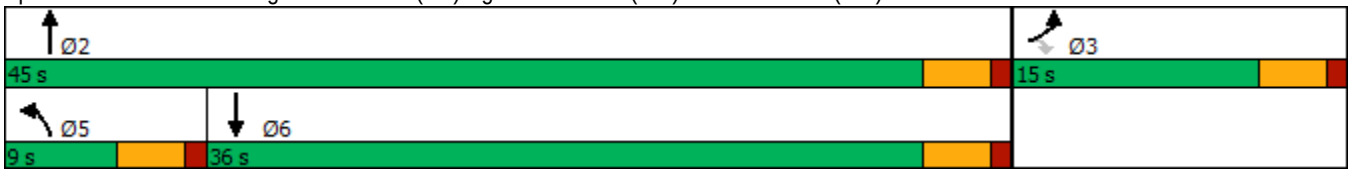


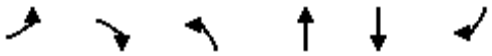
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	44	44	792	452	112
Future Volume (vph)	174	44	44	792	452	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.973	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1491	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1491	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45			32	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	179	45	45	816	466	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	45	45	816	581	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	15.0	15.0	9.0	45.0	36.0	
Total Split (%)	25.0%	25.0%	15.0%	75.0%	60.0%	
Maximum Green (s)	11.0	11.0	5.0	41.0	32.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	10.0	10.0	5.0	45.8	40.3	
Actuated g/C Ratio	0.16	0.16	0.08	0.75	0.66	
v/c Ratio	0.63	0.15	0.36	0.68	0.58	
Control Delay	33.7	9.0	34.7	9.4	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.7	9.0	34.7	9.4	11.6	
LOS	C	A	C	A	B	
Approach Delay	28.7			10.7	11.6	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	174	44	44	792	452	112
Future Volume (veh/h)	174	44	44	792	452	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	179	45	45	816	466	115
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	237	237	73	1180	759	187
Arrive On Green	0.13	0.13	0.04	0.73	0.61	0.61
Sat Flow, veh/h	1841	1841	1618	1618	1239	306
Grp Volume(v), veh/h	179	45	45	816	0	581
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	5.3	1.2	1.5	15.5	0.0	13.1
Cycle Q Clear(g_c), s	5.3	1.2	1.5	15.5	0.0	13.1
Prop In Lane	1.00	1.00	1.00			0.20
Lane Grp Cap(c), veh/h	237	237	73	1180	0	947
V/C Ratio(X)	0.75	0.19	0.62	0.69	0.00	0.61
Avail Cap(c_a), veh/h	360	360	144	1180	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	21.9	26.4	4.2	0.0	6.8
Incr Delay (d2), s/veh	4.8	0.4	8.3	3.3	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.5	0.7	2.2	0.0	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.5	22.3	34.7	7.5	0.0	9.7
LnGrp LOS	C	C	C	A	A	A
Approach Vol, veh/h	224			861	581	
Approach Delay, s/veh	27.2			8.9	9.7	
Approach LOS	C			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		45.0			6.5	38.5	11.2
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		41.0			5.0	32.0	11.0
Max Q Clear Time (g_c+I1), s		17.5			3.5	15.1	7.3
Green Ext Time (p_c), s		5.8			0.0	3.3	0.2

Intersection Summary		
HCM 6th Ctrl Delay		11.7
HCM 6th LOS		B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	133	730	12	29	407
Future Volume (vph)	49	133	730	12	29	407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.997			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3025	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3025	0	1421	1496
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	51	139	760	13	30	424
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	139	773	0	30	424
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.5%		ICU Level of Service A	
Analysis Period (min) 15			

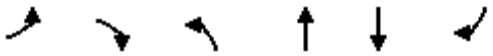
Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	133	730	12	29	407
Future Vol, veh/h	49	133	730	12	29	407
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	16	16	19	19	27	27
Mvmt Flow	51	139	760	13	30	424

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1251	387	0	0	773	0
Stage 1	767	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.84	7.14	-	-	4.505	-
Critical Hdwy Stg 1	6.04	-	-	-	-	-
Critical Hdwy Stg 2	5.64	-	-	-	-	-
Follow-up Hdwy	3.652	3.452	-	-	2.4565	-
Pot Cap-1 Maneuver	162	579	-	-	717	-
Stage 1	392	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	155	579	-	-	717	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	376	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	155	579	717	-
HCM Lane V/C Ratio	-	-	0.329	0.239	0.042	-
HCM Control Delay (s)	-	-	39.2	13.2	10.2	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.9	0.1	-



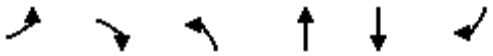
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	177	110	490	406	35
Future Volume (vph)	84	177	110	490	406	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		219				43
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	104	219	136	605	501	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	104	219	136	605	501	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	11.0	33.0	22.0	22.0
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	40.0%
Maximum Green (s)	18.0	18.0	7.0	29.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	8.7	8.7	7.2	26.2	18.0	18.0
Actuated g/C Ratio	0.22	0.22	0.18	0.67	0.46	0.46
v/c Ratio	0.35	0.50	0.49	0.30	0.39	0.08
Control Delay	18.1	7.5	27.0	4.8	12.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	7.5	27.0	4.8	12.2	4.8
LOS	B	A	C	A	B	A
Approach Delay	10.9			8.9	11.6	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 39.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

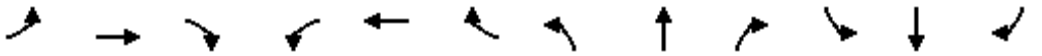




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	84	177	110	490	406	35
Future Volume (veh/h)	84	177	110	490	406	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	104	219	136	605	501	43
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	302	302	177	1626	813	411
Arrive On Green	0.22	0.22	0.11	0.53	0.29	0.29
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	104	219	136	605	501	43
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.1	4.8	2.6	3.7	5.0	0.7
Cycle Q Clear(g_c), s	2.1	4.8	2.6	3.7	5.0	0.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	302	302	177	1626	813	411
V/C Ratio(X)	0.34	0.72	0.77	0.37	0.62	0.10
Avail Cap(c_a), veh/h	769	769	354	2788	1556	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	11.6	13.8	4.4	9.7	8.2
Incr Delay (d2), s/veh	0.7	3.3	6.8	0.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.7	1.0	0.3	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	14.9	20.6	4.6	10.5	8.3
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	323			741	544	
Approach Delay, s/veh	13.7			7.5	10.3	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		20.9		11.1	7.5	13.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		29.0		18.0	7.0	18.0
Max Q Clear Time (g_c+I1), s		5.7		6.8	4.6	7.0
Green Ext Time (p_c), s		3.8		0.7	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

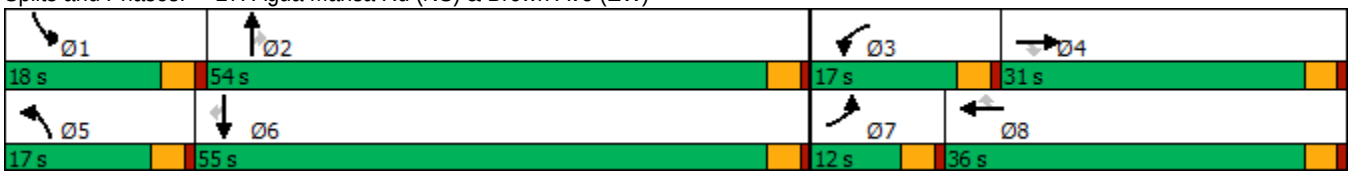


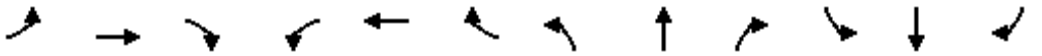
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3	72	50	4	195	39	391	117	52	516	13
Future Volume (vph)	22	3	72	50	4	195	39	391	117	52	516	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			244			118			118
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	28	4	90	63	5	244	49	489	146	65	645	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	4	90	63	5	244	49	489	146	65	645	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	31.0	31.0	17.0	36.0	36.0	17.0	54.0	54.0	18.0	55.0	55.0
Total Split (%)	10.0%	25.8%	25.8%	14.2%	30.0%	30.0%	14.2%	45.0%	45.0%	15.0%	45.8%	45.8%
Maximum Green (s)	8.0	27.0	27.0	13.0	32.0	32.0	13.0	50.0	50.0	14.0	51.0	51.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	7.0	7.2	7.2	9.1	13.6	13.6	8.5	52.1	52.1	9.6	55.4	55.4
Actuated g/C Ratio	0.08	0.08	0.08	0.10	0.15	0.15	0.10	0.58	0.58	0.11	0.62	0.62
v/c Ratio	0.26	0.03	0.47	0.41	0.02	0.64	0.36	0.29	0.21	0.44	0.38	0.02
Control Delay	49.4	41.7	12.5	48.9	36.5	13.7	48.4	12.8	4.9	49.9	12.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	41.7	12.5	48.9	36.5	13.7	48.4	12.8	4.9	49.9	12.3	0.1
LOS	D	D	B	D	D	B	D	B	A	D	B	A
Approach Delay		21.9			21.1			13.6			15.4	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 89.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	72	50	4	195	39	391	117	52	516	13
Future Volume (veh/h)	22	3	72	50	4	195	39	391	117	52	516	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	28	4	90	62	5	244	49	489	146	65	645	16
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	46	236	226	104	320	307	81	1521	768	102	1493	754
Arrive On Green	0.03	0.17	0.17	0.06	0.20	0.20	0.05	0.53	0.53	0.07	0.55	0.55
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	28	4	90	62	5	244	49	489	146	65	645	16
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.9	0.2	5.6	3.6	0.2	14.3	3.0	9.1	5.0	4.2	13.3	0.5
Cycle Q Clear(g_c), s	1.9	0.2	5.6	3.6	0.2	14.3	3.0	9.1	5.0	4.2	13.3	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	236	226	104	320	307	81	1521	768	102	1493	754
V/C Ratio(X)	0.62	0.02	0.40	0.60	0.02	0.80	0.60	0.32	0.19	0.64	0.43	0.02
Avail Cap(c_a), veh/h	119	403	386	220	542	521	208	1521	768	213	1493	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	32.9	35.2	43.1	30.4	36.0	43.8	12.7	11.7	42.8	12.8	9.9
Incr Delay (d2), s/veh	12.7	0.0	1.1	5.4	0.0	4.7	7.0	0.6	0.5	6.4	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	1.9	1.6	0.1	5.7	1.2	2.7	1.7	1.6	3.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	33.0	36.3	48.5	30.4	40.7	50.7	13.2	12.2	49.2	13.7	9.9
LnGrp LOS	E	C	D	D	C	D	D	B	B	D	B	A
Approach Vol, veh/h		122			311			684			726	
Approach Delay, s/veh		41.2			42.1			15.7			16.8	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	54.0	10.1	19.8	9.1	55.6	7.1	22.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	50.0	13.0	27.0	13.0	51.0	8.0	32.0
Max Q Clear Time (g_c+I1), s	8.2	13.1	7.6	9.6	7.0	17.3	5.9	18.3
Green Ext Time (p_c), s	0.0	3.7	0.0	0.2	0.0	4.6	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	37	23	647	39	76	578
Future Volume (vph)	37	23	647	39	76	578
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.387	
Satd. Flow (perm)	1107	991	2983	1335	584	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		25		42		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	40	25	696	42	82	622
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	25	696	42	82	622
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	9.0	25.0	73.0	73.0	95.0	95.0
Total Split (%)	7.5%	20.8%	60.8%	60.8%	79.2%	79.2%
Maximum Green (s)	5.0	21.0	69.0	69.0	91.0	91.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	6.5	6.7	104.8	104.8	104.8	104.8
Actuated g/C Ratio	0.06	0.06	0.90	0.90	0.90	0.90
v/c Ratio	0.65	0.31	0.26	0.03	0.16	0.46
Control Delay	96.9	28.7	1.4	0.4	1.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.9	28.7	1.4	0.4	1.9	2.7
LOS	F	C	A	A	A	A
Approach Delay	70.7		1.3			2.6
Approach LOS	E		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

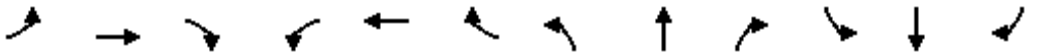




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	23	647	39	76	578
Future Volume (veh/h)	37	23	647	39	76	578
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	40	25	696	42	82	622
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	46	46	2641	1390	558	1325
Arrive On Green	0.05	0.05	0.88	0.88	0.88	0.88
Sat Flow, veh/h	966	966	3098	1589	583	1515
Grp Volume(v), veh/h	40	25	696	42	82	622
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	583	1515
Q Serve(g_s), s	4.3	2.6	3.9	0.4	2.8	9.1
Cycle Q Clear(g_c), s	4.3	2.6	3.9	0.4	6.7	9.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	2641	1390	558	1325
V/C Ratio(X)	0.86	0.54	0.26	0.03	0.15	0.47
Avail Cap(c_a), veh/h	46	46	2641	1390	558	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	48.4	1.1	0.8	1.6	1.4
Incr Delay (d2), s/veh	81.5	11.8	0.2	0.0	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.8	0.1	0.1	0.2	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	130.6	60.2	1.3	0.9	2.2	2.6
LnGrp LOS	F	E	A	A	A	A
Approach Vol, veh/h	65		738			704
Approach Delay, s/veh	103.5		1.3			2.5
Approach LOS	F		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		95.0			95.0	9.0
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		69.0			91.0	5.0
Max Q Clear Time (g_c+I1), s		5.9			11.1	6.3
Green Ext Time (p_c), s		5.2			5.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A



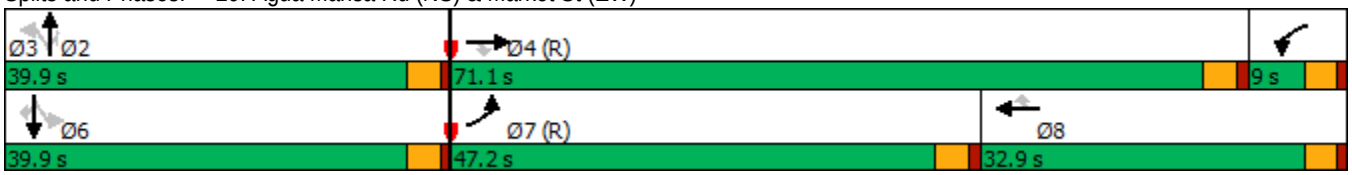
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	473	697	3	2	639	207	2	1	1	302	2	390
Future Volume (vph)	473	697	3	2	639	207	2	1	1	302	2	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.968		0.950		
Satd. Flow (prot)	1641	3282	1468	1656	3312	1482	0	1471	1292	1626	1712	1455
Flt Permitted	0.950			0.950				0.949		0.756		
Satd. Flow (perm)	1641	3282	1468	1656	3312	1482	0	1442	1292	1294	1712	1455
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45			83			82			415
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	503	741	3	2	680	220	2	1	1	321	2	415
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	741	3	2	680	220	0	3	1	321	2	415
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	

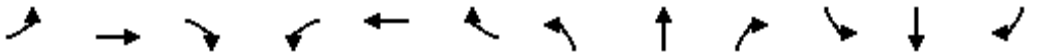
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	47.2	71.1	71.1	9.0	32.9	32.9	39.9	39.9	39.9	39.9	39.9	39.9
Total Split (%)	39.3%	59.3%	59.3%	7.5%	27.4%	27.4%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	43.2	67.1	67.1	5.0	28.9	28.9	35.9	35.9	35.9	35.9	35.9	35.9
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	43.2	73.4	73.4	5.0	28.0	28.0		36.8	36.8	36.8	36.8	36.8
Actuated g/C Ratio	0.36	0.61	0.61	0.04	0.23	0.23		0.31	0.31	0.31	0.31	0.31
v/c Ratio	0.85	0.37	0.00	0.03	0.88	0.54		0.01	0.00	0.81	0.00	0.57
Control Delay	61.0	21.0	0.0	56.0	58.1	29.7		29.7	0.0	56.1	29.5	6.4
Queue Delay	1.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	21.0	0.0	56.0	58.1	29.7		29.7	0.0	56.1	29.5	6.4
LOS	E	C	A	E	E	C		C	A	E	C	A
Approach Delay		37.5			51.2			22.3			28.1	
Approach LOS		D			D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 39.4 Intersection LOS: D
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

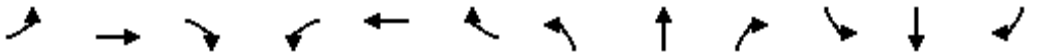




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	473	697	3	2	639	207	2	1	1	302	2	390
Future Volume (veh/h)	473	697	3	2	639	207	2	1	1	302	2	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	503	741	3	2	680	220	2	1	1	321	2	415
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	564	1861	980	74	936	492	227	101	458	430	520	520
Arrive On Green	0.64	1.00	1.00	0.04	0.28	0.28	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1752	3328	1752	1767	3357	1767	593	339	1530	1314	1737	1737
Grp Volume(v), veh/h	503	741	3	2	680	220	3	0	1	321	2	415
Grp Sat Flow(s),veh/h/ln	1752	1664	1752	1767	1678	1767	932	0	1530	1314	1737	1737
Q Serve(g_s), s	28.8	0.0	0.0	0.1	22.0	12.3	0.0	0.0	0.1	27.9	0.1	26.4
Cycle Q Clear(g_c), s	28.8	0.0	0.0	0.1	22.0	12.3	2.1	0.0	0.1	30.0	0.1	26.4
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	564	1861	980	74	936	492	329	0	458	430	520	520
V/C Ratio(X)	0.89	0.40	0.00	0.03	0.73	0.45	0.01	0.00	0.00	0.75	0.00	0.80
Avail Cap(c_a), veh/h	631	1861	980	74	936	492	329	0	458	430	520	520
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	19.6	0.0	0.0	55.2	39.1	35.7	29.5	0.0	29.5	41.0	29.5	38.7
Incr Delay (d2), s/veh	9.6	0.4	0.0	0.1	2.9	0.6	0.1	0.0	0.0	10.0	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.1	0.0	0.1	9.1	5.2	0.1	0.0	0.0	9.9	0.0	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	0.4	0.0	55.3	42.0	36.3	29.6	0.0	29.5	50.9	29.5	49.5
LnGrp LOS	C	A	A	E	D	D	C	A	C	D	C	D
Approach Vol, veh/h		1247			902			4			738	
Approach Delay, s/veh		12.0			40.6			29.6			50.1	
Approach LOS		B			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		39.9	9.0	71.1		39.9	42.6	37.5				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		35.9	5.0	67.1		35.9	43.2	28.9				
Max Q Clear Time (g_c+I1), s		4.1	4.1	4.0		32.0	32.8	26.0				
Green Ext Time (p_c), s		0.0	0.0	5.5		1.0	1.2	1.4				

Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

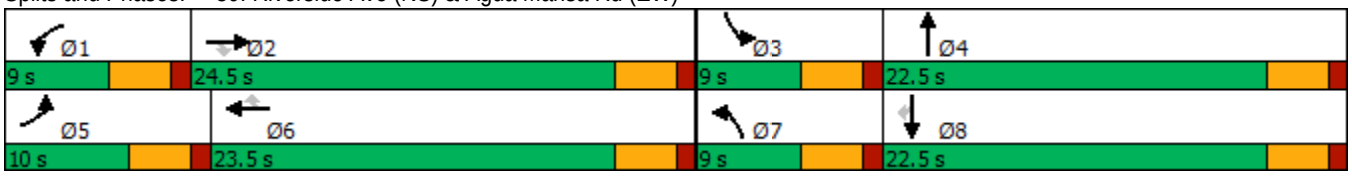


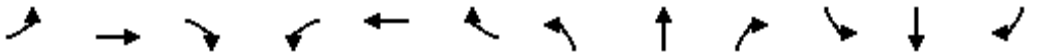
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	505	136	35	214	64	116	880	91	56	944	219
Future Volume (vph)	322	505	136	35	214	64	116	880	91	56	944	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1656	1743	1482	1492	1570	1335	1626	3207	0	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151			151		17				151
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	332	521	140	36	221	66	120	907	94	58	973	226
Shared Lane Traffic (%)												
Lane Group Flow (vph)	332	521	140	36	221	66	120	1001	0	58	973	226
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	10.0	24.5	24.5	9.0	23.5	23.5	9.0	22.5		9.0	22.5	22.5
Total Split (%)	15.4%	37.7%	37.7%	13.8%	36.2%	36.2%	13.8%	34.6%		13.8%	34.6%	34.6%
Maximum Green (s)	6.0	20.5	20.5	5.0	19.5	19.5	5.0	18.5		5.0	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	6.0	25.9	25.9	5.0	19.5	19.5	5.0	22.1		5.0	18.5	18.5
Actuated g/C Ratio	0.09	0.40	0.40	0.08	0.30	0.30	0.08	0.34		0.08	0.28	0.28
v/c Ratio	2.18	0.75	0.21	0.32	0.47	0.13	0.96	0.91		0.46	1.03	0.43
Control Delay	575.0	28.7	3.9	36.1	22.5	0.5	107.1	37.5		41.1	63.9	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	575.0	28.7	3.9	36.1	22.5	0.5	107.1	37.5		41.1	63.9	9.9
LOS	F	C	A	D	C	A	F	D		D	E	A
Approach Delay		207.9			19.6			44.9			53.1	
Approach LOS		F			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.18			
Intersection Signal Delay: 89.3		Intersection LOS: F	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	505	136	35	214	64	116	880	91	56	944	219
Future Volume (veh/h)	322	505	136	35	214	64	116	880	91	56	944	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	332	521	140	36	221	66	120	907	94	58	973	226
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	163	622	622	64	477	477	134	923	96	107	955	503
Arrive On Green	0.09	0.35	0.35	0.04	0.30	0.30	0.08	0.30	0.30	0.06	0.28	0.28
Sat Flow, veh/h	1767	1767	1767	1589	1589	1589	1737	3069	318	1767	3357	1767
Grp Volume(v), veh/h	332	521	140	36	221	66	120	488	513	58	973	226
Grp Sat Flow(s),veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	6.0	17.6	3.6	1.4	7.4	2.0	4.5	19.1	19.1	2.1	18.5	6.8
Cycle Q Clear(g_c), s	6.0	17.6	3.6	1.4	7.4	2.0	4.5	19.1	19.1	2.1	18.5	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	163	622	622	64	477	477	134	497	523	107	955	503
V/C Ratio(X)	2.04	0.84	0.22	0.57	0.46	0.14	0.90	0.98	0.98	0.54	1.02	0.45
Avail Cap(c_a), veh/h	163	622	622	122	477	477	134	497	523	136	955	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	19.3	14.8	30.6	18.5	16.6	29.7	22.5	22.5	29.7	23.3	19.1
Incr Delay (d2), s/veh	486.9	12.7	0.8	7.7	3.2	0.6	48.5	35.7	34.7	4.2	33.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.4	8.2	1.3	0.6	2.7	0.7	3.4	10.9	11.3	0.9	10.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	516.4	32.0	15.6	38.3	21.7	17.2	78.2	58.2	57.2	33.9	57.1	19.7
LnGrp LOS	F	C	B	D	C	B	E	E	E	C	F	B
Approach Vol, veh/h		993			323			1121			1257	
Approach Delay, s/veh		191.7			22.6			59.9			49.3	
Approach LOS		F			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	26.9	7.9	23.6	10.0	23.5	9.0	22.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	20.5	5.0	18.5	6.0	19.5	5.0	18.5
Max Q Clear Time (g_c+I1), s	5.4	21.6	6.1	23.1	10.0	11.4	8.5	22.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	88.5
HCM 6th LOS	F

YEAR 2035 WITH PROJECT – ALTERNATIVE 1

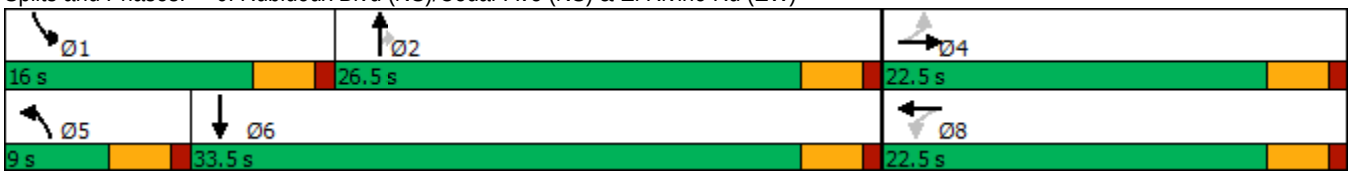
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	10	24	128	4	108	15	632	281	261	1095	8
Future Volume (vph)	21	10	24	128	4	108	15	632	281	261	1095	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.894			0.855				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1558	0	1456	1310	0	1597	3195	1429	1671	3339	0
Flt Permitted	0.685			0.735			0.950			0.950		
Satd. Flow (perm)	1194	1558	0	1126	1310	0	1597	3195	1429	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			108				281		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	21	10	24	128	4	108	15	632	281	261	1095	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	128	112	0	15	632	281	261	1103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		9.0	26.5	26.5	16.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%		13.8%	40.8%	40.8%	24.6%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		5.0	22.5	22.5	12.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	11.5	11.5		11.7	11.7		5.1	24.0	24.0	11.6	39.1	
Actuated g/C Ratio	0.20	0.20		0.21	0.21		0.09	0.42	0.42	0.20	0.69	
v/c Ratio	0.09	0.10		0.55	0.32		0.11	0.47	0.37	0.77	0.48	
Control Delay	18.8	10.8		30.3	7.6		28.7	15.5	3.9	41.1	8.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	18.8	10.8		30.3	7.6		28.7	15.5	3.9	41.1	8.2	
LOS	B	B		C	A		C	B	A	D	A	
Approach Delay		13.9			19.7			12.2			14.5	
Approach LOS		B			B			B			B	

Intersection Summary

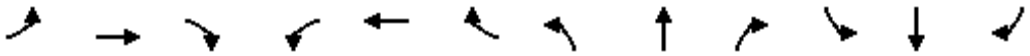
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 56.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 58.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	10	24	128	4	108	15	632	281	261	1095	8
Future Volume (veh/h)	21	10	24	128	4	108	15	632	281	261	1095	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	21	10	24	128	4	108	15	632	281	261	1095	8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	235	98	235	301	10	280	32	1286	677	364	2006	15
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.02	0.40	0.40	0.20	0.58	0.58
Sat Flow, veh/h	1210	520	1247	1135	55	1489	1707	3244	1707	1781	3449	25
Grp Volume(v), veh/h	21	0	34	128	0	112	15	632	281	261	537	566
Grp Sat Flow(s),veh/h/ln	1210	0	1767	1135	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	0.9	0.0	0.9	6.1	0.0	3.6	0.5	8.3	6.8	7.8	11.0	11.0
Cycle Q Clear(g_c), s	6.5	0.0	0.9	8.1	0.0	3.6	0.5	8.3	6.8	7.8	11.0	11.0
Prop In Lane	1.00		0.71	1.00		0.96	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	235	0	333	301	0	291	32	1286	677	364	985	1036
V/C Ratio(X)	0.09	0.00	0.10	0.43	0.00	0.39	0.47	0.49	0.42	0.72	0.55	0.55
Avail Cap(c_a), veh/h	402	0	576	457	0	503	150	1286	677	377	985	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	0.0	19.1	23.0	0.0	20.2	27.6	12.8	12.4	21.1	7.3	7.3
Incr Delay (d2), s/veh	0.2	0.0	0.1	1.0	0.0	0.8	10.6	1.3	1.9	6.2	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	1.6	0.0	1.3	0.3	2.5	2.3	3.3	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	0.0	19.2	23.9	0.0	21.0	38.2	14.2	14.3	27.3	9.4	9.3
LnGrp LOS	C	A	B	C	A	C	D	B	B	C	A	A
Approach Vol, veh/h		55			240			928			1364	
Approach Delay, s/veh		21.1			22.6			14.6			12.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	26.5		14.7	5.1	37.0		14.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	22.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	11.8	12.3		8.5	4.5	15.0		10.1				
Green Ext Time (p_c), s	0.0	3.4		0.1	0.0	5.5		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		14.5	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	2	926	20	0	1247
Future Volume (vph)	0	2	926	20	0	1247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	2	926	20	0	1247
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	946	0	0	1247
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	926	20	0	1247
Future Vol, veh/h	0	2	926	20	0	1247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	2	926	20	0	1247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	473	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	543	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	543	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	543	-
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	11.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



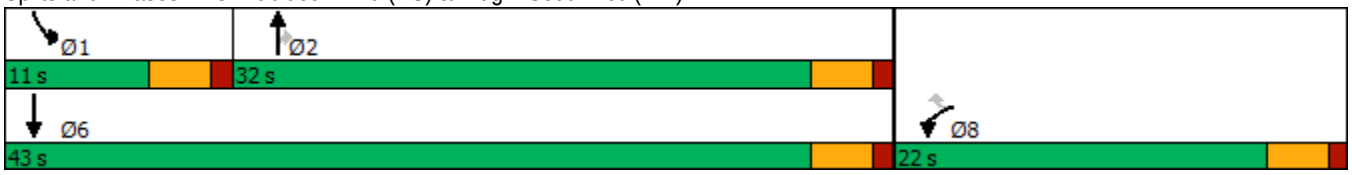
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	4	942	72	33	1214
Future Volume (vph)	18	4	942	72	33	1214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		4		72		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	18	4	942	72	33	1214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	4	942	72	33	1214
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	33.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	18.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	6.1	6.1	47.6	47.6	6.4	53.1
Actuated g/C Ratio	0.11	0.11	0.85	0.85	0.11	0.94
v/c Ratio	0.09	0.02	0.35	0.06	0.18	0.39
Control Delay	22.3	15.0	3.9	1.9	23.7	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	15.0	3.9	1.9	23.7	1.4
LOS	C	B	A	A	C	A
Approach Delay	21.0		3.7			2.0
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 2.9		Intersection LOS: A	
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

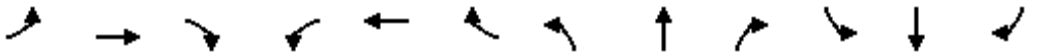




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	18	4	942	72	33	1214
Future Volume (veh/h)	18	4	942	72	33	1214
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	18	4	942	72	33	1214
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	50	50	2232	1175	65	2712
Arrive On Green	0.03	0.03	0.69	0.69	0.04	0.81
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	18	4	942	72	33	1214
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	0.4	0.1	6.2	0.7	0.9	5.3
Cycle Q Clear(g_c), s	0.4	0.1	6.2	0.7	0.9	5.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	50	50	2232	1175	65	2712
V/C Ratio(X)	0.36	0.08	0.42	0.06	0.50	0.45
Avail Cap(c_a), veh/h	708	708	2232	1175	256	2712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	22.9	3.3	2.5	22.8	1.4
Incr Delay (d2), s/veh	4.3	0.7	0.6	0.1	5.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.4	0.1	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.3	23.6	3.9	2.6	28.7	1.9
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	22		1014			1247
Approach Delay, s/veh	26.7		3.8			2.6
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.8	37.2			43.0	5.3
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	18.0
Max Q Clear Time (g_c+I1), s	2.9	8.2			7.3	2.4
Green Ext Time (p_c), s	0.0	6.1			9.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.4
HCM 6th LOS	A

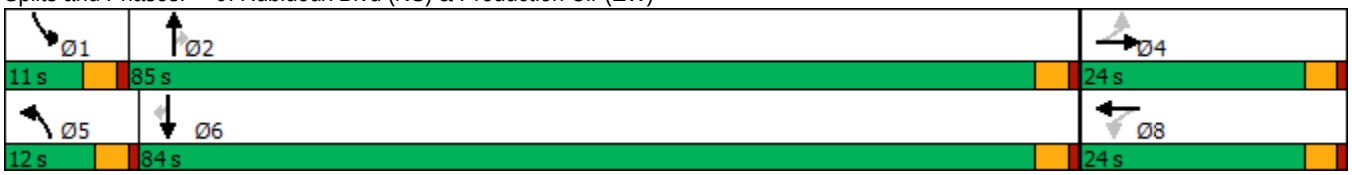


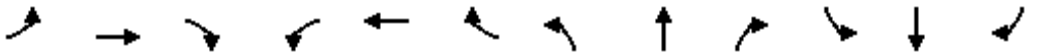
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1068	1	1	1208	11
Future Volume (vph)	5	0	15	1	0	0	19	1068	1	1	1208	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		179							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	5	0	15	1	0	0	19	1068	1	1	1208	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	15	0	1	0	0	19	1068	1	1	1208	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		12.0	85.0	85.0	11.0	84.0	84.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		10.0%	70.8%	70.8%	9.2%	70.0%	70.0%
Maximum Green (s)	20.0	20.0		20.0	20.0		8.0	81.0	81.0	7.0	80.0	80.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.2	6.2		6.2			6.7	98.0	98.0	5.7	95.5	95.5
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.06	0.06		0.01			0.19	0.36	0.00	0.01	0.40	0.01
Control Delay	50.4	0.5		49.0			52.7	1.9	0.0	50.0	3.0	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	0.5		49.0			52.7	1.9	0.0	50.0	3.0	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.0			49.0			2.8			3.0	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 3.0		Intersection LOS: A	
Intersection Capacity Utilization 44.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

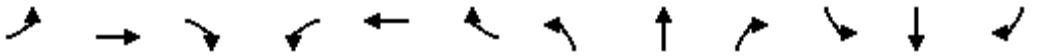




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1068	1	1	1208	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1068	1	1	1208	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	5	0	15	1	0	0	19	1068	1	1	1208	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1421	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	5	0	15	1	0	0	19	1068	1	1	1208	11
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1421	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.5	0.0	1.1	0.1	0.0	0.0	1.1	6.9	0.0	0.1	9.1	0.1
Cycle Q Clear(g_c), s	0.5	0.0	1.1	1.1	0.0	0.0	1.1	6.9	0.0	0.1	9.1	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
V/C Ratio(X)	0.05	0.00	0.50	0.01	0.00	0.00	0.53	0.38	0.00	0.41	0.43	0.01
Avail Cap(c_a), veh/h	286	0	278	355	395	0	143	2786	1408	129	2793	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	0.0	46.5	47.0	0.0	0.0	46.6	1.6	1.1	48.0	2.1	1.4
Incr Delay (d2), s/veh	0.2	0.0	12.5	0.0	0.0	0.0	11.8	0.4	0.0	85.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.0	0.0	0.0	0.5	0.3	0.0	0.1	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	58.9	47.1	0.0	0.0	58.4	2.0	1.1	133.4	2.6	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		20			1			1088			1220	
Approach Delay, s/veh		55.8			47.1			3.0			2.7	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	85.9		6.1	6.0	84.0		6.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	81.0		20.0	8.0	80.0		20.0				
Max Q Clear Time (g_c+I1), s	2.1	8.9		3.1	3.1	11.1		3.1				
Green Ext Time (p_c), s	0.0	8.8		0.0	0.0	10.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		3.3	
HCM 6th LOS		A	



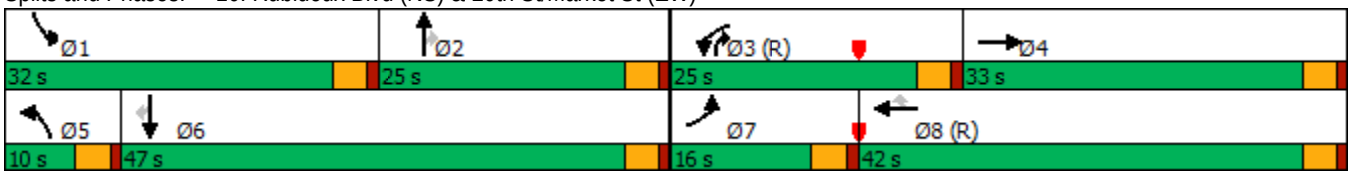
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	112	47	343	78	546	23	399	358	629	652	30
Future Volume (vph)	54	112	47	343	78	546	23	399	358	629	652	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.956				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				546			353			123
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	54	112	47	343	78	546	23	399	358	629	652	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	159	0	343	78	546	23	399	358	629	652	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	16.0	33.0		25.0	42.0	42.0	10.0	25.0	25.0	32.0	47.0	47.0
Total Split (%)	13.9%	28.7%		21.7%	36.5%	36.5%	8.7%	21.7%	21.7%	27.8%	40.9%	40.9%
Maximum Green (s)	12.0	29.0		21.0	38.0	38.0	6.0	21.0	21.0	28.0	43.0	43.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.9	29.0		21.0	42.0	42.0	5.9	23.6	48.6	25.4	47.0	47.0
Actuated g/C Ratio	0.09	0.25		0.18	0.37	0.37	0.05	0.21	0.42	0.22	0.41	0.41
v/c Ratio	0.59	0.56		0.61	0.13	0.63	0.29	0.63	0.45	0.85	0.46	0.04
Control Delay	75.2	41.8		54.8	47.5	25.7	62.0	47.4	4.6	54.1	26.9	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.2	41.8		54.8	47.5	26.2	62.0	47.4	4.6	54.1	26.9	0.1
LOS	E	D		D	D	C	E	D	A	D	C	A
Approach Delay		50.2			38.0			28.2			39.4	
Approach LOS		D			D			C			D	

Intersection Summary

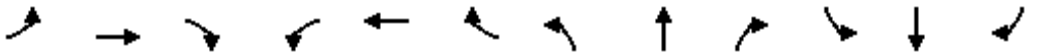
Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 60.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

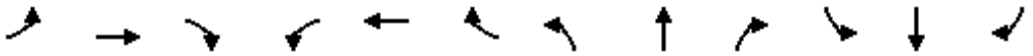
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	112	47	343	78	546	23	399	358	629	652	30
Future Volume (veh/h)	54	112	47	343	78	546	23	399	358	629	652	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	54	112	47	343	78	546	23	399	358	629	652	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	69	178	75	568	649	649	42	591	599	758	1308	688
Arrive On Green	0.08	0.29	0.29	0.17	0.38	0.38	0.03	0.19	0.19	0.21	0.37	0.37
Sat Flow, veh/h	877	618	259	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	54	0	159	343	78	546	23	399	358	629	652	30
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	7.0	0.0	18.1	11.1	3.4	33.8	1.6	13.5	20.2	19.4	16.5	1.2
Cycle Q Clear(g_c), s	7.0	0.0	18.1	11.1	3.4	33.8	1.6	13.5	20.2	19.4	16.5	1.2
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	0	253	568	649	649	42	591	599	758	1308	688
V/C Ratio(X)	0.79	0.00	0.63	0.60	0.12	0.84	0.55	0.68	0.60	0.83	0.50	0.04
Avail Cap(c_a), veh/h	92	0	253	600	649	649	87	591	599	869	1308	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.67	0.67	0.67	0.84	0.84	0.84	0.92	0.92	0.92
Uniform Delay (d), s/veh	52.1	0.0	35.5	43.9	22.9	32.3	55.4	43.5	30.0	43.3	27.7	22.9
Incr Delay (d2), s/veh	26.8	0.0	4.8	1.1	0.3	8.8	9.1	5.1	3.7	5.6	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	4.1	4.5	1.4	14.6	0.7	5.5	8.3	8.8	6.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	0.0	40.4	45.0	23.2	41.0	64.5	48.6	33.7	49.0	29.0	23.0
LnGrp LOS	E	A	D	D	C	D	E	D	C	D	C	C
Approach Vol, veh/h		213			967			780			1311	
Approach Delay, s/veh		50.1			41.0			42.3			38.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.4	25.5	23.9	37.2	6.9	47.0	13.0	48.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	21.0	21.0	29.0	6.0	43.0	12.0	38.0
Max Q Clear Time (g_c+I1), s	23.4	24.2	13.1	20.1	5.6	20.5	11.0	37.8
Green Ext Time (p_c), s	1.0	0.0	0.7	0.5	0.0	4.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

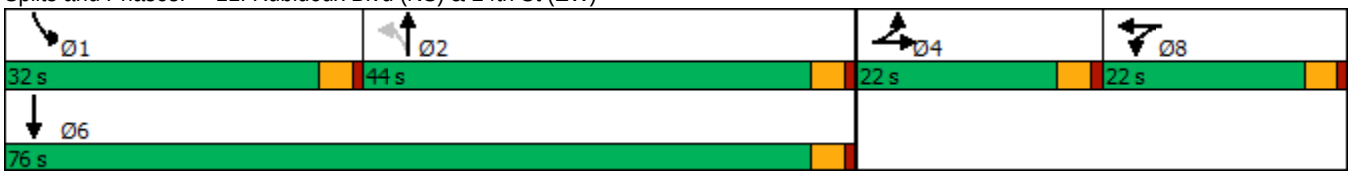


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	32	46	7	2	13	17	722	96	282	792	1
Future Volume (vph)	5	32	46	7	2	13	17	722	96	282	792	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.920			0.982				
Flt Protected		0.997			0.984		0.950			0.950		
Satd. Flow (prot)	0	1068	0	0	1433	0	1530	3004	0	1570	3139	0
Flt Permitted		0.997			0.984		0.352			0.950		
Satd. Flow (perm)	0	1068	0	0	1433	0	567	3004	0	1570	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			13			13				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	64%	64%	64%	20%	20%	20%	18%	18%	18%	15%	15%	15%
Adj. Flow (vph)	5	32	46	7	2	13	17	722	96	282	792	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	22	0	17	818	0	282	793	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		44.0	44.0		32.0	76.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		36.7%	36.7%		26.7%	63.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		40.0	40.0		28.0	72.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		9.4			6.5		48.2	48.2		21.0	74.3	
Actuated g/C Ratio		0.10			0.07		0.52	0.52		0.23	0.80	
v/c Ratio		0.56			0.20		0.06	0.52		0.79	0.32	
Control Delay		38.0			32.8		19.9	20.2		51.5	4.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		38.0			32.8		19.9	20.2		51.5	4.8	
LOS		D			C		B	C		D	A	
Approach Delay		38.0			32.8			20.2			17.0	
Approach LOS		D			C			C			B	

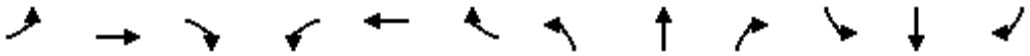
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 53.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)

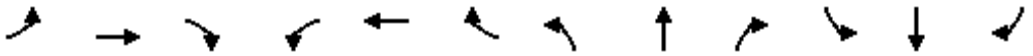
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	32	46	7	2	13	17	722	96	282	792	1
Future Volume (veh/h)	5	32	46	7	2	13	17	722	96	282	792	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	952	952	913	1604	1604	1539	1633	1633	1568	1678	1678	1611
Adj Flow Rate, veh/h	5	32	46	7	2	13	17	722	96	282	792	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	64	64	64	20	20	20	18	18	18	15	15	15
Cap, veh/h	6	36	51	12	3	22	387	1467	195	319	2464	3
Arrive On Green	0.10	0.10	0.10	0.02	0.02	0.02	0.52	0.52	0.52	0.19	0.75	0.75
Sat Flow, veh/h	57	367	527	510	146	948	597	2811	374	1678	3267	4
Grp Volume(v), veh/h	83	0	0	22	0	0	17	399	419	282	386	407
Grp Sat Flow(s),veh/h/ln	952	0	0	1604	0	0	597	1552	1633	1678	1594	1678
Q Serve(g_s), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.8	15.8	15.6	7.5	7.5
Cycle Q Clear(g_c), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.8	15.8	15.6	7.5	7.5
Prop In Lane	0.06		0.55	0.32		0.59	1.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h	92	0	0	37	0	0	387	810	853	319	1202	1265
V/C Ratio(X)	0.90	0.00	0.00	0.59	0.00	0.00	0.04	0.49	0.49	0.88	0.32	0.32
Avail Cap(c_a), veh/h	179	0	0	302	0	0	387	810	853	492	1202	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	0.0	46.2	0.0	0.0	11.2	14.7	14.7	37.6	3.8	3.8
Incr Delay (d2), s/veh	24.3	0.0	0.0	14.1	0.0	0.0	0.2	2.1	2.0	11.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.7	0.0	0.0	0.2	5.2	5.5	7.0	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	0.0	0.0	60.3	0.0	0.0	11.4	16.8	16.7	49.2	4.5	4.5
LnGrp LOS	E	A	A	E	A	A	B	B	B	D	A	A
Approach Vol, veh/h		83			22			835			1075	
Approach Delay, s/veh		66.9			60.3			16.7			16.2	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	22.2	53.8		13.3		76.0		6.2				
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s	28.0	40.0		18.0		72.0		18.0				
Max Q Clear Time (g_c+I1), s	17.6	17.8		10.2		9.5		3.3				
Green Ext Time (p_c), s	0.5	4.8		0.2		4.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									

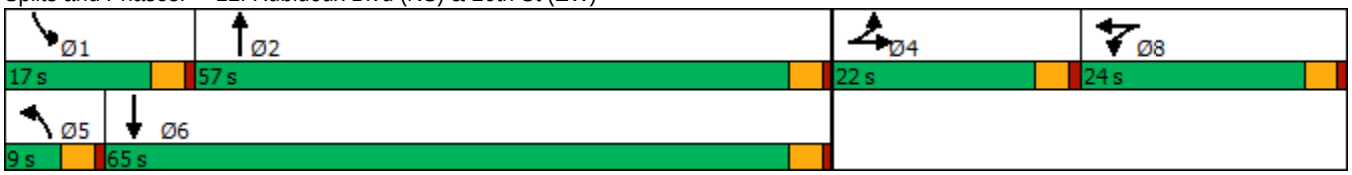


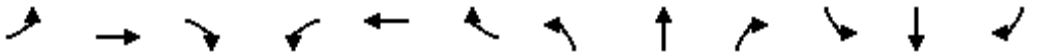
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	29	3	17	9	768	97	63	799	0
Future Volume (vph)	0	0	3	29	3	17	9	768	97	63	799	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.953			0.983				
Flt Protected					0.971		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Flt Permitted					0.971		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		375			17			15				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	44%	44%	44%	18%	18%	18%	19%	19%	19%
Adj. Flow (vph)	0	0	3	29	3	17	9	768	97	63	799	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	49	0	9	865	0	63	799	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	57.0		17.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	47.5%		14.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	53.0		13.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.5			8.0		5.0	62.5		9.1	71.8	
Actuated g/C Ratio		0.06			0.09		0.06	0.71		0.10	0.81	
v/c Ratio		0.01			0.39		0.10	0.41		0.41	0.32	
Control Delay		0.0			36.8		44.2	8.9		45.5	4.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			36.8		44.2	8.9		45.5	4.4	
LOS		A			D		D	A		D	A	
Approach Delay					36.8			9.2			7.4	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 88.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)

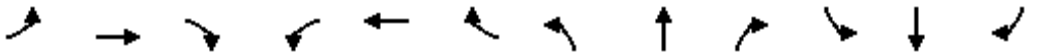




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	29	3	17	9	768	97	63	799	0
Future Volume (veh/h)	0	0	3	29	3	17	9	768	97	63	799	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1248	1248	1248	1633	1633	1568	1618	1618	1554
Adj Flow Rate, veh/h	0	0	3	29	3	17	9	768	97	63	799	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	44	44	44	18	18	18	19	19	19
Cap, veh/h	0	0	8	32	3	19	18	2003	253	78	2292	0
Arrive On Green	0.00	0.00	0.00	0.04	0.04	0.04	0.01	0.71	0.71	0.05	0.75	0.00
Sat Flow, veh/h	0	0	1900	739	76	433	1633	2828	357	1618	3156	0
Grp Volume(v), veh/h	0	0	3	49	0	0	9	421	444	63	799	0
Grp Sat Flow(s),veh/h/ln	0	0	1900	1248	0	0	1633	1552	1633	1618	1537	0
Q Serve(g_s), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.9	8.9	3.2	7.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.9	8.9	3.2	7.3	0.0
Prop In Lane	0.00		1.00	0.59		0.35	1.00		0.22	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	8	55	0	0	18	1099	1157	78	2292	0
V/C Ratio(X)	0.00	0.00	0.39	0.90	0.00	0.00	0.49	0.38	0.38	0.80	0.35	0.00
Avail Cap(c_a), veh/h	0	0	418	305	0	0	100	1099	1157	257	2292	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	40.7	38.9	0.0	0.0	40.2	4.8	4.8	38.6	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	29.6	35.2	0.0	0.0	18.5	1.0	1.0	17.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.5	0.0	0.0	0.3	1.9	2.0	1.5	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	70.2	74.1	0.0	0.0	58.8	5.8	5.7	55.6	4.0	0.0
LnGrp LOS	A	A	E	E	A	A	E	A	A	E	A	A
Approach Vol, veh/h		3			49			874			862	
Approach Delay, s/veh		70.2			74.1			6.3			7.8	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	62.0		4.3	4.9	65.0		7.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	53.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	5.2	10.9		2.1	2.4	9.3		5.2				
Green Ext Time (p_c), s	0.1	5.5		0.0	0.0	5.8		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		9.0	
HCM 6th LOS		A	



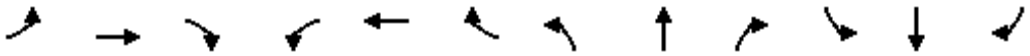
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	118	111	81	58	7	168	837	65	7	802	49
Future Volume (vph)	60	118	111	81	58	7	168	837	65	7	802	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.927			0.984			0.989			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1587	0	1583	1640	0	1543	3052	0	1543	3058	0
Flt Permitted	0.715			0.467			0.950			0.950		
Satd. Flow (perm)	1224	1587	0	778	1640	0	1543	3052	0	1543	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			7			16			11	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	11%	11%	14%	14%	14%	17%	17%	17%	17%	17%	17%
Adj. Flow (vph)	60	118	111	81	58	7	168	837	65	7	802	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	229	0	81	65	0	168	902	0	7	851	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		13.0	28.5		9.0	24.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		21.7%	47.5%		15.0%	40.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		9.0	24.5		5.0	20.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	10.5	10.5		10.5	10.5		8.7	31.9		5.0	20.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.17	0.61		0.10	0.40	
v/c Ratio	0.24	0.60		0.52	0.19		0.65	0.48		0.05	0.69	
Control Delay	19.4	18.7		30.5	16.5		36.8	8.3		24.4	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.4	18.7		30.5	16.5		36.8	8.3		24.4	18.0	
LOS	B	B		C	B		D	A		C	B	
Approach Delay		18.9			24.3			12.8			18.0	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 52			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)

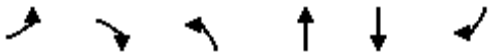




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	118	111	81	58	7	168	837	65	7	802	49
Future Volume (veh/h)	60	118	111	81	58	7	168	837	65	7	802	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1668	1693	1693	1625	1648	1648	1648	1648	1648	1648
Adj Flow Rate, veh/h	60	118	111	81	58	7	168	837	65	7	802	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	11	11	11	14	14	14	17	17	17	17	17	17
Cap, veh/h	373	234	220	248	396	48	256	1532	119	15	1114	68
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.51	0.51	0.01	0.37	0.37
Sat Flow, veh/h	1241	895	842	1042	1510	182	1648	2982	232	1648	3029	185
Grp Volume(v), veh/h	60	0	229	81	0	65	168	439	463	7	415	436
Grp Sat Flow(s),veh/h/ln	1241	0	1737	1042	0	1693	1648	1566	1648	1648	1566	1648
Q Serve(g_s), s	2.3	0.0	6.2	4.2	0.0	1.6	5.3	10.6	10.6	0.2	12.7	12.7
Cycle Q Clear(g_c), s	5.9	0.0	6.2	12.4	0.0	1.6	5.3	10.6	10.6	0.2	12.7	12.7
Prop In Lane	1.00		0.48	1.00		0.11	1.00		0.14	1.00		0.11
Lane Grp Cap(c), veh/h	373	0	455	248	0	443	256	804	847	15	576	606
V/C Ratio(X)	0.16	0.00	0.50	0.33	0.00	0.15	0.66	0.55	0.55	0.46	0.72	0.72
Avail Cap(c_a), veh/h	460	0	576	321	0	562	266	804	847	148	576	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	17.5	23.7	0.0	15.8	22.2	9.2	9.2	27.5	15.2	15.2
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.8	0.0	0.2	5.5	2.7	2.5	20.2	7.6	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.4	1.0	0.0	0.6	2.1	2.9	3.0	0.2	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	18.4	24.5	0.0	15.9	27.6	11.8	11.7	47.7	22.8	22.4
LnGrp LOS	B	A	B	C	A	B	C	B	B	D	C	C
Approach Vol, veh/h		289			146			1070			858	
Approach Delay, s/veh		18.5			20.7			14.3			22.8	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	32.6		18.6	12.7	24.5		18.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	9.0	20.5		18.5				
Max Q Clear Time (g_c+I1), s	4.2	14.6		10.2	9.3	16.7		14.4				
Green Ext Time (p_c), s	0.0	3.6		0.9	0.0	1.7		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	195	134	1076	952	35
Future Volume (vph)	0	195	134	1076	952	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1344	1556	3112	3139	1404
Flt Permitted			0.950			
Satd. Flow (perm)	0	1344	1556	3112	3139	1404
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	16%	16%	15%	15%
Adj. Flow (vph)	0	195	134	1076	952	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	195	134	1076	952	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.1%		ICU Level of Service A	
Analysis Period (min) 15			

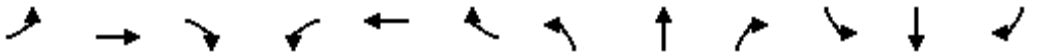
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	195	134	1076	952	35
Future Vol, veh/h	0	195	134	1076	952	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	16	16	15	15
Mvmt Flow	0	195	134	1076	952	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	476	987	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	4.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	2.36	-	-	-
Pot Cap-1 Maneuver	0	525	617	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	525	617	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	617	-	525	-	-
HCM Lane V/C Ratio	0.217	-	0.371	-	-
HCM Control Delay (s)	12.4	-	15.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	1.7	-	-

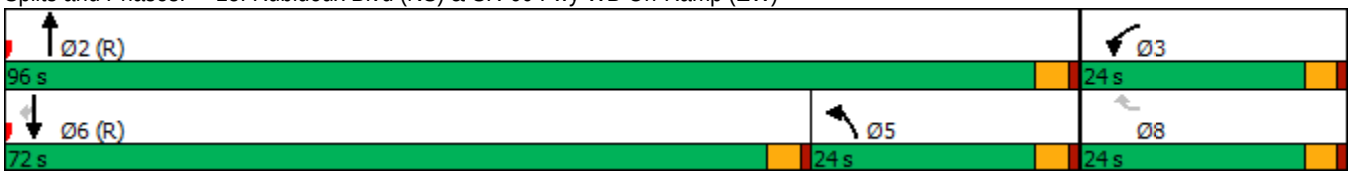


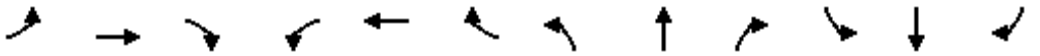
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Future Volume (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						240						578
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	12%	12%	12%
Adj. Flow (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	377	0	251	352	889	0	0	509	738
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				24.0		24.0	24.0	96.0			72.0	72.0
Total Split (%)				20.0%		20.0%	20.0%	80.0%			60.0%	60.0%
Maximum Green (s)				20.0		20.0	20.0	92.0			68.0	68.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				17.5		17.5	20.0	94.5			70.5	70.5
Actuated g/C Ratio				0.15		0.15	0.17	0.79			0.59	0.59
v/c Ratio				0.74		0.57	0.68	0.35			0.27	0.68
Control Delay				58.0		12.1	43.9	3.1			12.9	7.0
Queue Delay				0.0		0.0	0.0	0.3			0.0	0.0
Total Delay				58.0		12.1	43.9	3.4			12.9	7.0
LOS				E		B	D	A			B	A
Approach Delay					39.6			14.9			9.4	
Approach LOS					D			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 96 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

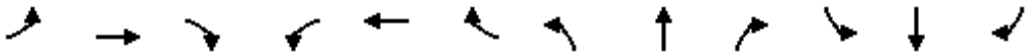




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	377	0	251	352	889	0	0	509	738
Future Volume (veh/h)	0	0	0	377	0	251	352	889	0	0	509	738
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1722	1722
Adj Flow Rate, veh/h				377	0	251	352	889	0	0	509	738
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	12	12
Cap, veh/h				557	0	287	609	2560	0	0	1854	976
Arrive On Green				0.15	0.00	0.15	0.06	0.26	0.00	0.00	0.57	0.57
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3358	1722
Grp Volume(v), veh/h				377	0	251	352	889	0	0	509	738
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1636	1722
Q Serve(g_s), s				11.6	0.0	15.5	12.3	26.6	0.0	0.0	9.6	39.0
Cycle Q Clear(g_c), s				11.6	0.0	15.5	12.3	26.6	0.0	0.0	9.6	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				557	0	287	609	2560	0	0	1854	976
V/C Ratio(X)				0.68	0.00	0.87	0.58	0.35	0.00	0.00	0.27	0.76
Avail Cap(c_a), veh/h				614	0	317	609	2560	0	0	1854	976
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.2	0.0	49.8	51.9	19.5	0.0	0.0	13.3	19.7
Incr Delay (d2), s/veh				2.6	0.0	21.4	1.2	0.3	0.0	0.0	0.4	5.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	9.1	5.6	11.7	0.0	0.0	3.4	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.8	0.0	71.2	53.1	19.9	0.0	0.0	13.7	25.2
LnGrp LOS				D	A	E	D	B	A	A	B	C
Approach Vol, veh/h					628			1241			1247	
Approach Delay, s/veh					59.0			29.3			20.5	
Approach LOS					E			C			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		97.9			25.9	72.0		22.1				
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0				
Max Green Setting (Gmax), s		92.0			20.0	68.0		20.0				
Max Q Clear Time (g_c+I1), s		28.6			14.3	41.0		17.5				
Green Ext Time (p_c), s		7.3			0.6	6.4		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			31.8									
HCM 6th LOS			C									

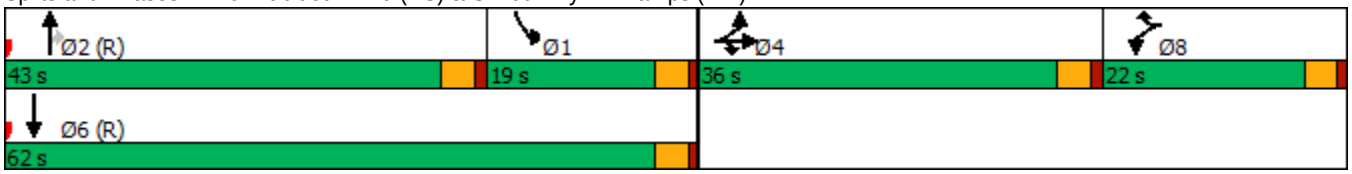


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	452	37	357	12	0	3	0	601	665	195	684	0
Future Volume (vph)	452	37	357	12	0	3	0	601	665	195	684	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1478	1492	1207	1805	0	1615	0	3471	1553	1703	3406	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1478	1492	1207	1805	0	1615	0	3471	1553	1703	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203			82			665			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	16%	0%	0%	0%	4%	4%	4%	6%	6%	6%
Adj. Flow (vph)	452	37	357	12	0	3	0	601	665	195	684	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	244	245	357	12	0	3	0	601	665	195	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	36.0	36.0	36.0	22.0		22.0		43.0	43.0	19.0	62.0	
Total Split (%)	30.0%	30.0%	30.0%	18.3%		18.3%		35.8%	35.8%	15.8%	51.7%	
Maximum Green (s)	32.0	32.0	32.0	18.0		18.0		39.0	39.0	15.0	58.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	26.4	26.4	26.4	6.4		6.4		62.1	62.1	15.0	81.1	
Actuated g/C Ratio	0.22	0.22	0.22	0.05		0.05		0.52	0.52	0.12	0.68	
v/c Ratio	0.75	0.75	0.84	0.12		0.02		0.33	0.59	0.92	0.30	
Control Delay	57.9	57.5	36.8	56.4		0.3		19.5	4.2	76.7	5.7	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.4	
Total Delay	57.9	57.5	36.8	56.4		0.3		19.5	4.2	76.7	6.1	
LOS	E	E	D	E		A		B	A	E	A	
Approach Delay		48.9			45.2			11.5			21.8	
Approach LOS		D			D			B			C	

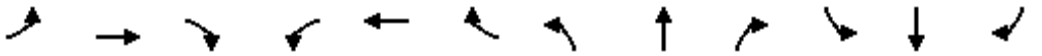
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 56 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



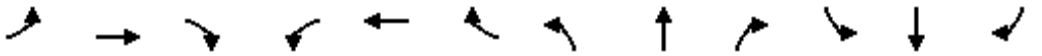
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	37	357	12	0	3	0	601	665	195	684	0
Future Volume (veh/h)	452	37	357	12	0	3	0	601	665	195	684	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1596	1900	0	1900	0	1841	1841	1811	1811	0
Adj Flow Rate, veh/h	478	0	357	12	0	3	0	601	665	195	684	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	16	0	0	0	0	4	4	6	6	0
Cap, veh/h	847	0	406	0	0	0	0	1137	598	580	2335	0
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.32	0.32	0.64	1.00	0.00
Sat Flow, veh/h	3326	0	1596		0		0	3589	1841	1811	3532	0
Grp Volume(v), veh/h	478	0	357		0.0		0	601	665	195	684	0
Grp Sat Flow(s),veh/h/ln	1663	0	1596				0	1749	1841	1811	1721	0
Q Serve(g_s), s	15.0	0.0	25.8				0.0	16.8	39.0	5.9	0.0	0.0
Cycle Q Clear(g_c), s	15.0	0.0	25.8				0.0	16.8	39.0	5.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	847	0	406				0	1137	598	580	2335	0
V/C Ratio(X)	0.56	0.00	0.88				0.00	0.53	1.11	0.34	0.29	0.00
Avail Cap(c_a), veh/h	887	0	426				0	1137	598	580	2335	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.88	0.88	0.00
Uniform Delay (d), s/veh	38.9	0.0	42.9				0.0	33.0	40.5	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	18.0				0.0	1.6	69.3	0.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	12.1				0.0	7.2	28.5	2.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.0	60.9				0.0	34.6	109.8	16.0	0.3	0.0
LnGrp LOS	D	A	E				A	C	F	B	A	A
Approach Vol, veh/h		835						1266			879	
Approach Delay, s/veh		48.8						74.1			3.8	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	42.4	43.0		34.6		85.4						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	15.0	39.0		32.0		58.0						
Max Q Clear Time (g_c+I1), s	9.9	41.0		29.8		4.0						
Green Ext Time (p_c), s	0.2	0.0		0.8		5.1						

Intersection Summary			
HCM 6th Ctrl Delay			46.3
HCM 6th LOS			D

Notes

User approved volume balancing among the lanes for turning movement.

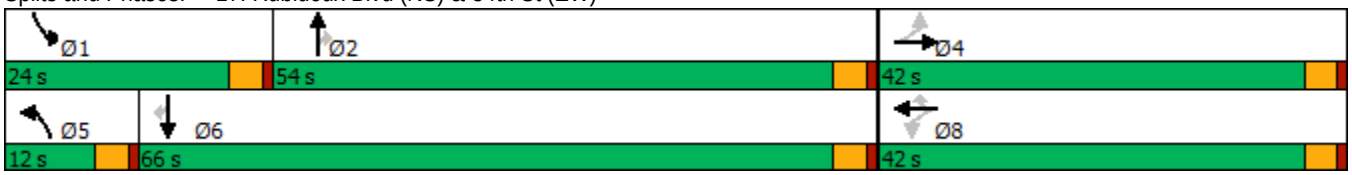


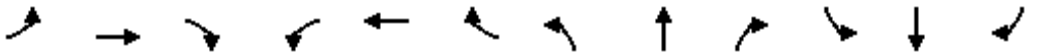
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	46	21	12	22	190	28	881	80	124	683	79
Future Volume (vph)	164	46	21	12	22	190	28	881	80	124	683	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.988				0.850			0.850			0.850
Flt Protected		0.966			0.983		0.950			0.950		
Satd. Flow (prot)	0	1727	0	0	1868	1400	1719	3438	1333	1703	3406	1320
Flt Permitted		0.768			0.906		0.950			0.950		
Satd. Flow (perm)	0	1373	0	0	1721	1400	1719	3438	1333	1703	3406	1320
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				190			82			46
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	5%	5%	5%	6%	6%	6%
Adj. Flow (vph)	164	46	21	12	22	190	28	881	80	124	683	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	34	190	28	881	80	124	683	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	42.0	42.0		42.0	42.0	42.0	12.0	54.0	54.0	24.0	66.0	66.0
Total Split (%)	35.0%	35.0%		35.0%	35.0%	35.0%	10.0%	45.0%	45.0%	20.0%	55.0%	55.0%
Maximum Green (s)	38.0	38.0		38.0	38.0	38.0	8.0	50.0	50.0	20.0	62.0	62.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		21.6			21.6	21.6	6.9	53.3	53.3	12.6	63.4	63.4
Actuated g/C Ratio		0.22			0.22	0.22	0.07	0.54	0.54	0.13	0.64	0.64
v/c Ratio		0.77			0.09	0.42	0.24	0.48	0.11	0.58	0.31	0.09
Control Delay		53.6			31.8	7.7	53.0	17.4	4.1	53.8	10.7	5.9
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		53.6			31.8	7.7	53.0	17.4	4.1	53.8	10.7	5.9
LOS		D			C	A	D	B	A	D	B	A
Approach Delay		53.6			11.4			17.3			16.3	
Approach LOS		D			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 99.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 20.0		Intersection LOS: B	
Intersection Capacity Utilization 60.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	46	21	12	22	190	28	881	80	124	683	79
Future Volume (veh/h)	164	46	21	12	22	190	28	881	80	124	683	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1824	1826	1826	1753	1811	1811	1739
Adj Flow Rate, veh/h	164	46	21	12	22	190	28	881	80	124	683	79
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	5	5	5	0	0	0	5	5	5	6	6	6
Cap, veh/h	246	58	24	159	270	406	54	1914	967	189	2155	1089
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.55	0.55	0.10	0.63	0.63
Sat Flow, veh/h	827	262	109	491	1213	1824	1826	3469	1753	1811	3441	1739
Grp Volume(v), veh/h	231	0	0	34	0	190	28	881	80	124	683	79
Grp Sat Flow(s),veh/h/ln	1198	0	0	1703	0	1824	1826	1735	1753	1811	1721	1739
Q Serve(g_s), s	16.7	0.0	0.0	0.0	0.0	8.9	1.5	15.1	2.1	6.5	9.2	1.8
Cycle Q Clear(g_c), s	18.7	0.0	0.0	1.4	0.0	8.9	1.5	15.1	2.1	6.5	9.2	1.8
Prop In Lane	0.71		0.09	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	0	0	429	0	406	54	1914	967	189	2155	1089
V/C Ratio(X)	0.70	0.00	0.00	0.08	0.00	0.47	0.51	0.46	0.08	0.66	0.32	0.07
Avail Cap(c_a), veh/h	535	0	0	697	0	700	148	1914	967	366	2155	1089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	0.0	0.0	30.4	0.0	33.4	47.3	13.3	10.4	42.6	8.6	7.2
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.0	0.8	7.3	0.8	0.2	3.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	0.0	0.7	0.0	4.1	0.8	5.5	0.8	3.0	3.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	0.0	0.0	30.5	0.0	34.2	54.6	14.1	10.6	46.5	9.0	7.4
LnGrp LOS	D	A	A	C	A	C	D	B	B	D	A	A
Approach Vol, veh/h		231			224			989			886	
Approach Delay, s/veh		40.5			33.7			15.0			14.1	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	58.6		26.1	7.0	66.0		26.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	50.0		38.0	8.0	62.0		38.0				
Max Q Clear Time (g_c+I1), s	10.5	19.1		20.7	5.5	13.2		12.9				
Green Ext Time (p_c), s	0.2	6.9		1.4	0.0	5.3		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	540	12	35	240	0	5
Future Volume (vph)	540	12	35	240	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	540	12	35	240	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	540	12	35	240	0	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	540	12	35	240	0	5
Future Vol, veh/h	540	12	35	240	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	540	12	35	240	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	552	0	-	270
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	876	-	0	734
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	876	-	-	734
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	734	-	-	876	-
HCM Lane V/C Ratio	0.007	-	-	0.04	-
HCM Control Delay (s)	9.9	-	-	9.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-

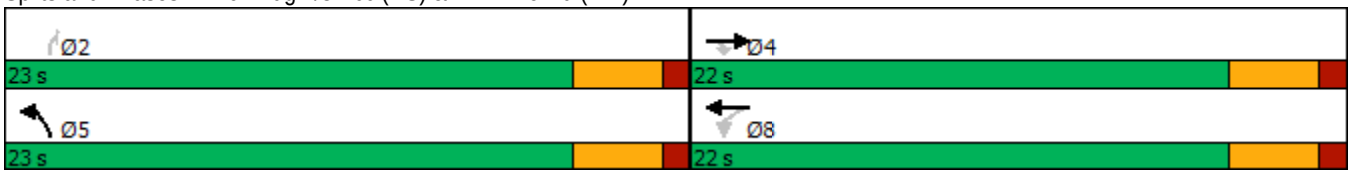


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	417	128	14	238	37	10
Future Volume (vph)	417	128	14	238	37	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.508		0.950	
Satd. Flow (perm)	3282	1468	778	2911	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		128				10
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	417	128	14	238	37	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	417	128	14	238	37	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	8.4	8.4	8.4	8.4	6.1	5.9
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.27	0.26
v/c Ratio	0.34	0.20	0.05	0.22	0.08	0.02
Control Delay	5.7	2.1	4.7	5.2	7.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	2.1	4.7	5.2	7.2	4.7
LOS	A	A	A	A	A	A
Approach Delay	4.9			5.1	6.7	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 22.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 5.0		Intersection LOS: A	
Intersection Capacity Utilization 22.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

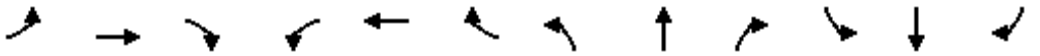




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	417	128	14	238	37	10
Future Volume (veh/h)	417	128	14	238	37	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1544	1544	1900	1900
Adj Flow Rate, veh/h	417	128	14	238	37	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	24	24	0	0
Cap, veh/h	1271	669	711	1120	113	113
Arrive On Green	0.38	0.38	0.38	0.38	0.06	0.06
Sat Flow, veh/h	3416	1752	711	3011	1900	1900
Grp Volume(v), veh/h	417	128	14	238	37	10
Grp Sat Flow(s),veh/h/ln	1664	1752	711	1467	1900	1900
Q Serve(g_s), s	1.3	0.7	0.2	0.8	0.3	0.1
Cycle Q Clear(g_c), s	1.3	0.7	1.5	0.8	0.3	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1271	669	711	1120	113	113
V/C Ratio(X)	0.33	0.19	0.02	0.21	0.33	0.09
Avail Cap(c_a), veh/h	4183	2202	1334	3688	2521	2521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.1	3.0	3.6	3.0	6.5	6.4
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.3	3.1	3.7	3.1	8.1	6.7
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	545			252	47	
Approach Delay, s/veh	3.2			3.1	7.8	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		4.9		9.5		9.5
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		2.3		3.3		3.5
Green Ext Time (p_c), s		0.1		2.4		1.2

Intersection Summary		
HCM 6th Ctrl Delay	3.4	
HCM 6th LOS	A	

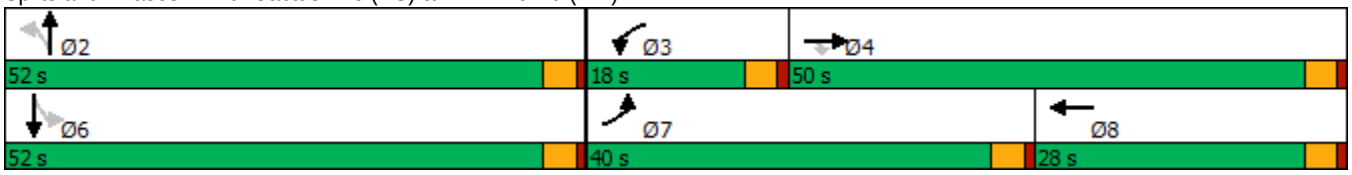


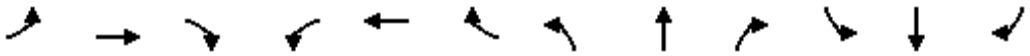
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	146	81	49	129	114	30	3	18	207	6	81
Future Volume (vph)	204	146	81	49	129	114	30	3	18	207	6	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.930			0.871			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2798	0	1805	1655	0	1626	1472	0
Flt Permitted	0.950			0.950			0.701			0.744		
Satd. Flow (perm)	1583	3167	1417	1504	2798	0	1332	1655	0	1274	1472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81		114			18			81	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	204	146	81	49	129	114	30	3	18	207	6	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	204	146	81	49	243	0	30	21	0	207	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	40.0	50.0	50.0	18.0	28.0		52.0	52.0		52.0	52.0	
Total Split (%)	33.3%	41.7%	41.7%	15.0%	23.3%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	36.0	46.0	46.0	14.0	24.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.3	22.1	22.1	8.3	9.6		48.4	48.4		48.4	48.4	
Actuated g/C Ratio	0.19	0.26	0.26	0.10	0.11		0.56	0.56		0.56	0.56	
v/c Ratio	0.68	0.18	0.19	0.34	0.59		0.04	0.02		0.29	0.10	
Control Delay	45.0	27.2	8.0	44.7	25.9		11.3	6.0		13.1	3.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	45.0	27.2	8.0	44.7	25.9		11.3	6.0		13.1	3.7	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		32.0			29.1			9.1			10.4	
Approach LOS		C			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 24.2		Intersection LOS: C	
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	146	81	49	129	114	30	3	18	207	6	81
Future Volume (veh/h)	204	146	81	49	129	114	30	3	18	207	6	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	204	146	81	49	129	114	30	3	18	207	6	81
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	249	706	371	66	189	167	847	161	963	847	71	957
Arrive On Green	0.15	0.22	0.22	0.04	0.11	0.11	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1693	3216	1693	1604	1660	1467	1331	271	1629	1292	120	1617
Grp Volume(v), veh/h	204	146	81	49	118	125	30	0	21	207	0	87
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1331	0	1900	1292	0	1737
Q Serve(g_s), s	9.5	3.0	3.2	2.5	6.1	6.1	0.8	0.0	0.4	6.4	0.0	1.7
Cycle Q Clear(g_c), s	9.5	3.0	3.2	2.5	6.1	6.1	2.6	0.0	0.4	6.8	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.91	1.00		0.86	1.00		0.93
Lane Grp Cap(c), veh/h	249	706	371	66	173	182	847	0	1124	847	0	1027
V/C Ratio(X)	0.82	0.21	0.22	0.74	0.68	0.68	0.04	0.00	0.02	0.24	0.00	0.08
Avail Cap(c_a), veh/h	751	1823	959	277	451	474	847	0	1124	847	0	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	25.9	26.0	38.5	34.6	34.6	7.7	0.0	6.8	8.2	0.0	7.1
Incr Delay (d2), s/veh	6.6	0.1	0.3	15.0	4.7	4.5	0.1	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.1	1.3	1.2	2.4	2.5	0.2	0.0	0.1	1.7	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	26.0	26.3	53.4	39.2	39.0	7.8	0.0	6.9	8.9	0.0	7.3
LnGrp LOS	D	C	C	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		431			292			51			294	
Approach Delay, s/veh		32.8			41.5			7.4			8.4	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		52.0	7.3	21.8		52.0	15.9	13.2				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		48.0	14.0	46.0		48.0	36.0	24.0				
Max Q Clear Time (g_c+I1), s		4.6	4.5	5.2		8.8	11.5	8.1				
Green Ext Time (p_c), s		0.2	0.0	1.2		1.2	0.5	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			27.3									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	352	19	4	291	0	2
Future Volume (vph)	352	19	4	291	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	352	19	4	291	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	19	4	291	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.7%		ICU Level of Service A	
Analysis Period (min) 15			

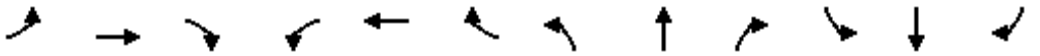
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	352	19	4	291	0	2
Future Vol, veh/h	352	19	4	291	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	352	19	4	291	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	371	0	-	176
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1065	-	0	843
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1065	-	-	843
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	843	-	-	1065	-
HCM Lane V/C Ratio	0.002	-	-	0.004	-
HCM Control Delay (s)	9.3	-	-	8.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

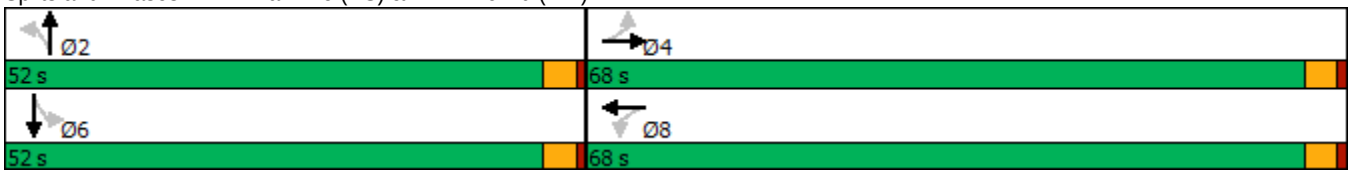


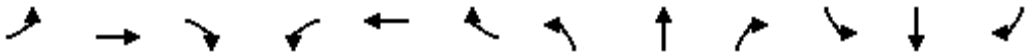
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	156	164	15	162	6	118	3	4	10	12	11
Future Volume (vph)	3	156	164	15	162	6	118	3	4	10	12	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.923			0.995			0.914			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1609	0	1583	1658	0	1410	1357	0	1736	1695	0
Flt Permitted	0.583			0.295			0.742			0.753		
Satd. Flow (perm)	1016	1609	0	492	1658	0	1101	1357	0	1376	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			2			4			11	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	3	156	164	15	162	6	118	3	4	10	12	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	320	0	15	168	0	118	7	0	10	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	68.0	68.0		68.0	68.0		52.0	52.0		52.0	52.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	64.0	64.0		64.0	64.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	17.0	17.0		17.0	17.0		48.2	48.2		48.2	48.2	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.66	0.66		0.66	0.66	
v/c Ratio	0.01	0.75		0.13	0.44		0.16	0.01		0.01	0.02	
Control Delay	20.3	32.0		24.2	27.0		6.6	4.7		5.9	4.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	32.0		24.2	27.0		6.6	4.7		5.9	4.3	
LOS	C	C		C	C		A	A		A	A	
Approach Delay		31.9			26.7			6.5			4.8	
Approach LOS		C			C			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 73.2	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 38.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

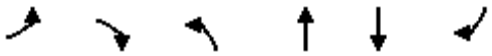




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	156	164	15	162	6	118	3	4	10	12	11
Future Volume (veh/h)	3	156	164	15	162	6	118	3	4	10	12	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	3	156	164	15	162	6	118	3	4	10	12	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	263	196	206	153	371	14	825	422	562	1015	636	583
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1150	861	905	959	1632	60	1102	636	849	1386	960	880
Grp Volume(v), veh/h	3	0	320	15	0	168	118	0	7	10	0	23
Grp Sat Flow(s),veh/h/ln	1150	0	1767	959	0	1693	1102	0	1485	1386	0	1841
Q Serve(g_s), s	0.2	0.0	12.4	1.1	0.0	6.2	3.0	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	6.3	0.0	12.4	13.5	0.0	6.2	3.3	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.51	1.00		0.04	1.00		0.57	1.00		0.48
Lane Grp Cap(c), veh/h	263	0	401	153	0	384	825	0	984	1015	0	1219
V/C Ratio(X)	0.01	0.00	0.80	0.10	0.00	0.44	0.14	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	1017	0	1560	782	0	1495	825	0	984	1015	0	1219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.7	0.0	26.4	32.8	0.0	24.0	4.7	0.0	4.1	4.2	0.0	4.2
Incr Delay (d2), s/veh	0.0	0.0	3.7	0.3	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.1	0.2	0.0	2.3	0.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	30.1	33.1	0.0	24.8	5.1	0.0	4.2	4.2	0.0	4.2
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		323			183			125			33	
Approach Delay, s/veh		30.1			25.5			5.1			4.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		20.5		52.0		20.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		48.0		64.0		48.0		64.0				
Max Q Clear Time (g_c+I1), s		5.3		14.4		2.3		15.5				
Green Ext Time (p_c), s		0.6		1.9		0.1		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			22.8									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	8	18	118	177	14
Future Volume (vph)	7	8	18	118	177	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	902	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	902	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	100%	28%	11%	11%
Adj. Flow (vph)	7	8	18	118	177	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	8	18	118	177	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			

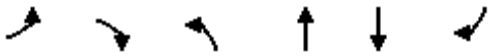
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	18	118	177	14
Future Vol, veh/h	7	8	18	118	177	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	100	28	11	11
Mvmt Flow	7	8	18	118	177	14

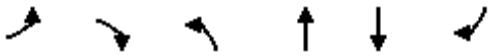
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	331	177	191	0	-	0
Stage 1	177	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Critical Hdwy	6.4	6.2	5.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	3.1	-	-	-
Pot Cap-1 Maneuver	668	871	961	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	655	871	961	-	-	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	879	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	961	-	655	871	-	-
HCM Lane V/C Ratio	0.019	-	0.011	0.009	-	-
HCM Control Delay (s)	8.8	-	10.6	9.2	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0	-	-



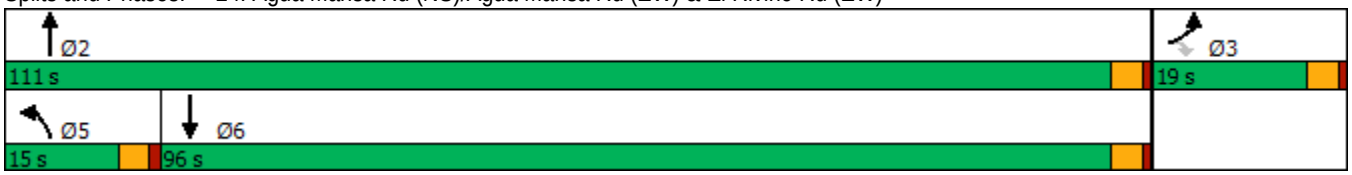
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	87	76	48	468	620	150
Future Volume (vph)	87	76	48	468	620	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.974	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	1380	1456	1532	1568	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	1380	1456	1532	1568	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		76			23	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	24%	24%	18%	18%
Adj. Flow (vph)	87	76	48	468	620	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	76	48	468	770	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

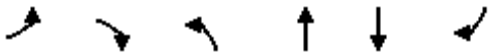


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	19.0	19.0	15.0	111.0	96.0	
Total Split (%)	14.6%	14.6%	11.5%	85.4%	73.8%	
Maximum Green (s)	15.0	15.0	11.0	107.0	92.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	11.9	11.9	9.0	107.1	96.1	
Actuated g/C Ratio	0.09	0.09	0.07	0.84	0.76	
v/c Ratio	0.60	0.38	0.47	0.36	0.65	
Control Delay	72.7	17.2	71.9	3.3	11.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.7	17.2	71.9	3.3	11.7	
LOS	E	B	E	A	B	
Approach Delay	46.8			9.7	11.7	
Approach LOS	D			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 127			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	87	76	48	468	620	150
Future Volume (veh/h)	87	76	48	468	620	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1648	1648	1544	1544	1633	1633
Adj Flow Rate, veh/h	87	76	48	468	620	150
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	24	24	18	18
Cap, veh/h	114	114	59	1337	1046	253
Arrive On Green	0.07	0.07	0.04	0.87	0.80	0.80
Sat Flow, veh/h	1648	1648	1544	1544	1315	318
Grp Volume(v), veh/h	87	76	48	468	0	770
Grp Sat Flow(s),veh/h/ln	1648	1648	1544	1544	0	1633
Q Serve(g_s), s	6.4	5.6	3.8	7.2	0.0	22.6
Cycle Q Clear(g_c), s	6.4	5.6	3.8	7.2	0.0	22.6
Prop In Lane	1.00	1.00	1.00			0.19
Lane Grp Cap(c), veh/h	114	114	59	1337	0	1299
V/C Ratio(X)	0.76	0.66	0.81	0.35	0.00	0.59
Avail Cap(c_a), veh/h	200	200	137	1337	0	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	56.1	59.0	1.6	0.0	4.9
Incr Delay (d2), s/veh	9.9	6.5	22.8	0.7	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.5	1.8	1.0	0.0	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.4	62.6	81.8	2.3	0.0	6.9
LnGrp LOS	E	E	F	A	A	A
Approach Vol, veh/h	163			516	770	
Approach Delay, s/veh	64.6			9.7	6.9	
Approach LOS	E			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		111.0			8.7	102.3	12.6
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		107.0			11.0	92.0	15.0
Max Q Clear Time (g_c+I1), s		9.2			5.8	24.6	8.4
Green Ext Time (p_c), s		3.0			0.0	6.1	0.2

Intersection Summary		
HCM 6th Ctrl Delay		14.4
HCM 6th LOS		B

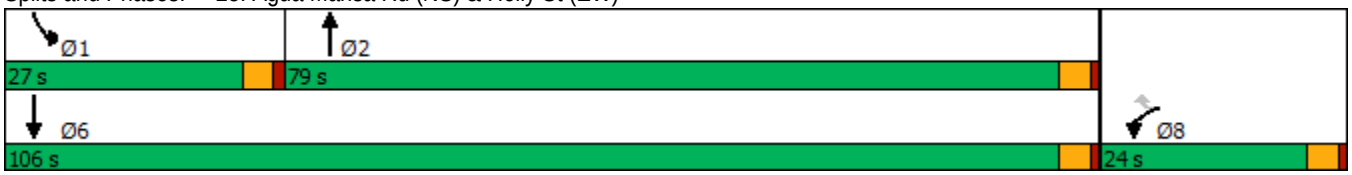


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	30	494	70	103	656
Future Volume (vph)	10	30	494	70	103	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.981			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1347	1045	2745	0	1504	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1347	1045	2745	0	1504	1583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		30	20			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	34%	34%	29%	29%	20%	20%
Adj. Flow (vph)	10	30	494	70	103	656
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	30	564	0	103	656
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	24.0	24.0	79.0		27.0	106.0
Total Split (%)	18.5%	18.5%	60.8%		20.8%	81.5%
Maximum Green (s)	20.0	20.0	75.0		23.0	102.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	6.8	6.8	90.4		13.4	109.3
Actuated g/C Ratio	0.06	0.06	0.76		0.11	0.92
v/c Ratio	0.13	0.34	0.27		0.61	0.45
Control Delay	55.7	28.4	5.6		64.8	2.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.7	28.4	5.6		64.8	2.4
LOS	E	C	A		E	A
Approach Delay	35.3		5.6			10.9
Approach LOS	D		A			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 45.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)

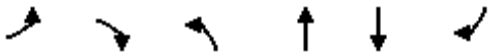




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	30	494	70	103	656
Future Volume (veh/h)	10	30	494	70	103	656
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1396	1340	1470	1470	1604	1604
Adj Flow Rate, veh/h	10	30	494	70	103	656
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	34	34	29	29	20	20
Cap, veh/h	44	42	1968	279	127	1440
Arrive On Green	0.03	0.03	0.78	0.78	0.08	0.90
Sat Flow, veh/h	1396	1340	2585	356	1604	1604
Grp Volume(v), veh/h	10	30	275	289	103	656
Grp Sat Flow(s),veh/h/ln	1396	1340	1397	1470	1604	1604
Q Serve(g_s), s	0.8	2.5	6.0	6.0	7.2	8.0
Cycle Q Clear(g_c), s	0.8	2.5	6.0	6.0	7.2	8.0
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	44	42	1095	1152	127	1440
V/C Ratio(X)	0.23	0.71	0.25	0.25	0.81	0.46
Avail Cap(c_a), veh/h	246	236	1095	1152	325	1440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	54.5	3.3	3.3	51.5	1.0
Incr Delay (d2), s/veh	2.6	19.5	0.6	0.5	11.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	1.3	1.3	3.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.2	74.0	3.9	3.8	63.1	2.0
LnGrp LOS	E	E	A	A	E	A
Approach Vol, veh/h	40		564			759
Approach Delay, s/veh	69.6		3.8			10.3
Approach LOS	E		A			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.0	93.0			106.0	7.6
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	23.0	75.0			102.0	20.0
Max Q Clear Time (g_c+I1), s	9.2	8.0			10.0	4.5
Green Ext Time (p_c), s	0.2	3.4			4.8	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A



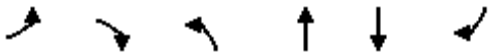
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	142	102	539	661	80
Future Volume (vph)	45	142	102	539	661	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		142				72
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	45	142	102	539	661	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	142	102	539	661	80
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	13.0	38.0	25.0	25.0
Total Split (%)	36.7%	36.7%	21.7%	63.3%	41.7%	41.7%
Maximum Green (s)	18.0	18.0	9.0	34.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	7.4	7.4	8.0	28.7	22.1	22.1
Actuated g/C Ratio	0.18	0.18	0.20	0.71	0.55	0.55
v/c Ratio	0.17	0.41	0.37	0.28	0.42	0.12
Control Delay	18.7	8.3	21.7	3.7	10.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	8.3	21.7	3.7	10.6	4.3
LOS	B	A	C	A	B	A
Approach Delay	10.8			6.6	9.9	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 40.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 38.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

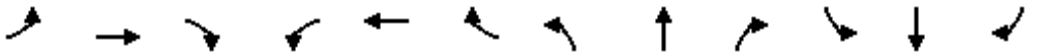




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	142	102	539	661	80
Future Volume (veh/h)	45	142	102	539	661	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	45	142	102	539	661	80
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	202	202	137	1643	1083	547
Arrive On Green	0.13	0.13	0.10	0.60	0.37	0.37
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	45	142	102	539	661	80
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.8	2.7	2.1	3.0	5.6	1.1
Cycle Q Clear(g_c), s	0.8	2.7	2.1	3.0	5.6	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	202	202	137	1643	1083	547
V/C Ratio(X)	0.22	0.70	0.74	0.33	0.61	0.15
Avail Cap(c_a), veh/h	894	894	430	3083	2022	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	12.5	13.3	3.0	7.7	6.3
Incr Delay (d2), s/veh	0.6	4.4	7.7	0.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.5	0.7	0.0	0.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	16.9	21.0	3.1	8.2	6.4
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	187			641	741	
Approach Delay, s/veh	15.8			6.0	8.0	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.1		8.1	6.9	15.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	9.0	21.0
Max Q Clear Time (g_c+I1), s		5.0		4.7	4.1	7.6
Green Ext Time (p_c), s		3.6		0.4	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

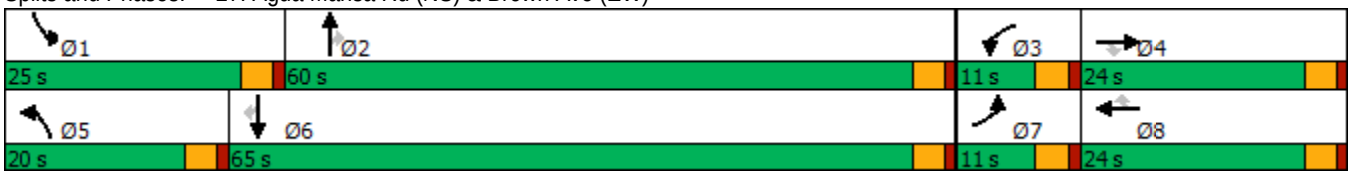


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	25	13	0	40	68	605	16	92	707	19
Future Volume (vph)	6	2	25	13	0	40	68	605	16	92	707	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			420			118			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	6	2	25	13	0	40	68	605	16	92	707	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	2	25	13	0	40	68	605	16	92	707	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	20.0	60.0	60.0	25.0	65.0	65.0
Total Split (%)	9.2%	20.0%	20.0%	9.2%	20.0%	20.0%	16.7%	50.0%	50.0%	20.8%	54.2%	54.2%
Maximum Green (s)	7.0	20.0	20.0	7.0	20.0	20.0	16.0	56.0	56.0	21.0	61.0	61.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.1	5.9	5.9	6.3		5.9	9.9	65.5	65.5	11.2	66.6	66.6
Actuated g/C Ratio	0.07	0.07	0.07	0.07		0.07	0.11	0.74	0.74	0.13	0.75	0.75
v/c Ratio	0.08	0.03	0.15	0.15		0.09	0.45	0.30	0.02	0.51	0.33	0.02
Control Delay	45.8	44.5	2.0	47.2		0.4	48.1	7.4	0.1	47.8	7.0	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	44.5	2.0	47.2		0.4	48.1	7.4	0.1	47.8	7.0	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		12.5			11.9			11.3			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 89			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)

10/08/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2	25	13	0	40	68	605	16	92	707	19
Future Volume (veh/h)	6	2	25	13	0	40	68	605	16	92	707	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	6	2	25	13	0	40	68	605	16	92	707	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	6	51	49	18	83	80	106	1763	891	142	1928	974
Arrive On Green	0.01	0.06	0.06	0.02	0.00	0.07	0.07	0.65	0.65	0.09	0.67	0.67
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	6	2	25	13	0	40	68	605	16	92	707	19
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.7	0.2	2.9	1.0	0.0	3.2	4.2	9.1	0.4	5.3	9.8	0.4
Cycle Q Clear(g_c), s	0.7	0.2	2.9	1.0	0.0	3.2	4.2	9.1	0.4	5.3	9.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	6	51	49	18	83	80	106	1763	891	142	1928	974
V/C Ratio(X)	0.98	0.04	0.51	0.73	0.00	0.50	0.64	0.34	0.02	0.65	0.37	0.02
Avail Cap(c_a), veh/h	61	173	166	89	255	244	251	1763	891	349	1928	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	40.0	41.2	44.6	0.0	40.7	40.9	7.1	5.6	39.8	6.6	5.0
Incr Delay (d2), s/veh	164.6	0.3	8.2	42.8	0.0	4.8	6.2	0.5	0.0	4.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.5	0.0	1.0	1.6	2.2	0.1	2.1	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	209.7	40.3	49.4	87.4	0.0	45.4	47.1	7.7	5.7	44.7	7.1	5.1
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		33			53			689			818	
Approach Delay, s/veh		78.0			55.7			11.5			11.3	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	63.3	5.4	9.8	10.8	65.0	4.7	10.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	56.0	7.0	20.0	16.0	61.0	7.0	20.0
Max Q Clear Time (g_c+I1), s	9.3	13.1	5.0	6.9	8.2	13.8	4.7	7.2
Green Ext Time (p_c), s	0.1	4.3	0.0	0.0	0.1	5.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B



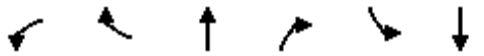
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	29	671	51	29	723
Future Volume (vph)	32	29	671	51	29	723
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.397	
Satd. Flow (perm)	1031	923	2654	1188	559	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		29		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	32	29	671	51	29	723
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	29	671	51	29	723
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	7.3	6.9	48.7	48.7	48.7	48.7
Actuated g/C Ratio	0.13	0.12	0.88	0.88	0.88	0.88
v/c Ratio	0.24	0.21	0.29	0.05	0.06	0.58
Control Delay	25.8	12.9	2.3	1.1	2.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	12.9	2.3	1.1	2.6	6.4
LOS	C	B	A	A	A	A
Approach Delay	19.6		2.2			6.3
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

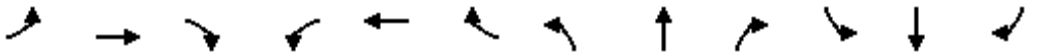




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	32	29	671	51	29	723
Future Volume (veh/h)	32	29	671	51	29	723
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	32	29	671	51	29	723
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	47	47	1977	1040	527	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	540	1381
Grp Volume(v), veh/h	32	29	671	51	29	723
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	540	1381
Q Serve(g_s), s	1.8	1.6	3.7	0.4	0.8	11.7
Cycle Q Clear(g_c), s	1.8	1.6	3.7	0.4	4.5	11.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	47	47	1977	1040	527	1052
V/C Ratio(X)	0.68	0.62	0.34	0.05	0.05	0.69
Avail Cap(c_a), veh/h	318	318	1977	1040	527	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.7	1.3	2.4	2.7
Incr Delay (d2), s/veh	16.1	12.6	0.5	0.1	0.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.7	33.1	2.2	1.4	2.6	6.3
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	61		722			752
Approach Delay, s/veh	34.9		2.1			6.2
Approach LOS	C		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.7
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.7			13.7	3.8
Green Ext Time (p_c), s		4.8			5.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

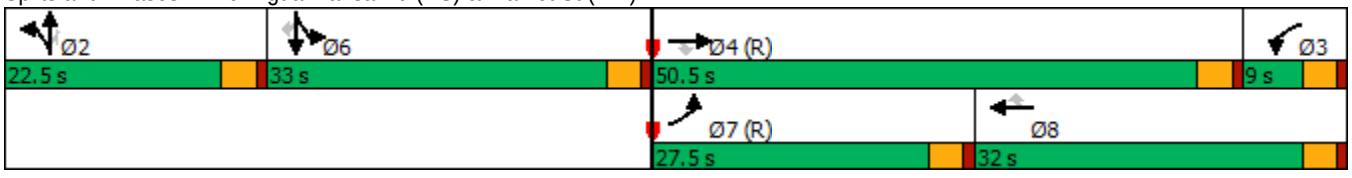


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	447	672	11	3	575	280	9	3	1	241	6	421
Future Volume (vph)	447	672	11	3	575	280	9	3	1	241	6	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	0		1	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	3183	3282	1272	1626	3252	1261	0	1263	965	1433	1508	1955
Flt Permitted	0.950			0.950				0.964		0.950		
Satd. Flow (perm)	3183	3282	1272	1626	3252	1261	0	1263	965	1433	1508	1955
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			130			123			421
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	447	672	11	3	575	280	9	3	1	241	6	421
Shared Lane Traffic (%)												
Lane Group Flow (vph)	447	672	11	3	575	280	0	12	1	241	6	421
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	27.5	50.5	50.5	9.0	32.0	32.0	22.5	22.5	22.5	33.0	33.0	33.0
Total Split (%)	23.9%	43.9%	43.9%	7.8%	27.8%	27.8%	19.6%	19.6%	19.6%	28.7%	28.7%	28.7%
Maximum Green (s)	23.5	46.5	46.5	5.0	28.0	28.0	18.5	18.5	18.5	29.0	29.0	29.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	23.5	51.1	51.1	5.0	25.4	25.4		21.1	21.1	29.0	29.0	29.0
Actuated g/C Ratio	0.20	0.44	0.44	0.04	0.22	0.22		0.18	0.18	0.25	0.25	0.25
v/c Ratio	0.69	0.46	0.02	0.04	0.80	0.74		0.05	0.00	0.67	0.02	0.52
Control Delay	58.3	40.7	0.4	54.0	51.3	33.9		41.6	0.0	49.0	32.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	40.7	0.4	54.0	51.3	33.9		41.6	0.0	49.0	32.7	5.8
LOS	E	D	A	D	D	C		D	A	D	C	A
Approach Delay		47.3			45.7			38.4			21.7	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 115			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 40.3		Intersection LOS: D	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

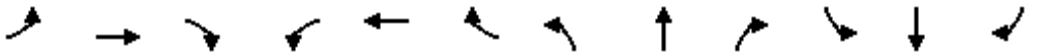
Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	447	672	11	3	575	280	9	3	1	241	6	421
Future Volume (veh/h)	447	672	11	3	575	280	9	3	1	241	6	421
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	447	672	11	3	575	280	9	3	1	241	6	421
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	653	1346	680	76	844	426	149	50	190	382	382	645
Arrive On Green	0.38	0.81	0.81	0.04	0.26	0.26	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	3398	3328	1682	1737	3300	1668	925	308	1184	1515	1515	2559
Grp Volume(v), veh/h	447	672	11	3	575	280	12	0	1	241	6	421
Grp Sat Flow(s),veh/h/ln	1699	1664	1682	1737	1650	1668	1233	0	1184	1515	1515	1280
Q Serve(g_s), s	12.6	7.5	0.1	0.2	18.1	17.3	0.9	0.0	0.1	16.3	0.3	16.9
Cycle Q Clear(g_c), s	12.6	7.5	0.1	0.2	18.1	17.3	0.9	0.0	0.1	16.3	0.3	16.9
Prop In Lane	1.00		1.00	1.00		1.00	0.75		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	653	1346	680	76	844	426	198	0	190	382	382	645
V/C Ratio(X)	0.68	0.50	0.02	0.04	0.68	0.66	0.06	0.00	0.01	0.63	0.02	0.65
Avail Cap(c_a), veh/h	694	1346	680	76	844	426	198	0	190	382	382	645
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	32.5	7.3	6.6	52.7	38.6	38.3	40.9	0.0	40.5	38.2	32.3	38.5
Incr Delay (d2), s/veh	1.7	0.9	0.0	0.2	2.2	3.6	0.6	0.0	0.0	6.2	0.1	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	1.9	0.1	0.1	7.3	7.2	0.3	0.0	0.0	6.5	0.1	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	8.2	6.6	52.9	40.8	41.9	41.5	0.0	40.6	44.5	32.3	42.6
LnGrp LOS	C	A	A	D	D	D	D	A	D	D	C	D
Approach Vol, veh/h		1130			858			13			668	
Approach Delay, s/veh		18.5			41.2			41.4			43.2	
Approach LOS		B			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	9.0	50.5		33.0	26.1	33.4				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.5	5.0	46.5		29.0	23.5	28.0				
Max Q Clear Time (g_c+I1), s		4.1	4.2	11.5		20.9	16.6	22.1				
Green Ext Time (p_c), s		0.0	0.0	4.7		1.5	0.9	2.2				

Intersection Summary												
HCM 6th Ctrl Delay			32.1									
HCM 6th LOS			C									



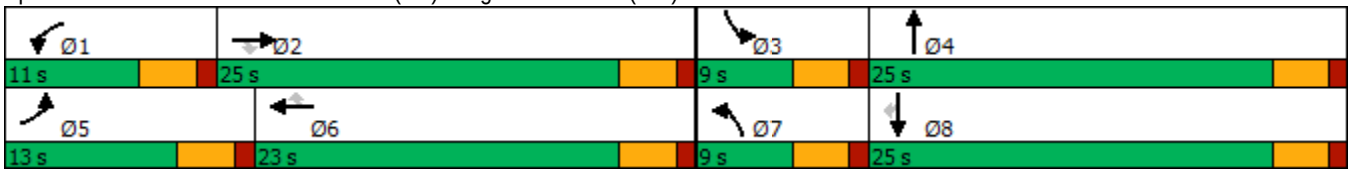
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Future Volume (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.991				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1492	1570	1335	1570	1652	1404	1570	3111	0	1597	3195	1429
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1492	1570	1335	1570	1652	1404	1570	3111	0	1597	3195	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			140		9				184
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	21%	15%	15%	15%	15%	15%	15%	13%	13%	13%
Adj. Flow (vph)	337	229	85	68	317	79	118	711	45	97	1237	389
Shared Lane Traffic (%)												
Lane Group Flow (vph)	337	229	85	68	317	79	118	756	0	97	1237	389
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

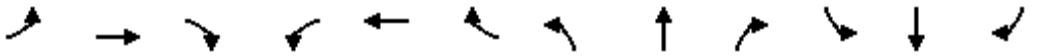
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	13.0	25.0	25.0	11.0	23.0	23.0	9.0	25.0		9.0	25.0	25.0
Total Split (%)	18.6%	35.7%	35.7%	15.7%	32.9%	32.9%	12.9%	35.7%		12.9%	35.7%	35.7%
Maximum Green (s)	9.0	21.0	21.0	7.0	19.0	19.0	5.0	21.0		5.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	9.0	25.4	25.4	6.7	19.0	19.0	5.0	21.0		5.0	21.0	21.0
Actuated g/C Ratio	0.13	0.36	0.36	0.10	0.27	0.27	0.07	0.30		0.07	0.30	0.30
v/c Ratio	1.76	0.40	0.15	0.45	0.71	0.16	1.05	0.81		0.85	1.29	0.70
Control Delay	389.2	21.2	1.8	39.9	33.4	1.7	137.9	30.6		88.7	164.2	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	389.2	21.2	1.8	39.9	33.4	1.7	137.9	30.6		88.7	164.2	19.0
LOS	F	C	A	D	C	A	F	C		F	F	B
Approach Delay		209.2			29.0			45.1			127.2	
Approach LOS		F			C			D			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.76
Intersection Signal Delay: 109.9 Intersection LOS: F
Intersection Capacity Utilization 89.4% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)

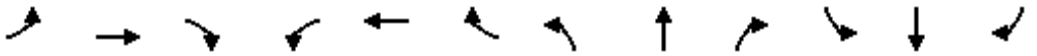




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	229	85	68	317	79	118	711	45	97	1237	389
Future Volume (veh/h)	337	229	85	68	317	79	118	711	45	97	1237	389
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1678	1678	1707	1707	1707
Adj Flow Rate, veh/h	337	229	85	68	317	79	118	711	45	97	1237	389
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	21	21	21	15	15	15	15	15	15	13	13	13
Cap, veh/h	204	523	523	119	455	455	120	923	58	122	973	512
Arrive On Green	0.13	0.33	0.33	0.07	0.27	0.27	0.07	0.30	0.30	0.07	0.30	0.30
Sat Flow, veh/h	1589	1589	1589	1678	1678	1678	1678	3077	195	1707	3244	1707
Grp Volume(v), veh/h	337	229	85	68	317	79	118	368	388	97	1237	389
Grp Sat Flow(s),veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1594	1678	1707	1622	1707
Q Serve(g_s), s	9.0	7.9	2.7	2.7	11.9	2.5	4.9	14.7	14.7	3.9	21.0	14.5
Cycle Q Clear(g_c), s	9.0	7.9	2.7	2.7	11.9	2.5	4.9	14.7	14.7	3.9	21.0	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	204	523	523	119	455	455	120	478	503	122	973	512
V/C Ratio(X)	1.65	0.44	0.16	0.57	0.70	0.17	0.98	0.77	0.77	0.80	1.27	0.76
Avail Cap(c_a), veh/h	204	523	523	168	455	455	120	478	503	122	973	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	18.4	16.6	31.5	22.9	19.5	32.5	22.3	22.3	32.0	24.5	22.2
Incr Delay (d2), s/veh	313.3	2.7	0.7	4.3	8.5	0.8	77.2	7.5	7.2	29.5	130.1	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.9	2.9	0.9	1.2	5.2	0.9	4.4	5.6	5.8	2.4	24.3	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	343.8	21.0	17.3	35.8	31.4	20.3	109.7	29.8	29.5	61.5	154.6	28.7
LnGrp LOS	F	C	B	D	C	C	F	C	C	E	F	C
Approach Vol, veh/h		651			464			874			1723	
Approach Delay, s/veh		187.6			30.2			40.5			121.0	
Approach LOS		F			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.0	9.0	25.0	13.0	23.0	9.0	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0	5.0	21.0	9.0	19.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	6.7	11.9	7.9	18.7	13.0	15.9	8.9	25.0
Green Ext Time (p_c), s	0.0	0.9	0.0	0.9	0.0	0.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	102.3
HCM 6th LOS	F

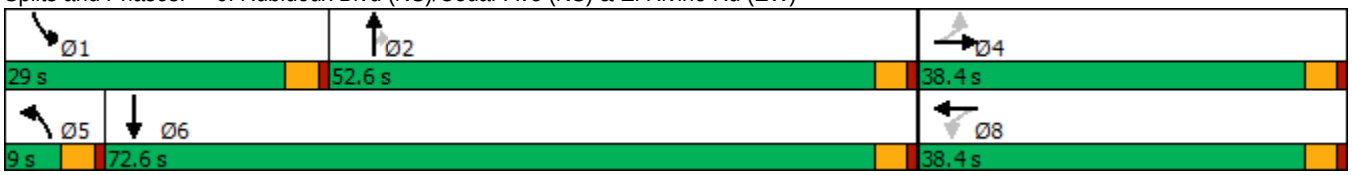


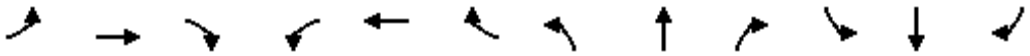
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	8	26	327	13	341	14	1249	198	323	1054	16
Future Volume (vph)	21	8	26	327	13	341	14	1249	198	323	1054	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.885			0.856				0.850		0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	1488	0	1504	1355	0	1597	3195	1429	1612	3217	0
Flt Permitted	0.269			0.735			0.950			0.950		
Satd. Flow (perm)	452	1488	0	1164	1355	0	1597	3195	1429	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			340				167		2	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	21	8	26	327	13	341	14	1249	198	323	1054	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	327	354	0	14	1249	198	323	1070	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	38.4	38.4		38.4	38.4		9.0	52.6	52.6	29.0	72.6	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		7.5%	43.8%	43.8%	24.2%	60.5%	
Maximum Green (s)	34.4	34.4		34.4	34.4		5.0	48.6	48.6	25.0	68.6	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	34.4	34.4		34.4	34.4		5.0	48.6	48.6	25.0	74.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.04	0.40	0.40	0.21	0.62	
v/c Ratio	0.16	0.08		0.98	0.56		0.21	0.97	0.29	0.96	0.54	
Control Delay	36.1	14.9		88.3	8.0		63.4	53.4	6.5	88.5	15.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	36.1	14.9		88.3	8.0		63.4	53.4	6.5	88.5	15.1	
LOS	D	B		F	A		E	D	A	F	B	
Approach Delay		23.0			46.6			47.1			32.1	
Approach LOS		C			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 40.8		Intersection LOS: D	
Intersection Capacity Utilization 87.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	8	26	327	13	341	14	1249	198	323	1054	16
Future Volume (veh/h)	21	8	26	327	13	341	14	1249	198	323	1054	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	21	8	26	327	13	341	14	1249	198	323	1054	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	124	115	374	378	17	443	27	1314	691	359	1978	30
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.02	0.41	0.41	0.21	0.60	0.60
Sat Flow, veh/h	938	402	1306	1179	59	1545	1707	3244	1707	1722	3308	50
Grp Volume(v), veh/h	21	0	34	327	0	354	14	1249	198	323	521	549
Grp Sat Flow(s),veh/h/ln	938	0	1707	1179	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	2.6	0.0	1.7	32.4	0.0	24.2	1.0	44.7	9.4	21.9	22.6	22.6
Cycle Q Clear(g_c), s	28.8	0.0	1.7	34.4	0.0	24.2	1.0	44.7	9.4	21.9	22.6	22.6
Prop In Lane	1.00		0.76	1.00		0.96	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	124	0	489	378	0	460	27	1314	691	359	978	1029
V/C Ratio(X)	0.17	0.00	0.07	0.86	0.00	0.77	0.53	0.95	0.29	0.90	0.53	0.53
Avail Cap(c_a), veh/h	124	0	489	378	0	460	71	1314	691	359	978	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	31.2	44.2	0.0	39.2	58.6	34.5	24.0	46.3	14.2	14.2
Incr Delay (d2), s/veh	0.6	0.0	0.1	18.4	0.0	7.8	15.3	15.5	1.0	24.7	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.7	11.6	0.0	10.5	0.5	19.1	3.8	11.4	7.9	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	0.0	31.2	62.6	0.0	47.0	73.9	50.1	25.1	70.9	16.3	16.2
LnGrp LOS	D	A	C	E	A	D	E	D	C	E	B	B
Approach Vol, veh/h		55			681			1461			1393	
Approach Delay, s/veh		39.9			54.5			46.9			28.9	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	52.6		38.4	5.9	75.7		38.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	25.0	48.6		34.4	5.0	68.6		34.4				
Max Q Clear Time (g_c+I1), s	25.9	48.7		30.8	5.0	26.6		36.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.4		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	16	1445	3	0	1407
Future Volume (vph)	0	16	1445	3	0	1407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1644	3195	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3195	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	16	1445	3	0	1407
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	1448	0	0	1407
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	1445	3	0	1407
Future Vol, veh/h	0	16	1445	3	0	1407
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	16	1445	3	0	1407

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	724	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	373	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	373	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	373	-
HCM Lane V/C Ratio	-	-	0.043	-
HCM Control Delay (s)	-	-	15.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

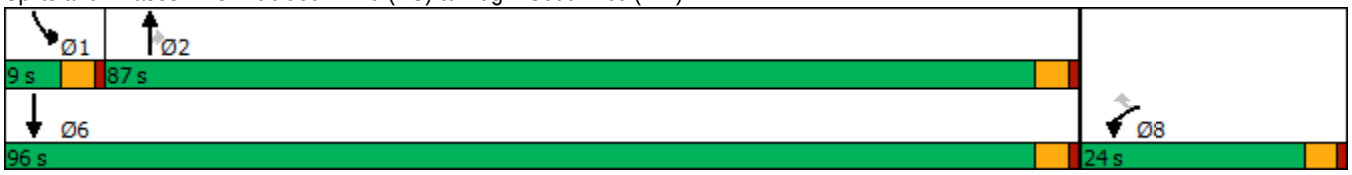


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	29	1419	10	3	1404
Future Volume (vph)	82	29	1419	10	3	1404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		29		10		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	82	29	1419	10	3	1404
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	29	1419	10	3	1404
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	24.0	24.0	87.0	87.0	9.0	96.0
Total Split (%)	20.0%	20.0%	72.5%	72.5%	7.5%	80.0%
Maximum Green (s)	20.0	20.0	83.0	83.0	5.0	92.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	10.6	10.6	99.0	99.0	5.0	100.8
Actuated g/C Ratio	0.09	0.09	0.85	0.85	0.04	0.87
v/c Ratio	0.50	0.17	0.52	0.01	0.04	0.49
Control Delay	60.3	18.1	4.5	1.9	54.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	60.3	18.1	4.5	1.9	54.3	3.5
LOS	E	B	A	A	D	A
Approach Delay	49.3		4.5			3.6
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 5.8		Intersection LOS: A	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

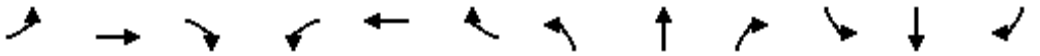




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	29	1419	10	3	1404
Future Volume (veh/h)	82	29	1419	10	3	1404
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	82	29	1419	10	3	1404
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	115	115	2669	1405	7	2901
Arrive On Green	0.06	0.06	0.82	0.82	0.00	0.86
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	82	29	1419	10	3	1404
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	4.5	1.5	14.7	0.1	0.2	10.4
Cycle Q Clear(g_c), s	4.5	1.5	14.7	0.1	0.2	10.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	115	115	2669	1405	7	2901
V/C Ratio(X)	0.71	0.25	0.53	0.01	0.43	0.48
Avail Cap(c_a), veh/h	357	357	2669	1405	83	2901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	47.7	3.0	1.7	52.9	1.7
Incr Delay (d2), s/veh	7.9	1.1	0.8	0.0	36.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.8	2.1	0.0	0.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.0	48.8	3.7	1.7	88.8	2.3
LnGrp LOS	E	D	A	A	F	A
Approach Vol, veh/h	111		1429			1407
Approach Delay, s/veh	54.8		3.7			2.5
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	4.4	91.6			96.0	10.5
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	5.0	83.0			92.0	20.0
Max Q Clear Time (g_c+I1), s	2.2	16.7			12.4	6.5
Green Ext Time (p_c), s	0.0	14.3			14.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

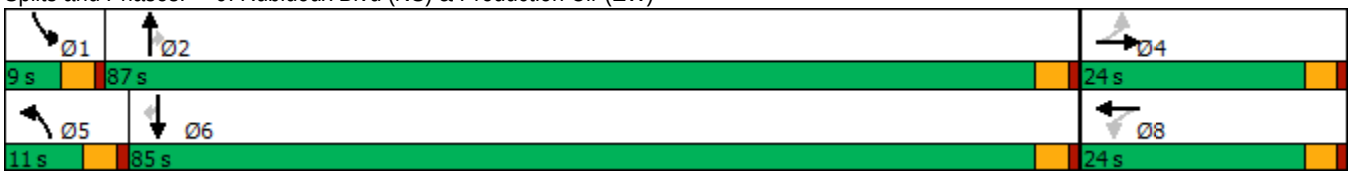


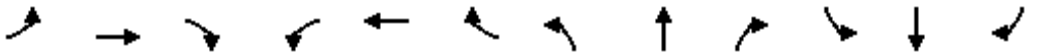
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	0	37	1	0	3	18	1327	0	0	1467	17
Future Volume (vph)	23	0	37	1	0	3	18	1327	0	0	1467	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.733			0.950					
Satd. Flow (perm)	1355	1524	0	1393	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		120			144							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	23	0	37	1	0	3	18	1327	0	0	1467	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	37	0	1	3	0	18	1327	0	0	1467	17
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		11.0	87.0	87.0	9.0	85.0	85.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		9.2%	72.5%	72.5%	7.5%	70.8%	70.8%
Maximum Green (s)	20.0	20.0		20.0	20.0		7.0	83.0	83.0	5.0	81.0	81.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.5	7.5		7.5	7.5		6.4	96.6			92.2	92.2
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.06	0.88			0.84	0.84
v/c Ratio	0.25	0.17		0.01	0.01		0.20	0.48			0.53	0.02
Control Delay	54.6	1.7		46.0	0.0		54.3	2.4			4.8	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.6	1.7		46.0	0.0		54.3	2.4			4.8	0.1
LOS	D	A		D	A		D	A			A	A
Approach Delay		22.0			11.5			3.1			4.7	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

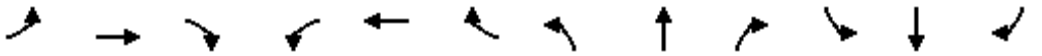




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	37	1	0	3	18	1327	0	0	1467	17
Future Volume (veh/h)	23	0	37	1	0	3	18	1327	0	0	1467	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	23	0	37	1	0	3	18	1327	0	0	1467	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	128	0	76	103	0	79	33	2797	1413	2	2721	1375
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1393	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	23	0	37	1	0	3	18	1327	0	0	1467	17
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1393	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.6	0.0	2.0	0.1	0.0	0.2	1.1	8.7	0.0	0.0	14.3	0.2
Cycle Q Clear(g_c), s	1.8	0.0	2.0	2.0	0.0	0.2	1.1	8.7	0.0	0.0	14.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	0	76	103	0	79	33	2797	1413	2	2721	1375
V/C Ratio(X)	0.18	0.00	0.49	0.01	0.00	0.04	0.54	0.47	0.00	0.00	0.54	0.01
Avail Cap(c_a), veh/h	347	0	366	326	0	383	119	2797	1413	88	2721	1375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	0.0	46.4	47.4	0.0	45.6	48.1	1.3	0.0	0.0	3.0	1.7
Incr Delay (d2), s/veh	0.7	0.0	4.8	0.0	0.0	0.2	13.2	0.6	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.0	0.0	0.0	0.1	0.5	0.2	0.0	0.0	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	51.3	47.5	0.0	45.8	61.3	1.9	0.0	0.0	3.7	1.7
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		60			4			1345			1484	
Approach Delay, s/veh		49.7			46.2			2.6			3.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.0		8.1	6.0	85.0		8.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	7.0	81.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	10.7		4.0	3.1	16.3		4.0				
Green Ext Time (p_c), s	0.0	12.7		0.2	0.0	15.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		4.2
HCM 6th LOS		A



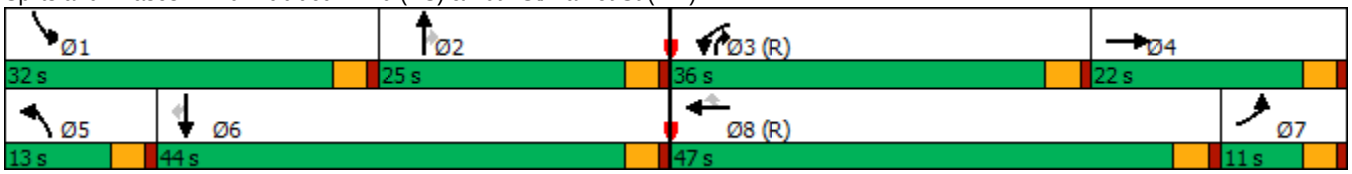
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	132	26	439	121	580	54	509	574	696	691	74
Future Volume (vph)	59	132	26	439	121	580	54	509	574	696	691	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	*1.00	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.975				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				555			149			123
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	59	132	26	439	121	580	54	509	574	696	691	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	158	0	439	121	580	54	509	574	696	691	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

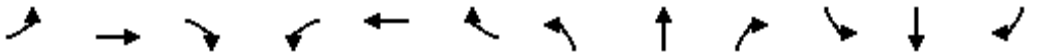
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.0	22.0		11.0	22.0	22.0	11.0	22.0	11.0	11.0	22.0	22.0
Total Split (s)	11.0	22.0		36.0	47.0	47.0	13.0	25.0	36.0	32.0	44.0	44.0
Total Split (%)	9.6%	19.1%		31.3%	40.9%	40.9%	11.3%	21.7%	31.3%	27.8%	38.3%	38.3%
Maximum Green (s)	7.0	18.0		32.0	43.0	43.0	9.0	21.0	32.0	28.0	40.0	40.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	7.0	16.4		32.0	43.6	43.6	8.3	23.8	59.8	26.8	44.5	44.5
Actuated g/C Ratio	0.06	0.14		0.28	0.38	0.38	0.07	0.21	0.52	0.23	0.39	0.39
v/c Ratio	0.63	0.68		0.47	0.18	0.63	0.47	0.73	0.71	0.89	0.49	0.11
Control Delay	82.3	60.0		36.4	25.0	6.3	64.6	50.7	21.5	57.8	29.6	1.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.3	60.0		36.4	25.0	6.3	64.6	50.7	21.5	57.8	29.6	1.2
LOS	F	E		D	C	A	E	D	C	E	C	A
Approach Delay		66.1			19.9			36.6			41.6	
Approach LOS		E			B			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 35.2 Intersection LOS: D
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

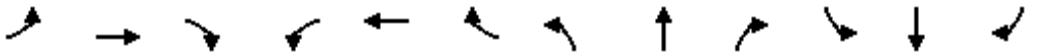




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	132	26	439	121	580	54	509	574	696	691	74
Future Volume (veh/h)	59	132	26	439	121	580	54	509	574	696	691	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	59	132	26	439	121	580	54	509	574	696	691	74
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	124	395	78	582	672	672	92	624	589	812	1306	653
Arrive On Green	0.08	0.29	0.29	0.16	0.37	0.37	0.05	0.18	0.18	0.23	0.36	0.36
Sat Flow, veh/h	1648	1377	271	3593	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	59	0	158	439	121	580	54	509	574	696	691	74
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1796	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	3.9	0.0	8.7	13.4	5.2	18.0	3.6	16.5	21.0	21.7	17.2	2.4
Cycle Q Clear(g_c), s	3.9	0.0	8.7	13.4	5.2	18.0	3.6	16.5	21.0	21.7	17.2	2.4
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	0	473	582	672	672	92	624	589	812	1306	653
V/C Ratio(X)	0.48	0.00	0.33	0.75	0.18	0.86	0.59	0.82	0.98	0.86	0.53	0.11
Avail Cap(c_a), veh/h	124	0	473	1000	672	672	134	624	589	862	1306	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.62	0.62	0.62	0.52	0.52	0.52	0.83	0.83	0.83
Uniform Delay (d), s/veh	51.0	0.0	32.3	46.0	24.2	9.1	53.1	45.1	37.2	42.5	29.3	14.8
Incr Delay (d2), s/veh	2.8	0.0	0.4	1.3	0.4	9.2	3.0	6.2	21.4	7.0	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	3.4	5.9	2.2	7.6	1.6	7.2	18.5	9.8	7.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	0.0	32.7	47.2	24.5	18.3	56.2	51.4	58.6	49.5	30.5	15.1
LnGrp LOS	D	A	C	D	C	B	E	D	E	D	C	B
Approach Vol, veh/h		217			1140			1137			1461	
Approach Delay, s/veh		38.5			30.1			55.3			38.8	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.4	25.0	22.6	37.0	10.2	45.1	12.6	47.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	21.0	32.0	18.0	9.0	40.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	25.7	25.0	15.4	10.7	7.6	21.2	7.9	22.0
Green Ext Time (p_c), s	0.7	0.0	1.3	0.4	0.0	4.2	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

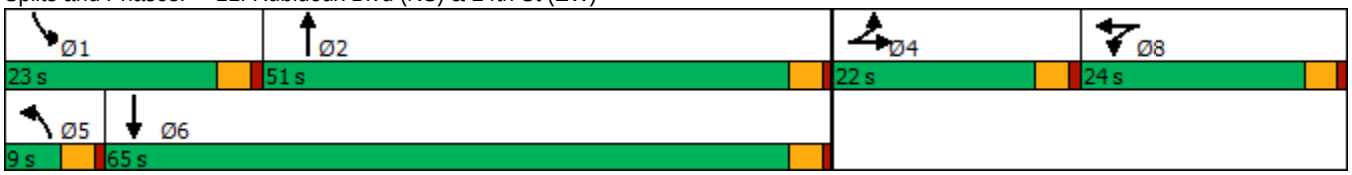


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	20	15	76	54	149	10	987	92	218	963	6
Future Volume (vph)	5	20	15	76	54	149	10	987	92	218	963	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949			0.928			0.987			0.999	
Flt Protected		0.994			0.987		0.950			0.950		
Satd. Flow (prot)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Flt Permitted		0.994			0.987		0.950			0.950		
Satd. Flow (perm)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			41			10			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	5	20	15	76	54	149	10	987	92	218	963	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	279	0	10	1079	0	218	969	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	51.0		23.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	42.5%		19.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	47.0		19.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.2			18.9		5.0	47.4		17.6	67.4	
Actuated g/C Ratio		0.07			0.18		0.05	0.46		0.17	0.65	
v/c Ratio		0.30			0.83		0.14	0.79		0.80	0.46	
Control Delay		40.0			57.4		55.2	30.2		64.5	11.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		40.0			57.4		55.2	30.2		64.5	11.3	
LOS		D			E		E	C		E	B	
Approach Delay		40.0			57.4			30.4			21.1	
Approach LOS		D			E			C			C	

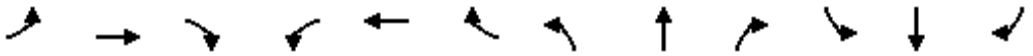
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)

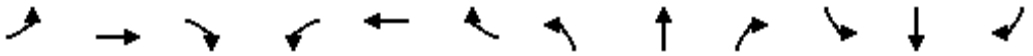
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	20	15	76	54	149	10	987	92	218	963	6
Future Volume (veh/h)	5	20	15	76	54	149	10	987	92	218	963	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	5	20	15	76	54	149	10	987	92	218	963	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	8	31	23	86	61	169	19	1380	129	251	2042	13
Arrive On Green	0.03	0.03	0.03	0.18	0.18	0.18	0.01	0.48	0.48	0.15	0.62	0.62
Sat Flow, veh/h	226	906	679	493	351	967	1604	2860	267	1707	3309	21
Grp Volume(v), veh/h	40	0	0	279	0	0	10	526	553	218	472	497
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1604	1707	1622	1707
Q Serve(g_s), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.0	27.0	12.3	15.5	15.5
Cycle Q Clear(g_c), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.0	27.0	12.3	15.5	15.5
Prop In Lane	0.12		0.37	0.27		0.53	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	61	0	0	317	0	0	19	735	773	251	1001	1054
V/C Ratio(X)	0.65	0.00	0.00	0.88	0.00	0.00	0.51	0.72	0.72	0.87	0.47	0.47
Avail Cap(c_a), veh/h	330	0	0	367	0	0	81	735	773	328	1001	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	0.0	39.8	0.0	0.0	48.5	20.2	20.2	41.2	10.2	10.2
Incr Delay (d2), s/veh	11.3	0.0	0.0	19.2	0.0	0.0	19.4	5.9	5.6	17.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	8.2	0.0	0.0	0.3	9.6	10.0	6.1	4.9	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	0.0	59.0	0.0	0.0	67.9	26.1	25.8	58.5	11.8	11.7
LnGrp LOS	E	A	A	E	A	A	E	C	C	E	B	B
Approach Vol, veh/h		40			279			1089			1187	
Approach Delay, s/veh		58.5			59.0			26.3			20.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.5	51.7		7.3	5.2	65.0		21.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	47.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	14.3	29.0		4.2	2.6	17.5		16.8				
Green Ext Time (p_c), s	0.2	6.1		0.1	0.0	6.4		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		27.6	
HCM 6th LOS		C	

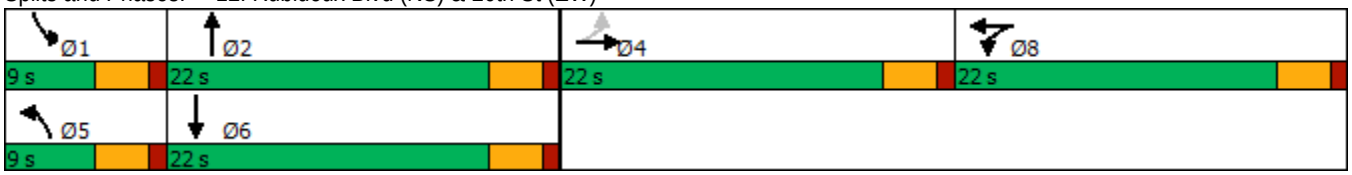


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	55	0	85	7	1026	62	38	1013	3
Future Volume (vph)	0	0	10	55	0	85	7	1026	62	38	1013	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.918			0.991				
Flt Protected					0.981		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1380	0	1517	3006	0	1612	3223	0
Flt Permitted					0.981		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1380	0	1517	3006	0	1612	3223	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		492			131			8				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	10	55	0	85	7	1026	62	38	1013	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	140	0	7	1088	0	38	1016	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4											
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		12.0%	29.3%		12.0%	29.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	18.0		5.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.7			6.8		5.2	24.7		5.2	24.7	
Actuated g/C Ratio		0.14			0.17		0.13	0.62		0.13	0.62	
v/c Ratio		0.02			0.41		0.04	0.58		0.18	0.51	
Control Delay		0.0			8.6		18.6	12.4		19.8	10.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			8.6		18.6	12.4		19.8	10.9	
LOS		A			A		B	B		B	B	
Approach Delay					8.6			12.4			11.2	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 39.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

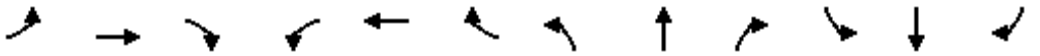
Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	55	0	85	7	1026	62	38	1013	3
Future Volume (veh/h)	0	0	10	55	0	85	7	1026	62	38	1013	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	10	55	0	85	7	1026	62	38	1013	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	25	72	0	112	15	1300	79	74	1575	5
Arrive On Green	0.00	0.00	0.01	0.12	0.00	0.12	0.01	0.44	0.44	0.04	0.47	0.47
Sat Flow, veh/h	0	0	1900	607	0	938	1618	2976	180	1722	3348	10
Grp Volume(v), veh/h	0	0	10	140	0	0	7	530	558	38	495	521
Grp Sat Flow(s),veh/h/ln	0	0	1900	1544	0	0	1618	1537	1618	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.2	12.2	0.9	9.5	9.5
Cycle Q Clear(g_c), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.2	12.2	0.9	9.5	9.5
Prop In Lane	0.00		1.00	0.39		0.61	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	25	184	0	0	15	672	707	74	769	810
V/C Ratio(X)	0.00	0.00	0.40	0.76	0.00	0.00	0.46	0.79	0.79	0.52	0.64	0.64
Avail Cap(c_a), veh/h	0	0	830	675	0	0	196	672	707	209	769	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.2	17.6	0.0	0.0	20.3	10.0	10.0	19.3	8.3	8.3
Incr Delay (d2), s/veh	0.0	0.0	10.1	6.4	0.0	0.0	20.4	9.2	8.7	5.5	4.1	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	1.4	0.0	0.0	0.1	3.9	4.0	0.4	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.2	24.0	0.0	0.0	40.7	19.1	18.7	24.8	12.4	12.2
LnGrp LOS	A	A	C	C	A	A	D	B	B	C	B	B
Approach Vol, veh/h		10			140			1095			1054	
Approach Delay, s/veh		30.2			24.0			19.0			12.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	22.0		4.5	4.4	23.4		8.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	2.9	14.2		2.2	2.2	11.5		5.6				
Green Ext Time (p_c), s	0.0	2.1		0.0	0.0	3.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		16.5	
HCM 6th LOS		B	



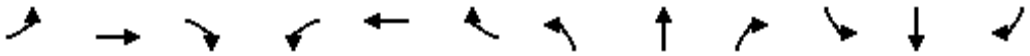
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	88	57	154	116	26	164	923	97	35	957	62
Future Volume (vph)	82	88	57	154	116	26	164	923	97	35	957	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.973			0.986			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1753	0	1736	1778	0	1583	3122	0	1703	3375	0
Flt Permitted	0.666			0.665			0.950			0.950		
Satd. Flow (perm)	1241	1753	0	1215	1778	0	1583	3122	0	1703	3375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			19			22			11	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	82	88	57	154	116	26	164	923	97	35	957	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	145	0	154	142	0	164	1020	0	35	1019	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		15.0	28.5		9.0	22.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		25.0%	47.5%		15.0%	37.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		11.0	24.5		5.0	18.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.5	11.5		11.8	11.8		9.5	32.3		5.1	24.6	
Actuated g/C Ratio	0.22	0.22		0.23	0.23		0.18	0.62		0.10	0.47	
v/c Ratio	0.30	0.33		0.56	0.34		0.57	0.52		0.21	0.63	
Control Delay	19.5	13.3		26.2	17.2		29.1	11.0		27.6	19.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.5	13.3		26.2	17.2		29.1	11.0		27.6	19.5	
LOS	B	B		C	B		C	B		C	B	
Approach Delay		15.6			21.9			13.5			19.7	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)

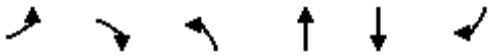




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	88	57	154	116	26	164	923	97	35	957	62
Future Volume (veh/h)	82	88	57	154	116	26	164	923	97	35	957	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	82	88	57	154	116	26	164	923	97	35	957	62
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	347	304	197	343	403	90	259	1392	146	69	1165	75
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.15	0.47	0.47	0.04	0.35	0.35
Sat Flow, veh/h	1246	1135	735	1223	1504	337	1693	2987	314	1811	3317	215
Grp Volume(v), veh/h	82	0	145	154	0	142	164	497	523	35	496	523
Grp Sat Flow(s),veh/h/ln	1246	0	1870	1223	0	1841	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	3.1	0.0	3.2	6.3	0.0	3.2	4.8	12.6	12.6	1.0	13.9	13.9
Cycle Q Clear(g_c), s	8.3	0.0	3.2	11.5	0.0	3.2	4.8	12.6	12.6	1.0	13.9	13.9
Prop In Lane	1.00		0.39	1.00		0.18	1.00		0.19	1.00		0.12
Lane Grp Cap(c), veh/h	347	0	501	343	0	493	259	750	789	69	604	636
V/C Ratio(X)	0.24	0.00	0.29	0.45	0.00	0.29	0.63	0.66	0.66	0.51	0.82	0.82
Avail Cap(c_a), veh/h	451	0	657	445	0	646	353	750	789	172	604	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	15.3	20.8	0.0	15.3	20.9	10.9	10.9	24.9	15.6	15.6
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.9	0.0	0.3	2.6	4.6	4.4	5.7	11.9	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.3	1.7	0.0	1.2	1.7	3.9	4.0	0.5	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	0.0	15.6	21.8	0.0	15.6	23.5	15.4	15.2	30.5	27.5	27.0
LnGrp LOS	B	A	B	C	A	B	C	B	B	C	C	C
Approach Vol, veh/h		227			296			1184			1054	
Approach Delay, s/veh		17.1			18.8			16.5			27.4	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	28.6		18.1	12.1	22.5		18.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	11.0	18.5		18.5				
Max Q Clear Time (g_c+I1), s	5.0	16.6		10.3	8.8	17.9		13.5				
Green Ext Time (p_c), s	0.0	3.6		0.6	0.1	0.4		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	164	235	117	1169	40
Future Volume (vph)	0	164	235	117	1169	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1370	1597	3195	3282	1468
Flt Permitted			0.950			
Satd. Flow (perm)	0	1370	1597	3195	3282	1468
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	13%	13%	10%	10%
Adj. Flow (vph)	0	164	235	117	1169	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	235	117	1169	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

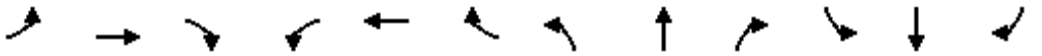
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	164	235	117	1169	40
Future Vol, veh/h	0	164	235	117	1169	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	13	13	10	10
Mvmt Flow	0	164	235	117	1169	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	585	1209	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.36	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.33	-	-	-
Pot Cap-1 Maneuver	0	449	515	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	449	515	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	11.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	515	-	449	-	-
HCM Lane V/C Ratio	0.456	-	0.365	-	-
HCM Control Delay (s)	17.7	-	17.6	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	2.4	-	1.7	-	-

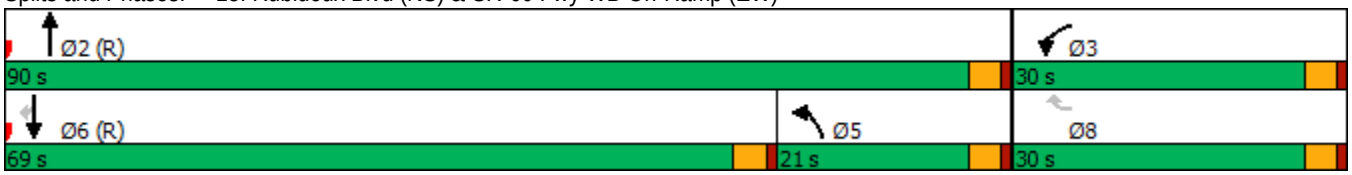


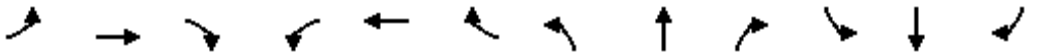
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Future Volume (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						148						700
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	6%	6%	6%
Adj. Flow (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	502	0	243	252	1088	0	0	638	731
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				30.0		30.0	21.0	90.0			69.0	69.0
Total Split (%)				25.0%		25.0%	17.5%	75.0%			57.5%	57.5%
Maximum Green (s)				26.0		26.0	17.0	86.0			65.0	65.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				22.0		22.0	17.0	90.0			69.0	69.0
Actuated g/C Ratio				0.18		0.18	0.14	0.75			0.58	0.58
v/c Ratio				0.78		0.58	0.57	0.45			0.33	0.62
Control Delay				55.6		23.0	38.4	1.9			14.3	4.0
Queue Delay				0.0		0.0	0.0	0.1			0.0	0.0
Total Delay				55.6		23.0	38.4	2.0			14.3	4.0
LOS				E		C	D	A			B	A
Approach Delay					45.0			8.9			8.8	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

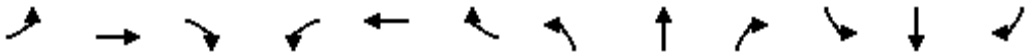




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	0	243	252	1088	0	0	638	731
Future Volume (veh/h)	0	0	0	502	0	243	252	1088	0	0	638	731
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1811	1811
Adj Flow Rate, veh/h				502	0	243	252	1088	0	0	638	731
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	6	6
Cap, veh/h				602	0	310	652	2520	0	0	1864	981
Arrive On Green				0.16	0.00	0.16	0.39	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3532	1811
Grp Volume(v), veh/h				502	0	243	252	1088	0	0	638	731
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1721	1811
Q Serve(g_s), s				15.8	0.0	14.7	6.5	0.0	0.0	0.0	12.5	37.2
Cycle Q Clear(g_c), s				15.8	0.0	14.7	6.5	0.0	0.0	0.0	12.5	37.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				602	0	310	652	2520	0	0	1864	981
V/C Ratio(X)				0.83	0.00	0.78	0.39	0.43	0.00	0.00	0.34	0.75
Avail Cap(c_a), veh/h				799	0	412	652	2520	0	0	1864	981
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.6	0.0	48.2	31.4	0.0	0.0	0.0	15.5	21.1
Incr Delay (d2), s/veh				5.8	0.0	7.0	0.3	0.4	0.0	0.0	0.5	5.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	7.6	2.4	0.2	0.0	0.0	4.8	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				54.5	0.0	55.2	31.7	0.4	0.0	0.0	16.0	26.3
LnGrp LOS				D	A	E	C	A	A	A	B	C
Approach Vol, veh/h					745			1340			1369	
Approach Delay, s/veh					54.7			6.3			21.5	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	96.4		27.4	69.0		23.6						
Change Period (Y+Rc), s	4.0		4.0	4.0		4.0						
Max Green Setting (Gmax), s	86.0		17.0	65.0		26.0						
Max Q Clear Time (g_c+I1), s	2.0		8.5	39.2		17.8						
Green Ext Time (p_c), s	10.0		0.5	7.3		1.8						

Intersection Summary		
HCM 6th Ctrl Delay		22.8
HCM 6th LOS		C

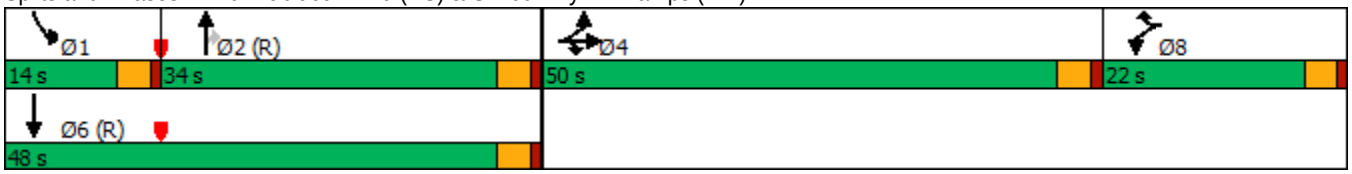


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	584	45	504	16	0	4	0	677	353	172	963	0
Future Volume (vph)	584	45	504	16	0	4	0	677	353	172	963	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			265			82			353			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	584	45	504	16	0	4	0	677	353	172	963	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	315	314	504	16	0	4	0	677	353	172	963	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	50.0	50.0	50.0	22.0		22.0		34.0	34.0	14.0	48.0	
Total Split (%)	41.7%	41.7%	41.7%	18.3%		18.3%		28.3%	28.3%	11.7%	40.0%	
Maximum Green (s)	46.0	46.0	46.0	18.0		18.0		30.0	30.0	10.0	44.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	37.3	37.3	37.3	6.7		6.7		44.8	44.8	21.2	70.0	
Actuated g/C Ratio	0.31	0.31	0.31	0.06		0.06		0.37	0.37	0.18	0.58	
v/c Ratio	0.67	0.67	0.89	0.16		0.02		0.51	0.44	0.55	0.47	
Control Delay	42.4	41.9	36.7	57.1		0.2		33.9	5.6	51.3	10.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.5	
Total Delay	42.4	41.9	36.7	57.1		0.2		33.9	5.6	51.3	10.7	
LOS	D	D	D	E		A		C	A	D	B	
Approach Delay		39.7			45.7			24.2			16.8	
Approach LOS		D			D			C			B	

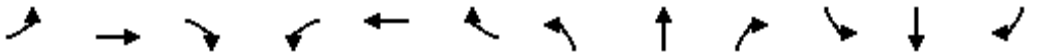
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



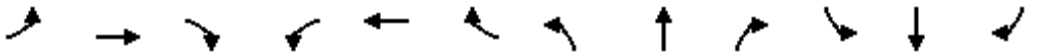
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	584	45	504	16	0	4	0	677	353	172	963	0
Future Volume (veh/h)	584	45	504	16	0	4	0	677	353	172	963	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	616	0	504	16	0	4	0	677	353	172	963	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	1176	0	565	0	0	0	0	1667	878	156	2082	0
Arrive On Green	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.47	0.47	0.17	1.00	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	616	0	504		0.0		0	677	353	172	963	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	17.4	0.0	35.2				0.0	15.0	14.8	10.0	0.0	0.0
Cycle Q Clear(g_c), s	17.4	0.0	35.2				0.0	15.0	14.8	10.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1176	0	565				0	1667	878	156	2082	0
V/C Ratio(X)	0.52	0.00	0.89				0.00	0.41	0.40	1.10	0.46	0.00
Avail Cap(c_a), veh/h	1298	0	623				0	1667	878	156	2082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.93	0.93	0.84	0.84	0.00
Uniform Delay (d), s/veh	31.2	0.0	37.0				0.0	20.9	20.8	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	14.3				0.0	0.7	1.3	96.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	16.0				0.0	6.2	6.6	8.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	51.4				0.0	21.6	22.1	146.5	0.6	0.0
LnGrp LOS	C	A	D				A	C	C	F	A	A
Approach Vol, veh/h		1120						1030			1135	
Approach Delay, s/veh		40.5						21.8			22.7	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.0	60.3		45.7		74.3						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	10.0	30.0		46.0		44.0						
Max Q Clear Time (g_c+I1), s	14.0	19.0		39.2		4.0						
Green Ext Time (p_c), s	0.0	4.1		2.5		7.8						

Intersection Summary												
HCM 6th Ctrl Delay			28.5									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

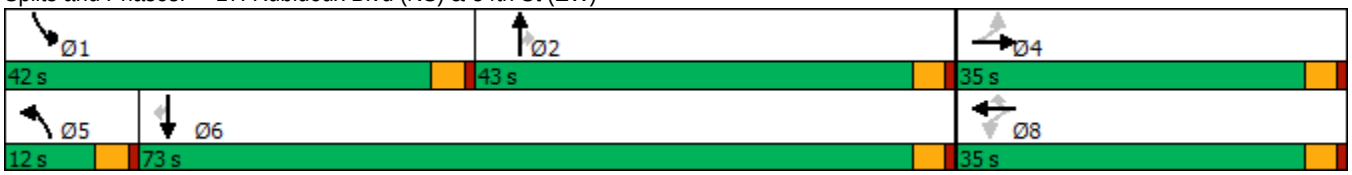


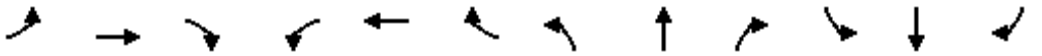
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	67	13	17	50	141	33	627	77	296	1023	167
Future Volume (vph)	110	67	13	17	50	141	33	627	77	296	1023	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.991				0.850			0.850			0.850
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1875	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.783			0.916		0.950			0.950		
Satd. Flow (perm)	0	1431	0	0	1740	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				141			82			74
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	110	67	13	17	50	141	33	627	77	296	1023	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	67	141	33	627	77	296	1023	167
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0	35.0	12.0	43.0	43.0	42.0	73.0	73.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%	29.2%	10.0%	35.8%	35.8%	35.0%	60.8%	60.8%
Maximum Green (s)	31.0	31.0		31.0	31.0	31.0	8.0	39.0	39.0	38.0	69.0	69.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		18.6			18.6	18.6	7.0	49.8	49.8	22.5	69.9	69.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.48	0.48	0.22	0.68	0.68
v/c Ratio		0.73			0.21	0.38	0.28	0.37	0.11	0.77	0.43	0.18
Control Delay		56.5			38.1	9.3	55.7	19.9	4.9	52.5	10.0	5.5
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		56.5			38.1	9.3	55.7	19.9	4.9	52.5	10.0	5.5
LOS		E			D	A	E	B	A	D	B	A
Approach Delay		56.5			18.6			20.0			18.0	
Approach LOS		E			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	67	13	17	50	141	33	627	77	296	1023	167
Future Volume (veh/h)	110	67	13	17	50	141	33	627	77	296	1023	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	110	67	13	17	50	141	33	627	77	296	1023	167
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	174	91	15	96	255	322	64	1778	898	368	2369	1197
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.03	0.51	0.51	0.20	0.67	0.67
Sat Flow, veh/h	670	513	87	297	1446	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	190	0	0	67	0	141	33	627	77	296	1023	167
Grp Sat Flow(s),veh/h/ln	1271	0	0	1743	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	12.1	0.0	0.0	0.0	0.0	7.1	1.8	11.0	2.3	15.6	13.8	3.5
Cycle Q Clear(g_c), s	15.2	0.0	0.0	3.1	0.0	7.1	1.8	11.0	2.3	15.6	13.8	3.5
Prop In Lane	0.58		0.07	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	0	0	352	0	322	64	1778	898	368	2369	1197
V/C Ratio(X)	0.68	0.00	0.00	0.19	0.00	0.44	0.52	0.35	0.09	0.80	0.43	0.14
Avail Cap(c_a), veh/h	455	0	0	567	0	551	143	1778	898	687	2369	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	0.0	36.1	0.0	37.7	48.7	15.1	13.0	39.3	7.8	6.1
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.3	0.0	0.9	6.4	0.6	0.2	4.2	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	1.5	0.0	3.3	0.9	4.2	0.9	7.3	4.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	36.3	0.0	38.7	55.1	15.7	13.2	43.4	8.4	6.3
LnGrp LOS	D	A	A	D	A	D	E	B	B	D	A	A
Approach Vol, veh/h		190			208			737			1486	
Approach Delay, s/veh		44.6			37.9			17.2			15.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	56.2		22.1	7.5	73.0		22.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	38.0	39.0		31.0	8.0	69.0		31.0				
Max Q Clear Time (g_c+I1), s	19.6	15.0		17.2	5.8	17.8		11.1				
Green Ext Time (p_c), s	0.7	4.3		0.9	0.0	9.4		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		19.6	
HCM 6th LOS		B	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	595	1	4	795	0	34
Future Volume (vph)	595	1	4	795	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	595	1	4	795	0	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	595	1	4	795	0	34
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	595	1	4	795	0	34
Future Vol, veh/h	595	1	4	795	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	595	1	4	795	0	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	596	0	-	298
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	863	-	0	704
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	863	-	-	704
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	704	-	-	863	-
HCM Lane V/C Ratio	0.048	-	-	0.005	-
HCM Control Delay (s)	10.4	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

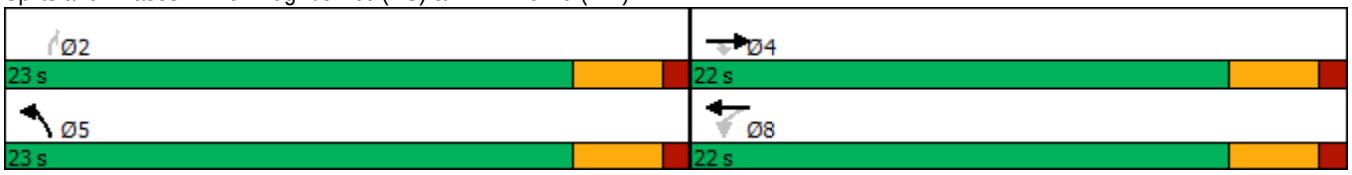


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	563	65	7	658	140	27
Future Volume (vph)	563	65	7	658	140	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.441		0.950	
Satd. Flow (perm)	2983	1335	698	3008	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		65				27
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	563	65	7	658	140	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	65	7	658	140	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	11.8	11.8	11.8	11.8	7.8	7.5
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.28	0.27
v/c Ratio	0.44	0.11	0.02	0.51	0.28	0.06
Control Delay	6.9	2.3	5.0	7.4	10.5	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.3	5.0	7.4	10.5	5.0
LOS	A	A	A	A	B	A
Approach Delay	6.4			7.4	9.6	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27.7			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

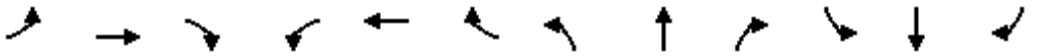




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	563	65	7	658	140	27
Future Volume (veh/h)	563	65	7	658	140	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1589	1589	1604	1604	1900	1900
Adj Flow Rate, veh/h	563	65	7	658	140	27
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	21	21	20	20	0	0
Cap, veh/h	1313	691	580	1325	291	291
Arrive On Green	0.43	0.43	0.43	0.43	0.15	0.15
Sat Flow, veh/h	3098	1589	684	3127	1900	1900
Grp Volume(v), veh/h	563	65	7	658	140	27
Grp Sat Flow(s),veh/h/ln	1509	1589	684	1523	1900	1900
Q Serve(g_s), s	2.5	0.5	0.1	3.0	1.3	0.2
Cycle Q Clear(g_c), s	2.5	0.5	2.7	3.0	1.3	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1313	691	580	1325	291	291
V/C Ratio(X)	0.43	0.09	0.01	0.50	0.48	0.09
Avail Cap(c_a), veh/h	2799	1473	917	2825	1860	1860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.8	3.2	4.7	4.0	7.5	7.1
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.0	3.3	4.7	4.2	8.8	7.2
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	628			665	167	
Approach Delay, s/veh	4.0			4.2	8.5	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		7.0		12.4		12.4
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		3.3		4.5		5.0
Green Ext Time (p_c), s		0.4		3.1		3.4

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	397	44	24	248	201	114	6	68	448	3	303
Future Volume (vph)	150	397	44	24	248	201	114	6	68	448	3	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.933			0.862			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2929	0	1805	1638	0	1556	1394	0
Flt Permitted	0.950			0.950			0.526			0.709		
Satd. Flow (perm)	1399	2798	1252	1570	2929	0	999	1638	0	1161	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		149			68			303	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	150	397	44	24	248	201	114	6	68	448	3	303
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	397	44	24	449	0	114	74	0	448	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	25.0	40.0	40.0	10.0	25.0		70.0	70.0		70.0	70.0	
Total Split (%)	20.8%	33.3%	33.3%	8.3%	20.8%		58.3%	58.3%		58.3%	58.3%	
Maximum Green (s)	21.0	36.0	36.0	6.0	21.0		66.0	66.0		66.0	66.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.4	31.4	31.4	5.9	16.7		66.4	66.4		66.4	66.4	
Actuated g/C Ratio	0.15	0.28	0.28	0.05	0.15		0.60	0.60		0.60	0.60	
v/c Ratio	0.73	0.50	0.11	0.29	0.80		0.19	0.07		0.65	0.32	
Control Delay	66.9	36.4	9.4	63.1	41.7		13.2	3.7		22.4	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	66.9	36.4	9.4	63.1	41.7		13.2	3.7		22.4	2.5	
LOS	E	D	A	E	D		B	A		C	A	
Approach Delay		42.2			42.8			9.4			14.3	
Approach LOS		D			D			A			B	

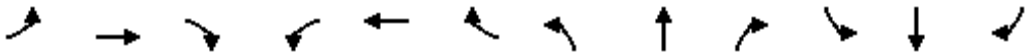
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.5			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 28.8		Intersection LOS: C	
Intersection Capacity Utilization 64.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	397	44	24	248	201	114	6	68	448	3	303
Future Volume (veh/h)	150	397	44	24	248	201	114	6	68	448	3	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	150	397	44	24	248	201	114	6	68	448	3	303
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	175	719	378	40	292	237	633	94	1062	765	10	1002
Arrive On Green	0.12	0.26	0.26	0.02	0.16	0.16	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1470	2793	1470	1678	1807	1465	1090	154	1746	1179	16	1647
Grp Volume(v), veh/h	150	397	44	24	219	230	114	0	74	448	0	306
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1090	0	1900	1179	0	1663
Q Serve(g_s), s	10.9	13.3	2.5	1.5	14.5	14.5	6.1	0.0	1.7	27.1	0.0	9.6
Cycle Q Clear(g_c), s	10.9	13.3	2.5	1.5	14.5	14.5	15.7	0.0	1.7	28.8	0.0	9.6
Prop In Lane	1.00		1.00	1.00		0.87	1.00		0.92	1.00		0.99
Lane Grp Cap(c), veh/h	175	719	378	40	258	271	633	0	1156	765	0	1012
V/C Ratio(X)	0.86	0.55	0.12	0.60	0.85	0.85	0.18	0.00	0.06	0.59	0.00	0.30
Avail Cap(c_a), veh/h	285	927	488	93	308	325	633	0	1156	765	0	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.9	34.9	30.8	52.5	44.2	44.2	14.0	0.0	8.7	14.5	0.0	10.2
Incr Delay (d2), s/veh	13.1	0.7	0.1	13.8	17.0	16.3	0.6	0.0	0.1	3.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	4.6	0.9	0.8	6.9	7.2	1.6	0.0	0.7	7.5	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	35.5	31.0	66.2	61.2	60.4	14.6	0.0	8.8	17.8	0.0	11.0
LnGrp LOS	E	D	C	E	E	E	B	A	A	B	A	B
Approach Vol, veh/h		591			473			188			754	
Approach Delay, s/veh		41.4			61.1			12.3			15.0	
Approach LOS		D			E			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		70.0	6.6	31.9		70.0	16.9	21.6				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		66.0	6.0	36.0		66.0	21.0	21.0				
Max Q Clear Time (g_c+I1), s		17.7	3.5	15.3		30.8	12.9	16.5				
Green Ext Time (p_c), s		0.9	0.0	2.8		4.2	0.2	1.1				

Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	904	9	2	472	0	0
Future Volume (vph)	904	9	2	472	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1900
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1900
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	904	9	2	472	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	904	9	2	472	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.3%		ICU Level of Service A	
Analysis Period (min) 15			

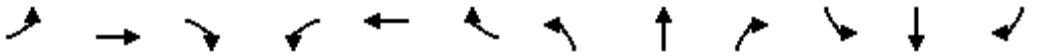
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	904	9	2	472	0	0
Future Vol, veh/h	904	9	2	472	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	904	9	2	472	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	913	0	-	452
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	666	-	0	560
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	666	-	-	560
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	666	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	10.4	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

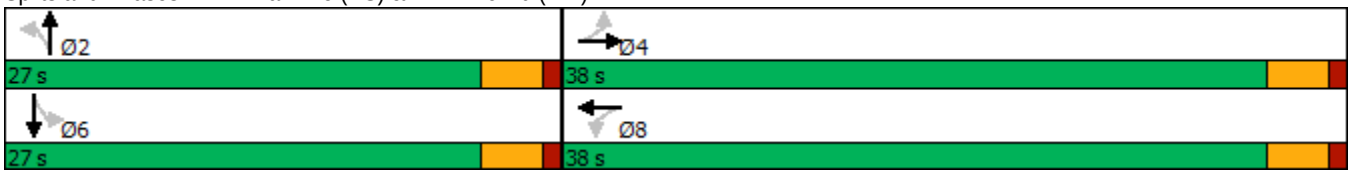


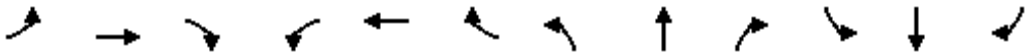
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	391	223	4	199	10	312	3	12	4	5	6
Future Volume (vph)	9	391	223	4	199	10	312	3	12	4	5	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.993			0.880			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1450	0	1583	1655	0	1517	1405	0	1805	1744	0
Flt Permitted	0.624			0.234			0.750			0.748		
Satd. Flow (perm)	956	1450	0	390	1655	0	1197	1405	0	1421	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			6			12			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	391	223	4	199	10	312	3	12	4	5	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	614	0	4	209	0	312	15	0	4	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	38.0	38.0		38.0	38.0		27.0	27.0		27.0	27.0	
Total Split (%)	58.5%	58.5%		58.5%	58.5%		41.5%	41.5%		41.5%	41.5%	
Maximum Green (s)	34.0	34.0		34.0	34.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	26.8	26.8		26.8	26.8		23.4	23.4		23.4	23.4	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.40	0.40		0.40	0.40	
v/c Ratio	0.02	0.87		0.02	0.27		0.65	0.03		0.01	0.02	
Control Delay	7.8	27.6		8.0	9.8		25.2	8.7		13.5	10.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.8	27.6		8.0	9.8		25.2	8.7		13.5	10.5	
LOS	A	C		A	A		C	A		B	B	
Approach Delay		27.3			9.8			24.5			11.3	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 64.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

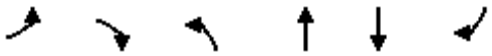




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	391	223	4	199	10	312	3	12	4	5	6
Future Volume (veh/h)	9	391	223	4	199	10	312	3	12	4	5	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	391	223	4	199	10	312	3	12	4	5	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	489	443	253	192	726	36	618	132	528	699	352	422
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	968	983	561	731	1612	81	1214	324	1295	1421	864	1036
Grp Volume(v), veh/h	9	0	614	4	0	209	312	0	15	4	0	11
Grp Sat Flow(s),veh/h/ln	968	0	1544	731	0	1693	1214	0	1618	1421	0	1900
Q Serve(g_s), s	0.3	0.0	20.5	0.3	0.0	4.4	11.6	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	4.7	0.0	20.5	20.7	0.0	4.4	11.8	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.36	1.00		0.05	1.00		0.80	1.00		0.55
Lane Grp Cap(c), veh/h	489	0	696	192	0	763	618	0	660	699	0	775
V/C Ratio(X)	0.02	0.00	0.88	0.02	0.00	0.27	0.50	0.00	0.02	0.01	0.00	0.01
Avail Cap(c_a), veh/h	636	0	931	303	0	1020	618	0	660	699	0	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	0.0	14.1	23.6	0.0	9.7	13.5	0.0	10.0	10.1	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.0	7.9	0.0	0.0	0.2	2.9	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	6.7	0.0	0.0	1.2	3.2	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	0.0	22.0	23.6	0.0	9.9	16.4	0.0	10.1	10.1	0.0	10.0
LnGrp LOS	B	A	C	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		623			213			327			15	
Approach Delay, s/veh		21.9			10.2			16.1			10.0	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		29.4		27.0		29.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		34.0		23.0		34.0				
Max Q Clear Time (g_c+I1), s		13.8		22.5		2.4		22.7				
Green Ext Time (p_c), s		0.9		3.0		0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			18.0									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	27	9	307	226	6
Future Volume (vph)	20	27	9	307	226	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	20	27	9	307	226	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	27	9	307	226	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.2%		ICU Level of Service A	
Analysis Period (min) 15			

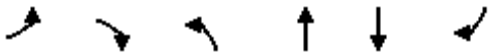
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	27	9	307	226	6
Future Vol, veh/h	20	27	9	307	226	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	20	27	9	307	226	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	551	226	232	0	-	0
Stage 1	226	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	499	818	1242	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	496	818	1242	-	-	-
Mov Cap-2 Maneuver	496	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1242	-	496	818	-	-
HCM Lane V/C Ratio	0.007	-	0.04	0.033	-	-
HCM Control Delay (s)	7.9	-	12.6	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

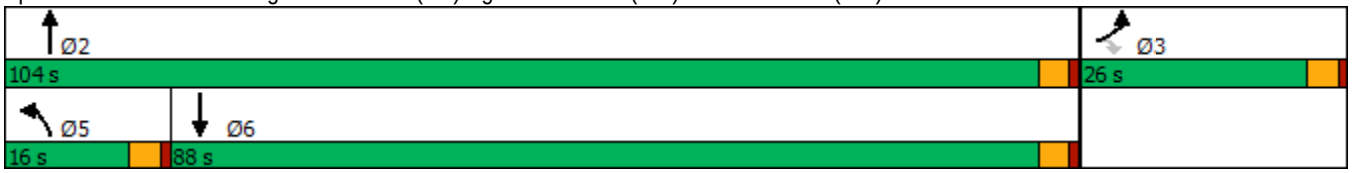


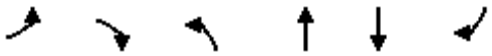
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	181	106	80	924	591	104
Future Volume (vph)	181	106	80	924	591	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.980	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1502	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1502	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		106			14	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	181	106	80	924	591	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	181	106	80	924	695	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	26.0	26.0	16.0	104.0	88.0	
Total Split (%)	20.0%	20.0%	12.3%	80.0%	67.7%	
Maximum Green (s)	22.0	22.0	12.0	100.0	84.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	17.6	17.6	10.5	100.2	88.0	
Actuated g/C Ratio	0.14	0.14	0.08	0.80	0.70	
v/c Ratio	0.75	0.34	0.63	0.73	0.66	
Control Delay	70.9	11.7	78.4	11.1	16.1	
Queue Delay	0.0	0.0	0.0	0.3	0.0	
Total Delay	70.9	11.7	78.4	11.4	16.1	
LOS	E	B	E	B	B	
Approach Delay	49.0			16.8	16.1	
Approach LOS	D			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 125.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	181	106	80	924	591	104
Future Volume (veh/h)	181	106	80	924	591	104
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	181	106	80	924	591	104
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	215	215	99	1324	951	167
Arrive On Green	0.12	0.12	0.06	0.82	0.72	0.72
Sat Flow, veh/h	1841	1841	1618	1618	1313	231
Grp Volume(v), veh/h	181	106	80	924	0	695
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	11.8	6.6	6.0	29.6	0.0	27.6
Cycle Q Clear(g_c), s	11.8	6.6	6.0	29.6	0.0	27.6
Prop In Lane	1.00	1.00	1.00			0.15
Lane Grp Cap(c), veh/h	215	215	99	1324	0	1118
V/C Ratio(X)	0.84	0.49	0.81	0.70	0.00	0.62
Avail Cap(c_a), veh/h	331	331	159	1324	0	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	50.6	56.7	4.7	0.0	8.5
Incr Delay (d2), s/veh	11.2	1.8	14.5	3.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	3.1	2.8	6.8	0.0	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.1	52.4	71.1	7.8	0.0	11.1
LnGrp LOS	E	D	E	A	A	B
Approach Vol, veh/h	287			1004	695	
Approach Delay, s/veh	59.8			12.8	11.1	
Approach LOS	E			B	B	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		104.0			11.5	92.5	18.3
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		100.0			12.0	84.0	22.0
Max Q Clear Time (g_c+I1), s		31.6			8.0	29.6	13.8
Green Ext Time (p_c), s		8.6			0.0	5.2	0.5

Intersection Summary		
HCM 6th Ctrl Delay	19.0	
HCM 6th LOS	B	

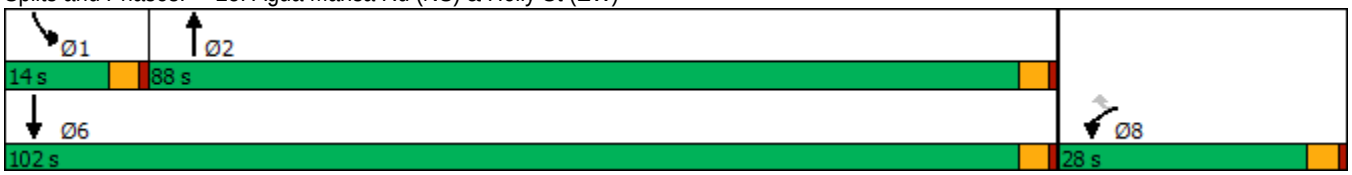


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	144	940	13	31	604
Future Volume (vph)	53	144	940	13	31	604
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3028	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3028	0	1421	1496
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		144	2			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	53	144	940	13	31	604
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	144	953	0	31	604
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	28.0	28.0	88.0		14.0	102.0
Total Split (%)	21.5%	21.5%	67.7%		10.8%	78.5%
Maximum Green (s)	24.0	24.0	84.0		10.0	98.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	9.6	9.6	92.7		7.8	100.6
Actuated g/C Ratio	0.08	0.08	0.78		0.07	0.85
v/c Ratio	0.42	0.63	0.40		0.33	0.47
Control Delay	60.5	20.5	5.7		61.4	3.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	60.5	20.5	5.7		61.4	3.9
LOS	E	C	A		E	A
Approach Delay	31.3		5.7			6.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)

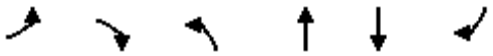




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	53	144	940	13	31	604
Future Volume (veh/h)	53	144	940	13	31	604
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1663	1596	1618	1618	1500	1500
Adj Flow Rate, veh/h	53	144	940	13	31	604
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	19	19	27	27
Cap, veh/h	180	173	2378	33	40	1236
Arrive On Green	0.11	0.11	0.76	0.76	0.03	0.82
Sat Flow, veh/h	1663	1596	3194	43	1500	1500
Grp Volume(v), veh/h	53	144	464	489	31	604
Grp Sat Flow(s),veh/h/ln	1663	1596	1537	1618	1500	1500
Q Serve(g_s), s	3.5	10.5	12.1	12.1	2.4	14.1
Cycle Q Clear(g_c), s	3.5	10.5	12.1	12.1	2.4	14.1
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	180	173	1174	1236	40	1236
V/C Ratio(X)	0.29	0.83	0.40	0.40	0.77	0.49
Avail Cap(c_a), veh/h	336	322	1174	1236	126	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	51.9	4.8	4.8	57.5	3.1
Incr Delay (d2), s/veh	0.9	9.9	1.0	0.9	25.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.7	3.1	3.3	1.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.7	61.8	5.8	5.7	82.9	4.5
LnGrp LOS	D	E	A	A	F	A
Approach Vol, veh/h	197		953			635
Approach Delay, s/veh	58.6		5.7			8.3
Approach LOS	E		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	94.8			102.0	16.9
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	10.0	84.0			98.0	24.0
Max Q Clear Time (g_c+I1), s	4.4	14.1			16.1	12.5
Green Ext Time (p_c), s	0.0	6.7			4.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B



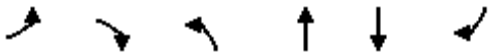
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	94	190	245	697	616	52
Future Volume (vph)	94	190	245	697	616	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		190				47
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	94	190	245	697	616	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	190	245	697	616	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	16.0	38.0	22.0	22.0
Total Split (%)	36.7%	36.7%	26.7%	63.3%	36.7%	36.7%
Maximum Green (s)	18.0	18.0	12.0	34.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	8.9	8.9	11.5	33.2	16.3	16.3
Actuated g/C Ratio	0.19	0.19	0.25	0.72	0.35	0.35
v/c Ratio	0.37	0.50	0.65	0.32	0.63	0.13
Control Delay	22.5	8.7	29.2	4.4	17.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	8.7	29.2	4.4	17.5	6.2
LOS	C	A	C	A	B	A
Approach Delay	13.3			10.8	16.7	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 45.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

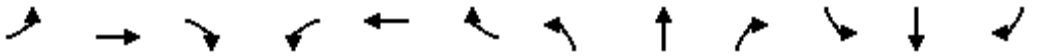




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	94	190	245	697	616	52
Future Volume (veh/h)	94	190	245	697	616	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	94	190	245	697	616	52
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	259	259	305	1861	868	439
Arrive On Green	0.19	0.19	0.19	0.61	0.31	0.31
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	94	190	245	697	616	52
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.3	5.1	5.6	4.5	7.7	1.0
Cycle Q Clear(g_c), s	2.3	5.1	5.6	4.5	7.7	1.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	259	259	305	1861	868	439
V/C Ratio(X)	0.36	0.73	0.80	0.37	0.71	0.12
Avail Cap(c_a), veh/h	632	632	499	2687	1279	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	14.9	15.1	3.9	11.8	9.5
Incr Delay (d2), s/veh	0.9	4.0	4.9	0.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	1.9	0.3	1.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.6	18.9	20.0	4.0	12.9	9.6
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	284			942	668	
Approach Delay, s/veh	17.5			8.2	12.6	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		27.6		11.4	11.3	16.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	12.0	18.0
Max Q Clear Time (g_c+I1), s		6.5		7.1	7.6	9.7
Green Ext Time (p_c), s		4.7		0.6	0.3	2.6

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

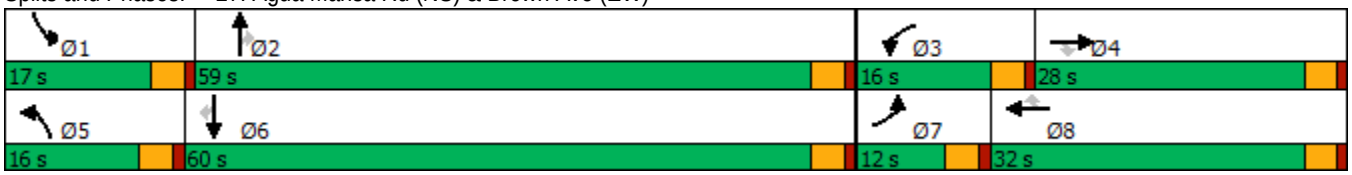


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	3	72	54	4	211	39	725	127	56	737	14
Future Volume (vph)	23	3	72	54	4	211	39	725	127	56	737	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			211			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	23	3	72	54	4	211	39	725	127	56	737	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	3	72	54	4	211	39	725	127	56	737	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	28.0	28.0	16.0	32.0	32.0	16.0	59.0	59.0	17.0	60.0	60.0
Total Split (%)	10.0%	23.3%	23.3%	13.3%	26.7%	26.7%	13.3%	49.2%	49.2%	14.2%	50.0%	50.0%
Maximum Green (s)	8.0	24.0	24.0	12.0	28.0	28.0	12.0	55.0	55.0	13.0	56.0	56.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.9	7.2	7.2	8.7	13.3	13.3	8.1	57.9	57.9	9.1	61.1	61.1
Actuated g/C Ratio	0.07	0.08	0.08	0.09	0.14	0.14	0.09	0.61	0.61	0.10	0.65	0.65
v/c Ratio	0.23	0.03	0.46	0.39	0.02	0.61	0.32	0.41	0.18	0.42	0.41	0.02
Control Delay	50.8	43.3	18.4	51.5	39.0	14.3	50.2	13.0	5.8	52.5	11.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	43.3	18.4	51.5	39.0	14.3	50.2	13.0	5.8	52.5	11.7	0.1
LOS	D	D	B	D	D	B	D	B	A	D	B	A
Approach Delay		26.8			22.1			13.6			14.4	
Approach LOS		C			C			B			B	

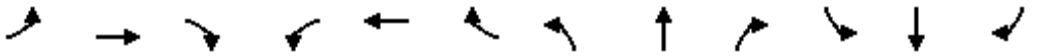
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 94.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)



HCM 6th Signalized Intersection Summary
27: Agua Mansa Rd (NS) & Brown Ave (EW)

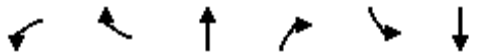
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	3	72	54	4	211	39	725	127	56	737	14
Future Volume (veh/h)	23	3	72	54	4	211	39	725	127	56	737	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	23	3	72	54	4	211	39	725	127	56	737	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	37	206	198	92	283	272	66	1638	828	89	1609	813
Arrive On Green	0.03	0.15	0.15	0.06	0.18	0.18	0.04	0.57	0.57	0.06	0.59	0.59
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	23	3	72	54	4	211	39	725	127	56	737	14
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.6	0.2	4.6	3.2	0.2	12.6	2.4	14.0	4.0	3.7	14.7	0.4
Cycle Q Clear(g_c), s	1.6	0.2	4.6	3.2	0.2	12.6	2.4	14.0	4.0	3.7	14.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	206	198	92	283	272	66	1638	828	89	1609	813
V/C Ratio(X)	0.61	0.01	0.36	0.59	0.01	0.78	0.59	0.44	0.15	0.63	0.46	0.02
Avail Cap(c_a), veh/h	117	350	336	199	465	446	188	1638	828	194	1609	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	35.3	37.2	44.5	32.8	37.9	45.4	12.0	9.8	44.2	11.2	8.3
Incr Delay (d2), s/veh	15.2	0.0	1.1	5.9	0.0	4.7	8.3	0.9	0.4	7.0	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	1.6	1.4	0.1	5.0	1.0	4.1	1.3	1.4	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	35.3	38.3	50.4	32.8	42.7	53.6	12.9	10.2	51.3	12.2	8.3
LnGrp LOS	E	D	D	D	C	D	D	B	B	D	B	A
Approach Vol, veh/h		98			269			891			807	
Approach Delay, s/veh		43.7			44.1			14.3			14.8	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	59.0	9.5	18.1	8.2	60.8	6.6	21.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	55.0	12.0	24.0	12.0	56.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	7.7	18.0	7.2	8.6	6.4	18.7	5.6	16.6
Green Ext Time (p_c), s	0.0	5.6	0.0	0.1	0.0	5.5	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



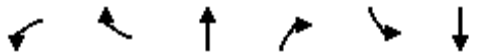
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	24	990	43	84	788
Future Volume (vph)	46	24	990	43	84	788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.281	
Satd. Flow (perm)	1107	991	2983	1335	424	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		24		43		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	46	24	990	43	84	788
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	24	990	43	84	788
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	98.0	98.0	98.0	98.0
Total Split (%)	18.3%	18.3%	81.7%	81.7%	81.7%	81.7%
Maximum Green (s)	18.0	18.0	94.0	94.0	94.0	94.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	10.3	10.3	103.1	103.1	103.1	103.1
Actuated g/C Ratio	0.09	0.09	0.87	0.87	0.87	0.87
v/c Ratio	0.48	0.22	0.38	0.04	0.23	0.60
Control Delay	67.3	22.3	2.7	0.7	3.8	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	22.3	2.7	0.7	3.8	5.5
LOS	E	C	A	A	A	A
Approach Delay	51.9		2.6			5.4
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 5.6		Intersection LOS: A	
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

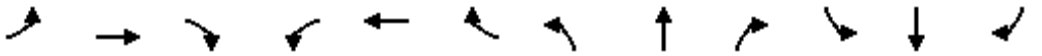




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	24	990	43	84	788
Future Volume (veh/h)	46	24	990	43	84	788
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	46	24	990	43	84	788
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	56	56	2620	1379	422	1314
Arrive On Green	0.06	0.06	0.87	0.87	0.87	0.87
Sat Flow, veh/h	966	966	3098	1589	442	1515
Grp Volume(v), veh/h	46	24	990	43	84	788
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	442	1515
Q Serve(g_s), s	5.1	2.6	7.0	0.4	5.0	15.5
Cycle Q Clear(g_c), s	5.1	2.6	7.0	0.4	12.0	15.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	56	2620	1379	422	1314
V/C Ratio(X)	0.82	0.43	0.38	0.03	0.20	0.60
Avail Cap(c_a), veh/h	161	161	2620	1379	422	1314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	49.2	1.4	1.0	2.6	2.0
Incr Delay (d2), s/veh	23.7	5.0	0.4	0.0	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.7	0.5	0.1	0.4	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.1	54.3	1.8	1.0	3.6	4.0
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	70		1033			872
Approach Delay, s/veh	67.3		1.8			4.0
Approach LOS	E		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		98.0			98.0	10.3
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		94.0			94.0	18.0
Max Q Clear Time (g_c+I1), s		9.0			17.5	7.1
Green Ext Time (p_c), s		8.5			8.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A



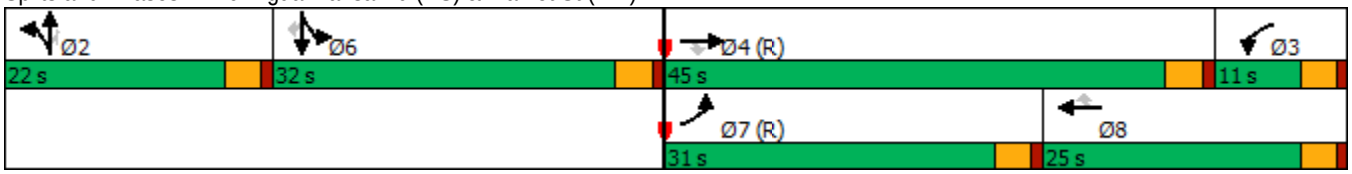
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	686	728	4	2	625	338	2	1	1	378	4	529
Future Volume (vph)	686	728	4	2	625	338	2	1	1	378	4	529
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	0		1	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	1.00	*1.00	*1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.968		0.950		
Satd. Flow (prot)	3183	3455	1468	1656	3486	1482	0	1471	1292	1626	1712	2910
Flt Permitted	0.950			0.950				0.968		0.950		
Satd. Flow (perm)	3183	3455	1468	1656	3486	1482	0	1471	1292	1626	1712	2910
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89			149			129			529
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	686	728	4	2	625	338	2	1	1	378	4	529
Shared Lane Traffic (%)												
Lane Group Flow (vph)	686	728	4	2	625	338	0	3	1	378	4	529
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	

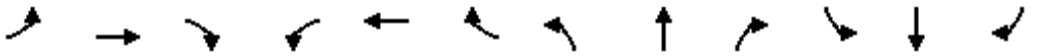
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.0	22.0	22.0	11.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	31.0	45.0	45.0	11.0	25.0	25.0	22.0	22.0	22.0	32.0	32.0	32.0
Total Split (%)	28.2%	40.9%	40.9%	10.0%	22.7%	22.7%	20.0%	20.0%	20.0%	29.1%	29.1%	29.1%
Maximum Green (s)	27.0	41.0	41.0	7.0	21.0	21.0	18.0	18.0	18.0	28.0	28.0	28.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	27.0	49.8	49.8	7.0	21.0	21.0		18.0	18.0	28.0	28.0	28.0
Actuated g/C Ratio	0.25	0.45	0.45	0.06	0.19	0.19		0.16	0.16	0.25	0.25	0.25
v/c Ratio	0.88	0.47	0.01	0.02	0.94	0.84		0.01	0.00	0.92	0.01	0.47
Control Delay	53.9	22.8	0.0	49.0	67.4	43.1		39.0	0.0	68.3	30.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	22.8	0.0	49.0	67.4	43.1		39.0	0.0	68.3	30.8	4.3
LOS	D	C	A	D	E	D		D	A	E	C	A
Approach Delay		37.8			58.8			29.3			31.0	
Approach LOS		D			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 42.0		Intersection LOS: D	
Intersection Capacity Utilization 74.5%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

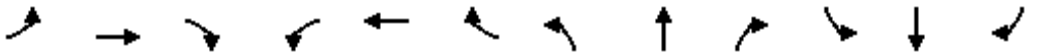




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	686	728	4	2	625	338	2	1	1	378	4	529
Future Volume (veh/h)	686	728	4	2	625	338	2	1	1	378	4	529
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	686	728	4	2	625	338	2	1	1	378	4	529
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	834	1306	653	112	675	337	167	83	250	442	442	884
Arrive On Green	0.25	0.37	0.37	0.06	0.19	0.19	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	3398	3504	1752	1767	3533	1767	1020	510	1530	1737	1737	3474
Grp Volume(v), veh/h	686	728	4	2	625	338	3	0	1	378	4	529
Grp Sat Flow(s),veh/h/ln	1699	1752	1752	1767	1767	1767	1530	0	1530	1737	1737	1737
Q Serve(g_s), s	21.0	18.1	0.2	0.1	19.1	21.0	0.2	0.0	0.1	22.8	0.2	14.7
Cycle Q Clear(g_c), s	21.0	18.1	0.2	0.1	19.1	21.0	0.2	0.0	0.1	22.8	0.2	14.7
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	834	1306	653	112	675	337	250	0	250	442	442	884
V/C Ratio(X)	0.82	0.56	0.01	0.02	0.93	1.00	0.01	0.00	0.00	0.85	0.01	0.60
Avail Cap(c_a), veh/h	834	1306	653	112	675	337	250	0	250	442	442	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.51	1.00	1.00	1.00	1.00	0.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	39.2	27.3	21.7	48.3	43.7	44.5	38.6	0.0	38.5	39.1	30.6	36.1
Incr Delay (d2), s/veh	3.5	0.9	0.0	0.1	18.9	49.6	0.1	0.0	0.0	15.0	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	7.3	0.1	0.1	9.8	13.5	0.1	0.0	0.0	11.1	0.1	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	28.2	21.7	48.3	62.7	94.1	38.6	0.0	38.5	54.1	30.7	38.4
LnGrp LOS	D	C	C	D	E	F	D	A	D	D	C	D
Approach Vol, veh/h		1418			965			4			911	
Approach Delay, s/veh		35.2			73.6			38.6			44.8	
Approach LOS		D			E			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.0	11.0	45.0		32.0	31.0	25.0				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.0	7.0	41.0		28.0	27.0	21.0				
Max Q Clear Time (g_c+I1), s		4.1	4.1	22.1		24.8	25.0	25.0				
Green Ext Time (p_c), s		0.0	0.0	4.4		1.1	0.6	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			49.1									
HCM 6th LOS			D									



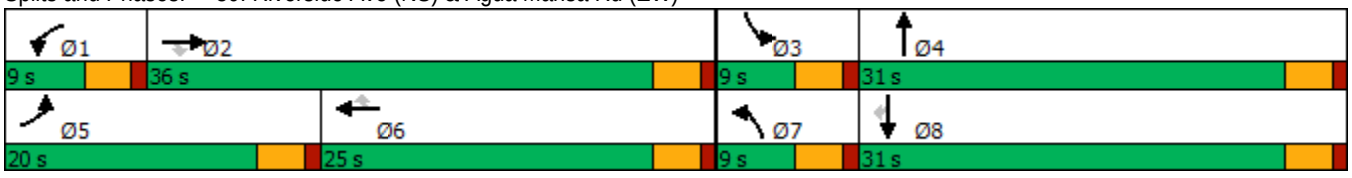
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Future Volume (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1743	1482	1492	1570	1335	1626	3220	0	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1656	1743	1482	1492	1570	1335	1626	3220	0	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			167		9				174
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	516	554	136	35	225	83	116	1321	91	92	1155	405
Shared Lane Traffic (%)												
Lane Group Flow (vph)	516	554	136	35	225	83	116	1412	0	92	1155	405
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

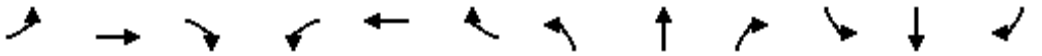
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	20.0	36.0	36.0	9.0	25.0	25.0	9.0	31.0		9.0	31.0	31.0
Total Split (%)	23.5%	42.4%	42.4%	10.6%	29.4%	29.4%	10.6%	36.5%		10.6%	36.5%	36.5%
Maximum Green (s)	16.0	32.0	32.0	5.0	21.0	21.0	5.0	27.0		5.0	27.0	27.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	16.0	35.6	35.6	5.0	21.0	21.0	5.0	27.0		5.0	27.0	27.0
Actuated g/C Ratio	0.19	0.42	0.42	0.06	0.25	0.25	0.06	0.32		0.06	0.32	0.32
v/c Ratio	1.66	0.76	0.20	0.40	0.58	0.18	1.22	1.37		0.95	1.10	0.69
Control Delay	337.4	30.9	5.8	52.5	35.2	0.9	201.2	201.4		122.4	88.0	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	337.4	30.9	5.8	52.5	35.2	0.9	201.2	201.4		122.4	88.0	21.0
LOS	F	C	A	D	D	A	F	F		F	F	C
Approach Delay		159.2			28.6			201.4			73.5	
Approach LOS		F			C			F			E	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.66
Intersection Signal Delay: 133.4 Intersection LOS: F
Intersection Capacity Utilization 98.3% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)



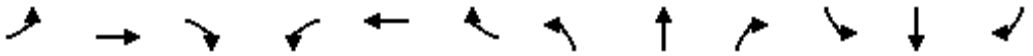


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	516	554	136	35	225	83	116	1321	91	92	1155	405
Future Volume (veh/h)	516	554	136	35	225	83	116	1321	91	92	1155	405
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	516	554	136	35	225	83	116	1321	91	92	1155	405
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	333	701	701	61	393	393	102	1007	69	104	1066	561
Arrive On Green	0.19	0.40	0.40	0.04	0.25	0.25	0.06	0.32	0.32	0.06	0.32	0.32
Sat Flow, veh/h	1767	1767	1767	1589	1589	1589	1737	3169	218	1767	3357	1767
Grp Volume(v), veh/h	516	554	136	35	225	83	116	688	724	92	1155	405
Grp Sat Flow(s),veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	16.0	23.4	4.3	1.8	10.6	3.5	5.0	27.0	27.0	4.4	27.0	17.3
Cycle Q Clear(g_c), s	16.0	23.4	4.3	1.8	10.6	3.5	5.0	27.0	27.0	4.4	27.0	17.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	333	701	701	61	393	393	102	524	552	104	1066	561
V/C Ratio(X)	1.55	0.79	0.19	0.57	0.57	0.21	1.14	1.31	1.31	0.89	1.08	0.72
Avail Cap(c_a), veh/h	333	701	701	93	393	393	102	524	552	104	1066	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	22.5	16.8	40.2	28.1	25.4	40.0	29.0	29.0	39.7	29.0	25.7
Incr Delay (d2), s/veh	262.7	8.9	0.6	8.1	6.0	1.2	130.1	153.8	153.2	53.7	53.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.7	10.3	1.6	0.8	4.4	1.3	5.7	31.7	33.3	3.3	17.3	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	297.2	31.4	17.4	48.2	34.0	26.6	170.1	182.8	182.2	93.4	82.0	30.2
LnGrp LOS	F	C	B	D	C	C	F	F	F	F	F	C
Approach Vol, veh/h		1206			343			1528			1652	
Approach Delay, s/veh		143.5			33.7			181.5			69.9	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	37.7	9.0	31.0	20.0	25.0	9.0	31.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	32.0	5.0	27.0	16.0	21.0	5.0	27.0
Max Q Clear Time (g_c+I1), s	5.8	27.4	8.4	31.0	20.0	14.6	9.0	31.0
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	0.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	122.1
HCM 6th LOS	F

YEAR 2035 WITH PROJECT – ALTERNATIVE 2



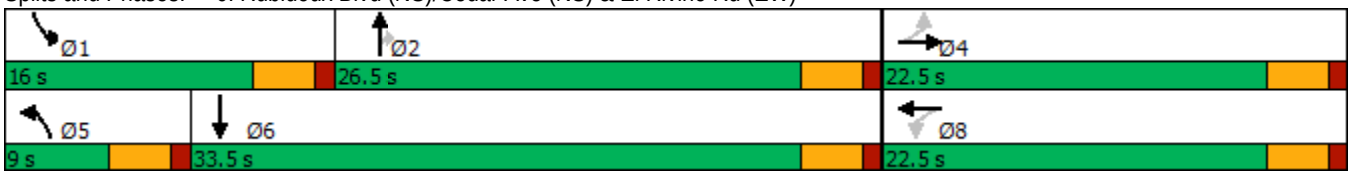
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	10	24	128	4	108	15	639	281	255	1078	8
Future Volume (vph)	21	10	24	128	4	108	15	639	281	255	1078	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.894			0.855				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1558	0	1456	1310	0	1597	3195	1429	1671	3339	0
Flt Permitted	0.685			0.735			0.950			0.950		
Satd. Flow (perm)	1194	1558	0	1126	1310	0	1597	3195	1429	1671	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			108				281		1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	24%	24%	24%	13%	13%	13%	8%	8%	8%
Adj. Flow (vph)	21	10	24	128	4	108	15	639	281	255	1078	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	128	112	0	15	639	281	255	1086	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		9.0	26.5	26.5	16.0	33.5	
Total Split (%)	34.6%	34.6%		34.6%	34.6%		13.8%	40.8%	40.8%	24.6%	51.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		5.0	22.5	22.5	12.0	29.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	11.5	11.5		11.7	11.7		5.1	24.1	24.1	11.5	39.1	
Actuated g/C Ratio	0.20	0.20		0.21	0.21		0.09	0.42	0.42	0.20	0.69	
v/c Ratio	0.09	0.10		0.55	0.32		0.11	0.47	0.37	0.75	0.47	
Control Delay	18.8	10.8		30.3	7.6		28.7	15.5	3.9	40.3	8.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	18.8	10.8		30.3	7.6		28.7	15.5	3.9	40.3	8.2	
LOS	B	B		C	A		C	B	A	D	A	
Approach Delay		13.9			19.7			12.2			14.3	
Approach LOS		B			B			B			B	

Intersection Summary

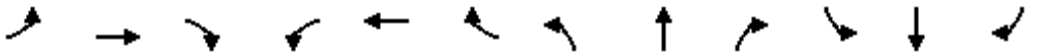
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 56.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 58.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	10	24	128	4	108	15	639	281	255	1078	8
Future Volume (veh/h)	21	10	24	128	4	108	15	639	281	255	1078	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1544	1544	1544	1707	1707	1707	1781	1781	1781
Adj Flow Rate, veh/h	21	10	24	128	4	108	15	639	281	255	1078	8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	24	24	24	13	13	13	8	8	8
Cap, veh/h	236	98	235	301	10	281	32	1291	680	358	2002	15
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.02	0.40	0.40	0.20	0.58	0.58
Sat Flow, veh/h	1210	520	1247	1135	55	1489	1707	3244	1707	1781	3448	26
Grp Volume(v), veh/h	21	0	34	128	0	112	15	639	281	255	529	557
Grp Sat Flow(s),veh/h/ln	1210	0	1767	1135	0	1544	1707	1622	1707	1781	1692	1781
Q Serve(g_s), s	0.9	0.0	0.9	6.1	0.0	3.6	0.5	8.3	6.7	7.5	10.8	10.8
Cycle Q Clear(g_c), s	6.5	0.0	0.9	8.1	0.0	3.6	0.5	8.3	6.7	7.5	10.8	10.8
Prop In Lane	1.00		0.71	1.00		0.96	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	236	0	333	301	0	291	32	1291	680	358	983	1034
V/C Ratio(X)	0.09	0.00	0.10	0.42	0.00	0.38	0.47	0.49	0.41	0.71	0.54	0.54
Avail Cap(c_a), veh/h	404	0	578	459	0	505	151	1291	680	378	983	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	19.0	22.8	0.0	20.1	27.5	12.8	12.3	21.1	7.2	7.2
Incr Delay (d2), s/veh	0.2	0.0	0.1	1.0	0.0	0.8	10.6	1.4	1.9	5.8	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	1.6	0.0	1.3	0.3	2.5	2.3	3.2	2.7	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	0.0	19.1	23.8	0.0	20.9	38.0	14.1	14.1	26.9	9.4	9.2
LnGrp LOS	C	A	B	C	A	C	D	B	B	C	A	A
Approach Vol, veh/h		55			240			935			1341	
Approach Delay, s/veh		21.0			22.4			14.5			12.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	26.5		14.7	5.0	36.8		14.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	22.5		18.5	5.0	29.5		18.5				
Max Q Clear Time (g_c+I1), s	11.5	12.3		8.5	4.5	14.8		10.1				
Green Ext Time (p_c), s	0.0	3.4		0.1	0.0	5.5		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		14.4	
HCM 6th LOS		B	

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	925	15	0	1230
Future Volume (vph)	0	10	925	15	0	1230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1644	3188	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3188	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	10	925	15	0	1230
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	10	940	0	0	1230
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	925	15	0	1230
Future Vol, veh/h	0	10	925	15	0	1230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	10	925	15	0	1230

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	470	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	545	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	545	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	545	-
HCM Lane V/C Ratio	-	-	0.018	-
HCM Control Delay (s)	-	-	11.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

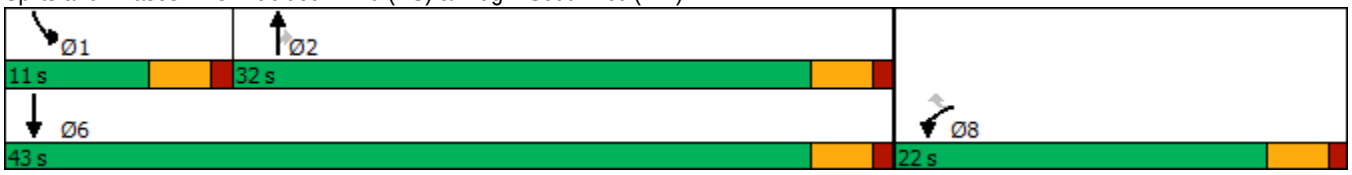


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	3	937	20	16	1214
Future Volume (vph)	17	3	937	20	16	1214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		3		20		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	17	3	937	20	16	1214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	3	937	20	16	1214
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	32.0	32.0	11.0	43.0
Total Split (%)	33.8%	33.8%	49.2%	49.2%	16.9%	66.2%
Maximum Green (s)	18.0	18.0	28.0	28.0	7.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	6.1	6.1	52.1	52.1	6.1	54.4
Actuated g/C Ratio	0.11	0.11	0.91	0.91	0.11	0.95
v/c Ratio	0.09	0.02	0.32	0.02	0.09	0.39
Control Delay	23.4	16.0	3.0	2.4	23.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	16.0	3.0	2.4	23.6	1.4
LOS	C	B	A	A	C	A
Approach Delay	22.3		3.0			1.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 57.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 2.4		Intersection LOS: A	
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

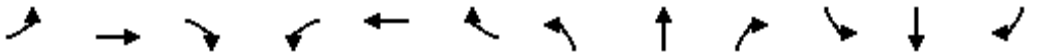




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	3	937	20	16	1214
Future Volume (veh/h)	17	3	937	20	16	1214
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	17	3	937	20	16	1214
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	46	46	2292	1206	35	2717
Arrive On Green	0.02	0.02	0.71	0.71	0.02	0.81
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	17	3	937	20	16	1214
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	0.4	0.1	5.7	0.2	0.4	5.2
Cycle Q Clear(g_c), s	0.4	0.1	5.7	0.2	0.4	5.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	46	46	2292	1206	35	2717
V/C Ratio(X)	0.37	0.06	0.41	0.02	0.45	0.45
Avail Cap(c_a), veh/h	710	710	2292	1206	257	2717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	23.0	2.9	2.1	23.3	1.4
Incr Delay (d2), s/veh	4.8	0.6	0.5	0.0	8.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.0	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.9	23.5	3.5	2.1	32.1	1.9
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	20		957			1230
Approach Delay, s/veh	27.3		3.4			2.3
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.0	38.0			43.0	5.2
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0			39.0	18.0
Max Q Clear Time (g_c+I1), s	2.4	7.7			7.2	2.4
Green Ext Time (p_c), s	0.0	6.0			9.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A

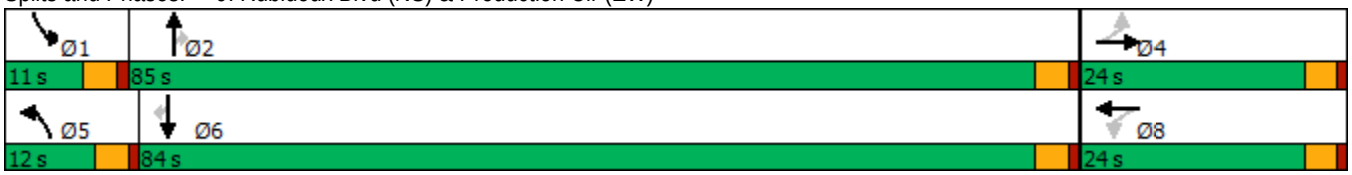


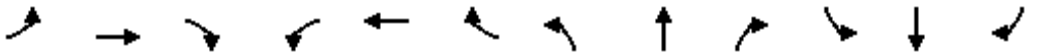
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	15	1	0	0	19	1011	1	1	1207	11
Future Volume (vph)	5	0	15	1	0	0	19	1011	1	1	1207	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1308	1170	0	1805	1900	0	1612	3223	1250	1656	3312	1284
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1377	1170	0	1900	1900	0	1612	3223	1250	1656	3312	1284
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		179							45			45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	38%	38%	38%	0%	0%	0%	12%	12%	12%	9%	9%	9%
Adj. Flow (vph)	5	0	15	1	0	0	19	1011	1	1	1207	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	15	0	1	0	0	19	1011	1	1	1207	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm			Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		12.0	85.0	85.0	11.0	84.0	84.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		10.0%	70.8%	70.8%	9.2%	70.0%	70.0%
Maximum Green (s)	20.0	20.0		20.0	20.0		8.0	81.0	81.0	7.0	80.0	80.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	6.2	6.2		6.2			6.7	98.0	98.0	5.7	95.5	95.5
Actuated g/C Ratio	0.06	0.06		0.06			0.06	0.93	0.93	0.05	0.90	0.90
v/c Ratio	0.06	0.06		0.01			0.19	0.34	0.00	0.01	0.40	0.01
Control Delay	50.4	0.5		49.0			52.7	1.8	0.0	50.0	3.0	0.0
Queue Delay	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	0.5		49.0			52.7	1.8	0.0	50.0	3.0	0.0
LOS	D	A		D			D	A	A	D	A	A
Approach Delay		13.0			49.0			2.8			3.0	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 3.0		Intersection LOS: A	
Intersection Capacity Utilization 44.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

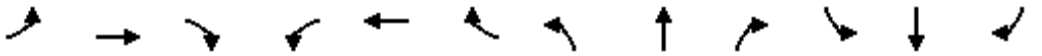




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	1	0	0	19	1011	1	1	1207	11
Future Volume (veh/h)	5	0	15	1	0	0	19	1011	1	1	1207	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1337	1337	1283	1900	1900	1824	1722	1722	1653	1767	1767	1696
Adj Flow Rate, veh/h	5	0	15	1	0	0	19	1011	1	1	1207	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	38	38	38	0	0	0	12	12	12	9	9	9
Cap, veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.85	0.85	0.00	0.83	0.83
Sat Flow, veh/h	1013	0	1337	1421	1900	0	1722	3272	1653	1767	3357	1696
Grp Volume(v), veh/h	5	0	15	1	0	0	19	1011	1	1	1207	11
Grp Sat Flow(s),veh/h/ln	1013	0	1337	1421	1900	0	1722	1636	1653	1767	1678	1696
Q Serve(g_s), s	0.5	0.0	1.1	0.1	0.0	0.0	1.1	6.4	0.0	0.1	9.1	0.1
Cycle Q Clear(g_c), s	0.5	0.0	1.1	1.1	0.0	0.0	1.1	6.4	0.0	0.1	9.1	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	30	91	42	0	36	2786	1408	2	2793	1411
V/C Ratio(X)	0.05	0.00	0.50	0.01	0.00	0.00	0.53	0.36	0.00	0.41	0.43	0.01
Avail Cap(c_a), veh/h	286	0	278	355	395	0	143	2786	1408	129	2793	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	0.0	46.5	47.0	0.0	0.0	46.6	1.5	1.1	48.0	2.1	1.4
Incr Delay (d2), s/veh	0.2	0.0	12.5	0.0	0.0	0.0	11.8	0.4	0.0	85.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.0	0.0	0.0	0.5	0.3	0.0	0.1	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	58.9	47.1	0.0	0.0	58.4	1.9	1.1	133.4	2.6	1.4
LnGrp LOS	D	A	E	D	A	A	E	A	A	F	A	A
Approach Vol, veh/h		20			1			1031			1219	
Approach Delay, s/veh		55.8			47.1			2.9			2.7	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	85.9		6.1	6.0	84.0		6.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	81.0		20.0	8.0	80.0		20.0				
Max Q Clear Time (g_c+I1), s	2.1	8.4		3.1	3.1	11.1		3.1				
Green Ext Time (p_c), s	0.0	8.1		0.0	0.0	10.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		3.3
HCM 6th LOS		A

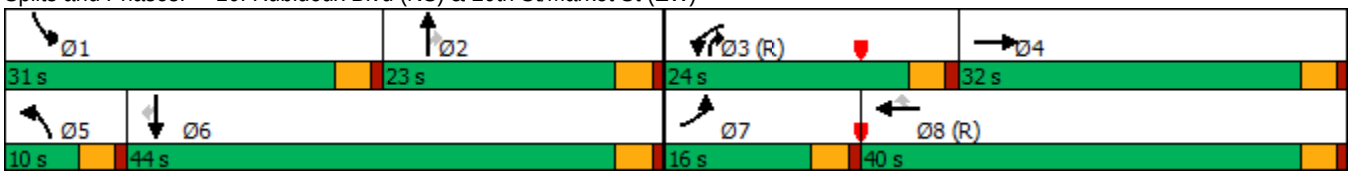


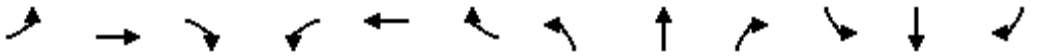
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	112	47	345	78	512	23	376	358	627	653	30
Future Volume (vph)	54	112	47	345	78	512	23	376	358	627	653	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt		0.956				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1068	1075	0	3072	1667	1417	1556	3112	1392	3367	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				512			356			129
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	69%	69%	69%	14%	14%	14%	16%	16%	16%	4%	4%	4%
Adj. Flow (vph)	54	112	47	345	78	512	23	376	358	627	653	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	159	0	345	78	512	23	376	358	627	653	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5		9.0	22.5	22.5	9.0	22.5	9.0	9.0	22.5	22.5
Total Split (s)	16.0	32.0		24.0	40.0	40.0	10.0	23.0	24.0	31.0	44.0	44.0
Total Split (%)	14.5%	29.1%		21.8%	36.4%	36.4%	9.1%	20.9%	21.8%	28.2%	40.0%	40.0%
Maximum Green (s)	12.0	28.0		20.0	36.0	36.0	6.0	19.0	20.0	27.0	40.0	40.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.8	28.0		20.0	40.1	40.1	5.9	21.5	45.5	24.5	46.0	46.0
Actuated g/C Ratio	0.09	0.25		0.18	0.36	0.36	0.05	0.20	0.41	0.22	0.42	0.42
v/c Ratio	0.57	0.55		0.62	0.13	0.61	0.28	0.62	0.46	0.84	0.45	0.04
Control Delay	70.3	39.9		51.8	46.6	24.5	58.7	46.3	4.5	51.5	25.1	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	39.9		51.8	46.6	24.9	58.7	46.3	4.5	51.5	25.1	0.1
LOS	E	D		D	D	C	E	D	A	D	C	A
Approach Delay		47.6			36.6			26.9			37.1	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 35.3		Intersection LOS: D	
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	112	47	345	78	512	23	376	358	627	653	30
Future Volume (veh/h)	54	112	47	345	78	512	23	376	358	627	653	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	877	877	877	1693	1693	1693	1663	1663	1663	1841	1841	1841
Adj Flow Rate, veh/h	54	112	47	345	78	512	23	376	358	627	653	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	69	69	69	14	14	14	16	16	16	4	4	4
Cap, veh/h	69	176	74	593	656	656	42	555	593	761	1272	669
Arrive On Green	0.08	0.28	0.28	0.18	0.39	0.39	0.03	0.18	0.18	0.21	0.36	0.36
Sat Flow, veh/h	877	618	259	3283	1693	1693	1663	3159	1663	3571	3497	1841
Grp Volume(v), veh/h	54	0	159	345	78	512	23	376	358	627	653	30
Grp Sat Flow(s),veh/h/ln	877	0	877	1642	1693	1693	1663	1580	1663	1785	1749	1841
Q Serve(g_s), s	6.6	0.0	17.4	10.6	3.3	29.2	1.5	12.2	19.3	18.4	16.1	1.2
Cycle Q Clear(g_c), s	6.6	0.0	17.4	10.6	3.3	29.2	1.5	12.2	19.3	18.4	16.1	1.2
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	0	250	593	656	656	42	555	593	761	1272	669
V/C Ratio(X)	0.79	0.00	0.64	0.58	0.12	0.78	0.55	0.68	0.60	0.82	0.51	0.04
Avail Cap(c_a), veh/h	96	0	250	597	656	656	91	555	593	877	1272	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.59	0.59	0.59	0.85	0.85	0.85	0.92	0.92	0.92
Uniform Delay (d), s/veh	49.8	0.0	34.3	41.2	21.6	29.6	53.0	42.4	29.0	41.3	27.4	22.6
Incr Delay (d2), s/veh	24.3	0.0	5.2	0.8	0.2	5.5	9.1	5.6	3.9	5.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	3.9	4.2	1.3	12.1	0.7	5.0	8.0	8.3	6.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	0.0	39.6	42.1	21.9	35.1	62.1	48.0	32.9	46.6	28.8	22.8
LnGrp LOS	E	A	D	D	C	D	E	D	C	D	C	C
Approach Vol, veh/h		213			935			757			1310	
Approach Delay, s/veh		48.3			36.6			41.3			37.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.4	23.3	23.9	35.3	6.8	44.0	12.6	46.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	27.0	19.0	20.0	28.0	6.0	40.0	12.0	36.0
Max Q Clear Time (g_c+I1), s	22.4	23.3	12.6	19.4	5.5	20.1	10.6	33.2
Green Ext Time (p_c), s	1.0	0.0	0.7	0.4	0.0	3.9	0.0	0.6

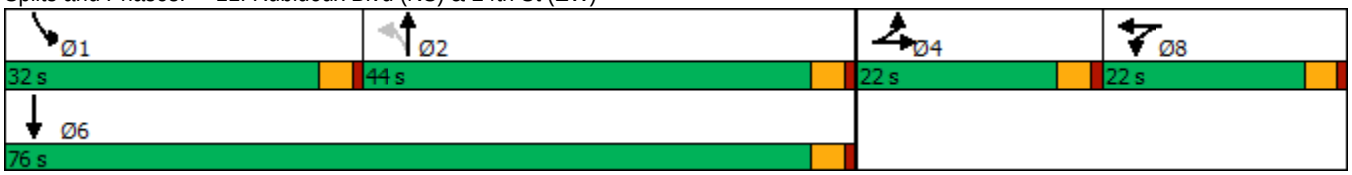
Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

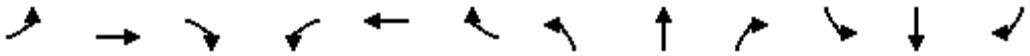
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	32	46	7	2	13	17	699	96	282	795	1
Future Volume (vph)	5	32	46	7	2	13	17	699	96	282	795	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.920			0.982				
Flt Protected		0.997			0.984		0.950			0.950		
Satd. Flow (prot)	0	1068	0	0	1433	0	1530	3004	0	1570	3139	0
Flt Permitted		0.997			0.984		0.351			0.950		
Satd. Flow (perm)	0	1068	0	0	1433	0	565	3004	0	1570	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			13			13				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	64%	64%	64%	20%	20%	20%	18%	18%	18%	15%	15%	15%
Adj. Flow (vph)	5	32	46	7	2	13	17	699	96	282	795	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	22	0	17	795	0	282	796	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		44.0	44.0		32.0	76.0	
Total Split (%)	18.3%	18.3%		18.3%	18.3%		36.7%	36.7%		26.7%	63.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		40.0	40.0		28.0	72.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		9.4			6.5		48.2	48.2		21.0	74.3	
Actuated g/C Ratio		0.10			0.07		0.52	0.52		0.23	0.80	
v/c Ratio		0.56			0.20		0.06	0.51		0.79	0.32	
Control Delay		38.0			32.8		19.9	20.0		51.5	4.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		38.0			32.8		19.9	20.0		51.5	4.8	
LOS		D			C		B	B		D	A	
Approach Delay		38.0			32.8			20.0			17.0	
Approach LOS		D			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 52.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)

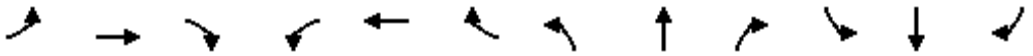




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	32	46	7	2	13	17	699	96	282	795	1
Future Volume (veh/h)	5	32	46	7	2	13	17	699	96	282	795	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	952	952	913	1604	1604	1539	1633	1633	1568	1678	1678	1611
Adj Flow Rate, veh/h	5	32	46	7	2	13	17	699	96	282	795	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	64	64	64	20	20	20	18	18	18	15	15	15
Cap, veh/h	6	36	51	12	3	22	386	1462	201	319	2464	3
Arrive On Green	0.10	0.10	0.10	0.02	0.02	0.02	0.52	0.52	0.52	0.19	0.75	0.75
Sat Flow, veh/h	57	367	527	510	146	948	596	2800	385	1678	3267	4
Grp Volume(v), veh/h	83	0	0	22	0	0	17	387	408	282	388	408
Grp Sat Flow(s),veh/h/ln	952	0	0	1604	0	0	596	1552	1633	1678	1594	1678
Q Serve(g_s), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.2	15.2	15.6	7.6	7.6
Cycle Q Clear(g_c), s	8.2	0.0	0.0	1.3	0.0	0.0	1.3	15.2	15.2	15.6	7.6	7.6
Prop In Lane	0.06		0.55	0.32		0.59	1.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	92	0	0	37	0	0	386	810	853	319	1202	1265
V/C Ratio(X)	0.90	0.00	0.00	0.59	0.00	0.00	0.04	0.48	0.48	0.88	0.32	0.32
Avail Cap(c_a), veh/h	179	0	0	302	0	0	386	810	853	492	1202	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	0.0	46.2	0.0	0.0	11.2	14.5	14.5	37.6	3.8	3.8
Incr Delay (d2), s/veh	24.3	0.0	0.0	14.1	0.0	0.0	0.2	2.0	1.9	11.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.7	0.0	0.0	0.2	5.0	5.3	7.0	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	0.0	0.0	60.3	0.0	0.0	11.4	16.6	16.5	49.2	4.5	4.5
LnGrp LOS	E	A	A	E	A	A	B	B	B	D	A	A
Approach Vol, veh/h		83			22			812			1078	
Approach Delay, s/veh		66.9			60.3			16.4			16.2	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	22.2	53.8		13.3		76.0		6.2				
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s	28.0	40.0		18.0		72.0		18.0				
Max Q Clear Time (g_c+I1), s	17.6	17.2		10.2		9.6		3.3				
Green Ext Time (p_c), s	0.5	4.6		0.2		4.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									

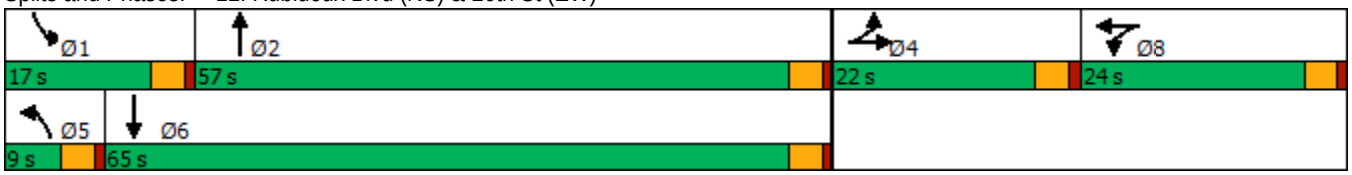


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	29	3	17	9	745	97	63	802	0
Future Volume (vph)	0	0	3	29	3	17	9	745	97	63	802	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.953			0.983				
Flt Protected					0.971		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Flt Permitted					0.971		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1221	0	1530	3007	0	1517	3034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		375			17			15				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	44%	44%	44%	18%	18%	18%	19%	19%	19%
Adj. Flow (vph)	0	0	3	29	3	17	9	745	97	63	802	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	49	0	9	842	0	63	802	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	57.0		17.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	47.5%		14.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	53.0		13.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.5			8.0		5.0	62.5		9.1	71.8	
Actuated g/C Ratio		0.06			0.09		0.06	0.71		0.10	0.81	
v/c Ratio		0.01			0.39		0.10	0.39		0.41	0.32	
Control Delay		0.0			36.8		44.2	8.7		45.5	4.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			36.8		44.2	8.7		45.5	4.4	
LOS		A			D		D	A		D	A	
Approach Delay					36.8			9.1			7.4	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 88.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



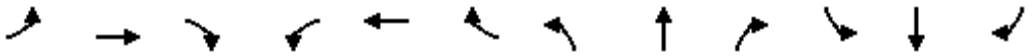
HCM 6th Signalized Intersection Summary
12: Rubidoux Blvd (NS) & 26th St (EW)

10/08/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	29	3	17	9	745	97	63	802	0
Future Volume (veh/h)	0	0	3	29	3	17	9	745	97	63	802	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1248	1248	1248	1633	1633	1568	1618	1618	1554
Adj Flow Rate, veh/h	0	0	3	29	3	17	9	745	97	63	802	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	44	44	44	18	18	18	19	19	19
Cap, veh/h	0	0	8	32	3	19	18	1996	260	78	2292	0
Arrive On Green	0.00	0.00	0.00	0.04	0.04	0.04	0.01	0.71	0.71	0.05	0.75	0.00
Sat Flow, veh/h	0	0	1900	739	76	433	1633	2818	367	1618	3156	0
Grp Volume(v), veh/h	0	0	3	49	0	0	9	410	432	63	802	0
Grp Sat Flow(s),veh/h/ln	0	0	1900	1248	0	0	1633	1552	1633	1618	1537	0
Q Serve(g_s), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.6	8.6	3.2	7.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	3.2	0.0	0.0	0.4	8.6	8.6	3.2	7.4	0.0
Prop In Lane	0.00		1.00	0.59		0.35	1.00		0.22	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	8	55	0	0	18	1099	1157	78	2292	0
V/C Ratio(X)	0.00	0.00	0.39	0.90	0.00	0.00	0.49	0.37	0.37	0.80	0.35	0.00
Avail Cap(c_a), veh/h	0	0	418	305	0	0	100	1099	1157	257	2292	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	40.7	38.9	0.0	0.0	40.2	4.7	4.7	38.6	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	29.6	35.2	0.0	0.0	18.5	1.0	0.9	17.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.5	0.0	0.0	0.3	1.9	2.0	1.5	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	70.2	74.1	0.0	0.0	58.8	5.7	5.7	55.6	4.0	0.0
LnGrp LOS	A	A	E	E	A	A	E	A	A	E	A	A
Approach Vol, veh/h		3			49			851			865	
Approach Delay, s/veh		70.2			74.1			6.2			7.8	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	62.0		4.3	4.9	65.0		7.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	13.0	53.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	5.2	10.6		2.1	2.4	9.4		5.2				
Green Ext Time (p_c), s	0.1	5.3		0.0	0.0	5.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		9.0
HCM 6th LOS		A



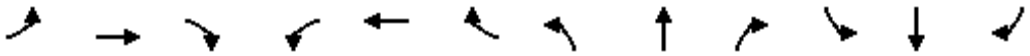
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	118	111	81	58	7	168	813	65	7	804	50
Future Volume (vph)	61	118	111	81	58	7	168	813	65	7	804	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.927			0.984			0.989			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1587	0	1583	1640	0	1543	3052	0	1543	3058	0
Flt Permitted	0.715			0.467			0.950			0.950		
Satd. Flow (perm)	1224	1587	0	778	1640	0	1543	3052	0	1543	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			7			17			11	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	11%	11%	14%	14%	14%	17%	17%	17%	17%	17%	17%
Adj. Flow (vph)	61	118	111	81	58	7	168	813	65	7	804	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	229	0	81	65	0	168	878	0	7	854	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		13.0	28.5		9.0	24.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		21.7%	47.5%		15.0%	40.8%	
Maximum Green (s)	18.5	18.5		18.5	18.5		9.0	24.5		5.0	20.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	10.5	10.5		10.5	10.5		8.7	31.9		5.0	20.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.17	0.61		0.10	0.40	
v/c Ratio	0.25	0.60		0.52	0.19		0.65	0.47		0.05	0.69	
Control Delay	19.4	18.7		30.5	16.5		36.8	8.2		24.4	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.4	18.7		30.5	16.5		36.8	8.2		24.4	18.0	
LOS	B	B		C	B		D	A		C	B	
Approach Delay		18.9			24.3			12.8			18.1	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 52			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)

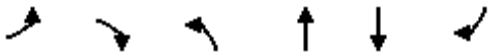




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	118	111	81	58	7	168	813	65	7	804	50
Future Volume (veh/h)	61	118	111	81	58	7	168	813	65	7	804	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1668	1693	1693	1625	1648	1648	1648	1648	1648	1648
Adj Flow Rate, veh/h	61	118	111	81	58	7	168	813	65	7	804	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	11	11	11	14	14	14	17	17	17	17	17	17
Cap, veh/h	373	234	220	248	396	48	256	1529	122	15	1112	69
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.51	0.51	0.01	0.37	0.37
Sat Flow, veh/h	1241	895	842	1042	1510	182	1648	2976	238	1648	3026	188
Grp Volume(v), veh/h	61	0	229	81	0	65	168	428	450	7	416	438
Grp Sat Flow(s),veh/h/ln	1241	0	1737	1042	0	1693	1648	1566	1648	1648	1566	1648
Q Serve(g_s), s	2.3	0.0	6.2	4.2	0.0	1.6	5.3	10.2	10.2	0.2	12.8	12.8
Cycle Q Clear(g_c), s	6.0	0.0	6.2	12.4	0.0	1.6	5.3	10.2	10.2	0.2	12.8	12.8
Prop In Lane	1.00		0.48	1.00		0.11	1.00		0.14	1.00		0.11
Lane Grp Cap(c), veh/h	373	0	455	248	0	443	256	804	847	15	576	606
V/C Ratio(X)	0.16	0.00	0.50	0.33	0.00	0.15	0.66	0.53	0.53	0.46	0.72	0.72
Avail Cap(c_a), veh/h	460	0	576	321	0	562	266	804	847	148	576	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	17.5	23.7	0.0	15.8	22.2	9.1	9.1	27.5	15.2	15.2
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.8	0.0	0.2	5.5	2.5	2.4	20.2	7.7	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.4	1.0	0.0	0.6	2.1	2.8	2.9	0.2	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	18.4	24.5	0.0	15.9	27.6	11.6	11.5	47.7	22.9	22.5
LnGrp LOS	B	A	B	C	A	B	C	B	B	D	C	C
Approach Vol, veh/h		290			146			1046			861	
Approach Delay, s/veh		18.5			20.7			14.1			22.9	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	32.6		18.6	12.7	24.5		18.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	9.0	20.5		18.5				
Max Q Clear Time (g_c+I1), s	4.2	14.2		10.2	9.3	16.8		14.4				
Green Ext Time (p_c), s	0.0	3.6		0.9	0.0	1.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		18.3	
HCM 6th LOS		B	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	195	134	1052	954	35
Future Volume (vph)	0	195	134	1052	954	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1344	1556	3112	3139	1404
Flt Permitted			0.950			
Satd. Flow (perm)	0	1344	1556	3112	3139	1404
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	16%	16%	15%	15%
Adj. Flow (vph)	0	195	134	1052	954	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	195	134	1052	954	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.1%		ICU Level of Service A	
Analysis Period (min) 15			

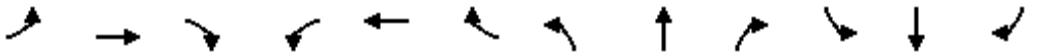
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	195	134	1052	954	35
Future Vol, veh/h	0	195	134	1052	954	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	16	16	15	15
Mvmt Flow	0	195	134	1052	954	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	477	989	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	4.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	2.36	-	-	-
Pot Cap-1 Maneuver	0	524	616	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	524	616	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	616	-	524	-	-
HCM Lane V/C Ratio	0.218	-	0.372	-	-
HCM Control Delay (s)	12.5	-	15.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	1.7	-	-

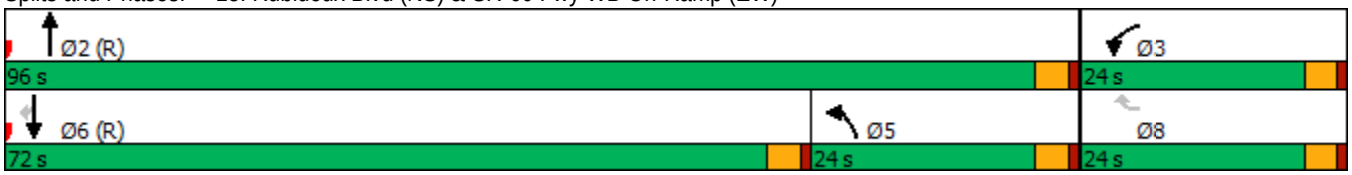


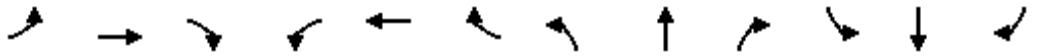
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Future Volume (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3223	1442
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						250						578
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	12%	12%	12%
Adj. Flow (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	377	0	250	352	866	0	0	511	738
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				24.0		24.0	24.0	96.0			72.0	72.0
Total Split (%)				20.0%		20.0%	20.0%	80.0%			60.0%	60.0%
Maximum Green (s)				20.0		20.0	20.0	92.0			68.0	68.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				17.5		17.5	20.0	94.5			70.5	70.5
Actuated g/C Ratio				0.15		0.15	0.17	0.79			0.59	0.59
v/c Ratio				0.74		0.56	0.68	0.34			0.27	0.68
Control Delay				58.0		10.5	44.1	3.1			12.9	7.0
Queue Delay				0.0		0.0	0.0	0.3			0.0	0.0
Total Delay				58.0		10.5	44.1	3.4			12.9	7.0
LOS				E		B	D	A			B	A
Approach Delay					39.0			15.2			9.5	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

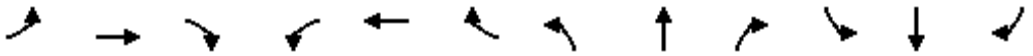




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	377	0	250	352	866	0	0	511	738
Future Volume (veh/h)	0	0	0	377	0	250	352	866	0	0	511	738
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1722	1722
Adj Flow Rate, veh/h				377	0	250	352	866	0	0	511	738
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	12	12
Cap, veh/h				555	0	286	611	2561	0	0	1854	976
Arrive On Green				0.15	0.00	0.15	0.06	0.26	0.00	0.00	0.57	0.57
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3358	1722
Grp Volume(v), veh/h				377	0	250	352	866	0	0	511	738
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1636	1722
Q Serve(g_s), s				11.6	0.0	15.4	12.3	25.8	0.0	0.0	9.6	39.0
Cycle Q Clear(g_c), s				11.6	0.0	15.4	12.3	25.8	0.0	0.0	9.6	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				555	0	286	611	2561	0	0	1854	976
V/C Ratio(X)				0.68	0.00	0.87	0.58	0.34	0.00	0.00	0.28	0.76
Avail Cap(c_a), veh/h				614	0	317	611	2561	0	0	1854	976
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.2	0.0	49.8	51.9	19.2	0.0	0.0	13.4	19.7
Incr Delay (d2), s/veh				2.7	0.0	21.2	1.2	0.3	0.0	0.0	0.4	5.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	9.0	5.6	11.3	0.0	0.0	3.5	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.9	0.0	71.1	53.1	19.6	0.0	0.0	13.7	25.2
LnGrp LOS				D	A	E	D	B	A	A	B	C
Approach Vol, veh/h					627			1218			1249	
Approach Delay, s/veh					58.9			29.2			20.5	
Approach LOS					E			C			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	97.9		25.9	72.0		22.1						
Change Period (Y+Rc), s	4.0		4.0	4.0		4.0						
Max Green Setting (Gmax), s	92.0		20.0	68.0		20.0						
Max Q Clear Time (g_c+I1), s	27.8		14.3	41.0		17.4						
Green Ext Time (p_c), s	7.1		0.6	6.4		0.6						

Intersection Summary		
HCM 6th Ctrl Delay	31.7	
HCM 6th LOS	C	

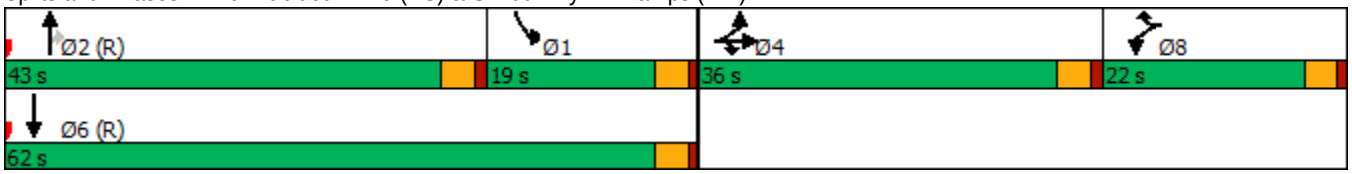


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	434	37	357	12	0	3	0	596	665	196	685	0
Future Volume (vph)	434	37	357	12	0	3	0	596	665	196	685	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.960		0.950						0.950		
Satd. Flow (prot)	1478	1494	1207	1805	0	1615	0	3471	1553	1703	3406	0
Flt Permitted	0.950	0.960		0.950						0.950		
Satd. Flow (perm)	1478	1494	1207	1805	0	1615	0	3471	1553	1703	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			82			665			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	16%	0%	0%	0%	4%	4%	4%	6%	6%	6%
Adj. Flow (vph)	434	37	357	12	0	3	0	596	665	196	685	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	234	237	357	12	0	3	0	596	665	196	685	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	36.0	36.0	36.0	22.0		22.0		43.0	43.0	19.0	62.0	
Total Split (%)	30.0%	30.0%	30.0%	18.3%		18.3%		35.8%	35.8%	15.8%	51.7%	
Maximum Green (s)	32.0	32.0	32.0	18.0		18.0		39.0	39.0	15.0	58.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	26.0	26.0	26.0	6.4		6.4		62.5	62.5	15.0	81.5	
Actuated g/C Ratio	0.22	0.22	0.22	0.05		0.05		0.52	0.52	0.12	0.68	
v/c Ratio	0.73	0.73	0.84	0.12		0.02		0.33	0.59	0.92	0.30	
Control Delay	56.8	56.8	35.6	56.4		0.3		19.3	4.2	77.6	5.7	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.4	
Total Delay	56.8	56.8	35.6	56.4		0.3		19.3	4.2	77.6	6.1	
LOS	E	E	D	E		A		B	A	E	A	
Approach Delay		47.6			45.2			11.3			22.0	
Approach LOS		D			D			B			C	

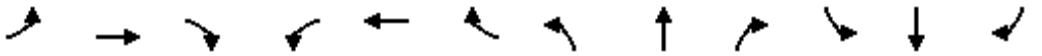
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 56 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	434	37	357	12	0	3	0	596	665	196	685	0
Future Volume (veh/h)	434	37	357	12	0	3	0	596	665	196	685	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1596	1900	0	1900	0	1841	1841	1811	1811	0
Adj Flow Rate, veh/h	460	0	357	12	0	3	0	596	665	196	685	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	16	0	0	0	0	4	4	6	6	0
Cap, veh/h	846	0	406	0	0	0	0	1137	598	580	2336	0
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.32	0.32	0.64	1.00	0.00
Sat Flow, veh/h	3326	0	1596		0		0	3589	1841	1811	3532	0
Grp Volume(v), veh/h	460	0	357		0.0		0	596	665	196	685	0
Grp Sat Flow(s),veh/h/ln	1663	0	1596				0	1749	1841	1811	1721	0
Q Serve(g_s), s	14.4	0.0	25.8				0.0	16.6	39.0	5.9	0.0	0.0
Cycle Q Clear(g_c), s	14.4	0.0	25.8				0.0	16.6	39.0	5.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	846	0	406				0	1137	598	580	2336	0
V/C Ratio(X)	0.54	0.00	0.88				0.00	0.52	1.11	0.34	0.29	0.00
Avail Cap(c_a), veh/h	887	0	426				0	1137	598	580	2336	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.88	0.88	0.00
Uniform Delay (d), s/veh	38.7	0.0	43.0				0.0	33.0	40.5	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	18.0				0.0	1.5	69.3	0.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	12.1				0.0	7.1	28.5	2.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	61.0				0.0	34.5	109.8	16.0	0.3	0.0
LnGrp LOS	D	A	E				A	C	F	B	A	A
Approach Vol, veh/h		817						1261			881	
Approach Delay, s/veh		48.8						74.2			3.8	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	42.5	43.0		34.5		85.5						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	15.0	39.0		32.0		58.0						
Max Q Clear Time (g_c+I1), s	9.9	41.0		29.8		4.0						
Green Ext Time (p_c), s	0.2	0.0		0.8		5.1						

Intersection Summary			
HCM 6th Ctrl Delay			46.2
HCM 6th LOS			D

Notes

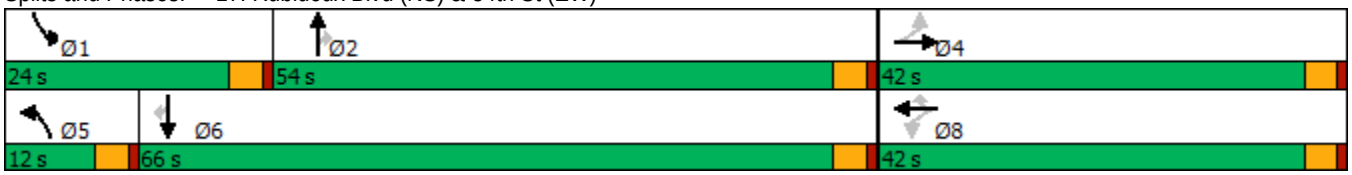
User approved volume balancing among the lanes for turning movement.

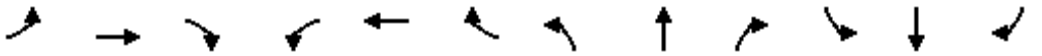
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	46	21	12	22	190	28	876	80	124	684	79
Future Volume (vph)	164	46	21	12	22	190	28	876	80	124	684	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.988				0.850			0.850			0.850
Flt Protected		0.966			0.983		0.950			0.950		
Satd. Flow (prot)	0	1727	0	0	1868	1400	1719	3438	1333	1703	3406	1320
Flt Permitted		0.768			0.906		0.950			0.950		
Satd. Flow (perm)	0	1373	0	0	1721	1400	1719	3438	1333	1703	3406	1320
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				190			82			46
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	5%	5%	0%	0%	0%	5%	5%	5%	6%	6%	6%
Adj. Flow (vph)	164	46	21	12	22	190	28	876	80	124	684	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	34	190	28	876	80	124	684	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	42.0	42.0		42.0	42.0	42.0	12.0	54.0	54.0	24.0	66.0	66.0
Total Split (%)	35.0%	35.0%		35.0%	35.0%	35.0%	10.0%	45.0%	45.0%	20.0%	55.0%	55.0%
Maximum Green (s)	38.0	38.0		38.0	38.0	38.0	8.0	50.0	50.0	20.0	62.0	62.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		21.6			21.6	21.6	6.9	53.3	53.3	12.6	63.4	63.4
Actuated g/C Ratio		0.22			0.22	0.22	0.07	0.54	0.54	0.13	0.64	0.64
v/c Ratio		0.77			0.09	0.42	0.24	0.48	0.11	0.58	0.32	0.09
Control Delay		53.6			31.8	7.7	53.0	17.4	4.1	53.8	10.7	5.9
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		53.6			31.8	7.7	53.0	17.4	4.1	53.8	10.7	5.9
LOS		D			C	A	D	B	A	D	B	A
Approach Delay		53.6			11.4			17.3			16.3	
Approach LOS		D			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 99.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 20.0		Intersection LOS: B	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	46	21	12	22	190	28	876	80	124	684	79
Future Volume (veh/h)	164	46	21	12	22	190	28	876	80	124	684	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1824	1826	1826	1753	1811	1811	1739
Adj Flow Rate, veh/h	164	46	21	12	22	190	28	876	80	124	684	79
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	5	5	5	0	0	0	5	5	5	6	6	6
Cap, veh/h	246	58	24	159	270	406	54	1914	967	189	2155	1089
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.55	0.55	0.10	0.63	0.63
Sat Flow, veh/h	827	262	109	491	1213	1824	1826	3469	1753	1811	3441	1739
Grp Volume(v), veh/h	231	0	0	34	0	190	28	876	80	124	684	79
Grp Sat Flow(s),veh/h/ln	1198	0	0	1703	0	1824	1826	1735	1753	1811	1721	1739
Q Serve(g_s), s	16.7	0.0	0.0	0.0	0.0	8.9	1.5	15.0	2.1	6.5	9.2	1.8
Cycle Q Clear(g_c), s	18.7	0.0	0.0	1.4	0.0	8.9	1.5	15.0	2.1	6.5	9.2	1.8
Prop In Lane	0.71		0.09	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	0	0	429	0	406	54	1914	967	189	2155	1089
V/C Ratio(X)	0.70	0.00	0.00	0.08	0.00	0.47	0.51	0.46	0.08	0.66	0.32	0.07
Avail Cap(c_a), veh/h	535	0	0	697	0	700	148	1914	967	366	2155	1089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	0.0	0.0	30.4	0.0	33.4	47.3	13.3	10.4	42.6	8.6	7.2
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.0	0.8	7.3	0.8	0.2	3.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	0.0	0.7	0.0	4.1	0.8	5.5	0.8	3.0	3.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	0.0	0.0	30.5	0.0	34.2	54.6	14.1	10.6	46.5	9.0	7.4
LnGrp LOS	D	A	A	C	A	C	D	B	B	D	A	A
Approach Vol, veh/h		231			224			984			887	
Approach Delay, s/veh		40.5			33.7			15.0			14.1	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	58.6		26.1	7.0	66.0		26.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	50.0		38.0	8.0	62.0		38.0				
Max Q Clear Time (g_c+I1), s	10.5	19.0		20.7	5.5	13.2		12.9				
Green Ext Time (p_c), s	0.2	6.8		1.4	0.0	5.3		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	540	6	12	240	0	12
Future Volume (vph)	540	6	12	240	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3282	1468	1456	2911	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3282	1468	1456	2911	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	540	6	12	240	0	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	540	6	12	240	0	12
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	540	6	12	240	0	12
Future Vol, veh/h	540	6	12	240	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	10	10	24	24	0	0
Mvmt Flow	540	6	12	240	0	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	546	0	-	270
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.58	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.44	-	-	3.3
Pot Cap-1 Maneuver	-	-	881	-	0	734
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	881	-	-	734
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	734	-	-	881	-
HCM Lane V/C Ratio	0.016	-	-	0.014	-
HCM Control Delay (s)	10	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

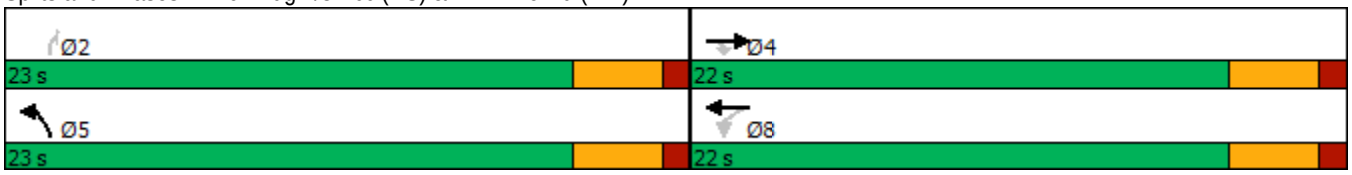


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	424	128	14	215	37	10
Future Volume (vph)	424	128	14	215	37	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3282	1468	1456	2911	1805	1615
Flt Permitted			0.505		0.950	
Satd. Flow (perm)	3282	1468	774	2911	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		128				10
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	24%	24%	0%	0%
Adj. Flow (vph)	424	128	14	215	37	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	424	128	14	215	37	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	8.7	8.7	8.7	8.7	6.1	5.9
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.27	0.26
v/c Ratio	0.34	0.20	0.05	0.19	0.08	0.02
Control Delay	5.7	2.1	4.7	5.0	7.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	2.1	4.7	5.0	7.3	4.7
LOS	A	A	A	A	A	A
Approach Delay	4.8			5.0	6.8	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 22.6			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 5.0		Intersection LOS: A	
Intersection Capacity Utilization 22.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

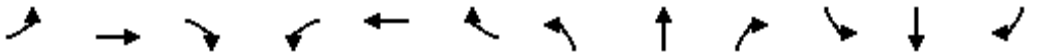




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	424	128	14	215	37	10
Future Volume (veh/h)	424	128	14	215	37	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1544	1544	1900	1900
Adj Flow Rate, veh/h	424	128	14	215	37	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	24	24	0	0
Cap, veh/h	1278	672	709	1126	113	113
Arrive On Green	0.38	0.38	0.38	0.38	0.06	0.06
Sat Flow, veh/h	3416	1752	707	3011	1900	1900
Grp Volume(v), veh/h	424	128	14	215	37	10
Grp Sat Flow(s),veh/h/ln	1664	1752	707	1467	1900	1900
Q Serve(g_s), s	1.3	0.7	0.2	0.7	0.3	0.1
Cycle Q Clear(g_c), s	1.3	0.7	1.5	0.7	0.3	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1278	672	709	1126	113	113
V/C Ratio(X)	0.33	0.19	0.02	0.19	0.33	0.09
Avail Cap(c_a), veh/h	4169	2194	1323	3675	2512	2512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.1	2.9	3.7	2.9	6.5	6.4
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.1	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.3	3.1	3.7	3.0	8.1	6.7
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	552			229	47	
Approach Delay, s/veh	3.2			3.1	7.8	
Approach LOS	A			A	A	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	4.9	9.5	9.5
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	19.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.3	3.3	3.5
Green Ext Time (p_c), s	0.1	2.5	1.1

Intersection Summary	
HCM 6th Ctrl Delay	3.4
HCM 6th LOS	A

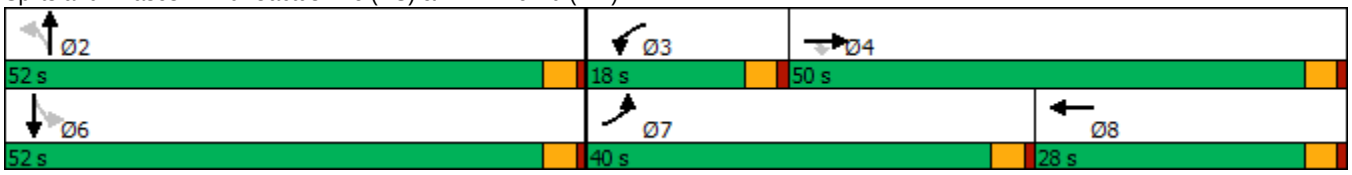


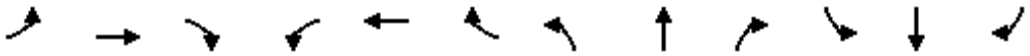
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	152	81	49	103	114	30	3	18	207	6	84
Future Volume (vph)	205	152	81	49	103	114	30	3	18	207	6	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.921			0.871			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3167	1417	1504	2771	0	1805	1655	0	1626	1472	0
Flt Permitted	0.950			0.950			0.699			0.744		
Satd. Flow (perm)	1583	3167	1417	1504	2771	0	1328	1655	0	1274	1472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81		114			18			84	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	20%	20%	20%	0%	0%	0%	11%	11%	11%
Adj. Flow (vph)	205	152	81	49	103	114	30	3	18	207	6	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	205	152	81	49	217	0	30	21	0	207	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	40.0	50.0	50.0	18.0	28.0		52.0	52.0		52.0	52.0	
Total Split (%)	33.3%	41.7%	41.7%	15.0%	23.3%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	36.0	46.0	46.0	14.0	24.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.3	21.3	21.3	8.3	8.8		48.4	48.4		48.4	48.4	
Actuated g/C Ratio	0.19	0.25	0.25	0.10	0.10		0.57	0.57		0.57	0.57	
v/c Ratio	0.68	0.19	0.20	0.34	0.56		0.04	0.02		0.29	0.10	
Control Delay	44.5	27.6	8.2	44.1	24.2		10.8	5.8		12.7	3.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.5	27.6	8.2	44.1	24.2		10.8	5.8		12.7	3.6	
LOS	D	C	A	D	C		B	A		B	A	
Approach Delay		31.9			27.8			8.8			9.9	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 85.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	152	81	49	103	114	30	3	18	207	6	84
Future Volume (veh/h)	205	152	81	49	103	114	30	3	18	207	6	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1604	1604	1604	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	205	152	81	49	103	114	30	3	18	207	6	84
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	20	20	20	0	0	0	11	11	11
Cap, veh/h	250	683	360	66	162	170	853	162	972	855	69	968
Arrive On Green	0.15	0.21	0.21	0.04	0.11	0.11	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1693	3216	1693	1604	1523	1604	1327	271	1629	1292	116	1621
Grp Volume(v), veh/h	205	152	81	49	103	114	30	0	21	207	0	90
Grp Sat Flow(s),veh/h/ln	1693	1608	1693	1604	1523	1604	1327	0	1900	1292	0	1737
Q Serve(g_s), s	9.4	3.1	3.2	2.4	5.2	5.5	0.8	0.0	0.4	6.3	0.0	1.8
Cycle Q Clear(g_c), s	9.4	3.1	3.2	2.4	5.2	5.5	2.6	0.0	0.4	6.6	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.93
Lane Grp Cap(c), veh/h	250	683	360	66	162	170	853	0	1134	855	0	1037
V/C Ratio(X)	0.82	0.22	0.23	0.74	0.64	0.67	0.04	0.00	0.02	0.24	0.00	0.09
Avail Cap(c_a), veh/h	758	1840	968	279	455	479	853	0	1134	855	0	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	26.2	26.2	38.1	34.5	34.6	7.4	0.0	6.6	8.0	0.0	6.9
Incr Delay (d2), s/veh	6.6	0.2	0.3	14.7	4.1	4.5	0.1	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.2	1.3	1.2	2.1	2.3	0.2	0.0	0.1	1.7	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	26.3	26.5	52.8	38.6	39.1	7.5	0.0	6.6	8.6	0.0	7.1
LnGrp LOS	D	C	C	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		438			266			51			297	
Approach Delay, s/veh		32.7			41.4			7.2			8.1	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		52.0	7.3	21.1		52.0	15.9	12.5				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		48.0	14.0	46.0		48.0	36.0	24.0				
Max Q Clear Time (g_c+I1), s		4.6	4.4	5.2		8.6	11.4	7.5				
Green Ext Time (p_c), s		0.2	0.0	1.2		1.2	0.6	1.0				

Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	358	19	4	265	0	2
Future Volume (vph)	358	19	4	265	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3343	1495	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	3343	1495	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	20%	20%	0%	0%
Adj. Flow (vph)	358	19	4	265	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	358	19	4	265	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.9%		ICU Level of Service A	
Analysis Period (min) 15			

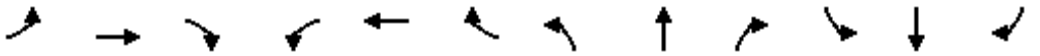
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	358	19	4	265	0	2
Future Vol, veh/h	358	19	4	265	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	8	8	20	20	0	0
Mvmt Flow	358	19	4	265	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	377	0	-	179
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	1059	-	0	839
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1059	-	-	839
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	839	-	-	1059	-
HCM Lane V/C Ratio	0.002	-	-	0.004	-
HCM Control Delay (s)	9.3	-	-	8.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

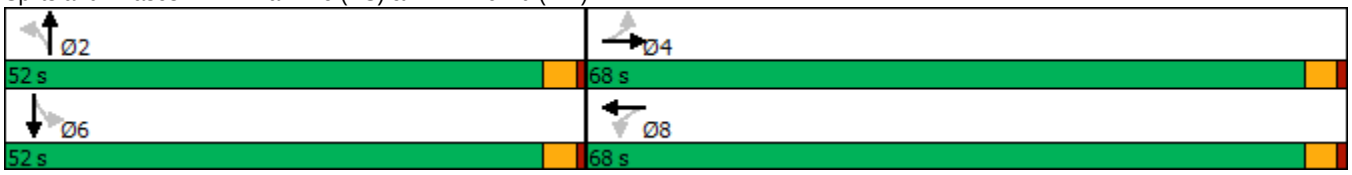


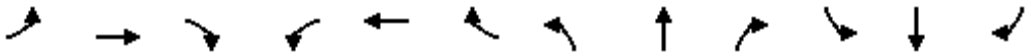
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	159	167	15	147	6	107	3	4	10	12	11
Future Volume (vph)	3	159	167	15	147	6	107	3	4	10	12	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.923			0.994			0.914			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1609	0	1583	1657	0	1410	1357	0	1736	1695	0
Flt Permitted	0.613			0.289			0.742			0.753		
Satd. Flow (perm)	1069	1609	0	482	1657	0	1101	1357	0	1376	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			3			4			11	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	14%	14%	14%	28%	28%	28%	4%	4%	4%
Adj. Flow (vph)	3	159	167	15	147	6	107	3	4	10	12	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	326	0	15	153	0	107	7	0	10	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	68.0	68.0		68.0	68.0		52.0	52.0		52.0	52.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	64.0	64.0		64.0	64.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	17.3	17.3		17.3	17.3		48.2	48.2		48.2	48.2	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.66	0.66		0.66	0.66	
v/c Ratio	0.01	0.76		0.13	0.39		0.15	0.01		0.01	0.02	
Control Delay	20.3	32.2		24.1	25.7		6.6	4.9		6.0	4.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	32.2		24.1	25.7		6.6	4.9		6.0	4.3	
LOS	C	C		C	C		A	A		A	A	
Approach Delay		32.1			25.6			6.5			4.8	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 73.5			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)

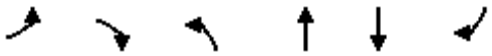




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	159	167	15	147	6	107	3	4	10	12	11
Future Volume (veh/h)	3	159	167	15	147	6	107	3	4	10	12	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1693	1693	1693	1485	1485	1485	1841	1841	1841
Adj Flow Rate, veh/h	3	159	167	15	147	6	107	3	4	10	12	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	14	14	14	28	28	28	4	4	4
Cap, veh/h	277	198	208	151	373	15	823	420	561	1013	634	582
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1166	862	905	954	1626	66	1102	636	849	1386	960	880
Grp Volume(v), veh/h	3	0	326	15	0	153	107	0	7	10	0	23
Grp Sat Flow(s),veh/h/ln	1166	0	1767	954	0	1693	1102	0	1485	1386	0	1841
Q Serve(g_s), s	0.2	0.0	12.7	1.1	0.0	5.6	2.7	0.0	0.1	0.2	0.0	0.3
Cycle Q Clear(g_c), s	5.7	0.0	12.7	13.8	0.0	5.6	3.0	0.0	0.1	0.3	0.0	0.3
Prop In Lane	1.00		0.51	1.00		0.04	1.00		0.57	1.00		0.48
Lane Grp Cap(c), veh/h	277	0	405	151	0	388	823	0	981	1013	0	1216
V/C Ratio(X)	0.01	0.00	0.80	0.10	0.00	0.39	0.13	0.00	0.01	0.01	0.00	0.02
Avail Cap(c_a), veh/h	1036	0	1556	773	0	1491	823	0	981	1013	0	1216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	26.5	33.0	0.0	23.7	4.8	0.0	4.2	4.3	0.0	4.2
Incr Delay (d2), s/veh	0.0	0.0	3.8	0.3	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.2	0.2	0.0	2.1	0.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	30.2	33.2	0.0	24.4	5.1	0.0	4.2	4.3	0.0	4.3
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		329			168			114			33	
Approach Delay, s/veh		30.2			25.2			5.0			4.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		20.7		52.0		20.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		48.0		64.0		48.0		64.0				
Max Q Clear Time (g_c+I1), s		5.0		14.7		2.3		15.8				
Green Ext Time (p_c), s		0.5		1.9		0.1		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	8	18	107	180	14
Future Volume (vph)	7	8	18	107	180	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	902	1484	1712	1455
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	902	1484	1712	1455
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	100%	28%	11%	11%
Adj. Flow (vph)	7	8	18	107	180	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	8	18	107	180	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			

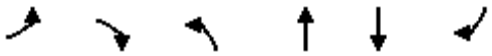
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	18	107	180	14
Future Vol, veh/h	7	8	18	107	180	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	100	28	11	11
Mvmt Flow	7	8	18	107	180	14

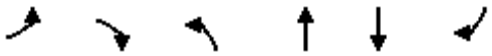
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	323	180	194	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.4	6.2	5.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	3.1	-	-	-
Pot Cap-1 Maneuver	675	868	958	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	662	868	958	-	-	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	958	-	662	868	-	-
HCM Lane V/C Ratio	0.019	-	0.011	0.009	-	-
HCM Control Delay (s)	8.8	-	10.5	9.2	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0	-	-



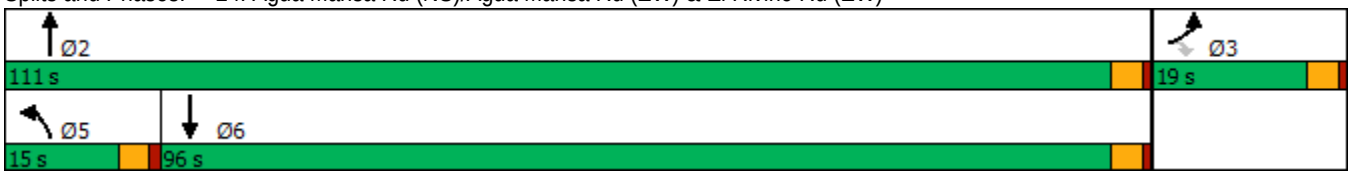
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	90	76	48	467	609	135
Future Volume (vph)	90	76	48	467	609	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.976	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	1380	1456	1532	1572	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	1380	1456	1532	1572	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		76			21	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	24%	24%	18%	18%
Adj. Flow (vph)	90	76	48	467	609	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	76	48	467	744	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

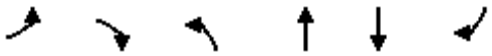


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	19.0	19.0	15.0	111.0	96.0	
Total Split (%)	14.6%	14.6%	11.5%	85.4%	73.8%	
Maximum Green (s)	15.0	15.0	11.0	107.0	92.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	12.1	12.1	9.0	107.0	96.0	
Actuated g/C Ratio	0.10	0.10	0.07	0.84	0.76	
v/c Ratio	0.62	0.38	0.47	0.36	0.62	
Control Delay	73.3	17.1	72.0	3.4	11.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	73.3	17.1	72.0	3.4	11.2	
LOS	E	B	E	A	B	
Approach Delay	47.5			9.8	11.2	
Approach LOS	D			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 127.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 51.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	76	48	467	609	135
Future Volume (veh/h)	90	76	48	467	609	135
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1648	1648	1544	1544	1633	1633
Adj Flow Rate, veh/h	90	76	48	467	609	135
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	24	24	18	18
Cap, veh/h	117	117	59	1335	1061	235
Arrive On Green	0.07	0.07	0.04	0.86	0.79	0.79
Sat Flow, veh/h	1648	1648	1544	1544	1337	296
Grp Volume(v), veh/h	90	76	48	467	0	744
Grp Sat Flow(s),veh/h/ln	1648	1648	1544	1544	0	1633
Q Serve(g_s), s	6.6	5.6	3.8	7.3	0.0	21.4
Cycle Q Clear(g_c), s	6.6	5.6	3.8	7.3	0.0	21.4
Prop In Lane	1.00	1.00	1.00			0.18
Lane Grp Cap(c), veh/h	117	117	59	1335	0	1296
V/C Ratio(X)	0.77	0.65	0.81	0.35	0.00	0.57
Avail Cap(c_a), veh/h	200	200	137	1335	0	1296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	56.0	59.1	1.6	0.0	4.8
Incr Delay (d2), s/veh	10.0	5.9	22.8	0.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.5	1.8	1.0	0.0	5.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.5	61.9	81.9	2.4	0.0	6.7
LnGrp LOS	E	E	F	A	A	A
Approach Vol, veh/h	166			515	744	
Approach Delay, s/veh	64.4			9.8	6.7	
Approach LOS	E			A	A	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		111.0			8.7	102.3	12.8
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		107.0			11.0	92.0	15.0
Max Q Clear Time (g_c+I1), s		9.3			5.8	23.4	8.6
Green Ext Time (p_c), s		3.0			0.0	5.8	0.2

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

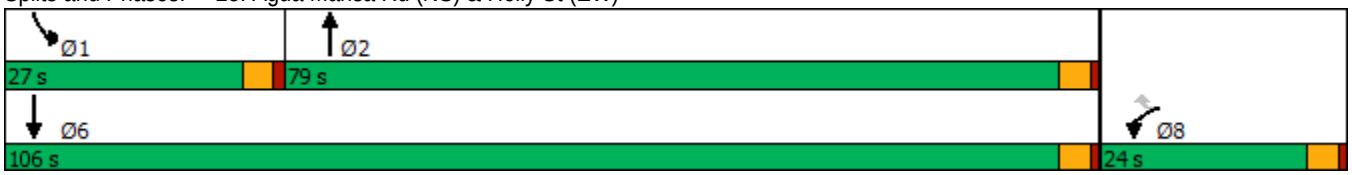


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	30	493	70	103	645
Future Volume (vph)	10	30	493	70	103	645
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.981			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1347	1045	2745	0	1504	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1347	1045	2745	0	1504	1583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		30	20			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	34%	34%	29%	29%	20%	20%
Adj. Flow (vph)	10	30	493	70	103	645
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	30	563	0	103	645
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	24.0	24.0	79.0		27.0	106.0
Total Split (%)	18.5%	18.5%	60.8%		20.8%	81.5%
Maximum Green (s)	20.0	20.0	75.0		23.0	102.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	6.8	6.8	90.4		13.4	109.3
Actuated g/C Ratio	0.06	0.06	0.76		0.11	0.92
v/c Ratio	0.13	0.34	0.27		0.61	0.44
Control Delay	55.7	28.4	5.6		64.8	2.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	55.7	28.4	5.6		64.8	2.4
LOS	E	C	A		E	A
Approach Delay	35.3		5.6			11.0
Approach LOS	D		A			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)

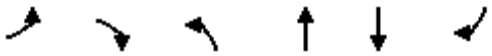




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	30	493	70	103	645
Future Volume (veh/h)	10	30	493	70	103	645
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1396	1340	1470	1470	1604	1604
Adj Flow Rate, veh/h	10	30	493	70	103	645
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	34	34	29	29	20	20
Cap, veh/h	44	42	1967	279	127	1440
Arrive On Green	0.03	0.03	0.78	0.78	0.08	0.90
Sat Flow, veh/h	1396	1340	2584	356	1604	1604
Grp Volume(v), veh/h	10	30	274	289	103	645
Grp Sat Flow(s),veh/h/ln	1396	1340	1397	1470	1604	1604
Q Serve(g_s), s	0.8	2.5	6.0	6.0	7.2	7.8
Cycle Q Clear(g_c), s	0.8	2.5	6.0	6.0	7.2	7.8
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	44	42	1095	1152	127	1440
V/C Ratio(X)	0.23	0.71	0.25	0.25	0.81	0.45
Avail Cap(c_a), veh/h	246	236	1095	1152	325	1440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	54.5	3.3	3.3	51.5	1.0
Incr Delay (d2), s/veh	2.6	19.5	0.5	0.5	11.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	1.3	1.3	3.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.2	74.0	3.9	3.8	63.1	2.0
LnGrp LOS	E	E	A	A	E	A
Approach Vol, veh/h	40		563			748
Approach Delay, s/veh	69.6		3.8			10.4
Approach LOS	E		A			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.0	93.0			106.0	7.6
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	23.0	75.0			102.0	20.0
Max Q Clear Time (g_c+I1), s	9.2	8.0			9.8	4.5
Green Ext Time (p_c), s	0.2	3.4			4.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A



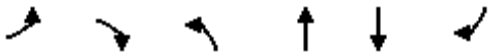
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	44	146	102	539	661	69
Future Volume (vph)	44	146	102	539	661	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1421	1272	1378	2756	2888	1120
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1421	1272	1378	2756	2888	1120
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				62
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	27%	27%	31%	31%	25%	25%
Adj. Flow (vph)	44	146	102	539	661	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	146	102	539	661	69
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	13.0	38.0	25.0	25.0
Total Split (%)	36.7%	36.7%	21.7%	63.3%	41.7%	41.7%
Maximum Green (s)	18.0	18.0	9.0	34.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	7.4	7.4	8.0	28.7	22.1	22.1
Actuated g/C Ratio	0.18	0.18	0.20	0.71	0.55	0.55
v/c Ratio	0.17	0.41	0.37	0.28	0.42	0.11
Control Delay	18.6	8.3	21.7	3.8	10.6	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	8.3	21.7	3.8	10.6	4.4
LOS	B	A	C	A	B	A
Approach Delay	10.7			6.6	10.0	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 40.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 38.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

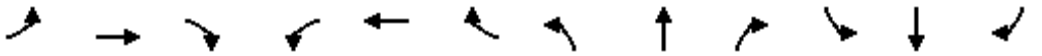




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	44	146	102	539	661	69
Future Volume (veh/h)	44	146	102	539	661	69
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1500	1500	1441	1441	1530	1468
Adj Flow Rate, veh/h	44	146	102	539	661	69
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	27	27	31	31	25	25
Cap, veh/h	206	206	137	1638	1079	545
Arrive On Green	0.14	0.14	0.10	0.60	0.37	0.37
Sat Flow, veh/h	1500	1500	1441	2809	2983	1468
Grp Volume(v), veh/h	44	146	102	539	661	69
Grp Sat Flow(s),veh/h/ln	1500	1500	1441	1369	1453	1468
Q Serve(g_s), s	0.8	2.8	2.1	3.0	5.6	0.9
Cycle Q Clear(g_c), s	0.8	2.8	2.1	3.0	5.6	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	206	206	137	1638	1079	545
V/C Ratio(X)	0.21	0.71	0.74	0.33	0.61	0.13
Avail Cap(c_a), veh/h	891	891	428	3071	2014	1018
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	12.5	13.4	3.0	7.8	6.3
Incr Delay (d2), s/veh	0.5	4.4	7.8	0.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.5	0.7	0.0	0.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	16.9	21.1	3.2	8.3	6.4
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	190			641	730	
Approach Delay, s/veh	15.8			6.0	8.1	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.1		8.2	6.9	15.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	9.0	21.0
Max Q Clear Time (g_c+I1), s		5.0		4.8	4.1	7.6
Green Ext Time (p_c), s		3.6		0.4	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

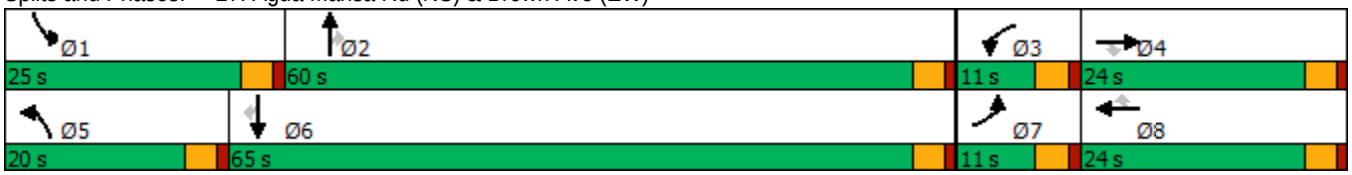


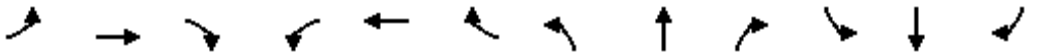
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	25	13	0	40	68	605	16	92	711	19
Future Volume (vph)	6	2	25	13	0	40	68	605	16	92	711	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1031	1086	800	1203	1267	933	1367	2735	1060	1433	2865	1111
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			420			118			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	75%	50%	50%	50%	32%	32%	32%	26%	26%	26%
Adj. Flow (vph)	6	2	25	13	0	40	68	605	16	92	711	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	2	25	13	0	40	68	605	16	92	711	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	20.0	60.0	60.0	25.0	65.0	65.0
Total Split (%)	9.2%	20.0%	20.0%	9.2%	20.0%	20.0%	16.7%	50.0%	50.0%	20.8%	54.2%	54.2%
Maximum Green (s)	7.0	20.0	20.0	7.0	20.0	20.0	16.0	56.0	56.0	21.0	61.0	61.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.1	5.9	5.9	6.3		5.9	9.9	65.5	65.5	11.2	66.6	66.6
Actuated g/C Ratio	0.07	0.07	0.07	0.07		0.07	0.11	0.74	0.74	0.13	0.75	0.75
v/c Ratio	0.08	0.03	0.15	0.15		0.09	0.45	0.30	0.02	0.51	0.33	0.02
Control Delay	45.8	44.5	2.0	47.2		0.4	48.1	7.4	0.1	47.8	7.0	0.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	44.5	2.0	47.2		0.4	48.1	7.4	0.1	47.8	7.0	0.1
LOS	D	D	A	D		A	D	A	A	D	A	A
Approach Delay		12.5			11.9			11.3			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 89			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 41.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2	25	13	0	40	68	605	16	92	711	19
Future Volume (veh/h)	6	2	25	13	0	40	68	605	16	92	711	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	788	757	1159	1159	1113	1426	1426	1369	1515	1515	1454
Adj Flow Rate, veh/h	6	2	25	13	0	40	68	605	16	92	711	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	75	50	50	50	32	32	32	26	26	26
Cap, veh/h	6	51	49	18	83	80	106	1763	891	142	1928	974
Arrive On Green	0.01	0.06	0.06	0.02	0.00	0.07	0.07	0.65	0.65	0.09	0.67	0.67
Sat Flow, veh/h	789	789	757	1159	1159	1113	1426	2709	1369	1515	2878	1454
Grp Volume(v), veh/h	6	2	25	13	0	40	68	605	16	92	711	19
Grp Sat Flow(s),veh/h/ln	789	789	757	1159	1159	1113	1426	1354	1369	1515	1439	1454
Q Serve(g_s), s	0.7	0.2	2.9	1.0	0.0	3.2	4.2	9.1	0.4	5.3	9.9	0.4
Cycle Q Clear(g_c), s	0.7	0.2	2.9	1.0	0.0	3.2	4.2	9.1	0.4	5.3	9.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	6	51	49	18	83	80	106	1763	891	142	1928	974
V/C Ratio(X)	0.98	0.04	0.51	0.73	0.00	0.50	0.64	0.34	0.02	0.65	0.37	0.02
Avail Cap(c_a), veh/h	61	173	166	89	255	244	251	1763	891	349	1928	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	40.0	41.2	44.6	0.0	40.7	40.9	7.1	5.6	39.8	6.6	5.0
Incr Delay (d2), s/veh	164.6	0.3	8.2	42.8	0.0	4.8	6.2	0.5	0.0	4.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.5	0.0	1.0	1.6	2.2	0.1	2.1	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	209.7	40.3	49.4	87.4	0.0	45.4	47.1	7.7	5.7	44.7	7.1	5.1
LnGrp LOS	F	D	D	F	A	D	D	A	A	D	A	A
Approach Vol, veh/h		33			53			689			822	
Approach Delay, s/veh		78.0			55.7			11.5			11.3	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	63.3	5.4	9.8	10.8	65.0	4.7	10.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	56.0	7.0	20.0	16.0	61.0	7.0	20.0
Max Q Clear Time (g_c+I1), s	9.3	13.1	5.0	6.9	8.2	13.9	4.7	7.2
Green Ext Time (p_c), s	0.1	4.3	0.0	0.0	0.1	5.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	29	671	51	29	727
Future Volume (vph)	32	29	671	51	29	727
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1031	923	2654	1188	1337	1407
Flt Permitted	0.950				0.397	
Satd. Flow (perm)	1031	923	2654	1188	559	1407
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		29		51		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	75%	75%	36%	36%	35%	35%
Adj. Flow (vph)	32	29	671	51	29	727
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	29	671	51	29	727
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	38.0	38.0	38.0	38.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	18.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	7.3	6.9	48.7	48.7	48.7	48.7
Actuated g/C Ratio	0.13	0.12	0.88	0.88	0.88	0.88
v/c Ratio	0.24	0.21	0.29	0.05	0.06	0.59
Control Delay	25.8	12.9	2.3	1.1	2.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	12.9	2.3	1.1	2.6	6.5
LOS	C	B	A	A	A	A
Approach Delay	19.6		2.2			6.4
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 49.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

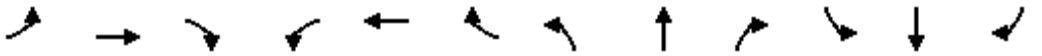




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	32	29	671	51	29	727
Future Volume (veh/h)	32	29	671	51	29	727
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	788	788	1366	1366	1381	1381
Adj Flow Rate, veh/h	32	29	671	51	29	727
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	75	75	36	36	35	35
Cap, veh/h	47	47	1977	1040	527	1052
Arrive On Green	0.06	0.06	0.76	0.76	0.76	0.76
Sat Flow, veh/h	789	789	2665	1366	540	1381
Grp Volume(v), veh/h	32	29	671	51	29	727
Grp Sat Flow(s),veh/h/ln	789	789	1298	1366	540	1381
Q Serve(g_s), s	1.8	1.6	3.7	0.4	0.8	11.8
Cycle Q Clear(g_c), s	1.8	1.6	3.7	0.4	4.5	11.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	47	47	1977	1040	527	1052
V/C Ratio(X)	0.68	0.62	0.34	0.05	0.05	0.69
Avail Cap(c_a), veh/h	318	318	1977	1040	527	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	1.7	1.3	2.4	2.7
Incr Delay (d2), s/veh	16.1	12.6	0.5	0.1	0.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1	0.0	0.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.7	33.1	2.2	1.4	2.6	6.4
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	61		722			756
Approach Delay, s/veh	34.9		2.1			6.3
Approach LOS	C		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		38.0			38.0	6.7
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		34.0			34.0	18.0
Max Q Clear Time (g_c+I1), s		5.7			13.8	3.8
Green Ext Time (p_c), s		4.8			5.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

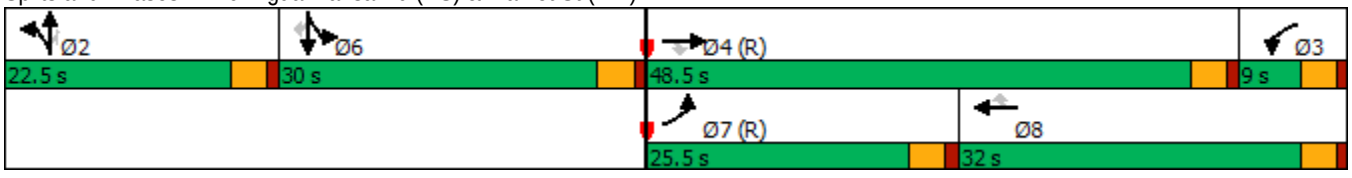


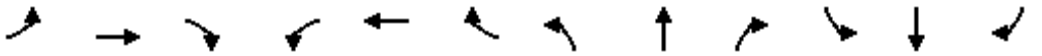
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	456	709	11	3	688	322	9	3	1	258	6	427
Future Volume (vph)	456	709	11	3	688	322	9	3	1	258	6	427
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	0		1	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	3183	3282	1272	1626	3252	1261	0	1263	965	1433	1508	1955
Flt Permitted	0.950			0.950				0.964		0.950		
Satd. Flow (perm)	3183	3282	1272	1626	3252	1261	0	1263	965	1433	1508	1955
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89			133			129			427
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	11%	11%	11%	45%	45%	45%	26%	26%	26%
Adj. Flow (vph)	456	709	11	3	688	322	9	3	1	258	6	427
Shared Lane Traffic (%)												
Lane Group Flow (vph)	456	709	11	3	688	322	0	12	1	258	6	427
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.5	48.5	48.5	9.0	32.0	32.0	22.5	22.5	22.5	30.0	30.0	30.0
Total Split (%)	23.2%	44.1%	44.1%	8.2%	29.1%	29.1%	20.5%	20.5%	20.5%	27.3%	27.3%	27.3%
Maximum Green (s)	21.5	44.5	44.5	5.0	28.0	28.0	18.5	18.5	18.5	26.0	26.0	26.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	21.5	50.7	50.7	5.0	27.0	27.0		19.5	19.5	26.0	26.0	26.0
Actuated g/C Ratio	0.20	0.46	0.46	0.05	0.25	0.25		0.18	0.18	0.24	0.24	0.24
v/c Ratio	0.73	0.47	0.02	0.04	0.86	0.79		0.05	0.00	0.76	0.02	0.54
Control Delay	57.8	36.1	0.0	51.3	52.0	37.1		39.3	0.0	55.3	32.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	36.1	0.0	51.3	52.0	37.1		39.3	0.0	55.3	32.5	6.2
LOS	E	D	A	D	D	D		D	A	E	C	A
Approach Delay		44.2			47.3			36.3			24.7	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 40.6		Intersection LOS: D	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

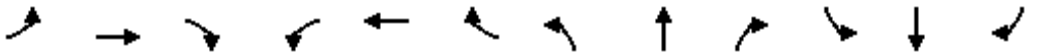




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	456	709	11	3	688	322	9	3	1	258	6	427
Future Volume (veh/h)	456	709	11	3	688	322	9	3	1	258	6	427
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1682	1737	1737	1668	1233	1233	1184	1515	1515	1454
Adj Flow Rate, veh/h	456	709	11	3	688	322	9	3	1	258	6	427
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	11	11	11	45	45	45	26	26	26
Cap, veh/h	667	1346	680	79	837	423	156	52	199	358	358	605
Arrive On Green	0.39	0.81	0.81	0.05	0.25	0.25	0.17	0.17	0.17	0.24	0.24	0.24
Sat Flow, veh/h	3398	3328	1682	1737	3300	1668	925	308	1184	1515	1515	2559
Grp Volume(v), veh/h	456	709	11	3	688	322	12	0	1	258	6	427
Grp Sat Flow(s),veh/h/ln	1699	1664	1682	1737	1650	1668	1233	0	1184	1515	1515	1280
Q Serve(g_s), s	12.3	7.8	0.1	0.2	21.6	19.6	0.9	0.0	0.1	17.2	0.3	16.8
Cycle Q Clear(g_c), s	12.3	7.8	0.1	0.2	21.6	19.6	0.9	0.0	0.1	17.2	0.3	16.8
Prop In Lane	1.00		1.00	1.00		1.00	0.75		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	667	1346	680	79	837	423	207	0	199	358	358	605
V/C Ratio(X)	0.68	0.53	0.02	0.04	0.82	0.76	0.06	0.00	0.01	0.72	0.02	0.71
Avail Cap(c_a), veh/h	667	1346	680	79	840	424	207	0	199	358	358	605
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	30.6	7.0	6.3	50.2	38.7	38.0	38.4	0.0	38.1	38.7	32.2	38.5
Incr Delay (d2), s/veh	2.0	1.0	0.0	0.2	6.6	7.9	0.5	0.0	0.0	9.6	0.1	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.0	0.1	0.1	9.1	8.6	0.3	0.0	0.0	7.1	0.1	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	8.0	6.3	50.4	45.3	45.8	39.0	0.0	38.1	48.3	32.3	44.0
LnGrp LOS	C	A	A	D	D	D	D	A	D	D	C	D
Approach Vol, veh/h		1176			1013			13			691	
Approach Delay, s/veh		17.5			45.5			38.9			45.5	
Approach LOS		B			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	9.0	48.5		30.0	25.6	31.9				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.5	5.0	44.5		26.0	21.5	28.0				
Max Q Clear Time (g_c+I1), s		4.1	4.2	11.8		20.8	16.3	25.6				
Green Ext Time (p_c), s		0.0	0.0	5.0		1.2	0.8	1.3				

Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									



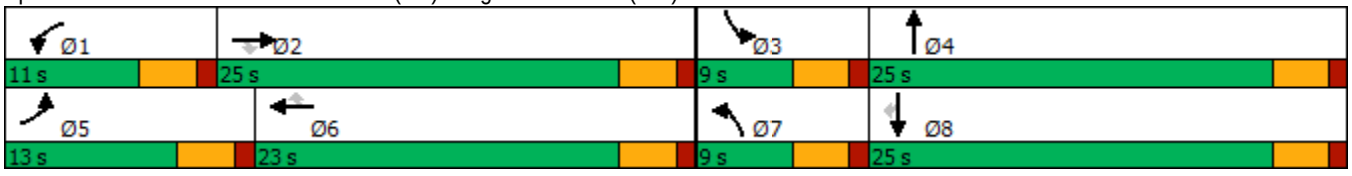
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Future Volume (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.991				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1492	1570	1335	1570	1652	1404	1570	3111	0	1597	3195	1429
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1492	1570	1335	1570	1652	1404	1570	3111	0	1597	3195	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			140		9				175
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	21%	15%	15%	15%	15%	15%	15%	13%	13%	13%
Adj. Flow (vph)	338	230	85	68	310	79	118	711	45	97	1237	370
Shared Lane Traffic (%)												
Lane Group Flow (vph)	338	230	85	68	310	79	118	756	0	97	1237	370
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

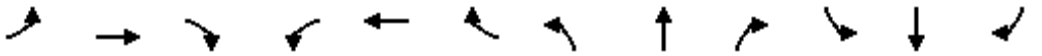
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	13.0	25.0	25.0	11.0	23.0	23.0	9.0	25.0		9.0	25.0	25.0
Total Split (%)	18.6%	35.7%	35.7%	15.7%	32.9%	32.9%	12.9%	35.7%		12.9%	35.7%	35.7%
Maximum Green (s)	9.0	21.0	21.0	7.0	19.0	19.0	5.0	21.0		5.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	9.0	25.4	25.4	6.7	19.0	19.0	5.0	21.0		5.0	21.0	21.0
Actuated g/C Ratio	0.13	0.36	0.36	0.10	0.27	0.27	0.07	0.30		0.07	0.30	0.30
v/c Ratio	1.77	0.40	0.15	0.45	0.69	0.16	1.05	0.81		0.85	1.29	0.67
Control Delay	391.5	21.2	1.8	39.9	32.6	1.7	137.9	30.6		88.7	164.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	391.5	21.2	1.8	39.9	32.6	1.7	137.9	30.6		88.7	164.2	18.0
LOS	F	C	A	D	C	A	F	C		F	F	B
Approach Delay		210.3			28.3			45.1			128.2	
Approach LOS		F			C			D			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.77
Intersection Signal Delay: 110.6 Intersection LOS: F
Intersection Capacity Utilization 89.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)

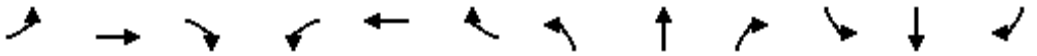




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	230	85	68	310	79	118	711	45	97	1237	370
Future Volume (veh/h)	338	230	85	68	310	79	118	711	45	97	1237	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1678	1678	1707	1707	1707
Adj Flow Rate, veh/h	338	230	85	68	310	79	118	711	45	97	1237	370
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	21	21	21	15	15	15	15	15	15	13	13	13
Cap, veh/h	204	523	523	119	455	455	120	923	58	122	973	512
Arrive On Green	0.13	0.33	0.33	0.07	0.27	0.27	0.07	0.30	0.30	0.07	0.30	0.30
Sat Flow, veh/h	1589	1589	1589	1678	1678	1678	1678	3077	195	1707	3244	1707
Grp Volume(v), veh/h	338	230	85	68	310	79	118	368	388	97	1237	370
Grp Sat Flow(s),veh/h/ln	1589	1589	1589	1678	1678	1678	1678	1594	1678	1707	1622	1707
Q Serve(g_s), s	9.0	7.9	2.7	2.7	11.6	2.5	4.9	14.7	14.7	3.9	21.0	13.6
Cycle Q Clear(g_c), s	9.0	7.9	2.7	2.7	11.6	2.5	4.9	14.7	14.7	3.9	21.0	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	204	523	523	119	455	455	120	478	503	122	973	512
V/C Ratio(X)	1.65	0.44	0.16	0.57	0.68	0.17	0.98	0.77	0.77	0.80	1.27	0.72
Avail Cap(c_a), veh/h	204	523	523	168	455	455	120	478	503	122	973	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	18.4	16.6	31.5	22.8	19.5	32.5	22.3	22.3	32.0	24.5	21.9
Incr Delay (d2), s/veh	315.4	2.7	0.7	4.3	8.0	0.8	77.2	7.5	7.2	29.5	130.1	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.0	2.9	0.9	1.2	5.0	0.9	4.4	5.6	5.8	2.4	24.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	345.9	21.1	17.3	35.8	30.8	20.3	109.7	29.8	29.5	61.5	154.6	26.9
LnGrp LOS	F	C	B	D	C	C	F	C	C	E	F	C
Approach Vol, veh/h		653			457			874			1704	
Approach Delay, s/veh		188.7			29.7			40.5			121.6	
Approach LOS		F			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.0	9.0	25.0	13.0	23.0	9.0	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0	5.0	21.0	9.0	19.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	6.7	11.9	7.9	18.7	13.0	15.6	8.9	25.0
Green Ext Time (p_c), s	0.0	0.9	0.0	0.9	0.0	0.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	102.9
HCM 6th LOS	F



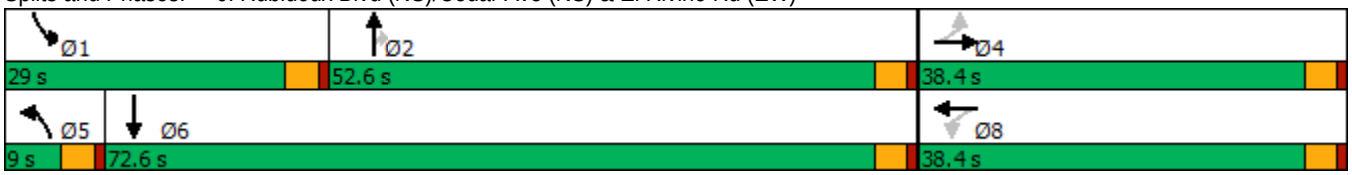
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	8	26	327	13	341	15	1245	198	342	1057	16
Future Volume (vph)	21	8	26	327	13	341	15	1245	198	342	1057	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		185	150		0	305		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.885			0.856				0.850		0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	1488	0	1504	1355	0	1597	3195	1429	1612	3217	0
Flt Permitted	0.269			0.735			0.950			0.950		
Satd. Flow (perm)	452	1488	0	1164	1355	0	1597	3195	1429	1612	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			341				168		2	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		530			879			395			895	
Travel Time (s)		12.0			20.0			5.4			12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	13%	13%	13%	20%	20%	20%	13%	13%	13%	12%	12%	12%
Adj. Flow (vph)	21	8	26	327	13	341	15	1245	198	342	1057	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	34	0	327	354	0	15	1245	198	342	1073	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5	22.5	9.0	22.5	
Total Split (s)	38.4	38.4		38.4	38.4		9.0	52.6	52.6	29.0	72.6	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		7.5%	43.8%	43.8%	24.2%	60.5%	
Maximum Green (s)	34.4	34.4		34.4	34.4		5.0	48.6	48.6	25.0	68.6	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	34.4	34.4		34.4	34.4		5.0	48.6	48.6	25.0	74.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.04	0.40	0.40	0.21	0.62	
v/c Ratio	0.16	0.08		0.98	0.56		0.23	0.96	0.29	1.02	0.54	
Control Delay	36.1	14.9		88.3	8.0		64.0	52.8	6.4	101.8	15.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	36.1	14.9		88.3	8.0		64.0	52.8	6.4	101.8	15.1	
LOS	D	B		F	A		E	D	A	F	B	
Approach Delay		23.0			46.5			46.6			36.0	
Approach LOS		C			D			D			D	

Intersection Summary

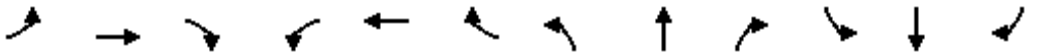
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 42.1 Intersection LOS: D
Intersection Capacity Utilization 88.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
6: Rubidoux Blvd (NS)/Cedar Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	8	26	327	13	341	15	1245	198	342	1057	16
Future Volume (veh/h)	21	8	26	327	13	341	15	1245	198	342	1057	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1604	1604	1604	1707	1707	1707	1722	1722	1722
Adj Flow Rate, veh/h	21	8	26	327	13	341	15	1245	198	342	1057	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	13	13	13	20	20	20	13	13	13	12	12	12
Cap, veh/h	124	115	374	378	17	443	28	1314	691	359	1974	30
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.02	0.41	0.41	0.21	0.60	0.60
Sat Flow, veh/h	938	402	1306	1179	59	1545	1707	3244	1707	1722	3308	50
Grp Volume(v), veh/h	21	0	34	327	0	354	15	1245	198	342	523	550
Grp Sat Flow(s),veh/h/ln	938	0	1707	1179	0	1604	1707	1622	1707	1722	1636	1722
Q Serve(g_s), s	2.6	0.0	1.7	32.4	0.0	24.2	1.0	44.5	9.4	23.5	22.7	22.7
Cycle Q Clear(g_c), s	28.8	0.0	1.7	34.4	0.0	24.2	1.0	44.5	9.4	23.5	22.7	22.7
Prop In Lane	1.00		0.76	1.00		0.96	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	124	0	489	378	0	460	28	1314	691	359	976	1028
V/C Ratio(X)	0.17	0.00	0.07	0.86	0.00	0.77	0.53	0.95	0.29	0.95	0.54	0.54
Avail Cap(c_a), veh/h	124	0	489	378	0	460	71	1314	691	359	976	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	31.2	44.2	0.0	39.2	58.5	34.5	24.0	46.9	14.3	14.3
Incr Delay (d2), s/veh	0.6	0.0	0.1	18.4	0.0	7.8	14.6	15.1	1.0	35.4	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.7	11.6	0.0	10.5	0.6	19.0	3.8	13.2	8.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	0.0	31.2	62.6	0.0	47.0	73.1	49.6	25.1	82.3	16.4	16.3
LnGrp LOS	D	A	C	E	A	D	E	D	C	F	B	B
Approach Vol, veh/h		55			681			1458			1415	
Approach Delay, s/veh		39.9			54.5			46.5			32.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	52.6		38.4	6.0	75.6		38.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	25.0	48.6		34.4	5.0	68.6		34.4				
Max Q Clear Time (g_c+I1), s	27.5	48.5		30.8	5.0	26.7		36.4				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	7.4		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

User approved changes to right turn type.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	28	1430	26	0	1410
Future Volume (vph)	0	28	1430	26	0	1410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1644	3185	0	0	3312
Flt Permitted						
Satd. Flow (perm)	0	1644	3185	0	0	3312
Link Speed (mph)	25		50			50
Link Distance (ft)	318		85			395
Travel Time (s)	8.7		1.2			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	0	28	1430	26	0	1410
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	1456	0	0	1410
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	1430	26	0	1410
Future Vol, veh/h	0	28	1430	26	0	1410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	13	13	9	9
Mvmt Flow	0	28	1430	26	0	1410

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	728	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	370	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	370	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	370	-
HCM Lane V/C Ratio	-	-	0.076	-
HCM Control Delay (s)	-	-	15.5	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

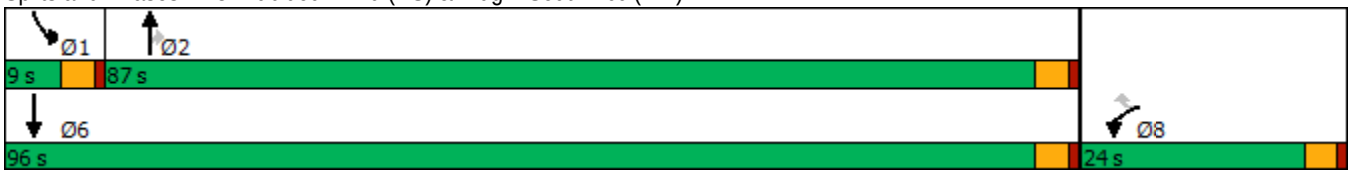


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	14	1442	11	6	1404
Future Volume (vph)	30	14	1442	11	6	1404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1615	3195	1429	1656	3312
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1615	3195	1429	1656	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		14		11		
Link Speed (mph)	25		50			50
Link Distance (ft)	288		3101			207
Travel Time (s)	7.9		42.3			2.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	13%	13%	9%	9%
Adj. Flow (vph)	30	14	1442	11	6	1404
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	14	1442	11	6	1404
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	24.0	24.0	87.0	87.0	9.0	96.0
Total Split (%)	20.0%	20.0%	72.5%	72.5%	7.5%	80.0%
Maximum Green (s)	20.0	20.0	83.0	83.0	5.0	92.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	7.4	7.4	102.7	102.7	5.0	104.6
Actuated g/C Ratio	0.06	0.06	0.90	0.90	0.04	0.92
v/c Ratio	0.26	0.12	0.50	0.01	0.08	0.46
Control Delay	55.8	24.4	3.1	1.4	55.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	55.8	24.4	3.1	1.4	55.0	2.2
LOS	E	C	A	A	D	A
Approach Delay	45.8		3.1			2.4
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 114.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 3.4		Intersection LOS: A	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Rubidoux Blvd (NS) & Bldg 4 South Acc (EW)

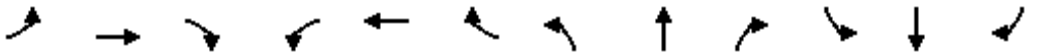




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	14	1442	11	6	1404
Future Volume (veh/h)	30	14	1442	11	6	1404
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1707	1707	1767	1767
Adj Flow Rate, veh/h	30	14	1442	11	6	1404
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	13	13	9	9
Cap, veh/h	66	66	2731	1437	14	2981
Arrive On Green	0.03	0.03	0.84	0.84	0.01	0.89
Sat Flow, veh/h	1900	1900	3329	1707	1767	3445
Grp Volume(v), veh/h	30	14	1442	11	6	1404
Grp Sat Flow(s),veh/h/ln	1900	1900	1622	1707	1767	1678
Q Serve(g_s), s	1.6	0.7	13.1	0.1	0.4	8.3
Cycle Q Clear(g_c), s	1.6	0.7	13.1	0.1	0.4	8.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	66	66	2731	1437	14	2981
V/C Ratio(X)	0.46	0.21	0.53	0.01	0.44	0.47
Avail Cap(c_a), veh/h	367	367	2731	1437	85	2981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	48.6	2.3	1.3	51.2	1.1
Incr Delay (d2), s/veh	4.8	1.6	0.7	0.0	21.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	1.3	0.0	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.9	50.2	3.1	1.3	72.3	1.7
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	44		1453			1410
Approach Delay, s/veh	52.7		3.1			2.0
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	4.8	91.2			96.0	7.6
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	5.0	83.0			92.0	20.0
Max Q Clear Time (g_c+I1), s	2.4	15.1			10.3	3.6
Green Ext Time (p_c), s	0.0	14.8			14.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	3.3
HCM 6th LOS	A

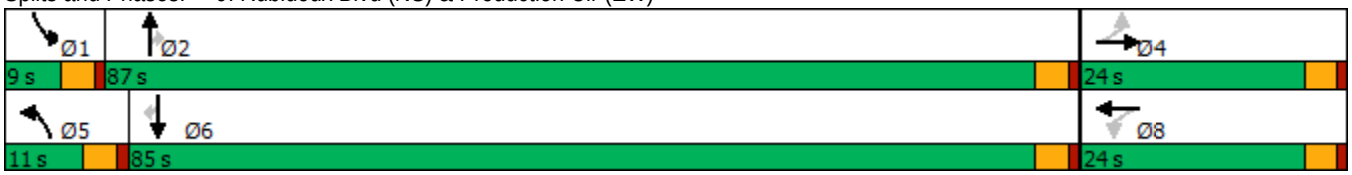


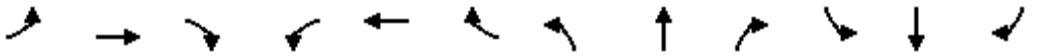
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	0	37	1	0	3	19	1351	0	0	1415	17
Future Volume (vph)	23	0	37	1	0	3	19	1351	0	0	1415	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	90		60	0		60
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850							0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1703	1524	0	1805	1615	0	1570	3139	1432	1727	3282	1272
Flt Permitted	0.756			0.733			0.950					
Satd. Flow (perm)	1355	1524	0	1393	1615	0	1570	3139	1432	1727	3282	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		126			140							45
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		380			189			1696			3101	
Travel Time (s)		10.4			5.2			23.1			42.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	0%	0%	0%	15%	15%	15%	10%	10%	10%
Adj. Flow (vph)	23	0	37	1	0	3	19	1351	0	0	1415	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	37	0	1	3	0	19	1351	0	0	1415	17
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0	22.0	9.0	22.0	22.0
Total Split (s)	24.0	24.0		24.0	24.0		11.0	87.0	87.0	9.0	85.0	85.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%		9.2%	72.5%	72.5%	7.5%	70.8%	70.8%
Maximum Green (s)	20.0	20.0		20.0	20.0		7.0	83.0	83.0	5.0	81.0	81.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	7.5	7.5		7.5	7.5		6.4	96.6			92.2	92.2
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.06	0.88			0.84	0.84
v/c Ratio	0.25	0.17		0.01	0.01		0.21	0.49			0.51	0.02
Control Delay	54.6	1.6		46.0	0.0		54.6	2.5			4.6	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	54.6	1.6		46.0	0.0		54.6	2.5			4.6	0.1
LOS	D	A		D	A		D	A			A	A
Approach Delay		21.9			11.5			3.2			4.5	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 4.3		Intersection LOS: A	
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Rubidoux Blvd (NS) & Production Cir (EW)

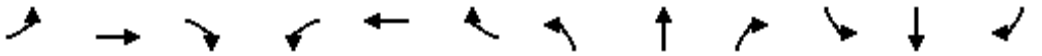




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	37	1	0	3	19	1351	0	0	1415	17
Future Volume (veh/h)	23	0	37	1	0	3	19	1351	0	0	1415	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1900	1900	1824	1678	1678	1611	1752	1752	1682
Adj Flow Rate, veh/h	23	0	37	1	0	3	19	1351	0	0	1415	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	0	0	0	15	15	15	10	10	10
Cap, veh/h	128	0	76	103	0	79	34	2797	1413	2	2718	1373
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.00	0.00	0.82	0.82
Sat Flow, veh/h	1369	0	1811	1393	0	1900	1678	3188	1611	1752	3328	1682
Grp Volume(v), veh/h	23	0	37	1	0	3	19	1351	0	0	1415	17
Grp Sat Flow(s),veh/h/ln	1369	0	1811	1393	0	1900	1678	1594	1611	1752	1664	1682
Q Serve(g_s), s	1.6	0.0	2.0	0.1	0.0	0.2	1.1	8.9	0.0	0.0	13.4	0.2
Cycle Q Clear(g_c), s	1.8	0.0	2.0	2.1	0.0	0.2	1.1	8.9	0.0	0.0	13.4	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	0	76	103	0	79	34	2797	1413	2	2718	1373
V/C Ratio(X)	0.18	0.00	0.49	0.01	0.00	0.04	0.55	0.48	0.00	0.00	0.52	0.01
Avail Cap(c_a), veh/h	347	0	365	326	0	383	118	2797	1413	88	2718	1373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	46.5	47.5	0.0	45.6	48.1	1.3	0.0	0.0	2.9	1.7
Incr Delay (d2), s/veh	0.7	0.0	4.8	0.0	0.0	0.2	13.0	0.6	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.0	0.0	0.0	0.1	0.6	0.2	0.0	0.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	51.3	47.5	0.0	45.8	61.1	1.9	0.0	0.0	3.6	1.7
LnGrp LOS	D	A	D	D	A	D	E	A	A	A	A	A
Approach Vol, veh/h		60			4			1370			1432	
Approach Delay, s/veh		49.7			46.2			2.7			3.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	91.0		8.1	6.0	85.0		8.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	83.0		20.0	7.0	81.0		20.0				
Max Q Clear Time (g_c+I1), s	0.0	10.9		4.0	3.1	15.4		4.1				
Green Ext Time (p_c), s	0.0	13.1		0.2	0.0	14.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		4.2	
HCM 6th LOS		A	



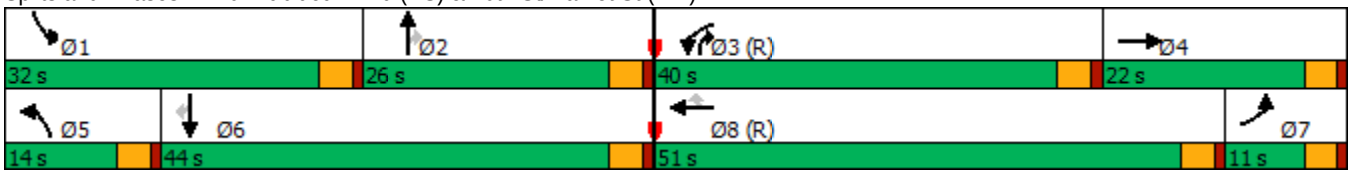
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	132	26	449	121	594	54	519	574	665	670	74
Future Volume (vph)	59	132	26	449	121	594	54	519	574	665	670	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	0		0	68		160	196		215
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	*1.00	1.00	1.00	1.00	*1.00	1.00	0.97	*1.00	1.00
Frt		0.975				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1543	1583	0	3374	1776	1509	1597	3363	1429	3335	3619	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				542			143			118
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		646			567			1264			1696	
Travel Time (s)		9.8			8.6			17.2			23.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	13%	13%	13%	5%	5%	5%
Adj. Flow (vph)	59	132	26	449	121	594	54	519	574	665	670	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	158	0	449	121	594	54	519	574	665	670	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		36			36			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.0	22.0		11.0	22.0	22.0	11.0	22.0	11.0	11.0	22.0	22.0
Total Split (s)	11.0	22.0		40.0	51.0	51.0	14.0	26.0	40.0	32.0	44.0	44.0
Total Split (%)	9.2%	18.3%		33.3%	42.5%	42.5%	11.7%	21.7%	33.3%	26.7%	36.7%	36.7%
Maximum Green (s)	7.0	18.0		36.0	47.0	47.0	10.0	22.0	36.0	28.0	40.0	40.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		C-Max	C-Max	C-Max	None	Max	C-Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	7.0	16.4		36.0	47.6	47.6	8.9	24.7	64.7	26.8	44.9	44.9
Actuated g/C Ratio	0.06	0.14		0.30	0.40	0.40	0.07	0.21	0.54	0.22	0.37	0.37
v/c Ratio	0.66	0.71		0.44	0.17	0.64	0.46	0.75	0.69	0.89	0.49	0.11
Control Delay	87.7	64.7		57.1	40.5	24.2	65.7	53.3	20.5	60.6	31.8	1.5
Queue Delay	0.0	0.0		0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.7	64.7		57.1	40.5	24.5	65.7	53.3	20.5	60.6	31.8	1.5
LOS	F	E		E	D	C	E	D	C	E	C	A
Approach Delay		71.0			38.7			37.5			43.8	
Approach LOS		E			D			D			D	

Intersection Summary

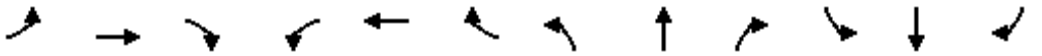
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 42.0 Intersection LOS: D
Intersection Capacity Utilization 73.0% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 10: Rubidoux Blvd (NS) & 20th St/Market St (EW)



HCM 6th Signalized Intersection Summary
10: Rubidoux Blvd (NS) & 20th St/Market St (EW)

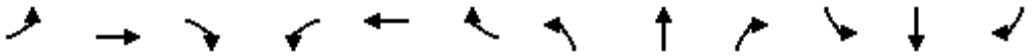
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	132	26	449	121	594	54	519	574	665	670	74
Future Volume (veh/h)	59	132	26	449	121	594	54	519	574	665	670	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1648	1648	1796	1796	1796	1707	1707	1707	1826	1826	1826
Adj Flow Rate, veh/h	59	132	26	449	121	594	54	519	574	665	670	74
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	17	17	17	7	7	7	13	13	13	5	5	5
Cap, veh/h	119	416	82	583	704	704	92	626	590	776	1274	637
Arrive On Green	0.07	0.30	0.30	0.16	0.39	0.39	0.05	0.18	0.18	0.22	0.35	0.35
Sat Flow, veh/h	1648	1377	271	3593	1796	1796	1707	3415	1707	3542	3652	1826
Grp Volume(v), veh/h	59	0	158	449	121	594	54	519	574	665	670	74
Grp Sat Flow(s),veh/h/ln	1648	0	1648	1796	1796	1796	1707	1707	1707	1771	1826	1826
Q Serve(g_s), s	4.1	0.0	8.9	14.4	5.3	19.1	3.7	17.6	22.0	21.7	17.6	2.6
Cycle Q Clear(g_c), s	4.1	0.0	8.9	14.4	5.3	19.1	3.7	17.6	22.0	21.7	17.6	2.6
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	119	0	497	583	704	704	92	626	590	776	1274	637
V/C Ratio(X)	0.49	0.00	0.32	0.77	0.17	0.84	0.59	0.83	0.97	0.86	0.53	0.12
Avail Cap(c_a), veh/h	119	0	497	1078	704	704	142	626	590	827	1274	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.64	0.64	0.64	0.51	0.51	0.51	0.85	0.85	0.85
Uniform Delay (d), s/veh	53.5	0.0	32.3	48.1	23.8	9.3	55.5	47.2	38.7	45.0	31.2	16.4
Incr Delay (d2), s/veh	3.1	0.0	0.4	1.4	0.3	8.0	3.0	6.6	20.7	7.3	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	3.5	6.4	2.2	7.9	1.6	7.7	19.2	9.9	7.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	0.0	32.7	49.5	24.1	17.3	58.5	53.7	59.4	52.4	32.5	16.7
LnGrp LOS	E	A	C	D	C	B	E	D	E	D	C	B
Approach Vol, veh/h		217			1164			1147			1409	
Approach Delay, s/veh		39.2			30.4			56.8			41.0	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.3	26.0	23.5	40.2	10.4	45.9	12.7	51.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	22.0	36.0	18.0	10.0	40.0	7.0	47.0
Max Q Clear Time (g_c+I1), s	25.7	26.0	16.4	10.9	7.7	21.6	8.1	23.1
Green Ext Time (p_c), s	0.6	0.0	1.4	0.4	0.0	4.0	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

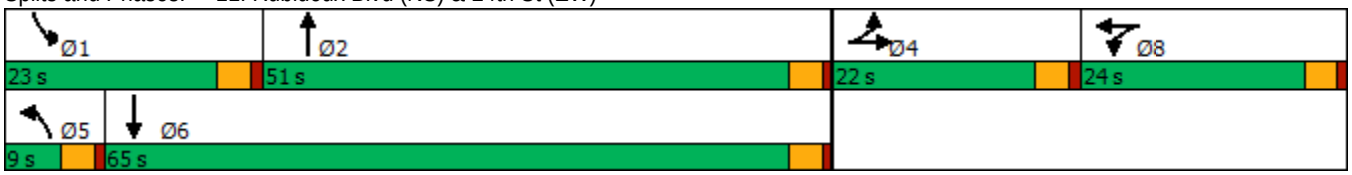


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	20	15	76	54	149	10	997	92	218	952	6
Future Volume (vph)	5	20	15	76	54	149	10	997	92	218	952	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		60	0		60	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949			0.928			0.987			0.999	
Flt Protected		0.994			0.987		0.950			0.950		
Satd. Flow (prot)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Flt Permitted		0.994			0.987		0.950			0.950		
Satd. Flow (perm)	0	1691	0	0	1642	0	1504	2969	0	1597	3191	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			41			9			1	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		952			856			1635			1264	
Travel Time (s)		21.6			19.5			22.3			17.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	20%	20%	20%	13%	13%	13%
Adj. Flow (vph)	5	20	15	76	54	149	10	997	92	218	952	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	279	0	10	1089	0	218	958	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		24.0	24.0		9.0	51.0		23.0	65.0	
Total Split (%)	18.3%	18.3%		20.0%	20.0%		7.5%	42.5%		19.2%	54.2%	
Maximum Green (s)	18.0	18.0		20.0	20.0		5.0	47.0		19.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.2			18.9		5.0	47.4		17.6	67.4	
Actuated g/C Ratio		0.07			0.18		0.05	0.46		0.17	0.65	
v/c Ratio		0.30			0.83		0.14	0.79		0.80	0.46	
Control Delay		40.0			57.4		55.2	30.6		64.5	11.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		40.0			57.4		55.2	30.6		64.5	11.3	
LOS		D			E		E	C		E	B	
Approach Delay		40.0			57.4			30.8			21.1	
Approach LOS		D			E			C			C	

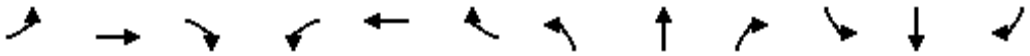
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Rubidoux Blvd (NS) & 24th St (EW)



HCM 6th Signalized Intersection Summary
11: Rubidoux Blvd (NS) & 24th St (EW)

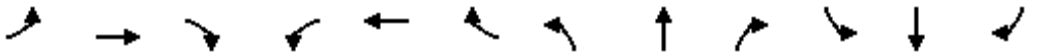
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	20	15	76	54	149	10	997	92	218	952	6
Future Volume (veh/h)	5	20	15	76	54	149	10	997	92	218	952	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1739	1811	1811	1739	1604	1604	1539	1707	1707	1639
Adj Flow Rate, veh/h	5	20	15	76	54	149	10	997	92	218	952	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	20	20	20	13	13	13
Cap, veh/h	8	31	23	86	61	169	19	1381	127	251	2042	13
Arrive On Green	0.03	0.03	0.03	0.18	0.18	0.18	0.01	0.48	0.48	0.15	0.62	0.62
Sat Flow, veh/h	226	906	679	493	351	967	1604	2863	264	1707	3308	21
Grp Volume(v), veh/h	40	0	0	279	0	0	10	531	558	218	467	491
Grp Sat Flow(s),veh/h/ln	1811	0	0	1811	0	0	1604	1523	1604	1707	1622	1707
Q Serve(g_s), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.3	27.3	12.3	15.3	15.3
Cycle Q Clear(g_c), s	2.2	0.0	0.0	14.8	0.0	0.0	0.6	27.3	27.3	12.3	15.3	15.3
Prop In Lane	0.12		0.37	0.27		0.53	1.00		0.16	1.00		0.01
Lane Grp Cap(c), veh/h	61	0	0	317	0	0	19	735	773	251	1001	1054
V/C Ratio(X)	0.65	0.00	0.00	0.88	0.00	0.00	0.51	0.72	0.72	0.87	0.47	0.47
Avail Cap(c_a), veh/h	330	0	0	367	0	0	81	735	773	328	1001	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	0.0	39.8	0.0	0.0	48.5	20.3	20.3	41.2	10.2	10.2
Incr Delay (d2), s/veh	11.3	0.0	0.0	19.2	0.0	0.0	19.4	6.1	5.8	17.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	8.2	0.0	0.0	0.3	9.7	10.2	6.1	4.8	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	0.0	59.0	0.0	0.0	67.9	26.4	26.1	58.5	11.7	11.6
LnGrp LOS	E	A	A	E	A	A	E	C	C	E	B	B
Approach Vol, veh/h		40			279			1099			1176	
Approach Delay, s/veh		58.5			59.0			26.6			20.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.5	51.7		7.3	5.2	65.0		21.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	19.0	47.0		18.0	5.0	61.0		20.0				
Max Q Clear Time (g_c+I1), s	14.3	29.3		4.2	2.6	17.3		16.8				
Green Ext Time (p_c), s	0.2	6.1		0.1	0.0	6.3		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		27.8	
HCM 6th LOS		C	

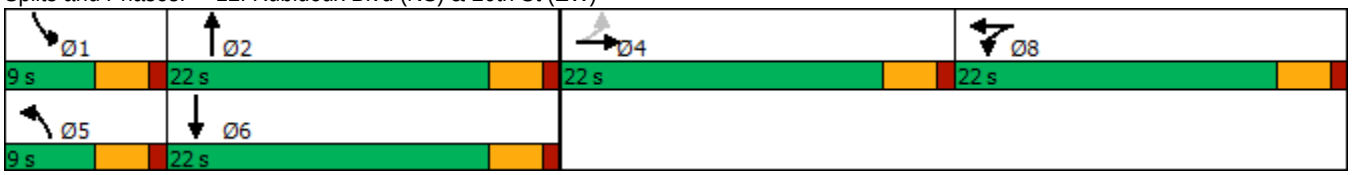


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	55	0	85	7	1036	62	38	1002	3
Future Volume (vph)	0	0	10	55	0	85	7	1036	62	38	1002	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	8	12	12	8
Storage Length (ft)	0		60	0		0	0		60	0		60
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.865			0.918			0.992				
Flt Protected					0.981		0.950			0.950		
Satd. Flow (prot)	0	1644	0	0	1380	0	1517	3009	0	1612	3223	0
Flt Permitted					0.981		0.950			0.950		
Satd. Flow (perm)	0	1644	0	0	1380	0	1517	3009	0	1612	3223	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		492			131			8				
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		815			1581			1578			1635	
Travel Time (s)		18.5			35.9			21.5			22.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	24%	24%	24%	19%	19%	19%	12%	12%	12%
Adj. Flow (vph)	0	0	10	55	0	85	7	1036	62	38	1002	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	140	0	7	1098	0	38	1005	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Split	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4											
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (s)	22.0	22.0		22.0	22.0		9.0	22.0		9.0	22.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		12.0%	29.3%		12.0%	29.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	18.0		5.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.7			6.8		5.2	24.7		5.2	24.7	
Actuated g/C Ratio		0.14			0.17		0.13	0.62		0.13	0.62	
v/c Ratio		0.02			0.41		0.04	0.58		0.18	0.50	
Control Delay		0.0			8.6		18.6	12.4		19.8	10.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			8.6		18.6	12.4		19.8	10.7	
LOS		A			A		B	B		B	B	
Approach Delay					8.6			12.5			11.1	
Approach LOS					A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 39.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

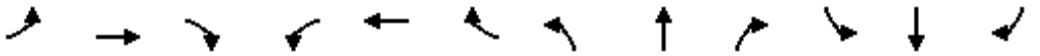
Splits and Phases: 12: Rubidoux Blvd (NS) & 26th St (EW)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	55	0	85	7	1036	62	38	1002	3
Future Volume (veh/h)	0	0	10	55	0	85	7	1036	62	38	1002	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1824	1544	1544	1544	1618	1618	1554	1722	1722	1653
Adj Flow Rate, veh/h	0	0	10	55	0	85	7	1036	62	38	1002	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	24	24	24	19	19	19	12	12	12
Cap, veh/h	0	0	25	72	0	112	15	1301	78	74	1575	5
Arrive On Green	0.00	0.00	0.01	0.12	0.00	0.12	0.01	0.44	0.44	0.04	0.47	0.47
Sat Flow, veh/h	0	0	1900	607	0	938	1618	2978	178	1722	3348	10
Grp Volume(v), veh/h	0	0	10	140	0	0	7	535	563	38	490	515
Grp Sat Flow(s),veh/h/ln	0	0	1900	1544	0	0	1618	1537	1618	1722	1636	1722
Q Serve(g_s), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.4	12.4	0.9	9.3	9.3
Cycle Q Clear(g_c), s	0.0	0.0	0.2	3.6	0.0	0.0	0.2	12.4	12.4	0.9	9.3	9.3
Prop In Lane	0.00		1.00	0.39		0.61	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	25	184	0	0	15	672	707	74	769	810
V/C Ratio(X)	0.00	0.00	0.40	0.76	0.00	0.00	0.46	0.80	0.80	0.52	0.64	0.64
Avail Cap(c_a), veh/h	0	0	830	675	0	0	196	672	707	209	769	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.2	17.6	0.0	0.0	20.3	10.0	10.0	19.3	8.3	8.3
Incr Delay (d2), s/veh	0.0	0.0	10.1	6.4	0.0	0.0	20.4	9.5	9.1	5.5	4.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	1.4	0.0	0.0	0.1	4.0	4.1	0.4	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.2	24.0	0.0	0.0	40.7	19.5	19.1	24.8	12.2	12.1
LnGrp LOS	A	A	C	C	A	A	D	B	B	C	B	B
Approach Vol, veh/h		10			140			1105			1043	
Approach Delay, s/veh		30.2			24.0			19.4			12.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	22.0		4.5	4.4	23.4		8.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	2.9	14.4		2.2	2.2	11.3		5.6				
Green Ext Time (p_c), s	0.0	2.1		0.0	0.0	3.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		16.7	
HCM 6th LOS		B	



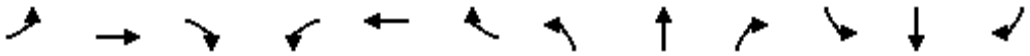
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	88	57	154	116	26	164	930	97	35	943	65
Future Volume (vph)	85	88	57	154	116	26	164	930	97	35	943	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		60	0		60	146		0	148		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.973			0.986			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1753	0	1736	1778	0	1583	3122	0	1703	3372	0
Flt Permitted	0.666			0.665			0.950			0.950		
Satd. Flow (perm)	1241	1753	0	1215	1778	0	1583	3122	0	1703	3372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			19			22			12	
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		810			1579			1593			1578	
Travel Time (s)		18.4			35.9			21.7			21.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	14%	14%	14%	6%	6%	6%
Adj. Flow (vph)	85	88	57	154	116	26	164	930	97	35	943	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	145	0	154	142	0	164	1027	0	35	1008	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.0	22.5		9.0	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		15.0	28.5		9.0	22.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		25.0%	47.5%		15.0%	37.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		11.0	24.5		5.0	18.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.5	11.5		11.8	11.8		9.5	32.3		5.1	24.6	
Actuated g/C Ratio	0.22	0.22		0.23	0.23		0.18	0.62		0.10	0.47	
v/c Ratio	0.31	0.33		0.56	0.34		0.57	0.53		0.21	0.63	
Control Delay	19.8	13.3		26.2	17.2		29.1	11.1		27.6	19.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.8	13.3		26.2	17.2		29.1	11.1		27.6	19.2	
LOS	B	B		C	B		C	B		C	B	
Approach Delay		15.7			21.9			13.6			19.5	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: Rubidoux Blvd (NS) & 28th St (EW)

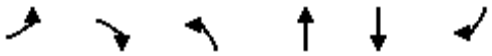




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	88	57	154	116	26	164	930	97	35	943	65
Future Volume (veh/h)	85	88	57	154	116	26	164	930	97	35	943	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1841	1841	1767	1693	1693	1693	1811	1811	1811
Adj Flow Rate, veh/h	85	88	57	154	116	26	164	930	97	35	943	65
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	4	4	4	14	14	14	6	6	6
Cap, veh/h	347	304	197	343	403	90	259	1393	145	69	1160	80
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.15	0.47	0.47	0.04	0.35	0.35
Sat Flow, veh/h	1246	1135	735	1223	1504	337	1693	2989	312	1811	3304	228
Grp Volume(v), veh/h	85	0	145	154	0	142	164	500	527	35	491	517
Grp Sat Flow(s),veh/h/ln	1246	0	1870	1223	0	1841	1693	1608	1693	1811	1721	1811
Q Serve(g_s), s	3.2	0.0	3.2	6.3	0.0	3.2	4.8	12.7	12.7	1.0	13.7	13.7
Cycle Q Clear(g_c), s	8.4	0.0	3.2	11.5	0.0	3.2	4.8	12.7	12.7	1.0	13.7	13.7
Prop In Lane	1.00		0.39	1.00		0.18	1.00		0.18	1.00		0.13
Lane Grp Cap(c), veh/h	347	0	501	343	0	493	259	750	789	69	604	636
V/C Ratio(X)	0.24	0.00	0.29	0.45	0.00	0.29	0.63	0.67	0.67	0.51	0.81	0.81
Avail Cap(c_a), veh/h	451	0	657	445	0	646	353	750	789	172	604	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	15.3	20.8	0.0	15.3	20.9	10.9	10.9	24.9	15.5	15.5
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.9	0.0	0.3	2.6	4.7	4.4	5.7	11.4	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.3	1.7	0.0	1.2	1.7	3.9	4.0	0.5	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	15.6	21.8	0.0	15.6	23.5	15.6	15.3	30.5	26.9	26.4
LnGrp LOS	B	A	B	C	A	B	C	B	B	C	C	C
Approach Vol, veh/h		230			296			1191			1043	
Approach Delay, s/veh		17.2			18.8			16.6			26.8	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	28.6		18.1	12.1	22.5		18.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	24.5		18.5	11.0	18.5		18.5				
Max Q Clear Time (g_c+I1), s	5.0	16.7		10.4	8.8	17.7		13.5				
Green Ext Time (p_c), s	0.0	3.5		0.6	0.1	0.5		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	164	235	1124	1155	40
Future Volume (vph)	0	164	235	1124	1155	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60	77			0
Storage Lanes	0	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1370	1597	3195	3282	1468
Flt Permitted			0.950			
Satd. Flow (perm)	0	1370	1597	3195	3282	1468
Link Speed (mph)	30			40	50	
Link Distance (ft)	785			178	1593	
Travel Time (s)	17.8			3.0	21.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	13%	13%	10%	10%
Adj. Flow (vph)	0	164	235	1124	1155	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	235	1124	1155	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

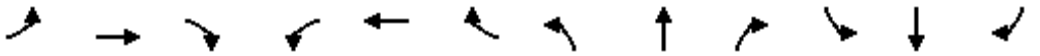
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	164	235	1124	1155	40
Future Vol, veh/h	0	164	235	1124	1155	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	77	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	13	13	10	10
Mvmt Flow	0	164	235	1124	1155	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	578	1195	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.36	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.33	-	-	-
Pot Cap-1 Maneuver	0	454	522	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	454	522	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	522	-	454	-	-
HCM Lane V/C Ratio	0.45	-	0.361	-	-
HCM Control Delay (s)	17.4	-	17.3	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	2.3	-	1.6	-	-

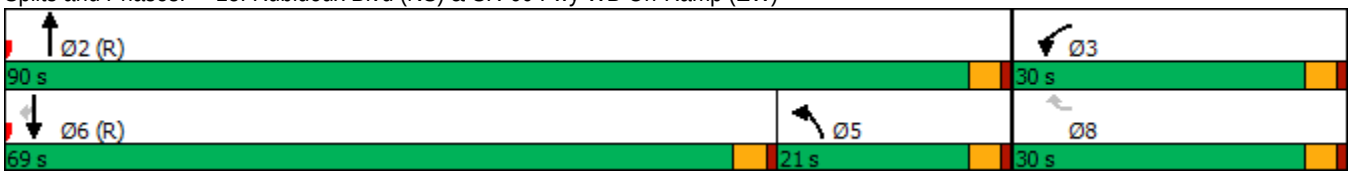


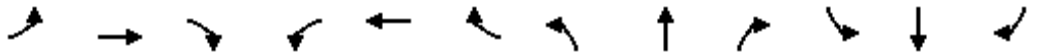
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Future Volume (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	105		0	0		0
Storage Lanes	0		0	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	3502	0	1615	3127	3223	0	0	3406	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						146						700
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1099			300			374			178	
Travel Time (s)		25.0			6.8			6.4			3.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	12%	12%	12%	6%	6%	6%
Adj. Flow (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	502	0	244	252	1094	0	0	635	720
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2			2	1
Detector Template				Left		Right	Left	Thru			Thru	Right
Leading Detector (ft)				20		20	20	100			100	20
Trailing Detector (ft)				0		0	0	0			0	0
Detector 1 Position(ft)				0		0	0	0			0	0
Detector 1 Size(ft)				20		20	20	6			6	20
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0		0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Prot		Perm	Prot	NA			NA	Perm
Protected Phases				3			5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8						6
Detector Phase				3		8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0		5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				9.0		22.0	9.0	22.0			22.0	22.0
Total Split (s)				30.0		30.0	21.0	90.0			69.0	69.0
Total Split (%)				25.0%		25.0%	17.5%	75.0%			57.5%	57.5%
Maximum Green (s)				26.0		26.0	17.0	86.0			65.0	65.0
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	3.0
All-Red Time (s)				1.0		1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Recall Mode				None		None	None	C-Max			C-Max	C-Max
Walk Time (s)						7.0		7.0			7.0	7.0
Flash Dont Walk (s)						11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)						0		0			0	0
Act Effct Green (s)				22.0		22.0	17.0	90.0			69.0	69.0
Actuated g/C Ratio				0.18		0.18	0.14	0.75			0.58	0.58
v/c Ratio				0.78		0.59	0.57	0.45			0.32	0.61
Control Delay				55.6		23.6	38.5	1.9			14.3	3.8
Queue Delay				0.0		0.0	0.0	0.1			0.0	0.0
Total Delay				55.6		23.6	38.5	2.0			14.3	3.8
LOS				E		C	D	A			B	A
Approach Delay					45.1			8.8			8.7	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Rubidoux Blvd (NS) & SR-60 Fwy WB On-Ramp (EW)

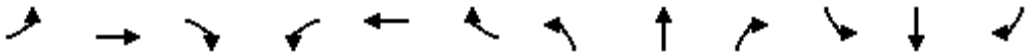




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	0	244	252	1094	0	0	635	720
Future Volume (veh/h)	0	0	0	502	0	244	252	1094	0	0	635	720
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	1722	1722	0	0	1811	1811
Adj Flow Rate, veh/h				502	0	244	252	1094	0	0	635	720
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	12	12	0	0	6	6
Cap, veh/h				602	0	310	652	2520	0	0	1864	981
Arrive On Green				0.16	0.00	0.16	0.39	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				3686	0	1900	3341	3358	0	0	3532	1811
Grp Volume(v), veh/h				502	0	244	252	1094	0	0	635	720
Grp Sat Flow(s),veh/h/ln				1843	0	1900	1670	1636	0	0	1721	1811
Q Serve(g_s), s				15.8	0.0	14.8	6.5	0.0	0.0	0.0	12.4	36.3
Cycle Q Clear(g_c), s				15.8	0.0	14.8	6.5	0.0	0.0	0.0	12.4	36.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				602	0	310	652	2520	0	0	1864	981
V/C Ratio(X)				0.83	0.00	0.79	0.39	0.43	0.00	0.00	0.34	0.73
Avail Cap(c_a), veh/h				799	0	412	652	2520	0	0	1864	981
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.6	0.0	48.2	31.4	0.0	0.0	0.0	15.5	20.9
Incr Delay (d2), s/veh				5.8	0.0	7.2	0.3	0.4	0.0	0.0	0.5	4.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	7.6	2.4	0.2	0.0	0.0	4.8	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				54.5	0.0	55.4	31.7	0.4	0.0	0.0	16.0	25.8
LnGrp LOS				D	A	E	C	A	A	A	B	C
Approach Vol, veh/h					746			1346			1355	
Approach Delay, s/veh					54.8			6.3			21.2	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	96.4		27.4	69.0		23.6						
Change Period (Y+Rc), s	4.0		4.0	4.0		4.0						
Max Green Setting (Gmax), s	86.0		17.0	65.0		26.0						
Max Q Clear Time (g_c+I1), s	2.0		8.5	38.3		17.8						
Green Ext Time (p_c), s	10.1		0.5	7.3		1.8						

Intersection Summary		
HCM 6th Ctrl Delay		22.6
HCM 6th LOS		C

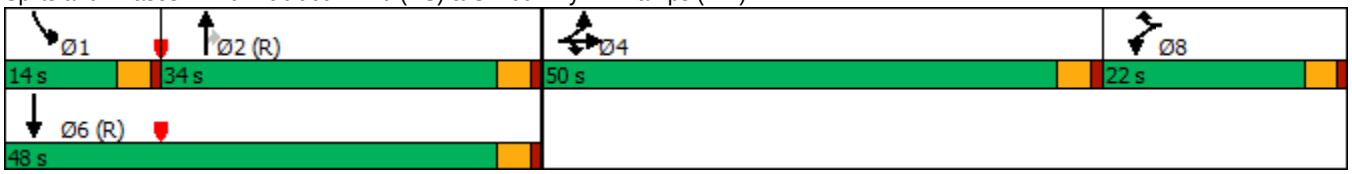


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	587	45	504	16	0	4	0	680	353	171	961	0
Future Volume (vph)	587	45	504	16	0	4	0	680	353	171	961	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		60	33		0	0		0	115		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950	0.959		0.950						0.950		
Satd. Flow (prot)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Flt Permitted	0.950	0.959		0.950						0.950		
Satd. Flow (perm)	1504	1518	1228	1805	0	1615	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			265			82			353			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		948			851			1558			374	
Travel Time (s)		21.5			19.3			26.6			6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	14%	14%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	587	45	504	16	0	4	0	680	353	171	961	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	317	315	504	16	0	4	0	680	353	171	961	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20		20		100	20	20	100	
Trailing Detector (ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Position(ft)	0	0	0	0		0		0	0	0	0	
Detector 1 Size(ft)	20	6	20	20		20		6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Prot	Prot		Prot		NA	Perm	Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4	4	8		8		2		1	6	
Permitted Phases									2			
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.0		22.0		22.5	22.5	9.5	22.5	
Total Split (s)	50.0	50.0	50.0	22.0		22.0		34.0	34.0	14.0	48.0	
Total Split (%)	41.7%	41.7%	41.7%	18.3%		18.3%		28.3%	28.3%	11.7%	40.0%	
Maximum Green (s)	46.0	46.0	46.0	18.0		18.0		30.0	30.0	10.0	44.0	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0		0	0		0	
Act Effct Green (s)	37.3	37.3	37.3	6.7		6.7		44.8	44.8	21.1	69.9	
Actuated g/C Ratio	0.31	0.31	0.31	0.06		0.06		0.37	0.37	0.18	0.58	
v/c Ratio	0.68	0.67	0.89	0.16		0.02		0.51	0.43	0.55	0.47	
Control Delay	42.5	42.0	36.6	57.1		0.2		33.9	5.6	51.3	10.2	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.5	
Total Delay	42.5	42.0	36.6	57.1		0.2		33.9	5.6	51.3	10.7	
LOS	D	D	D	E		A		C	A	D	B	
Approach Delay		39.8			45.7			24.2			16.8	
Approach LOS		D			D			C			B	

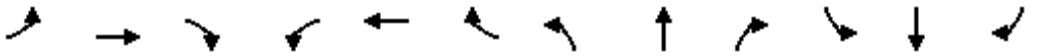
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 27.2		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)



HCM 6th Signalized Intersection Summary
16: Rubidoux Blvd (NS) & SR-60 Fwy EB Ramps (EW)

10/08/2018



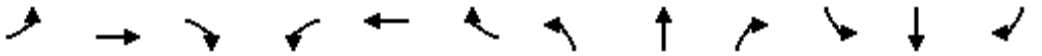
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	45	504	16	0	4	0	680	353	171	961	0
Future Volume (veh/h)	587	45	504	16	0	4	0	680	353	171	961	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1625	1900	0	1900	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	619	0	504	16	0	4	0	680	353	171	961	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	14	14	14	0	0	0	0	2	2	2	2	0
Cap, veh/h	1176	0	565	0	0	0	0	1667	877	156	2082	0
Arrive On Green	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.47	0.47	0.17	1.00	0.00
Sat Flow, veh/h	3385	0	1625		0		0	3647	1870	1870	3647	0
Grp Volume(v), veh/h	619	0	504		0.0		0	680	353	171	961	0
Grp Sat Flow(s),veh/h/ln	1693	0	1625				0	1777	1870	1870	1777	0
Q Serve(g_s), s	17.5	0.0	35.2				0.0	15.1	14.8	10.0	0.0	0.0
Cycle Q Clear(g_c), s	17.5	0.0	35.2				0.0	15.1	14.8	10.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1176	0	565				0	1667	877	156	2082	0
V/C Ratio(X)	0.53	0.00	0.89				0.00	0.41	0.40	1.10	0.46	0.00
Avail Cap(c_a), veh/h	1298	0	623				0	1667	877	156	2082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.93	0.93	0.84	0.84	0.00
Uniform Delay (d), s/veh	31.3	0.0	37.0				0.0	20.9	20.8	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	14.3				0.0	0.7	1.3	94.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	16.0				0.0	6.2	6.6	8.3	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	51.3				0.0	21.6	22.1	144.4	0.6	0.0
LnGrp LOS	C	A	D				A	C	C	F	A	A
Approach Vol, veh/h		1123						1033			1132	
Approach Delay, s/veh		40.5						21.8			22.3	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.0	60.3		45.7		74.3						
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0						
Max Green Setting (Gmax), s	10.0	30.0		46.0		44.0						
Max Q Clear Time (g_c+I1), s	14.0	19.1		39.2		4.0						
Green Ext Time (p_c), s	0.0	4.1		2.5		7.8						

Intersection Summary			
HCM 6th Ctrl Delay		28.4	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

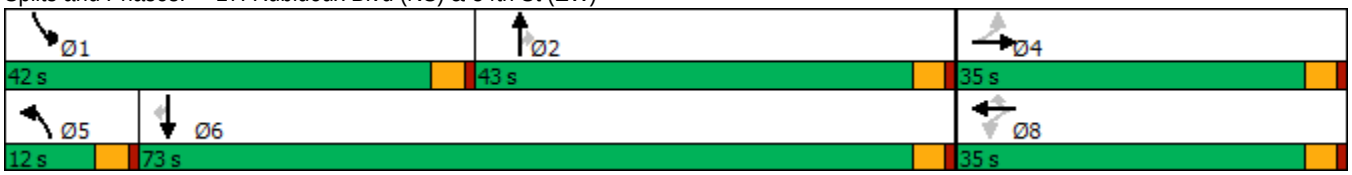


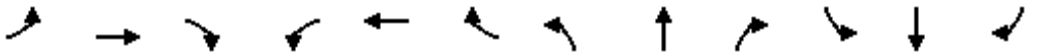
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	67	13	17	50	141	33	630	77	296	1021	167
Future Volume (vph)	110	67	13	17	50	141	33	630	77	296	1021	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	8	12	12	8
Storage Length (ft)	0		0	0		60	150		60	150		60
Storage Lanes	0		0	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.991				0.850			0.850			0.850
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1875	1400	1736	3471	1346	1752	3505	1359
Flt Permitted		0.783			0.916		0.950			0.950		
Satd. Flow (perm)	0	1431	0	0	1740	1400	1736	3471	1346	1752	3505	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				141			82			75
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		838			1147			569			1558	
Travel Time (s)		22.9			31.3			9.7			26.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	3%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	110	67	13	17	50	141	33	630	77	296	1021	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	67	141	33	630	77	296	1021	167
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8			2			6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0	35.0	12.0	43.0	43.0	42.0	73.0	73.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%	29.2%	10.0%	35.8%	35.8%	35.0%	60.8%	60.8%
Maximum Green (s)	31.0	31.0		31.0	31.0	31.0	8.0	39.0	39.0	38.0	69.0	69.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	0
Act Effct Green (s)		18.6			18.6	18.6	7.0	49.8	49.8	22.5	69.9	69.9
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.48	0.48	0.22	0.68	0.68
v/c Ratio		0.73			0.21	0.38	0.28	0.38	0.11	0.77	0.43	0.18
Control Delay		56.5			38.1	9.3	55.7	20.0	4.9	52.5	10.0	5.5
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		56.5			38.1	9.3	55.7	20.0	4.9	52.5	10.0	5.5
LOS		E			D	A	E	B	A	D	A	A
Approach Delay		56.5			18.6			20.0			18.0	
Approach LOS		E			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: Rubidoux Blvd (NS) & 34th St (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	67	13	17	50	141	33	630	77	296	1021	167
Future Volume (veh/h)	110	67	13	17	50	141	33	630	77	296	1021	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1824	1841	1841	1767	1856	1856	1781
Adj Flow Rate, veh/h	110	67	13	17	50	141	33	630	77	296	1021	167
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	0	0	0	4	4	4	3	3	3
Cap, veh/h	174	91	15	96	255	322	64	1778	898	368	2369	1197
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.03	0.51	0.51	0.20	0.67	0.67
Sat Flow, veh/h	670	513	87	297	1446	1824	1841	3497	1767	1856	3526	1781
Grp Volume(v), veh/h	190	0	0	67	0	141	33	630	77	296	1021	167
Grp Sat Flow(s),veh/h/ln	1271	0	0	1743	0	1824	1841	1749	1767	1856	1763	1781
Q Serve(g_s), s	12.1	0.0	0.0	0.0	0.0	7.1	1.8	11.1	2.3	15.6	13.7	3.5
Cycle Q Clear(g_c), s	15.2	0.0	0.0	3.1	0.0	7.1	1.8	11.1	2.3	15.6	13.7	3.5
Prop In Lane	0.58		0.07	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	0	0	352	0	322	64	1778	898	368	2369	1197
V/C Ratio(X)	0.68	0.00	0.00	0.19	0.00	0.44	0.52	0.35	0.09	0.80	0.43	0.14
Avail Cap(c_a), veh/h	455	0	0	567	0	551	143	1778	898	687	2369	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	0.0	36.1	0.0	37.7	48.7	15.1	13.0	39.3	7.8	6.1
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.3	0.0	0.9	6.4	0.6	0.2	4.2	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	1.5	0.0	3.3	0.9	4.2	0.9	7.3	4.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	36.3	0.0	38.7	55.1	15.7	13.2	43.4	8.3	6.3
LnGrp LOS	D	A	A	D	A	D	E	B	B	D	A	A
Approach Vol, veh/h		190			208			740			1484	
Approach Delay, s/veh		44.6			37.9			17.2			15.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	56.2		22.1	7.5	73.0		22.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	38.0	39.0		31.0	8.0	69.0		31.0				
Max Q Clear Time (g_c+I1), s	19.6	15.1		17.2	5.8	17.7		11.1				
Green Ext Time (p_c), s	0.7	4.3		0.9	0.0	9.4		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		19.6	
HCM 6th LOS		B	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	595	20	16	795	0	40
Future Volume (vph)	595	20	16	795	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	2983	1335	1504	3008	0	1644
Flt Permitted			0.950			
Satd. Flow (perm)	2983	1335	1504	3008	0	1644
Link Speed (mph)	45			45	25	
Link Distance (ft)	879			592	333	
Travel Time (s)	13.3			9.0	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	595	20	16	795	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	595	20	16	795	0	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	595	20	16	795	0	40
Future Vol, veh/h	595	20	16	795	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	21	21	20	20	0	0
Mvmt Flow	595	20	16	795	0	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	615	0	-	298
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.5	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.4	-	-	3.3
Pot Cap-1 Maneuver	-	-	848	-	0	704
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	848	-	-	704
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	704	-	-	848	-
HCM Lane V/C Ratio	0.057	-	-	0.019	-
HCM Control Delay (s)	10.4	-	-	9.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

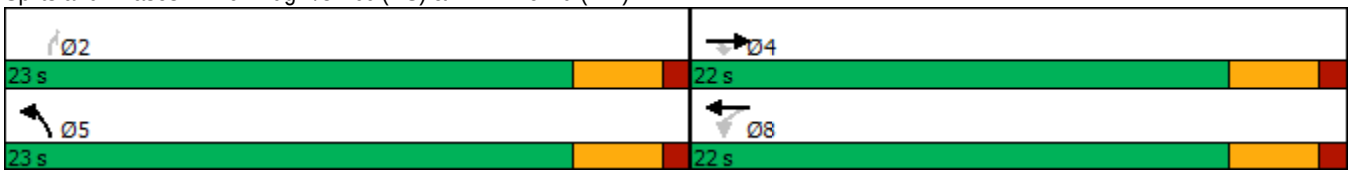


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	569	65	7	670	140	27
Future Volume (vph)	569	65	7	670	140	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2983	1335	1504	3008	1805	1615
Flt Permitted			0.438		0.950	
Satd. Flow (perm)	2983	1335	694	3008	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		65				27
Link Speed (mph)	45			45	25	
Link Distance (ft)	592			1549	330	
Travel Time (s)	9.0			23.5	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	21%	21%	20%	20%	0%	0%
Adj. Flow (vph)	569	65	7	670	140	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	569	65	7	670	140	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	5	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	5	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	22.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%
Maximum Green (s)	18.0	18.0	18.0	18.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	11.9	11.9	11.9	11.9	7.8	7.5
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.28	0.27
v/c Ratio	0.44	0.11	0.02	0.52	0.28	0.06
Control Delay	6.9	2.3	5.0	7.5	10.5	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.3	5.0	7.5	10.5	5.0
LOS	A	A	A	A	B	A
Approach Delay	6.4			7.5	9.6	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 19: Bldg 2/3 Acc (NS) & El Rivino Rd (EW)

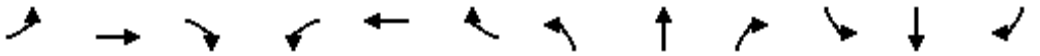




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	569	65	7	670	140	27
Future Volume (veh/h)	569	65	7	670	140	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1589	1589	1604	1604	1900	1900
Adj Flow Rate, veh/h	569	65	7	670	140	27
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	21	21	20	20	0	0
Cap, veh/h	1324	697	578	1336	290	290
Arrive On Green	0.44	0.44	0.44	0.44	0.15	0.15
Sat Flow, veh/h	3098	1589	680	3127	1900	1900
Grp Volume(v), veh/h	569	65	7	670	140	27
Grp Sat Flow(s),veh/h/ln	1509	1589	680	1523	1900	1900
Q Serve(g_s), s	2.6	0.5	0.1	3.1	1.3	0.2
Cycle Q Clear(g_c), s	2.6	0.5	2.7	3.1	1.3	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1324	697	578	1336	290	290
V/C Ratio(X)	0.43	0.09	0.01	0.50	0.48	0.09
Avail Cap(c_a), veh/h	2778	1462	905	2804	1846	1846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.8	3.2	4.7	4.0	7.6	7.1
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.0	3.3	4.7	4.2	8.8	7.3
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	634			677	167	
Approach Delay, s/veh	3.9			4.2	8.6	
Approach LOS	A			A	A	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		7.0		12.6		12.6
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		3.3		4.6		5.1
Green Ext Time (p_c), s		0.4		3.1		3.5

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	400	44	24	255	201	114	6	68	448	3	308
Future Volume (vph)	153	400	44	24	255	201	114	6	68	448	3	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.934			0.862			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1399	2798	1252	1570	2932	0	1805	1638	0	1556	1394	0
Flt Permitted	0.950			0.950			0.521			0.709		
Satd. Flow (perm)	1399	2798	1252	1570	2932	0	990	1638	0	1161	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			45		143			68			308	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1549			261			319			517	
Travel Time (s)		35.2			5.9			7.3			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	29%	29%	29%	15%	15%	15%	0%	0%	0%	16%	16%	16%
Adj. Flow (vph)	153	400	44	24	255	201	114	6	68	448	3	308
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	400	44	24	456	0	114	74	0	448	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2			6		
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	25.0	40.0	40.0	10.0	25.0		70.0	70.0		70.0	70.0	
Total Split (%)	20.8%	33.3%	33.3%	8.3%	20.8%		58.3%	58.3%		58.3%	58.3%	
Maximum Green (s)	21.0	36.0	36.0	6.0	21.0		66.0	66.0		66.0	66.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	16.5	31.8	31.8	5.9	17.0		66.3	66.3		66.3	66.3	
Actuated g/C Ratio	0.15	0.28	0.28	0.05	0.15		0.59	0.59		0.59	0.59	
v/c Ratio	0.74	0.50	0.11	0.29	0.81		0.19	0.07		0.65	0.33	
Control Delay	67.9	36.3	9.3	63.3	43.2		13.3	3.7		22.6	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	67.9	36.3	9.3	63.3	43.2		13.3	3.7		22.6	2.5	
LOS	E	D	A	E	D		B	A		C	A	
Approach Delay		42.4			44.2			9.5			14.4	
Approach LOS		D			D			A			B	

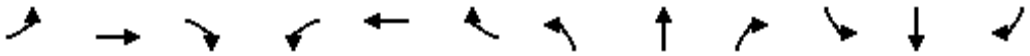
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.9			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Cactus Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
20: Cactus Ave (NS) & El Rivino Rd (EW)

10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	400	44	24	255	201	114	6	68	448	3	308
Future Volume (veh/h)	153	400	44	24	255	201	114	6	68	448	3	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1470	1470	1678	1678	1678	1900	1900	1900	1663	1663	1663
Adj Flow Rate, veh/h	153	400	44	24	255	201	114	6	68	448	3	308
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	29	29	29	15	15	15	0	0	0	16	16	16
Cap, veh/h	178	729	384	40	299	236	624	93	1057	761	10	997
Arrive On Green	0.12	0.26	0.26	0.02	0.16	0.16	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1470	2793	1470	1678	1829	1442	1085	154	1746	1179	16	1647
Grp Volume(v), veh/h	153	400	44	24	222	234	114	0	74	448	0	311
Grp Sat Flow(s),veh/h/ln	1470	1397	1470	1678	1594	1678	1085	0	1900	1179	0	1663
Q Serve(g_s), s	11.1	13.5	2.5	1.5	14.8	14.8	6.2	0.0	1.7	27.5	0.0	9.9
Cycle Q Clear(g_c), s	11.1	13.5	2.5	1.5	14.8	14.8	16.1	0.0	1.7	29.2	0.0	9.9
Prop In Lane	1.00		1.00	1.00		0.86	1.00		0.92	1.00		0.99
Lane Grp Cap(c), veh/h	178	729	384	40	261	274	624	0	1150	761	0	1006
V/C Ratio(X)	0.86	0.55	0.11	0.60	0.85	0.85	0.18	0.00	0.06	0.59	0.00	0.31
Avail Cap(c_a), veh/h	283	922	485	92	307	323	624	0	1150	761	0	1006
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.0	34.7	30.7	52.7	44.3	44.3	14.4	0.0	8.8	14.8	0.0	10.5
Incr Delay (d2), s/veh	14.0	0.6	0.1	13.8	17.9	17.1	0.6	0.0	0.1	3.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.6	0.9	0.8	7.1	7.4	1.6	0.0	0.7	7.6	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	35.4	30.8	66.6	62.2	61.5	15.0	0.0	9.0	18.2	0.0	11.3
LnGrp LOS	E	D	C	E	E	E	B	A	A	B	A	B
Approach Vol, veh/h		597			480			188			759	
Approach Delay, s/veh		41.6			62.1			12.6			15.3	
Approach LOS		D			E			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		70.0	6.6	32.5		70.0	17.2	21.8				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		66.0	6.0	36.0		66.0	21.0	21.0				
Max Q Clear Time (g_c+I1), s		18.1	3.5	15.5		31.2	13.1	16.8				
Green Ext Time (p_c), s		0.9	0.0	2.8		4.2	0.2	1.0				

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	907	9	2	479	0	0
Future Volume (vph)	907	9	2	479	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	2888	1292	1570	3139	0	1900
Flt Permitted			0.950			
Satd. Flow (perm)	2888	1292	1570	3139	0	1900
Link Speed (mph)	45			45	25	
Link Distance (ft)	261			811	303	
Travel Time (s)	4.0			12.3	8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	25%	25%	15%	15%	0%	0%
Adj. Flow (vph)	907	9	2	479	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	907	9	2	479	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.4%		ICU Level of Service A	
Analysis Period (min) 15			

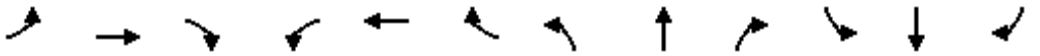
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	907	9	2	479	0	0
Future Vol, veh/h	907	9	2	479	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	25	25	15	15	0	0
Mvmt Flow	907	9	2	479	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	916	0	-	454
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.4	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.35	-	-	3.3
Pot Cap-1 Maneuver	-	-	664	-	0	559
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	664	-	-	559
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	664	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	10.4	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

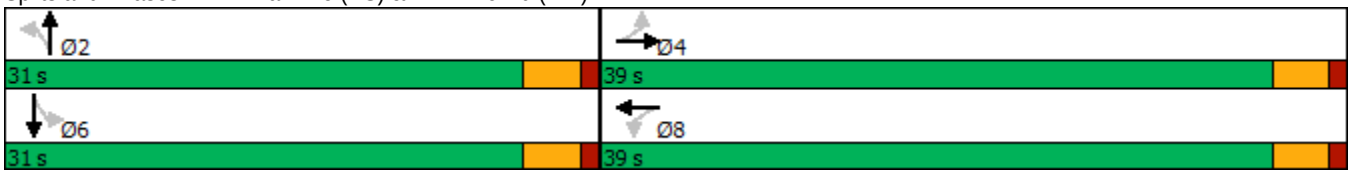


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	385	232	4	207	10	311	3	12	4	5	6
Future Volume (vph)	9	385	232	4	207	10	311	3	12	4	5	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944			0.993			0.880			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1456	1446	0	1583	1655	0	1517	1405	0	1805	1744	0
Flt Permitted	0.605			0.218			0.750			0.748		
Satd. Flow (perm)	927	1446	0	363	1655	0	1197	1405	0	1421	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			5			12			6	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		811			2357			392			558	
Travel Time (s)		12.3			35.7			8.9			12.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	24%	24%	14%	14%	14%	19%	19%	19%	0%	0%	0%
Adj. Flow (vph)	9	385	232	4	207	10	311	3	12	4	5	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	617	0	4	217	0	311	15	0	4	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	39.0	39.0		39.0	39.0		31.0	31.0		31.0	31.0	
Total Split (%)	55.7%	55.7%		55.7%	55.7%		44.3%	44.3%		44.3%	44.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		27.0	27.0		27.0	27.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	29.2	29.2		29.2	29.2		27.3	27.3		27.3	27.3	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.42	0.42		0.42	0.42	
v/c Ratio	0.02	0.90		0.02	0.29		0.62	0.03		0.01	0.01	
Control Delay	9.1	32.4		9.5	11.5		23.2	8.5		13.2	10.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.1	32.4		9.5	11.5		23.2	8.5		13.2	10.2	
LOS	A	C		A	B		C	A		B	B	
Approach Delay		32.1			11.5			22.5			11.0	
Approach LOS		C			B			C			B	

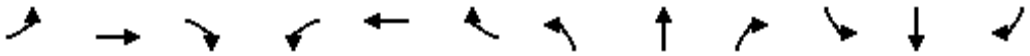
Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 64.6			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 25.3		Intersection LOS: C	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 22: Hall Ave (NS) & El Rivino Rd (EW)



HCM 6th Signalized Intersection Summary
22: Hall Ave (NS) & El Rivino Rd (EW)

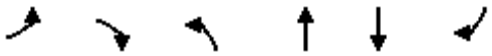
10/08/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	385	232	4	207	10	311	3	12	4	5	6
Future Volume (veh/h)	9	385	232	4	207	10	311	3	12	4	5	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1544	1544	1544	1693	1693	1693	1618	1618	1618	1900	1900	1900
Adj Flow Rate, veh/h	9	385	232	4	207	10	311	3	12	4	5	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	24	24	24	14	14	14	19	19	19	0	0	0
Cap, veh/h	463	428	258	169	717	35	631	139	555	716	370	444
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	961	964	581	729	1615	78	1214	324	1295	1421	864	1036
Grp Volume(v), veh/h	9	0	617	4	0	217	311	0	15	4	0	11
Grp Sat Flow(s),veh/h/ln	961	0	1544	729	0	1693	1214	0	1618	1421	0	1900
Q Serve(g_s), s	0.4	0.0	23.3	0.3	0.0	5.1	12.5	0.0	0.3	0.1	0.0	0.2
Cycle Q Clear(g_c), s	5.5	0.0	23.3	23.6	0.0	5.1	12.7	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.38	1.00		0.05	1.00		0.80	1.00		0.55
Lane Grp Cap(c), veh/h	463	0	686	169	0	752	631	0	694	716	0	814
V/C Ratio(X)	0.02	0.00	0.90	0.02	0.00	0.29	0.49	0.00	0.02	0.01	0.00	0.01
Avail Cap(c_a), veh/h	570	0	858	250	0	940	631	0	694	716	0	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	16.2	27.1	0.0	11.2	14.0	0.0	10.4	10.5	0.0	10.3
Incr Delay (d2), s/veh	0.0	0.0	10.6	0.1	0.0	0.2	2.7	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	8.3	0.1	0.0	1.6	3.5	0.0	0.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	26.8	27.2	0.0	11.4	16.7	0.0	10.4	10.5	0.0	10.4
LnGrp LOS	B	A	C	C	A	B	B	A	B	B	A	B
Approach Vol, veh/h		626			221			326			15	
Approach Delay, s/veh		26.6			11.7			16.4			10.4	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		32.0		31.0		32.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		27.0		35.0		27.0		35.0				
Max Q Clear Time (g_c+I1), s		14.7		25.3		2.4		25.6				
Green Ext Time (p_c), s		1.0		2.7		0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			20.8									
HCM 6th LOS			C									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	27	9	306	235	6
Future Volume (vph)	20	27	9	306	235	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1517	1597	1377	1170
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1517	1597	1377	1170
Link Speed (mph)	30			30	30	
Link Distance (ft)	373			1996	392	
Travel Time (s)	8.5			45.4	8.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	19%	19%	38%	38%
Adj. Flow (vph)	20	27	9	306	235	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	27	9	306	235	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

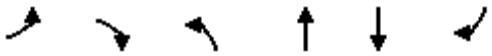
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	27	9	306	235	6
Future Vol, veh/h	20	27	9	306	235	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	19	19	38	38
Mvmt Flow	20	27	9	306	235	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	559	235	241	0	-	0
Stage 1	235	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.29	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.371	-	-	-
Pot Cap-1 Maneuver	494	809	1232	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	491	809	1232	-	-	-
Mov Cap-2 Maneuver	491	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1232	-	491	809	-	-
HCM Lane V/C Ratio	0.007	-	0.041	0.033	-	-
HCM Control Delay (s)	7.9	-	12.6	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

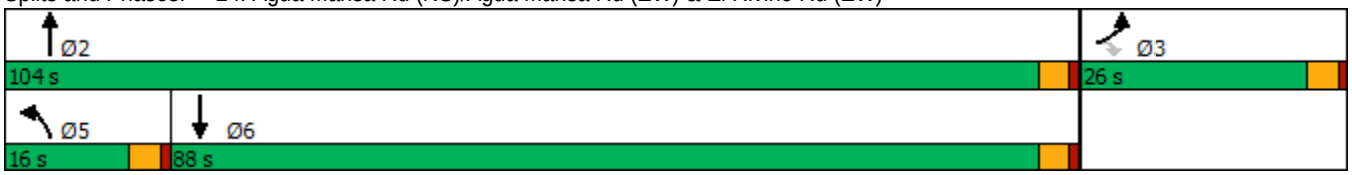


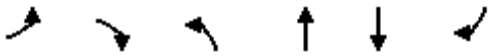
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	106	80	914	590	112
Future Volume (vph)	175	106	80	914	590	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.978	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1736	1553	1517	1597	1499	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1736	1553	1517	1597	1499	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		106			15	
Link Speed (mph)	45			45	45	
Link Distance (ft)	2357			1048	2246	
Travel Time (s)	35.7			15.9	34.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	4%	19%	19%	24%	24%
Adj. Flow (vph)	175	106	80	914	590	112
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	106	80	914	702	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	3		5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		3				
Detector Phase	3	3	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	9.0	9.0	22.0	22.0	
Total Split (s)	26.0	26.0	16.0	104.0	88.0	
Total Split (%)	20.0%	20.0%	12.3%	80.0%	67.7%	
Maximum Green (s)	22.0	22.0	12.0	100.0	84.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effct Green (s)	17.3	17.3	10.5	100.2	88.0	
Actuated g/C Ratio	0.14	0.14	0.08	0.80	0.70	
v/c Ratio	0.74	0.35	0.63	0.72	0.67	
Control Delay	70.1	11.8	78.3	10.7	16.1	
Queue Delay	0.0	0.0	0.0	0.3	0.0	
Total Delay	70.1	11.8	78.3	11.0	16.1	
LOS	E	B	E	B	B	
Approach Delay	48.1			16.4	16.1	
Approach LOS	D			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 125.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 64.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 24: Agua Mansa Rd (NS)/Agua Mansa Rd (EW) & El Rivino Rd (EW)





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	106	80	914	590	112
Future Volume (veh/h)	175	106	80	914	590	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1618	1618	1544	1544
Adj Flow Rate, veh/h	175	106	80	914	590	112
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	19	19	24	24
Cap, veh/h	209	209	99	1328	943	179
Arrive On Green	0.11	0.11	0.06	0.82	0.73	0.73
Sat Flow, veh/h	1841	1841	1618	1618	1298	246
Grp Volume(v), veh/h	175	106	80	914	0	702
Grp Sat Flow(s),veh/h/ln	1841	1841	1618	1618	0	1544
Q Serve(g_s), s	11.3	6.6	5.9	28.3	0.0	27.7
Cycle Q Clear(g_c), s	11.3	6.6	5.9	28.3	0.0	27.7
Prop In Lane	1.00	1.00	1.00			0.16
Lane Grp Cap(c), veh/h	209	209	99	1328	0	1122
V/C Ratio(X)	0.84	0.51	0.81	0.69	0.00	0.63
Avail Cap(c_a), veh/h	332	332	159	1328	0	1122
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	50.8	56.5	4.5	0.0	8.3
Incr Delay (d2), s/veh	10.1	1.9	14.3	2.9	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	3.1	2.8	6.4	0.0	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.0	52.7	70.8	7.4	0.0	11.0
LnGrp LOS	E	D	E	A	A	B
Approach Vol, veh/h	281			994	702	
Approach Delay, s/veh	59.1			12.5	11.0	
Approach LOS	E			B	B	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		104.0			11.5	92.5	17.8
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		100.0			12.0	84.0	22.0
Max Q Clear Time (g_c+I1), s		30.3			7.9	29.7	13.3
Green Ext Time (p_c), s		8.4			0.0	5.3	0.5

Intersection Summary		
HCM 6th Ctrl Delay		18.6
HCM 6th LOS		B

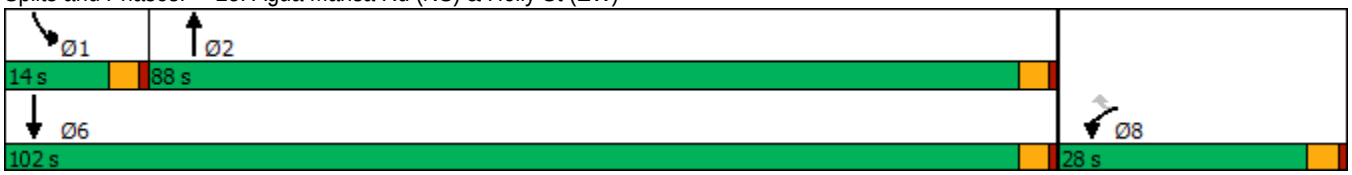


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	144	930	13	31	603
Future Volume (vph)	53	144	930	13	31	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	12	12	12	12
Storage Length (ft)	0	60		0	155	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	1207	3028	0	1421	1496
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1556	1207	3028	0	1421	1496
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		144	2			
Link Speed (mph)	30		45			45
Link Distance (ft)	1275		1057			1048
Travel Time (s)	29.0		16.0			15.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	16%	19%	19%	27%	27%
Adj. Flow (vph)	53	144	930	13	31	603
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	144	943	0	31	603
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.20	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Prot	NA

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.0	22.0	22.0		9.0	22.0
Total Split (s)	28.0	28.0	88.0		14.0	102.0
Total Split (%)	21.5%	21.5%	67.7%		10.8%	78.5%
Maximum Green (s)	24.0	24.0	84.0		10.0	98.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	9.6	9.6	92.7		7.8	100.6
Actuated g/C Ratio	0.08	0.08	0.78		0.07	0.85
v/c Ratio	0.42	0.63	0.40		0.33	0.47
Control Delay	60.5	20.5	5.6		61.4	3.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	60.5	20.5	5.6		61.4	3.9
LOS	E	C	A		E	A
Approach Delay	31.3		5.6			6.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 118.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Agua Mansa Rd (NS) & Holly St (EW)

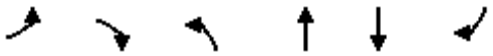




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	53	144	930	13	31	603
Future Volume (veh/h)	53	144	930	13	31	603
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1663	1596	1618	1618	1500	1500
Adj Flow Rate, veh/h	53	144	930	13	31	603
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	16	16	19	19	27	27
Cap, veh/h	180	173	2377	33	40	1236
Arrive On Green	0.11	0.11	0.76	0.76	0.03	0.82
Sat Flow, veh/h	1663	1596	3193	44	1500	1500
Grp Volume(v), veh/h	53	144	459	484	31	603
Grp Sat Flow(s),veh/h/ln	1663	1596	1537	1618	1500	1500
Q Serve(g_s), s	3.5	10.5	12.0	12.0	2.4	14.0
Cycle Q Clear(g_c), s	3.5	10.5	12.0	12.0	2.4	14.0
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	180	173	1174	1236	40	1236
V/C Ratio(X)	0.29	0.83	0.39	0.39	0.77	0.49
Avail Cap(c_a), veh/h	336	322	1174	1236	126	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	51.9	4.7	4.7	57.5	3.1
Incr Delay (d2), s/veh	0.9	9.9	1.0	0.9	25.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.7	3.1	3.2	1.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.7	61.8	5.7	5.7	82.9	4.4
LnGrp LOS	D	E	A	A	F	A
Approach Vol, veh/h	197		943			634
Approach Delay, s/veh	58.6		5.7			8.3
Approach LOS	E		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	94.8			102.0	16.9
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	10.0	84.0			98.0	24.0
Max Q Clear Time (g_c+I1), s	4.4	14.0			16.0	12.5
Green Ext Time (p_c), s	0.0	6.6			4.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B



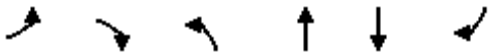
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	209	245	697	616	51
Future Volume (vph)	84	209	245	697	616	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8
Storage Length (ft)	0	0	160			60
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1327	1188	1517	3034	2777	1077
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1327	1188	1517	3034	2777	1077
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		209				46
Link Speed (mph)	30			45	45	
Link Distance (ft)	1996			938	1057	
Travel Time (s)	45.4			14.2	16.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	36%	36%	19%	19%	30%	30%
Adj. Flow (vph)	84	209	245	697	616	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	209	245	697	616	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	Perm

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.0	22.0	9.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	16.0	38.0	22.0	22.0
Total Split (%)	36.7%	36.7%	26.7%	63.3%	36.7%	36.7%
Maximum Green (s)	18.0	18.0	12.0	34.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	8.7	8.7	11.6	33.2	16.1	16.1
Actuated g/C Ratio	0.19	0.19	0.25	0.72	0.35	0.35
v/c Ratio	0.34	0.53	0.64	0.32	0.64	0.13
Control Delay	21.8	9.0	28.6	4.3	17.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	9.0	28.6	4.3	17.5	6.2
LOS	C	A	C	A	B	A
Approach Delay	12.7			10.6	16.7	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 45.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Agua Mansa Rd (NS) & Hall Ave

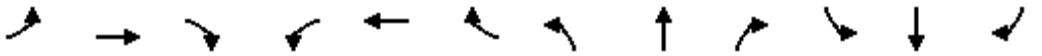




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	84	209	245	697	616	51
Future Volume (veh/h)	84	209	245	697	616	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1366	1366	1618	1618	1455	1397
Adj Flow Rate, veh/h	84	209	245	697	616	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	36	36	19	19	30	30
Cap, veh/h	276	276	304	1840	858	434
Arrive On Green	0.20	0.20	0.19	0.60	0.31	0.31
Sat Flow, veh/h	1366	1366	1618	3156	2838	1397
Grp Volume(v), veh/h	84	209	245	697	616	51
Grp Sat Flow(s),veh/h/ln	1366	1366	1618	1537	1383	1397
Q Serve(g_s), s	2.1	5.8	5.8	4.7	7.9	1.0
Cycle Q Clear(g_c), s	2.1	5.8	5.8	4.7	7.9	1.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	276	276	304	1840	858	434
V/C Ratio(X)	0.30	0.76	0.81	0.38	0.72	0.12
Avail Cap(c_a), veh/h	615	615	485	2613	1244	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	15.1	15.5	4.2	12.2	9.9
Incr Delay (d2), s/veh	0.6	4.3	5.2	0.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	2.0	0.4	1.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.2	19.3	20.7	4.3	13.4	10.0
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	293			942	667	
Approach Delay, s/veh	17.8			8.6	13.1	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		27.9		12.1	11.5	16.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	12.0	18.0
Max Q Clear Time (g_c+I1), s		6.7		7.8	7.8	9.9
Green Ext Time (p_c), s		4.7		0.6	0.3	2.5

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

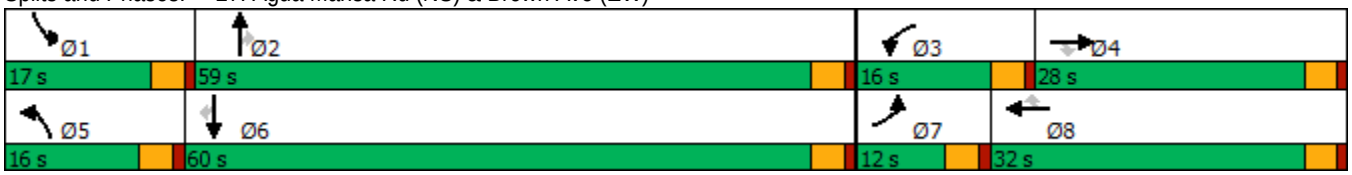


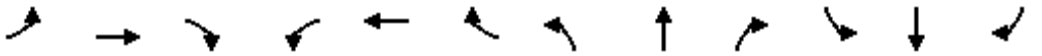
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	3	72	54	4	211	39	725	127	56	756	14
Future Volume (vph)	23	3	72	54	4	211	39	725	127	56	756	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	8	12	12	8	12	12	8
Storage Length (ft)	137		60	143		60	145		60	140		60
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1357	1429	1052	1504	1583	1166	1433	2865	1111	1378	2756	1068
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			211			82			82
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		737			556			2429			938	
Travel Time (s)		16.8			12.6			36.8			14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	33%	33%	33%	20%	20%	20%	26%	26%	26%	31%	31%	31%
Adj. Flow (vph)	23	3	72	54	4	211	39	725	127	56	756	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	3	72	54	4	211	39	725	127	56	756	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5	22.5
Total Split (s)	12.0	28.0	28.0	16.0	32.0	32.0	16.0	59.0	59.0	17.0	60.0	60.0
Total Split (%)	10.0%	23.3%	23.3%	13.3%	26.7%	26.7%	13.3%	49.2%	49.2%	14.2%	50.0%	50.0%
Maximum Green (s)	8.0	24.0	24.0	12.0	28.0	28.0	12.0	55.0	55.0	13.0	56.0	56.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	6.9	7.2	7.2	8.7	13.3	13.3	8.1	57.9	57.9	9.1	61.1	61.1
Actuated g/C Ratio	0.07	0.08	0.08	0.09	0.14	0.14	0.09	0.61	0.61	0.10	0.65	0.65
v/c Ratio	0.23	0.03	0.46	0.39	0.02	0.61	0.32	0.41	0.18	0.42	0.42	0.02
Control Delay	50.8	43.3	18.4	51.5	39.0	14.3	50.2	13.0	5.8	52.5	11.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	43.3	18.4	51.5	39.0	14.3	50.2	13.0	5.8	52.5	11.9	0.1
LOS	D	D	B	D	D	B	D	B	A	D	B	A
Approach Delay		26.8			22.1			13.6			14.4	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 94.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Agua Mansa Rd (NS) & Brown Ave (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	3	72	54	4	211	39	725	127	56	756	14
Future Volume (veh/h)	23	3	72	54	4	211	39	725	127	56	756	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1411	1411	1354	1604	1604	1539	1515	1515	1454	1441	1441	1383
Adj Flow Rate, veh/h	23	3	72	54	4	211	39	725	127	56	756	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	33	33	33	20	20	20	26	26	26	31	31	31
Cap, veh/h	37	206	198	92	283	272	66	1638	828	89	1609	813
Arrive On Green	0.03	0.15	0.15	0.06	0.18	0.18	0.04	0.57	0.57	0.06	0.59	0.59
Sat Flow, veh/h	1411	1411	1355	1604	1604	1539	1515	2878	1454	1441	2737	1383
Grp Volume(v), veh/h	23	3	72	54	4	211	39	725	127	56	756	14
Grp Sat Flow(s),veh/h/ln	1411	1411	1355	1604	1604	1539	1515	1439	1454	1441	1369	1383
Q Serve(g_s), s	1.6	0.2	4.6	3.2	0.2	12.6	2.4	14.0	4.0	3.7	15.2	0.4
Cycle Q Clear(g_c), s	1.6	0.2	4.6	3.2	0.2	12.6	2.4	14.0	4.0	3.7	15.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	206	198	92	283	272	66	1638	828	89	1609	813
V/C Ratio(X)	0.61	0.01	0.36	0.59	0.01	0.78	0.59	0.44	0.15	0.63	0.47	0.02
Avail Cap(c_a), veh/h	117	350	336	199	465	446	188	1638	828	194	1609	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	35.3	37.2	44.5	32.8	37.9	45.4	12.0	9.8	44.2	11.3	8.3
Incr Delay (d2), s/veh	15.2	0.0	1.1	5.9	0.0	4.7	8.3	0.9	0.4	7.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	1.6	1.4	0.1	5.0	1.0	4.1	1.3	1.4	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	35.3	38.3	50.4	32.8	42.7	53.6	12.9	10.2	51.3	12.3	8.3
LnGrp LOS	E	D	D	D	C	D	D	B	B	D	B	A
Approach Vol, veh/h		98			269			891			826	
Approach Delay, s/veh		43.7			44.1			14.3			14.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	59.0	9.5	18.1	8.2	60.8	6.6	21.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	55.0	12.0	24.0	12.0	56.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	7.7	18.0	7.2	8.6	6.4	19.2	5.6	16.6
Green Ext Time (p_c), s	0.0	5.6	0.0	0.1	0.0	5.6	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	24	990	43	84	807
Future Volume (vph)	46	24	990	43	84	807
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1107	991	2983	1335	1433	1508
Flt Permitted	0.950				0.281	
Satd. Flow (perm)	1107	991	2983	1335	424	1508
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		24		43		
Link Speed (mph)	25		45			45
Link Distance (ft)	316		1750			2429
Travel Time (s)	8.6		26.5			36.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	63%	63%	21%	21%	26%	26%
Adj. Flow (vph)	46	24	990	43	84	807
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	24	990	43	84	807
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	98.0	98.0	98.0	98.0
Total Split (%)	18.3%	18.3%	81.7%	81.7%	81.7%	81.7%
Maximum Green (s)	18.0	18.0	94.0	94.0	94.0	94.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	10.3	10.3	103.1	103.1	103.1	103.1
Actuated g/C Ratio	0.09	0.09	0.87	0.87	0.87	0.87
v/c Ratio	0.48	0.22	0.38	0.04	0.23	0.62
Control Delay	67.3	22.3	2.7	0.7	3.8	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	22.3	2.7	0.7	3.8	5.8
LOS	E	C	A	A	A	A
Approach Delay	51.9		2.6			5.6
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: Agua Mansa Rd (NS) & R. A. Nelson Sta. (EW)

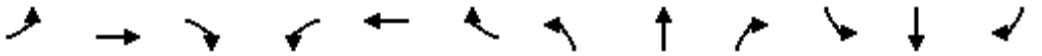




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	24	990	43	84	807
Future Volume (veh/h)	46	24	990	43	84	807
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	966	966	1589	1589	1515	1515
Adj Flow Rate, veh/h	46	24	990	43	84	807
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	63	63	21	21	26	26
Cap, veh/h	56	56	2620	1379	422	1314
Arrive On Green	0.06	0.06	0.87	0.87	0.87	0.87
Sat Flow, veh/h	966	966	3098	1589	442	1515
Grp Volume(v), veh/h	46	24	990	43	84	807
Grp Sat Flow(s),veh/h/ln	966	966	1509	1589	442	1515
Q Serve(g_s), s	5.1	2.6	7.0	0.4	5.0	16.3
Cycle Q Clear(g_c), s	5.1	2.6	7.0	0.4	12.0	16.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	56	2620	1379	422	1314
V/C Ratio(X)	0.82	0.43	0.38	0.03	0.20	0.61
Avail Cap(c_a), veh/h	161	161	2620	1379	422	1314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	49.2	1.4	1.0	2.6	2.0
Incr Delay (d2), s/veh	23.7	5.0	0.4	0.0	1.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.7	0.5	0.1	0.4	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.1	54.3	1.8	1.0	3.6	4.2
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	70		1033			891
Approach Delay, s/veh	67.3		1.8			4.1
Approach LOS	E		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		98.0			98.0	10.3
Change Period (Y+Rc), s		4.0			4.0	4.0
Max Green Setting (Gmax), s		94.0			94.0	18.0
Max Q Clear Time (g_c+I1), s		9.0			18.3	7.1
Green Ext Time (p_c), s		8.5			8.8	0.1

Intersection Summary		
HCM 6th Ctrl Delay	5.1	
HCM 6th LOS	A	



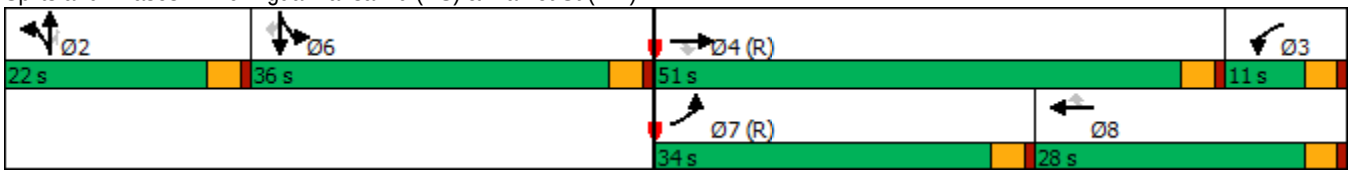
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	686	697	4	2	639	338	2	1	1	387	4	539
Future Volume (vph)	686	697	4	2	639	338	2	1	1	387	4	539
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	215		60	50		60	0		60	0		60
Storage Lanes	2		1	1		1	0		1	1		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	1.00	*1.00	*1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.968		0.950		
Satd. Flow (prot)	3183	3455	1468	1656	3486	1482	0	1471	1292	1626	1712	2910
Flt Permitted	0.950			0.950				0.968		0.950		
Satd. Flow (perm)	3183	3455	1468	1656	3486	1482	0	1471	1292	1626	1712	2910
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			135			118			539
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		567			472			444			1750	
Travel Time (s)		8.6			7.2			10.1			26.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	25%	25%	25%	11%	11%	11%
Adj. Flow (vph)	686	697	4	2	639	338	2	1	1	387	4	539
Shared Lane Traffic (%)												
Lane Group Flow (vph)	686	697	4	2	639	338	0	3	1	387	4	539
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	

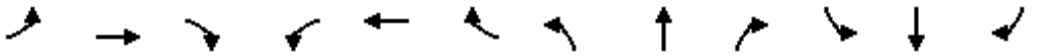
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.0	22.0	22.0	11.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	34.0	51.0	51.0	11.0	28.0	28.0	22.0	22.0	22.0	36.0	36.0	36.0
Total Split (%)	28.3%	42.5%	42.5%	9.2%	23.3%	23.3%	18.3%	18.3%	18.3%	30.0%	30.0%	30.0%
Maximum Green (s)	30.0	47.0	47.0	7.0	24.0	24.0	18.0	18.0	18.0	32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	30.0	55.7	55.7	7.0	23.9	23.9		18.1	18.1	32.0	32.0	32.0
Actuated g/C Ratio	0.25	0.46	0.46	0.06	0.20	0.20		0.15	0.15	0.27	0.27	0.27
v/c Ratio	0.86	0.44	0.01	0.02	0.92	0.84		0.01	0.00	0.89	0.01	0.46
Control Delay	52.4	32.4	0.0	54.0	67.1	46.7		43.7	0.0	66.6	32.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	52.4	32.4	0.0	54.0	67.1	46.7		43.7	0.0	66.6	32.5	4.2
LOS	D	C	A	D	E	D		D	A	E	C	A
Approach Delay		42.2			60.0			32.8			30.3	
Approach LOS		D			E			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 44.1 Intersection LOS: D
Intersection Capacity Utilization 75.3% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 29: Agua Mansa Rd (NS) & Market St (EW)

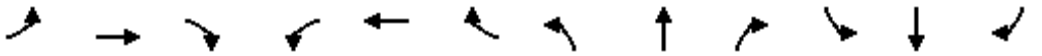




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	686	697	4	2	639	338	2	1	1	387	4	539
Future Volume (veh/h)	686	697	4	2	639	338	2	1	1	387	4	539
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1767	1767	1767	1530	1530	1530	1737	1737	1737
Adj Flow Rate, veh/h	686	697	4	2	639	338	2	1	1	387	4	539
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	9	9	9	25	25	25	11	11	11
Cap, veh/h	850	1372	686	103	707	353	153	76	229	463	463	926
Arrive On Green	0.50	0.78	0.78	0.06	0.20	0.20	0.15	0.15	0.15	0.27	0.27	0.27
Sat Flow, veh/h	3398	3504	1752	1767	3533	1767	1020	510	1530	1737	1737	3474
Grp Volume(v), veh/h	686	697	4	2	639	338	3	0	1	387	4	539
Grp Sat Flow(s),veh/h/ln	1699	1752	1752	1767	1767	1767	1530	0	1530	1737	1737	1737
Q Serve(g_s), s	20.3	8.6	0.1	0.1	21.2	22.7	0.2	0.0	0.1	25.2	0.2	16.2
Cycle Q Clear(g_c), s	20.3	8.6	0.1	0.1	21.2	22.7	0.2	0.0	0.1	25.2	0.2	16.2
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	850	1372	686	103	707	353	229	0	229	463	463	926
V/C Ratio(X)	0.81	0.51	0.01	0.02	0.90	0.96	0.01	0.00	0.00	0.84	0.01	0.58
Avail Cap(c_a), veh/h	850	1372	686	103	707	353	229	0	229	463	463	926
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	27.6	8.8	7.9	53.3	46.9	47.5	43.4	0.0	43.4	41.5	32.3	38.2
Incr Delay (d2), s/veh	3.1	0.7	0.0	0.1	15.1	36.5	0.1	0.0	0.0	12.8	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	2.4	0.0	0.1	10.5	13.2	0.1	0.0	0.0	12.0	0.1	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	9.5	7.9	53.3	62.0	84.0	43.5	0.0	43.4	54.3	32.4	40.2
LnGrp LOS	C	A	A	D	E	F	D	A	D	D	C	D
Approach Vol, veh/h		1387			979			4			930	
Approach Delay, s/veh		20.0			69.6			43.5			46.1	
Approach LOS		B			E			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.0	11.0	51.0		36.0	34.0	28.0				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.0	7.0	47.0		32.0	30.0	24.0				
Max Q Clear Time (g_c+I1), s		4.1	4.1	12.6		27.2	24.3	26.7				
Green Ext Time (p_c), s		0.0	0.0	4.9		1.5	1.3	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			42.1									
HCM 6th LOS			D									

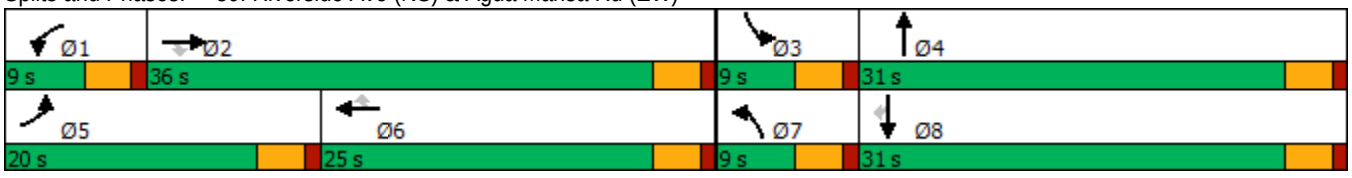


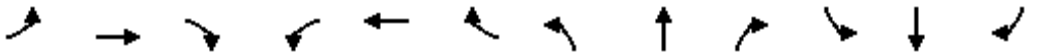
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Future Volume (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		80	75		100	250		0	260		80
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1743	1482	1492	1570	1335	1626	3220	0	1656	3312	1482
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1656	1743	1482	1492	1570	1335	1626	3220	0	1656	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			167		9				175
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		2246			1037			1169			1121	
Travel Time (s)		34.0			15.7			14.5			13.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	9%	21%	21%	21%	11%	11%	11%	9%	9%	9%
Adj. Flow (vph)	503	551	136	35	228	83	116	1321	91	92	1155	409
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	551	136	35	228	83	116	1412	0	92	1155	409
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.0	22.5	22.5	9.0	22.5	22.5	9.0	22.5		9.0	22.5	22.5
Total Split (s)	20.0	36.0	36.0	9.0	25.0	25.0	9.0	31.0		9.0	31.0	31.0
Total Split (%)	23.5%	42.4%	42.4%	10.6%	29.4%	29.4%	10.6%	36.5%		10.6%	36.5%	36.5%
Maximum Green (s)	16.0	32.0	32.0	5.0	21.0	21.0	5.0	27.0		5.0	27.0	27.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	16.0	35.6	35.6	5.0	21.0	21.0	5.0	27.0		5.0	27.0	27.0
Actuated g/C Ratio	0.19	0.42	0.42	0.06	0.25	0.25	0.06	0.32		0.06	0.32	0.32
v/c Ratio	1.62	0.75	0.20	0.40	0.59	0.18	1.22	1.37		0.95	1.10	0.69
Control Delay	319.6	30.7	5.8	52.5	35.4	0.9	201.2	201.4		122.4	88.0	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	319.6	30.7	5.8	52.5	35.4	0.9	201.2	201.4		122.4	88.0	21.3
LOS	F	C	A	D	D	A	F	F		F	F	C
Approach Delay		149.9			28.9			201.4			73.5	
Approach LOS		F			C			F			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.62			
Intersection Signal Delay: 130.9		Intersection LOS: F	
Intersection Capacity Utilization 97.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 39: Riverside Ave (NS) & Agua Mansa Rd (EW)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	503	551	136	35	228	83	116	1321	91	92	1155	409
Future Volume (veh/h)	503	551	136	35	228	83	116	1321	91	92	1155	409
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1737	1737	1767	1767	1767
Adj Flow Rate, veh/h	503	551	136	35	228	83	116	1321	91	92	1155	409
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	9	9	9	21	21	21	11	11	11	9	9	9
Cap, veh/h	333	701	701	61	393	393	102	1007	69	104	1066	561
Arrive On Green	0.19	0.40	0.40	0.04	0.25	0.25	0.06	0.32	0.32	0.06	0.32	0.32
Sat Flow, veh/h	1767	1767	1767	1589	1589	1589	1737	3169	218	1767	3357	1767
Grp Volume(v), veh/h	503	551	136	35	228	83	116	688	724	92	1155	409
Grp Sat Flow(s),veh/h/ln	1767	1767	1767	1589	1589	1589	1737	1650	1737	1767	1678	1767
Q Serve(g_s), s	16.0	23.2	4.3	1.8	10.7	3.5	5.0	27.0	27.0	4.4	27.0	17.5
Cycle Q Clear(g_c), s	16.0	23.2	4.3	1.8	10.7	3.5	5.0	27.0	27.0	4.4	27.0	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	333	701	701	61	393	393	102	524	552	104	1066	561
V/C Ratio(X)	1.51	0.79	0.19	0.57	0.58	0.21	1.14	1.31	1.31	0.89	1.08	0.73
Avail Cap(c_a), veh/h	333	701	701	93	393	393	102	524	552	104	1066	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	22.5	16.8	40.2	28.1	25.4	40.0	29.0	29.0	39.7	29.0	25.7
Incr Delay (d2), s/veh	245.7	8.7	0.6	8.1	6.2	1.2	130.1	153.8	153.2	53.7	53.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.1	10.2	1.6	0.8	4.5	1.3	5.7	31.7	33.3	3.3	17.3	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	280.2	31.2	17.4	48.2	34.3	26.6	170.1	182.8	182.2	93.4	82.0	30.5
LnGrp LOS	F	C	B	D	C	C	F	F	F	F	F	C
Approach Vol, veh/h		1190			346			1528			1656	
Approach Delay, s/veh		134.8			33.9			181.5			69.9	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	37.7	9.0	31.0	20.0	25.0	9.0	31.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	32.0	5.0	27.0	16.0	21.0	5.0	27.0
Max Q Clear Time (g_c+I1), s	5.8	27.2	8.4	31.0	20.0	14.7	9.0	31.0
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	119.8
HCM 6th LOS	F



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